



# **Kiteboarding / Snowkiting**

## **Instructor's Manual**

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## **Welcome**

The Professional Air Sports Association's Kiteboarding / Snowkiting Division has created a complete system for kiteboarding and snowkiting to promote and maintain a constant standard of quality. This system also allows for students to evaluate their own skills with clearly defined certification levels for all kiteboarders, snowkiters and instructors. The PASA system provides the most efficient and safest steps in learning to kiteboard or snowkite. PASA also offers other support for schools and instructors such as PASA instructor certification programs to help members uphold safety and professionalism within their schools as well as insurance solutions for schools, instructors and recreational kites. Members of PASA are dedicated to maintaining the sports of kiteboarding and snowkiting with integrity, safe practices, accessibility to the public, and fun.

As a member of the PASA Kiteboarding / Snowkiting Division, you will be able to obtain the latest information from the worlds of kiteboarding and snowkiting, while having the opportunity to update, adapt, and share your knowledge in the coming years.

## **How to Use This Book**

This Instructor's Manual is intended to be used by instructors working towards their Instructor Certification established by the Professional Air Sports Association.

The tips, techniques, and methods we present here have been gathered from different sources as well as hands-on experience with teaching the sports of kiteboarding and snowkiting. The techniques provided here have been proven to be both safe and the best method in rapid skills advancement. This manual should serve as a store of information that every instructor can use to enhance his or her teaching abilities. Since teaching methods continue to evolve, we are aware that instructors in the field may have new ideas or improvement on old ones that can facilitate instruction. For that reason we welcome all input and helpful suggestions from you, the reader.

All instructors should be familiar with this material, even if they only teach beginners, for it gives direction to their teaching since students must develop sound fundamentals which transition into advanced skills. We also suggest a frequent review of the manual by practicing instructors so that continued excellence and improvement is fostered.

This manual is a tool that should be part of the "equipment" you bring to the job. We hope it enhances your enjoyment of instruction and your effectiveness in introducing others to the exciting sports of kiteboarding and snowkiting.



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## Promoting and Preserving the Air Sports Industry

### What Is PASA?

PASA was founded March 21, 1997 as a **non-profit organization** (501-(c) 3) by a group of industry leaders who envisioned a member driven trade association for the air sports industry.

### PASA's Mission:

To Assist with Kiteboarding and Snowkiting Access, Education and Insurance Issues.

PASA is dedicated to preserving and promoting the Kiteboarding and Snowkiting Industry.

**PASA promotes safety in kiteboarding**, works to preserve kiteboarding access, has established international teaching standards, and offers insurance solutions for kiteboard and snowkite instructors and schools throughout North America, Mexico and the Caribbean.

**The PASA Kiteboarding / Snowkiting Division** is part of the Professional Air Sports Association, offering educational information on the sports of Kiteboarding, Snowkiting, Hang Gliding, Paragliding, Ultralight Flying and Parasailing to the general public.

We have developed a complete certification system to train both Kiteboarding and Snowkiting Instructors. PASA with its insurance provider, First Flight Insurance, has made 3<sup>rd</sup> party commercial liability insurance available to PASA certified kiteboarding and snowkiting schools and personal liability insurance to current PASA recreational members.

### Kiteboarding / Snowkiting Schools & Instructor Certification Clinics

By attending one of our Instructor Certification Clinics and becoming PASA certified you will attract students, legitimize your school, and increase the skill level of yourself and your instructors. We offer many support mechanisms for your school, such as certification cards, handbooks, lesson plans, and teaching manuals. Certification also makes you eligible for commercial insurance if you are a current PASA professional member.



## Joining PASA

Benefits of joining PASA are supporting a national certification system, insurance for instructors and schools, events and conferences, help in establishing schools, and instructor certification clinics. We want to offer information to everyone concerning kiteboarding and snowkiting, including: Safety, training, and locations to participate.

### Professional Members

These are instructors who have obtained their certification through the PASA program. Annual dues for this membership are **\$150.00**.

- Support PASA to help promote a complete certification system from beginner to advanced kiteboarders. This unifies teaching levels across North America, Mexico and the Caribbean and helps ensure quality instructors, who produce quality students. This results in safe and competent kiteboarders as well as snowkiters in your local area, helping to preserve both sports.
- Instructor Certification Programs
- Ongoing educational support for you from PASA
- Job placement opportunities through PASA

### PASA Schools

These are school owners who have obtained their certification through the PASA program and wish to operate a school.

Annual dues for this membership are **\$150.00**.

- Support PASA to help promote a complete certification system from beginner to advanced kiteboarders. This unifies teaching levels across North America, Mexico and the Caribbean and helps ensure quality instructors, who produce quality students. This results in safe and competent kiteboarders as well as snowkiters in your local area, helping to preserve both sports.
- Instructor Certification Programs to train you and/or your instructors.
- Be eligible for the most complete and affordable A-Rated third party commercial liability insurance policy available anywhere for instructors and schools. ***PASA school and instructor certification as well as current membership are requirements for insurance eligibility.***
- Ongoing educational support for you from PASA
- Job placement opportunities through PASA



## **PASA Recreational Kiteboarders or Snowkiters**

These are recreational riders that join PASA.  
Annual dues for this membership are **\$50.00**

- Receive personal liability insurance for bodily injury or property damage caused by a PASA member while kiting
- Receive the PASA Recreational Kiteboarder Card that shows the rider's measurable skill level)
- Receive a one-year subscription to KiteBoard Magazine
- \$20.00 off new annual membership with ikiteboard.com
- Online support at [www.pasakiteboarding.org](http://www.pasakiteboarding.org)
- A copy of the PASA Student Handbook
- Ability to ride at restricted kite spots that adhere to the PASA certification system
- Ability to rent equipment from shops and schools that offer rentals to PASA kiters

## **Industry Members**

These are kite industry manufacturers, retailers, non-profit organizations, private individuals, and the media that join PASA.  
Annual dues for this membership are a sliding scale depending on annual gross income starting at **\$150.00**.

- Ability to network with instructors and riders in the sport of kiting
- Offer special instructional discounts to PASA instructors and schools
- Support the intro market, access and safety in the sports of kiteboarding and snowkiting.



## Contact Information for PASA

**PASA Kiteboarding / Snowkiting Division Website:** [www.pasakiteboarding.org](http://www.pasakiteboarding.org)

PASA approved schools and instructors with current memberships will be offered a one-page bio with a link on PASA's Kiteboarding / Snowkiting website. This page will identify you as a PASA certified school or instructor and include the name and location of the school and the names of the PASA certified instructor(s) teaching there.

### **Kiteboarding / Snowkiting Division**

#### **Chair:**

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## **PASA Levels of Recreational Kiteboarder Certification**



Certification of kiteboarders establishes a measurable level of skills obtained under the PASA guidelines. Each certification level means the kiteboarder has accomplished the skills criteria for that particular level. After obtaining Level 2 Kiteboarder, the student is qualified to rent gear from participating rental centers. PASA developed these levels to ensure teaching quality and to allow kiteboarders to evaluate their own skills.

### **LEVEL 1 PASA KITEBOARDER**

The kiteboarder exhibits the following skills:

- Can determine wind direction, speed and quality to assess safety.
- Possesses meteorology knowledge for risk management decisions.
- Understands the requirements for a good launch area.
- Understands the rules of the road with other kites.
- Is able to set-up equipment independently and safely perform a pre-flight check.
- Is able to use and reset all safety features on the equipment.
- Uses kite harness.
- Performs self-rescue techniques to disarm the kite and get to shore with gear.
- Performs safe launching and landing of the kite.
- Executes kite water relaunches.
- Is able to body drag in control of direction.

### **LEVEL 2 PASA KITEBOARDER**

The kiteboarder exhibits the following skills:

- All of the skills listed in the criteria for Level 1 Kiteboarder.
- Is comfortable using the kite depower system to adjust kite power intake.
- Performs water starts on the board and maintains control of kite and board solo.
- Is able to control speed with advanced kite and board handling.
- Works the board and kite in harmony for extended rides.
- Can perform basic turns and transitions.

### **LEVEL 3 PASA KITEBOARDER**

The kiteboarder exhibits all the skills of Kiteboarder level 1 and 2 as well as the following skills:

- Is consistently going upwind.
- Performs advanced turns and transitions under power.
- Maintains control in most wind conditions.
- Performs simple jumps



## **PASA Levels of Recreational Snowkiter Certification**

### **LEVEL 1 PASA SNOWKITER**

The snowkiter exhibits the following skills:

- Can determine wind direction, speed and quality to assess safety.
- Possesses meteorology and snow knowledge for risk management decisions.
- Understands the requirements for a good launch area.
- Understands the rules of the road with other kites.
- Is able to set-up equipment independently and safely perform a pre-flight check.
- Is able to use and reset all safety features on the equipment.
- Uses kite harness.
- Performs self-rescue techniques to disarm the kite and get to safety with gear.
- Performs safe launching and landing of the kite.
- Executes kite snow relaunches.
- Performs starts on board/skis and maintains control of kite and board/skis solo.

### **LEVEL 2 PASA SNOWKITER**

The snowkiter exhibits the following skills:

- All of the skills listed in the criteria for Level 1 Snowkiter.
- Is comfortable using the kite depower system to adjust kite power intake.
- Is able to kite on either snowboard or skis in control of direction.
- Is able to control speed with advanced kite and board/skis handling.
- Works the board/skis and kite in harmony for extended rides.
- Can perform basic turns and transitions.

### **LEVEL 3 PASA SNOWKITER**

The snowkiter exhibits all the skills of Snowkiter level 1 and 2 as well as the following skills:

- Is consistently going upwind.
- Performs advanced turns and transitions under power.
- Maintains control in most wind conditions.
- Performs simple jumps



## **PASA Levels of Kiteboard or Snowkite Instructor Certification**

PASA offers both Kiteboard Instructor Certification Courses as well as Snowkite Instructor Certification Courses. Once a current professional PASA member has passed the Kiteboard Instructor Certification Course, he/she becomes eligible to participate in the Snowkite Instructor Course for a reduced course fee (Or vice versa). No additional PASA professional membership dues are required as long as the PASA instructor stays current in their membership dues.

### **PASA KITEBOARD or SNOWKITE INSTRUCTOR LEVEL 1 (Water and Snow are 2 separate certification courses)**

#### **Level 1 PASA Instructor can certify Level 1 PASA recreational kiter**

- Must be a Level 3 PASA Kiteboarder or Snowkiter.
- Passes a PASA Instructor Certification Program (ICP).
- Has Basic CPR & Basic First Aid Certification (CPR/First Aid Certification must be either Red Cross, Green Cross or American Heart Assoc.) and a basic Boat Safety certificate (BoatSafe cert. is required for water, not for snow)  
**NOTE:** These are not taught in the PASA course.
- Must pass a live teaching situation during the course.
- Understands the psychology of teaching and is an effective communicator.
- Has a basic understanding of weather and its effects on kiting.
- Understands how a kite functions, and how to adjust it. Must have skills to fix or correct kites, bars, & boards.
- Must be able to identify a safe teaching location and demonstrates the ability to make good judgments.
- Knows emergency recovery systems both with and without rescue vehicle.
- Must submit a lesson plan and emergency procedure to their Examiner and PASA's Training Review Board and submit a signed instructor's agreement to PASA Administration.
- Have paid annual Professional Membership dues (not included in ICP payment)

#### **In order to receive your Level 1 PASA Instructor Certificate,**

You have to submit **within 60 days** (from the last day of the ICP you passed):

Lesson Plans, Emergency Procedure, Basic CPR / First Aid and Boat Safe certifications, signed Instructor Agreement and a Digital photo



**PASA KITEBOARD or SNOWKITE INSTRUCTOR LEVEL 2**  
**(Can certify Level 1, 2 & 3 PASA Kiteboarders)**

- Must fulfill the PASA Level 1 Instructor requirements.
- Has submitted for review: 30 student feedback forms or online student reviews from 30 different students, which will be randomly verified and signed off by the PASA Training Review Board. These forms are required to be completed within 6 months of the Level 1 ICP, unless otherwise approved for extension by his/her PASA Examiner.
- Must show the ability to teach and demonstrate safely and consistently.

**PASA KITEBOARD or SNOWKITE INSTRUCTOR LEVEL 3**  
**(Can certify Level 1, 2 & 3 PASA Kiteboarders)**

- Must have completed the requirements for both PASA Instructor Levels 1 and 2.
- Must have kited in at least two different regions, states, or countries to show the ability to handle diversity and demands of different riding areas.
- Must have taught kiteboarding or snowkiting in at least one other school than their own to show the ability to handle the diversity and demands of teaching in different areas.
- Must submit for review 60 student feedback forms to PASA showing he/she has taught 60 students. These must be signed off by the PASA Training Review Board as safe and knowledgeable instruction.



## PASA EXAMINER

The PASA Examiner is a nationally recognized instructor that is capable of hosting instructor certification programs in various parts of the USA. This position demands leadership skills, adaptability and flexibility.

- Has Level 3 PASA Kiteboarder certification
- Has Level 3 PASA Instructor certification
- Trained 100 students and turned in the proper PASA forms for all students taught.
- Must have taught kiteboarding or snowkiting in at least **four** different regions. This shows the ability to handle the diversity and demands of teaching in different areas.
- Submits 2 letters of recommendation and references from the kiteboarding industry.
- Must have kited in at least **five** different regions, states, or countries to show ability to handle diversity and demands of different riding areas.
- Attends a PASA Examiner Seminar.
- Co-administers an ICP with another examiner.
- Must be willing to travel within their region.

## PASA MASTER INSTRUCTOR

PASA Master Instructor is the highest level of instructor with extensive experience in different parts of the USA and the world. A Master Instructor has extensive training experience with many students and situations.

- Has met the criteria as a PASA Examiner.
- Trained a minimum of 1000 students.
- Has taught 15 group clinics.
- Has taught kiteboarding or snowkiting in 15 different regions, states, or countries.
- Can teach advanced tricks to students.
- Has taught over 100 instructors
- Submits recommendations by four kite companies or industry groups.
- Has given two or more seminars to a large group.
- Participates in creating updates for educational organizations.
- Has or held a title in a local kiteboard association.



## CHAPTER 1

### Learning to Teach – Teaching to Learn

Teaching is more than imparting knowledge to another person. It is a teacher's responsibility to do everything they can to make sure their students receive and embrace that knowledge. People learn in many different ways. Some learn visually, some learn verbally, some learn experimentally. The instructor must be part psychologist and be able to read their students so they can impart information to them in a way that they can absorb it.

#### THE PROFESSIONAL INSTRUCTOR

A simple definition of a professional is someone who accepts payment for a service. This definition generally applies to kiteboarding or snowkiting instructors. When you hang your sign out looking for students you are – at least in the public view – a professional. With this designation come some expectations in the mind of your students as well as some moral and legal responsibilities to deliver as promised. Let's look at ourselves as professionals.

#### **Instructor Responsibilities:**

- Safe and Effective Instruction
- School Organization
- Communication
- Patience
- Liability

#### THE BREADTH AND REACH OF A PROFESSIONAL

A professional instructor has the responsibility to be as knowledgeable and up-to-date as possible. Your goal should be to offer the utmost expertise for your student's time and investment. When you extend the effort to become certified or re-certified you are accomplishing several things: You learn the latest techniques and teaching aids from a good ICP presenter as well as other instructors in the class. You receive a readily apparent check of your personal instruction skills. You minimize liability to



yourself and your school because you become part of a well-established professional network.

### **As a professional instructor, you must acquire the following skills:**

#### **Communication.**

All the knowledge in the world is useless if you can't communicate this knowledge.

#### **Patience.**

When you teach the same subject day after day, students ask the same questions, and students make the same mistakes, it can be frustrating. You must be able to continually nurture your students.

#### **Good Judgment.**

This means before monetary reward, before the urge to see results of your hard work, before the pleas of your students and before your own ego. You must be able to judge safe and unsafe situations and always keep the safety of your students as the #1 priority.

Communication, patience, and judgment, that's half the battle. We can add to this a constant striving for self-improvement and understanding. How about your off-duty habits? How effective will your preaching on the virtues of safety be if your free kiting involves death-defying look-at-me stunts? A good instructor must be observant and empathetic to detect student problems and offer effective solutions. Finally, an instructor must care about his/her students and their results.

### **WHAT IS A PROFESSIONAL INSTRUCTOR**

- |                                 |                                      |
|---------------------------------|--------------------------------------|
| *1. Able to communicate         | 11. Thoughtful                       |
| *2. Patient                     | 12. Free from distractions (focused) |
| *3. Safety conscious            | 13. Observant                        |
| *4. Positive                    | 14. Emphatic                         |
| 5. Knowledgeable                | 15. Caring                           |
| 6. Good example on and off-duty | 16. Punctual                         |
| 7. Open to Self-improvement     | 17. Persistent                       |
| 8. Sincere                      | 18. Humble                           |
| 9. Confident and calm           | 19. Enthusiastic!                    |



10. Disciplined and prepared

\*These **four** are your guiding lights.

## PROFESSIONALISM

What is meant by professionalism? Technically, a professional accepts payment for his services, but there are other legal and moral responsibilities to consider. The sport of kiteboarding and snowkiting involves risks, so part of your responsibility involves the assessment of conditions and making calls about rescheduling for wind and such. This is easier to do when the instructor and student are aware of the fact that their relationship is professional and every decision is based on a mutual acknowledgement that there is a common goal.

If your student accepts you as a professional, then it is easier to enforce reasonable standards, even strictly enforced standards. Kiteboarding and snowkiting students are often chomping at the bit to get out on the water or snow, but getting into the water or onto the board before mastering the kite will prove to be counter productive and add extra time to the process, compromising your effectiveness. Accepting lower than normal standards in order to appease an over-eager or overconfident student will hurt your professional relationship.

Try to direct a student's drive into a specific realization of a goal or objective for the lesson. An earnest student will never resent you for enforcing reasonable standards before moving on to the next learning block.

This is just one of the many challenges that are specific to kiteboarding and snowkiting. Over time, you may notice that there are certain personality types that will react predictably to some of the standards you will need to enforce. It's the responsibility of the professional instructor to accept your students as they are, complete with all their faults, while simultaneously trying to build their self-confidence, setting appropriate challenges, and the entire time controlling the atmosphere for learning.

A professional instructor must be straightforward and honest. Anything less than 100% sincerity is quickly picked up on by your students. If you try to bluff, they will immediately catch it and will lose confidence in you. Suddenly your job has become much more difficult. In the same way, if you appear unprepared, your students become apathetic and the end result is that your ability to effectively communicate is compromised.

Being an instructor demands a code of ethics, and requires image consciousness. Your attitudes, movements, and your general demeanor contribute a lot to your professional image. Even your behavior off duty can affect your role as an educator. Try to be



smooth and fluid in your motions, maintaining a calm demeanor. Avoid distracting speech patterns, and try to maintain a positive consistent good mood.

Every decision you make should be approached in a thoughtful and disciplined manner. If it's your nature to be on the extreme side, try to curb these temptations when it comes to dealing with your student, who may never reach your skill level. The idea is to always reason logically and accurately when making decisions that involve your student.

There is an old saying in aviation that really applies to kiteboarding and snowkiting. In it, learning to kiteboard/snowkite is compared to starting out with two buckets. The first bucket is your experience bucket, and it is empty. The other bucket is full of luck. The idea is to fill the experience bucket before the luck bucket runs dry! Think of yourself as your student's bucket of experience. Your student is paying you to learn from your experiences, acquired good judgment and knowledge. This will render their learning curve less steep, and make their learning experience more pleasant and less time and energy consuming.

You are failing as an instructor if you allow a student to partially learn an important skill before advancing to the next stage. Every step is built upon how solid a foundation is being laid, and a student who is not able to execute a simulated water start on land is unlikely to make efficient use of the first couple of hours in the water. This can be hazardous to your student in the future, also, since they may be faced with a situation that requires that they have perfected the skill in question. It is funny to hear that first windsurfing experience story repeated after so many years and in so many different languages. "I made it out really far before realizing that I couldn't turn around and go the other way, so I had to paddle that &\*^%\$! thing in!" So many belong to this club, it is your responsibility as an instructor to keep this story out of our sports!

And lastly, as a professional instructor, you have the responsibility to be completely familiar with all current certification requirements and rating requirements. You also must have a detailed, organized series of lesson plans that lists each lesson's objective and the techniques used to achieve that goal.

While most people react predictably to stress and are easy to deal with, some people have a peculiar reaction to stress. A few inappropriate reactions that are commonly related to stress include: drastic changes in emotion, unreasonable anger at themselves, over cooperation, and painstaking self-control to the point that they may block you out. Learn to recognize these behavior patterns and diagnose their source as quickly as possible. Fear will always be present and won't be debilitating if you recognize it for what it is and deal with it directly.

## **THE COMMUNICATION PROCESS**



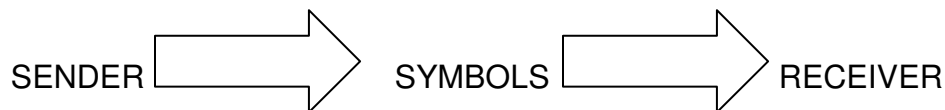
There has been a tremendous amount of research which aims at uncovering the mysteries of how we communicate. Maslow, the behavioral psychologist, gave us his pyramid in order to explain the nature of human needs that must be satisfied in order to be able to influence behavior, which is a primary responsibility to every instructor.

The top of Maslow’s pyramid is self-fulfillment, which can only happen when all other needs are adequately satisfied. The biggest challenge to an instructor is to fulfill all of the lower levels of learning, making sure that each skill builds upon information that has already been learned, in order to get your student to the point where they are realizing their own potentials in kiteboarding and snowkiting, embracing the idea that they can now, on their own, continue to develop their skills safely, and approach the expert level maneuvers with creativity and confidence.

The most rewarding and worthwhile accomplishment is also the instructor’s biggest challenge...to get the student to the top of the learning hierarchy. Before an educator can tackle this challenge, he needs to understand the entire process of communication and why it sometimes misfires.

In all forms of communication we have three dynamically interrelated elements. These consist of the sender, or instructor, the symbols, or methodology, and the receiver, or student.

Source ----- Symbols ----- Receiver  
 Instructor ----- Teaching method + symbols ----- Receiver



We know that communication takes place when this system is complete, but in order to measure how effective this communication process has been, we need to measure how closely the idea transmitted fits in with the idea that was received.

For example, you may be teaching your student how to self launch a foil kite during the land lesson, and you employ techniques that wouldn’t apply to an inflatable kite. In your student’s mind, unfortunately, this is the way to launch a kite in kiteboarding and snowkiting, and when they try to apply what you taught them to an inflatable kite, they are in big trouble! Your message was broadcast with the intent that



it addresses foils only, but *without specifically clarifying* this to your student, he receives the information and applies it to all situations. Not effective communication, since it hasn't led to strong launching skills as intended, and your student's behavior has still not improved. The instructor must now put these concepts together.

There are many ways that you can keep yourself effective in your teaching. Probably the most important is to stay focused on being *positive* while you deliver your message. Staying positive will keep your students motivated and will help them build their confidence in you. A unique challenge to the instructor, especially as the sport is still maturing, is *staying up to date on the industry*. Being on the inside lends credibility to what you say and the ability to discuss with confidence the benefits and risks involved with the different choices of equipment will go a long way in your relationship with your student. Be aware that bashing a manufacturer or speaking negatively about any riding style or preference will possibly detract from the respect your student has toward you, especially if he feels that you have a selfish interest at stake. Give advice but always stay positive.

Explain your own personal preferences as just that, personal, and let your student develop their own style.

Stay effective in your communication by picking the right symbols for your student. Take into account your *student's background, experience, and education*. For example, there are certain tools that work really well for teaching a windsurfer. Likewise, snowboarders respond very well to certain analogies, as do wakeboarders or surfers. You can keep the attention of these groupings of student backgrounds by using a customized approach to choosing your symbols so they hit their targets.

This is never easy, especially considering the diversity of your students. The first barrier you are likely to come across, as an instructor is the language barrier. Even with students who are fluent in your native tongue, if you don't share a common core of experience, then your student may not be able to connect with you.

This helps out the instructor if he has a broad background in board sports or air sports because it increases the core group of experiences that he/she can draw from and make correlations with. Be careful when using correlations. When choosing how to phrase an idea or concept, be sure your receiver is able to connect your ideas to their own experiences. Avoid the overuse of abstractions and the overuse of correlations because it is easy to lose the attention of your student unless you are using concrete words and concrete ideas. Choosing concrete words gives you more control over the mind of your student. *Watch out for that glazed-over look in your receiver's eyes.*

If you are unsure that a student understands a concept, be aware that simply asking will almost always be met with a nod (especially if your student's primary language is not yours). Your students want you to be happy with their progress, and the temptation is to say what they think you want to hear. This situation does not indicate that your choice of words and symbols produced any marked change in understanding or behavior. Be creative in determining your student's level of comprehension. Abstractions are best for tying together large areas of experience. If your student is



familiar with driving a stick shift, then the analogy comparing the gears of a racecar to the zones of the power window will hit their target. If your student drives an automatic, your symbols will miss their mark.

## THREE METHODS OF COMMUNICATION

There are three main categories of teaching methods that a kiteboarding or snowkiting instructor is likely to employ. Each has its own utility and practicality, depending on which level of the training program your student has progressed to. These methods are the **Lecture, Guided Discussion and Demonstration Performance**. At this point it should again be noted that with each of these methods, an instructor always needs to stay positive in their delivery. This means that before an instructor introduces the idea of danger or the importance of safety and emergency protocol, they will first approach the most positive aspects of kiteboarding and snowkiting and how much fun the process can be if everything goes well. The very first few minutes of the first lesson will set the stage for the hours and hours that will follow. A big mistake would be to focus on the potential for injury when attempting tricks or trying to jump on land. These topics will eventually surface, but before discussing these things there are more important challenges for you to face. This principle also applies to the specific task of teaching a pre-flight of the kite, lines, harness, etc... It is possible to be too exhaustive in this area. While it is essential that you teach your student everything they need to know about what they are trying to ascertain during the pre-flight, it is not in your best interest to emphasize on the potential for disastrous equipment failures, or equipment shortcomings. Remember to always stay positive in all of your delivery.

## LECTURE METHOD

A lecture is primarily used for introducing new material. You may not consider your ground school as a lecture, but it is, because in it you introduce the main points of instruction and show the relationship between understanding the theory in addition to practicing the maneuvers. Later in your lesson program you will be forced to use another teaching method but you should know and understand the benefits and shortcomings of lecturing.

A teaching lectures biggest advantage is that allows you to present many ideas in a short period of time. Be careful not to approach your ground school without first planning where you want to lead your student. It would be nice to unload your brain and all of your knowledge at this time, but new students are especially prone to a situation known as "**information overload**" where they can no longer accept new information. If you organize your ideas in a logical manner, this time spent lecturing is the most economical way to teach. The big problem with this method is that you don't get a direct reaction in words or actions from your students. If you ask a group collectively if they understand, only the ones who understand respond, leaving others behind. Because of this, you need to learn the art of detecting the subtle responses from your students,



reactions like facial expressions and lack of interest that are indicators that your student has lost you, and then adjust the lesson accordingly.

When preparing a lecture, you must first decide the objective or the desired outcome of your presentation. What are the specific things you want your student to know at the end of your lecture? Then you have to organize your material, but this doesn't mean memorizing a speech. A lecture is most useful when it is delivered extemporaneously from a written outline, because the exact words you use to explain your ideas should be chosen at the moment of delivery, so it suits the moment.

When delivering your ground school, you should use simple words that help to shape concrete ideas. Kiteboarding and snowkiting have a lingo that students have not been exposed to, so explain the meanings of terms as you use them. You can make the experience more fun if you can use slang or colloquialisms, but be careful of going too far. You would never want to say something that would detract from your personal dignity, or the dignity of your students.

Remember that everything you say and do will be evaluated by the person who is paying you.

This doesn't mean that you should approach your ground school as a formal lecture. In a formal lecture there is no active student participation, aside from taking notes. A ground school should be approached as an informal lecture and you should encourage your student to ask questions.

## **GUIDED DISCUSSION METHOD**

Another teaching method that you can employ during your ground school is known as the Guided Discussion Method. This is sort of the reverse of the lecture, in that you are not presenting new ideas, but are using questions to guide the discussion and to stimulate your students.

When preparing these questions, many times on the spot, it's important to remember that the purpose here is for discussion and not just answers. Your leadoff question should start with How or Why, such as " How do snowboarding skills relate to kiteboarding or snowkiting", or "Where does the wind come from", rather than questions that begin with what, when, or does. Avoid questions that require short, categorized answers, since they don't often foster discussion.

## **TYPES OF QUESTIONS**

A question can be overheard, addressed to the entire group, or directed and addressed to a single student with the expectation of a response. A rhetorical question is used to stimulate thought, but is answered by the instructor himself. This is normally used in a lecture, not in a guided discussion. Another type of question is called a Reverse Question. This is where the instructor answers a student's question by



redirecting the question for the student to answer. For example, a student may ask you "How long will it take me to learn to kiteboard/snowkite", and you could redirect the question as "How long did it take you to learn to ride a bike?" Instead of answering "It depends ...". You can also do this by addressing the entire group with the reversal, such as "How long did it take for each of you to ride a bike?" instead of the generic answer of "it's different for each person."

When formulating a question you should try to make sure that it is effective toward your goal. Each question should be clear and worded to a specific purpose. It should contain a single idea and most importantly, it needs to relate to information that you have previously taught.

After the discussion, you summarize. Summary is one of the instructor's most effective tools if it's done properly and occurs immediately after the discussion. A good interim summary will consolidate what your students learned, and should emphasize how much they know while pointing at any aspects they may have missed. It should be noted at this time that your desired outcome is to produce students who can exchange their knowledge with each other, so a good instructor will encourage student participation during the summary period. On the other hand, a student with no background in a subject should never need to discuss it, since it is common experience that will lay the foundation for your summary. Keep this in mind as you might deal with the huge push at the windsurfing community as they take kiteboarding / snowkiting lessons. Not everyone has windsurfed!

### WHAT MAKES YOUR STUDENT LEARN A NEW SKILL

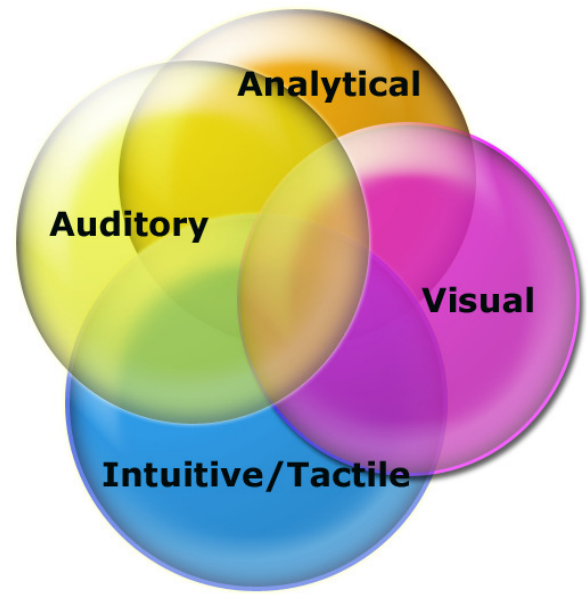
This graphic shows different ways your students might learn the skills /knowledge you teach them.

**Auditory** learners absorb knowledge by listening.

**Analytical** learners analyze the information they receive and translate it into acquiring the new skill.

**Visual** learners watch you perform or demonstrate a new skill and can repeat it.

**Intuitive/Tactile\*** learners will soak up all the information you give them, but until they actually get to "feel" the kite in their hands they will not understand how it works. \* This kind of learning can also be called 'kinesthetic'.



Most students are differing mixtures of several qualities in this graphic.



## **DEMONSTRATION / PERFORMANCE METHOD**

The demonstration / performance method of instruction is how an instructor should approach both the land lessons and the water lessons.

**But all types of students will respond to the demonstration/performance method,** and it is where you will spend approximately 80% of your time with your student.

The demonstration/performance method consists of essential steps. Let's look at how this method is used in a situation where you are teaching your student how to launch and land a kite.

The first step is to explain the task at hand to your student, and explain thoroughly enough so that your student can repeat it back to you in his own words the objective of the lesson plan.

In the second step you demonstrate launching the kite employing the techniques you just described. Then, while you launch the kite again, you have the student tell you what they are going to do before they attempt it. This way you can make sure any misunderstanding is cleared up, and it gives you two opportunities to show the new skill.

At the next step, the student performance phase takes place. You explained it and launched it. Then he explained it back to you and you launched it again. Now he gets to try, and you will provide constant supervision during this practice time.

The last step of the process is the critique and evaluation phase. The entire process looks something like this:

Instructor Explains ----- Instructor Launches Kite  
Student Explains ----- Instructor Launches Kite  
Student Explains ----- Student Launches Kite  
Student Launches Kite ----- Instructor Evaluation

## **CRITIQUE AND EVALUATION**

The ability to analyze, appraise, and judge your students' progress is one of the most important instructor skills to master. A student will stay motivated if you keep them informed of his progress; this will minimize frustrations especially if you can refine basic skills so that the later lessons go well. As an instructor, your student looks to you for guidance, suggestions for improvement, and encouragement. Your critique of a student's performance should not be viewed as a grading technique. It should consider



the good along with the bad, the whole in terms of its parts, and the parts in relation to each other. Your main purpose is improvement, and to provide direction and guidance to improvement.

Below is a list of things to consider when developing your evaluation skills as a kiteboarding or snowkiting instructor.

**Objectivity-** we all have personal opinions, likes, dislikes, and biases, especially in light of the vast array of kites and boards and the different styles that relate to each. But your evaluation of your student should not reflect your personal opinions, and should focus on their performance instead. Base your critique on what your student did and not what they could have done.

**Flexibility-** every situation is a sum of many variables, so your evaluation techniques must be able to fit the requirements of the moment. You need to be able to fit your tone of voice, your techniques, and the content of your evaluation to the specific occasion and to each specific student. Some students respond very well to a strict and regimented instructor, where others will do better under the tutelage of a laid-back type personality.

**Acceptability-** Before a student will accept what you are trying to teach them, they must accept you personally as an instructor. This is explained in detail in the chapter dealing with professionalism. They must be confident in your qualifications, teaching ability, sincerity, competence, and authority. You won't have an acceptable critique process if, for example, the standards you insist on are beyond your own personal ability as an instructor.

**Comprehensiveness-** you must address the exact individual skills in your evaluation, but this doesn't necessarily mean that your critique should be especially long or treat every aspect in detail. You may decide instead to focus on a few major points or a number of minor points, and you need to focus on strengths as well as weaknesses.

**Constructiveness-** A critique should be tailored to lead you closer to your lesson goal. It is pointless, unless a student profits from it. Praising your student strictly for the sake of praise is of no value to your evaluation process, or your student. It is not enough to simply identify a fault or weakness, either. Identify a fault without offering explanation is a sure road to frustration.

**Thoughtfulness-** Consider the feelings of your student and how closely they relate to their self-image. Each individual has inherent dignity and you should never minimize a person's importance. You should never show anger toward your student, or ridicule them in front of others.



**Specific-** Your student should have no doubt after your evaluation about what they did right and what they did wrong, and specifically what they need to do to improve. Here, again, we see how important it is to express ideas with firmness and in concrete terms.

In addition to the evaluation of major skills, you must somehow be able to evaluate how well your student is grasping the more general concepts. The most practical way that you can do this is by asking questions individually to your students, known as oral quizzing. *Oral quizzing* can include questions that are fact based and deal with memory and recall, such as "What are the steps involved in the pre-flight check?" Or it could be as a thought question, such as "Explain to me where and how to launch the kite". Thought questions will help you to evaluate your student more deeply because they require your student to analyze the layout and process to solve the question, and make a conclusion.

When you use oral quizzing as an evaluation technique, you are allowing active student participation in the evaluation process, and this helps your student to stay motivated. You also get a chance to determine how well you have been doing as an instructor, while identifying points that need more emphasis.

When you formulate your questions, keep in mind the following characteristics of a good question: A good question has only one answer and applies directly to the subject being taught. It should be brief and concise, clear and definite. It should confer on one main idea instead of a combination of ideas. For example, a good question will focus on a single who, what, where, when, how, or why. It will also be difficult and present a challenge to your student, stretching their level of understanding, while reviewing what has been covered.

A good time to open up the floor for your students to ask you questions is following your ground school. When answering your students' questions, be very careful that you are sure that you understand them 100%. It can get boring and frustrating answering the same questions day after day, but you must always display interest in your students' questions.

Occasionally, you will come across a student with a vast background in a particular field, who will ask a question that is too advanced for where the rest of the group is.

When this happens, the best course of action is to explain that the question is good and pertinent, but that answering it at that moment would unacceptably complicate the learning task. You can then advise your student to reintroduce the question at a later time or meet you after class. The main point here is that you are in control of the direction that the topic of conversation moves, and although it may be fun for your student to discuss how Bernoulli's principle applies to the shape of a foil kite, it could detract from your ultimate lesson goal.

And of course there is always the question that is asked that you can't answer. When this happens, don't wing it! Promise to look it up and answer it later, but



remember that you risk losing credibility if your student happens to be a physics professor and he calls you on your explanation. One of the biggest problems new instructors face is that they tend to **talk too much**, and it's easy to talk yourself into trouble, especially if you are new to the subject material.

## WRITTEN TEST

Another type of testing procedure that you may find very useful in determining the effectiveness of your training program is the written test. It is recommended that you include a written test into your program because of the uniform application and the objective way of determining how good a test is. Writing a written test, as anyone who has done it can tell you, is very, very challenging. There are specific characteristics that a test must possess.

A written test must be reliable in that it yields consistent results. This means that over time, you can make a direct correlation between a student's grade on the test and their level of comprehension of the material. A written test holds validity when it measures what it is supposed to measure.

For example, asking a student to solve a vector equation with a kiteboarding or snowkiting application would be valid for a student of physics, but would not measure how much your student has comprehended regarding the sport of kiteboarding or snowkiting. A good test has usability, in terms of how easy it is to administer, read, understand, and most importantly for the instructor, to grade. Finally, a good written test will be comprehensive in that it will sample liberally from the subject that is being measured.

The best time to administer the written test is as a student is approaching a milestone in the certification process. A program that has many levels may also choose to have written tests that go with each level or one large test administered toward the end of the program, or no written tests at all. A good instructor can ascertain a student's level of comprehension using oral quizzing alone, but there are additional benefits to the written test that extend beyond the individual student and can compliment your lesson program in the future.

Keeping student logs is always recommended for the benefit of the student as well as your own over time. After reviewing many test results, you will be able to fine-tune your program by focusing on the most commonly missed questions or concepts and addressing them with greater emphasis during the lesson progression. It may also give you the insight on where your own personal weaknesses are as an instructor so you can focus on this subject matter with more diligence.



## TYPES OF TESTS

There are many types of written tests, each with its own benefits and drawbacks. The best course of action therefore, after understanding these choices, is to use a combination of different test types in each written test.

A supply-type test will provide a perfect avenue to evaluate your students, as long as your student has the ability to express his ideas on paper. It's easy to assume, even with a child, that your student can read and write, but eventually, if you teach long enough, you will come up with a student with poor reading or writing skills. It's likely that your student is sensitive about this, so use discretion in this situation. Allow this student to answer the questions verbally after you read it out to them. In a supply type question, a student is forced to respond in a word, sentence, or paragraph, and so it requires a student to organize their thoughts and ideas. This detracts from the objectivity of the grading process. Not only do these questions take longer to take and grade, two instructors may grade them differently. Because of this, it is best to limit these types of questions on your test to just a few.

The other type of written test questions, which should form the main body of your test, is the selection type questions. These are very objective and easy to grade, and allow for uniform comparisons within the same class, no matter which instructor administers the test. In this type of test, a student is provided two or more alternatives from which to select.

This gives rise to the issue of a student who guesses correctly. When this happens it is almost impossible to detect without reviewing each question, including the ones that were answered correctly. This could mean that your student is progressing with false impressions, and once again bears to light how important the wording of the question, and the choices, are.

A true false test is best for testing facts and details, but the probability of the student guessing correctly is 50%, which is unacceptably high to allow you to weigh too much of the test on these type questions. As with the supply type questions you should limit the true false question to just a few.

A matching test reduces the probability of guessing correctly. These questions are used to measure the ability of your student to recognize relationships between terms and ideas, parts, words, phrases, or symbols. The best type of test question for a kiteboarding or snowkiting written test is probably the multiple-choice test. This test is most useful because not only does it measure student achievement, from the acquisition of facts to understanding of the material, it has the ability to force the student to apply what has been learned to specific situations.



The biggest difficulty in writing this type of test is that it is very difficult to come up with the bogus choices, especially as the level of testing the comprehension goes up. It's simply hard to come up with 3 plausible alternatives to the correct answer, with each alternative worded at an equal length. Don't allow the correct answer to be the longest.

## CHAPTER 2

### The Basis of Learning & How People Learn

How do people learn and how do we facilitate this learning? In this part we will explore the process that develops a new physical skill as well as what goes on in the mind of students when the “light bulb” lights up.

#### HOW WE LEARN

In order for anyone to learn anything efficiently, three criteria must be met.

They are:

- The person must be **motivated** to learn.
- The person must see the **goal**.
- The learning must build on **previous knowledge**.

Let us understand each of these points.

#### MOTIVATION

Being motivated to learn means having a strong desire to acquire the knowledge or skill being taught. The best motivators are providing an overview of the steps or goals of the course or showing the students a training film so they understand how they are going to get to the point of riding on a board.

Other motivations for learning to kiteboard are the challenge and satisfaction of learning something new, the exhilaration of overcoming fears, the visible rewards of achievement and the sense of belonging to an elite group. How many people are kiteboarding or snowkiting in your area? An instructor should be aware of all these factors – both good and bad – to help maintain a student’s motivation.

There will be times when you are faced with a student whose source of motivation is hidden. There is no way to progress with a student who completely lacks any motivation, and it can be difficult with a student who has hidden or inauthentic



motivation (as in some group members who may or may not want to be there), but the best thing we have going for us is a vast majority of positive motivation.

**FUN** is the primary motivator, and the idea of having fun is the dominating force that will guide you and govern the progress of your students. Lucky!

Positive motivators like having fun offer promise of achievement or reward. There are less desirable types of motivators that instructors should be aware of. Negative motivators, like “Don’t do it this way or else...” cause a student to react with fear and anxiety, and often lead to stagnation in progression. Slumps in motivation and slumps in learning go hand in hand, so remember to always stay focused on positive rewards. The best way to control the level of motivation of your students is to tie the purpose of everything you teach to a goal. For motor skills, this should be the actual accomplishment of a specific task, from launching a trainer to returning to where you are launching. Keep every lesson enjoyable. Smiling can be a great motivator. If frustration begins to affect your student, get him smiling and before long you will be on the right path again.

## **GOALS**

Instructors should use goal setting in two essential manners. First they should inform the student of the general progression of the kite training in terms of skills to be learned and the broad time frame in which the lessons will progress. It often helps here to let the students talk.

Secondly, each lesson or specific skill to be learned should be prefaced with an outline of what will take place with the goal clearly stated. **Use a lesson plan.** Students must be constantly reminded of what the immediate goal is.

## **PREVIOUS KNOWLEDGE**

Knowledge exists within a framework. It must be related to something that has been learned before.

If we have no knowledge in a given field, our learning normally will progress more slowly. If we already have related knowledge we learn faster.

You will get students who may have many experiences practicing activities requiring three-dimensional spatial judgment. You will get others who have no such experience. Out of necessity, their learning will progress at a different rate because they have different foundations on which to build. Part of an instructor’s job is to evaluate students for these very factors and utilize the most effective instructional techniques for each student.

We should think of the acquisition of knowledge or skills as a building. We lay a solid structure of fundamentals down first then we build a strong building block by block. The higher we build the more complex, subtly, or elaborate the structure may be. We



cannot expect a building to be solid if we start with a weak foundation. We cannot expect a student to learn effectively, thoroughly, or safely if we don't first build a foundation of solid basic skills then progress block by learning block to create the consummate kiteboarder. Your lesson outline and progression onsite should follow this controlled and careful presentation of new skills.

Summary

Learning Principles to remember:

In order for learning to take place, a student should:

- Be motivated and prepared
- See the intended goal
- Build on previous knowledge in small steps.

**LEARNING ZONES**

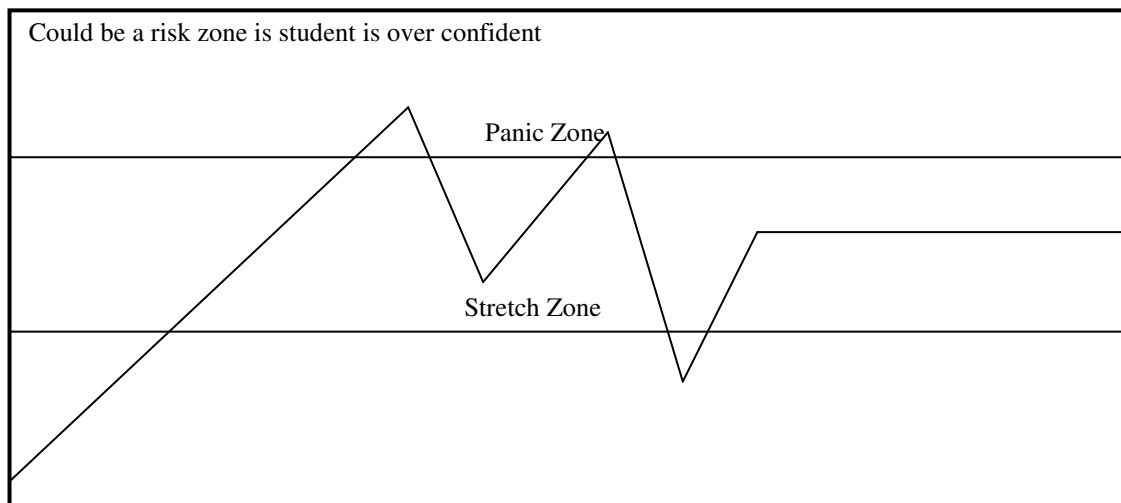
A clear way to view a lesson structure is to imagine three zones. We call them the comfort zone, the stretch zone, and the panic zone.

*Comfort zone* – That's where everything they do is familiar. They are merely repeating old experiences. They are comfortable.

*Stretch zone* – That's where a new item is added to their practice. As long as the addition is a minor step, the stress level is controllable and they are s-t-r-e-t-c-h-i-n-g their skill level to encompass new things they are learning.

*Panic zone* – That's where we have gone too far. We proverbially bit off more than we can chew. We are overwhelmed and thinking of survival. We are acting on pure fight or flight instinct. We are learning no useful behavior.

As an instructor, it is your job to learn the borders of each of your students learning zones. You can do this fairly readily by asking them pertinent questions such as "How do you feel?" and carefully noting the nature of their response and observing their body language.





Comfort Zone

Some students may need extra encouragement in this zone

It is important to keep your students practicing in the comfort zone until they perfect a skill, then move into the stretch zone to add a new skill. This new skill is repeated until it becomes part of the comfort zone, then another new skill is added from the stretch zone. In this manner, networks of complex skills are learned step by step.

In the comfort zone, a student is working on skills that they already possess.

While it is good to practice the skills to perfection, it will hurt your ultimate goal if your student spends too much time practicing without moving on to the next step. In the same way, there would be no need to dwell on an area that your student is doing well in; it's best to move along as quickly as is reasonable.

The stretch zone is where you should aim for with your students. In this zone of learning, your student is pushing his/her envelope under your guidance and supervision. He/she is alert and has a good grasp of everything surrounding him/her. We call this situational awareness and it is sort of like knowing what surrounds you without having to look at every individual object. This is really important to the kiteboarder when things start getting crowded at the local site. You should always know who is coming from what direction while concentrating on your own direction. The upper end of the stretch zone, or the area to the right, will gain you the most rapid improvement with your student, but be careful!

The panic zone will completely halt the learning process. In this zone your student is unable to process any information whatsoever. Most people would call this "freezing up", and it almost always involves some form of intense fear or anxiety, most likely fear of getting hurt. A dangerous situation that requires a quick correction will be met with no attempt to make a correction at all. At this point, you need to stop or if possible, slow down your pace and let your student become completely comfortable with the current lesson before moving on. This situation seems to surface the most often right before getting into the water. Make sure your student is not overwhelmed by the power of the kite before moving on.

Fortunately, this is quite rare if you know how to prevent it. Most of the time, individuals will react immediately when faced with an emergency situation, and this reaction is predictably triggered from within their own experience. This is why it is so vital that every lesson program includes emergency procedures and includes actual training for emergencies. Any lifeguard who has saved a drowning person would credit their training, so be ready for anything by being prepared and properly equipped.



By all means, avoid the panic zone since not only does learning cease in this zone but a student actually regresses, because fear contracts the stretch zone and may even adversely affect practice in the comfort zone.

Here is a “How To” Interpretation of the graphic on page 31:

|                          |  |
|--------------------------|--|
| Overconfident student    | -> Safely challenge (i.e. to perform a skill), keep busy |
| Bored student            | -> Safely Challenge, (keep interested, occupied)         |
| Student is / gets afraid | -> Make comfortable (i.e. step back one learning step)   |
| Panicked student         | -> Stop, reevaluate, step <b>way</b> back if possible... |

## FOUR LEVELS OF LEARNING

As we already mentioned earlier in this chapter, we know that learning has taken place when the communication process results in a change of behavior for your student. We can now amend our model to be more complete.

**Learning = Sender + Symbols + Student which yields a change in behavior.**

We can concentrate on the change of behavior as its own field of study, because there are levels of learning, each one corresponding to how strongly the idea or concept that led to the change was grasped.

- I. Rote
- II. Understanding
- III. Application
- IV. Correlation

### **Rote**

The first of the four levels is called **Rote**. Rote has taken place when your student can cite back facts to you. It's easy to remember doing this in grade school to subjects like history. You can memorize the date the battle took place, but it doesn't explain the war. And years later, it has been completely deleted from your memory. Also with mathematics and physics, plugging numbers into formulas and coming up with



the correct answer without grasping the whole meaning of the formula. Although we consider this as a level of learning, your student still has a long way to go.

### **Understanding**

The next level is referred to as **understanding**. At this stage, the student comprehends the skill being taught, and they can explain it back to you in their own terms, but they are not yet ready to apply the theory to their own kiteboarding or snowkiting. Explaining the dynamics of getting the kite to hover at the side of the window will be met with your student responding, "Oh, ok, I get it."

### **Application**

The next level is called **application**, and this is where most instructors will stop teaching. Don't stop here!

### **Correlation**

The final level is **correlation**, and it involves your student acquiring insight.

Here is an example of the four levels of learning taking place in the context of an actual lesson.

Your student has experience in sailing and surfing. You tell him "You must lean back and dig in your rail if you want to go upwind, and get your butt close to the water."

"Okay", he says, "...butt close to water, dig the rail. Got it!" This is the **rote** level of learning. His butt has never been close to water and his concept of digging in the rail is still a foreign sensation. But he heard you, and listened well enough to repeat what you had told him.

At this point you bring up his sailing experience, and he begins to see the relationship between what he knows and what he is learning, such as tacking across the wind. The student explains this back to you. Here we have **understanding**.

Out on the water, however, things aren't coming as quickly. Your student obviously took in what you said, but continues to struggle with the execution. Eventually, things start coming together and the light bulb flashes over his head. Success! He does it, and now we have the **application** level of learning. It is easy to see how many instructors will stop teaching at this point and begin to move on to the next learning block, but the job has not yet been completed because your student will be inconsistent in his/her execution until one final level occurs.

Out on the water, without any prompting from you, your student realizes that he must coordinate how much power he generates with the positioning of the kite with the amount of force he can use to dig the rail of his board. He thinks back on his first land lesson and remembers the exercise where he was asked to generate power through airspeed to power up the kite. What he has done essentially on his own is he has associated things that he learned in the first learning block with things you recently introduced. We call this **correlation**, and it involves your student acquiring insight.



## INSIGHT

Insight occurs when associated perceptions are grouped into meaningful wholes. This is when we “see the light”. It is the job of the INSTRUCTOR to evoke these insights and teach the relationships of the perceptions as they occur. This can be a very enjoyable experience as an instructor, because it is most often accompanied by physical indicators that your student is learning, “Oh, I get it!” and “A-HA!” are some of the more typical exclamations. Even after the lesson has been learned, the instructor should promote the development of additional insights, all the while doing so in a safe environment.

Fear is a double-edged sword. It serves a useful purpose in our lives, but sometimes with a student, if allowed to go unchecked, it can approach levels that are debilitating to the learning curve. Fear, or the element of threat, narrows the perceptual field, and the resulting anxiety limits a person’s ability to learn from their perceptions.

By perception, we refer here to more than what we pick up through the five senses. Perception is when we assign meaning to what you are doing and experiencing, and so perception is the basis to all learning.

## THE CURVE OF REMEMBERING

We acquire new skills both with a mental and physical process. We all remember learning to perform math operations with our brain and learning to drive a car using our senses and physical coordination. Kiteboarding and snowkiting require a bit of both. We use our brain to exercise judgment and make decisions while our body performs the necessary controls, often without conscious thought.

We are intimately familiar with our mental memory, but many of us are not aware that a muscle memory is also occurring when we perform a task. A guitar player, for example, would not be able to play smoothly if he or she had to think about the placement of each finger to form a chord. The muscles remember how to position the fingers at the appropriate time.

It is the repetition of a skill that develops muscle memory. This is as important for kiting as it is for making music. *Repetition* and *review* are the twin pillars on which we build our basic skills.

Of course if we practice one item forever we don’t have time to add any new material. For practical reasons, we introduce the *Curve of Remembering*, which researchers have found to be the process providing the most retention with the minimum repetition for the average person.

If we acquire a skill or bit of knowledge with 100% retention, we may be down to 20% proficiency after 24 hours. Then, if we relearn the item back up to 100% our loss of ability drops off much more slowly. We will be down to 20% after 7 days. If within that time, we repeat our practice and bump back to 100%, our loss of information



continues to be slower and is back down to 20% only after 28 days as shown. We can repeat this process for longer and longer retention.

We should be aware of how a physical skill or bit of information deteriorates more slowly with strategic repetition and review. Use this figure to tailor your lessons so that students not only learn the important items but also retain them long after they have progressed to kiteboard or snowkite expertly while you work with a new set of students at the training site.

## **AUTOMATIC PROCESSING**

Have you noticed yourself driving a familiar stretch of road while you were thinking of something miles away? You were in automatic processing mode whereby the senses and responses were functioning without any conscious effort. This is the ideal state for performing skills since this leaves the conscious mind free to assess the situation and make judgments.

Naturally, the beginning student will not be operating with automatic processing, but will be using conscious processing, which requires thinking about each control step or input. His or her controls will be jerky and often of the wrong magnitude. Part of the goal of your instruction program should be to develop automatic processing in your students.

How do we develop automatic processing? Practice and more practice. However, mere repetition is not necessarily effective, unless it is consistent and focused. By consistent we mean repeating the same elements of the skill to be learned in the same order and as much as possible in the same conditions.

For example, if we are teaching water re-launching, repetition from the same location with the same conditions and the same kite will lead to automatic processing the quickest.

Focus is concentration by the student. Curiously, it has been noted that if a student focuses on the control movements, he or she will not develop automatic processing readily. Rather, the focus should be on the position of the kite and the feeling or sensation of the control bar.

Interestingly, such focusing on the sensation of a correct flight rather than specific controls ties in with the imaging exercises in the next chapter. Furthermore, the visual direction we emphasize in that chapter reinforces this need to focus on the overall picture rather than the details of each control action.

Automatic processing is what every student must develop to adequately perform a motor skill. As instructors, we must understand this matter and tailor our lessons to enhance the acquisition of this process.

## **LEARNING**



If the main characteristic of learning is that it evokes a change in behavior, then what are some of the elements that are involved in this process?

As an instructor, you will be evaluating your students on physical and overt characteristics, like when you present a physical task and then evaluate your student's performance. There are also attitudinal and psychological characteristics to look for, like the insights we just discussed, and more acute perceptions, like the linking of one experience to another common experience. There are also verbal elements involved, such as kiteboarding and snowkiting slang and lingo, and conceptual elements, like the relationship of lift and drag.

We are dealing with the ability of our student to grasp what we want them to perceive, while dealing with all of the complications of the emotions that go hand in hand with learning something that is so demanding physically and mentally. There is also incidental learning, for example the understanding of weather systems that is required to be able to predict the local winds.

Learning, as a field of study, has given rise to a set of laws that you must fully grasp in order to be an effective communicator.

## THE SIX LAWS OF LEARNING

These laws are not like laws of physics and mathematics because they can't be properly evaluated scientifically, but they do directly apply to the learning process and will help you to develop personal insight into the ways in which you can be a more effective educator.

1. **The Law of Readiness.** This law addresses what we previously talked about concerning motivation and slumps in learning. Basically, a student who is ready to be a kiteboarder or snowkiter, (or INSTRUCTOR), will make more progress than if he had no motivation to kiteboard or snowkite. Because of this, working with groups where motivation levels vary will be a unique challenge, as the more motivated students will progress more quickly.
2. **The Law of Effect.** This law relates to what was discussed previously concerning praise and a person's tendency to repeat behaviors that produce pleasant results. It concerns the emotional reaction of the receiver. Learning is facilitated by pleasant and satisfying feelings, and weakened when associated with fear or any other unpleasant feeling.
3. **The Law of Primacy.** This law concerns itself with the idea that the things that are learned first will oftentimes create an impression that will solidify. This is why it is so important to not allow bad habits to continue throughout the process. These bad habits will be almost unshakable because of this law, so make sure that every minimum standard is being enforced from the beginning.



4. **The Law of Exercise.** This is best summed up in the old saying “Practice makes perfect”. The things that are most often repeated are best remembered and performed. That is why every training program’s basis should consist of supervised practice of maneuvers, to the point of near perfection before moving on to the next learning block.
5. **The Law of Intensity.** This is best summed up in the old saying “There is no substitute for experience”. In order to teach your student, you must get in the water! Books can teach you many things, but compared to the level of excitement and drama that occurs during the water lessons, books can be considered routine and boring. A real experience will teach you more than a hypothetical experience.
6. **The Law of Recency.** This law concerns the idea that the things most recently taught will be best remembered by your students. This is of particular importance to the INSTRUCTOR because of the progressive nature of the learning process. It will help you determine in which order you decide to progress with your student from one idea to the next.

## FORGETTING

When you propose a goal to a student, and your student executes the maneuver to your approval, you give the student what is called praise or positive feedback. Praise greatly helps your students to remember what they have just learned, as we just discussed with the Law of Effect. It provokes a pleasurable experience, and pleasurable experiences are likely to be repeated.

Here again we see the importance of staying positive as an instructor. Even when your criticism is intended to only help your student’s progress, if he interprets your input as negative, frustration will quickly follow. If anything, sandwich your criticism between two areas where your student did well.

This probably sounds like the B.F. Skinner school of Behaviorism and Pavlov, but understanding how praise is a useful tool in remembering is essential to the INSTRUCTOR. But what about the dog that doesn’t respond to Pavlov’s conditioning?

There are exceptions to every rule, and just because a student executes a move perfectly on Saturday, this is no prediction to his performance on Sunday. What allows us to forget how to do something, and how is this related to learning?

Obviously, as you may well have figured out by now, forgetting is related to the four levels of learning in that the higher the level, the less likely that the information or skill will be forgotten, even after many, many years. That’s why kiteboarding and snowkiting will join many other pursuits in its inclusion of things that are “Like learning to ride a bike”.

There are three main theories of forgetting and they are listed below, along with specific kiteboarding or snowkiting correlations.



1. **The Theory of Disuse.** This theory states that over time, information is forgotten. For this reason, you should encourage your students to not allow long intervals between lessons. It is best to engage in intense training over short time periods until the skills are honed in and become second nature. This theory generally applies to the learning process, and is not applicable to the time when automatic processing has taken place. Because of this theory, clinics may be the most efficient way to teach and learn.
2. **The Theory of Interference.** This theory states that newly learned skills could displace previously learned skills. People will forget what they have learned because the new skill overshadows the old skill. An example would be a windsurfer that knows how to jibe a directional and then learns to ride a twin tip. The skill of jibing may become rusty if the rider continues with his new board, and the new sensations will overshadow the old way of doing it.
3. **The Theory of Repression.** This theory states that some material may find its way deep into the realm of the subconscious, especially if the experience produced feelings of fear and anxiety. Psychologists have been aware of this phenomenon for quite some time now. Our brain protects us by unintentionally filing these bad experiences away. It works the same for forgetting information as it does for forgetting experiences. It is a subconscious and protective response.

## TRANSFER OF LEARNING

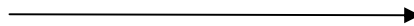
When you are teaching, a transfer of learning is taking place. This process can be either positive or negative. A negative transfer of learning occurs when the performance of one maneuver interferes with the performance of another that has been previously learned. A good example is when your student twists the bar during an effort to steer the kite as if it were a car and the bar were the steering wheel. Being the driver of a car is interfering with becoming a master at steering the kite. In this way, the negative transfer of learning theory agrees with the interference theory in that a previously learned skill is at odds with the new skill, and creates problems with progression.

A positive transfer of learning occurs when the learning of one maneuver aids in the learning of another. This is best illustrated by how learning the water start on land will facilitate a quick learning curve on the water. As an instructor, you are trying to convey to the student that what is being learned in the land lesson can be applied to a water based situation. This is an example of an instructor facilitating a positive transfer of learning, and it leads to the building block technique of instruction, where each simple





Get up on board



Ride!

Stay upwind



Move to jumping

## CHAPTER 3

### Learning Challenges

How is it that some students seem to have no fear, to the point of being foolish, whereas others seem to be debilitated with irrationalities? Everybody experiences some degree of stress and anxiety, and it is a wide band of experience that we teach to. It is important, therefore, to treat fear as normal with your students, and by no means ignore it. Reinforcing the positive aspects of kiteboarding or snowkiting will help your students cope with their fear. Anxiety can be a major psychological barrier, and you must counteract it.

Students will retain what they learn and be able to advance if they are coping with the dangers in a rational manner. As an instructor, you create the environment that surrounds your student, and in this way you can tailor that environment to fit the needs of your student.

Every individual brings a unique package of mental, physical, and emotional makeup into your lessons. People vary widely in all three of these aspects. What problems arise due to internal and external factors?

#### BARRIERS TO LEARNING

Dealing with the onset of forgetting what has been learned is something that will always affect you as an instructor; it is a natural byproduct of any learning curve. But look on the bright side...you were successful already if they have merely forgotten, so all that needs to be done is a quick refresher course and you are back to where you left off. Consider forgetting to be a lesser problem than the failure to learn.

An example of a bad problem would be a situation where you are unable to deliver what you promised as a professional. How do you deal with the student who you just can't seem to make any progress with?

There is an inherent paradox here that must be dealt with in the most professional manner. Some students will have barriers to learning that you may judge



to be insurmountable. One manufacturer of kiteboarding / snowkiting equipment has said in its advertisements that kiteboarding and snowkiting are exactly the wrong sports for 99.9% of the population. Presumably, this is intended to foster an elitist feeling among this company's customers, but what does it mean to the kiteboarding or snowkiting instructor? More directly, how much money should be expected from a reasonable person for instruction, and at what point should you throw in the towel as an instructor?

Unfortunately, there is no concrete answer to this dilemma. It can be a bad situation and a person's sense of self-worth is at stake. The best thing you can do as an instructor is to remember these three instructor attributes; patience, communication skills, and positive attitude. Usually, what happens is that a defense mechanism kicks in with your student, and in order to protect their own feelings, a reason will appear why they can't continue in their training. Most likely it won't concern the cost of instruction. If it does, and you find yourself the object of your student's criticism, then take it seriously. All criticism is valid, and it could help shape your program in the future to listen to what your student has to say.

In the most extreme case, when the issue becomes a safety issue, you will need to sit down with your student and explain with compassion for his/her feelings exactly why it is that you don't think that they should continue with their training. You must have a concrete reason, like "you can't swim" or something else completely objective from the viewpoint of an instructor.

The next likely step is for the student to seek instruction elsewhere. The other side of this coin is the student who comes to you after abandoning another school's lesson program. Beware! There could be challenges ahead. Luckily, this situation won't happen very often in your career as an instructor, but you should find truth in the fact that although everybody could learn to be a kiteboarder or snowkiter, not everybody should. There is a level of maturity and judgment that must be met because the safety of others is at stake.

Most often, you will be able to deal with and break through these barriers to learning. In the same way that learning the barriers to communication allows us to be more successful as a communicator. Understanding the barriers to learning will help you as a teacher.

#### **FOUR DEFENSE MECHANISMS**

The most powerful determinant in learning is your student's self-concept. How your student feels about himself, his potential, and his progress influence his perceptual process. Needless to say, a negative self-concept rejects training. Your job is to help your student acquire and maintain a favorable self-concept to foster the development of insights. Once again we are reminded of the importance of maintaining a positive attitude in your student-teacher relationship. With a motivated student and a safe, positive teaching environment, your job will be easy to accomplish.



But what about that problem student that we were speaking of before? We don't want to lose the student, but we are struggling with the fact that there is always one reason or another that is given to you for the plateau of the learning curve, and it is never the fault of your student (although it may be your fault, in the eyes of your student).

These reasons arrive in the form of defense mechanisms, and are actually useful to your student. Defense mechanisms are mainly engaged in order to protect a person's feelings of personal worth, soften feelings of failure, or to alleviate feelings of guilt. These may help your student maintain a good self-image, which we want, but defense mechanisms become a hindrance in the long run because they involve self-deception and a distortion of reality.

Let's now look at four defense mechanisms and how you may be faced with dealing with them in the context of an instructor.

### **Rationalization**

This is probably the most common one. This is when your student substitutes excuses for reasons, and if anything, is at least the easiest to identify, although it may also to prove to be the most frustrating situation you will ever deal with as an instructor. Identifying that this process is taking place will help you deal with it. It can actually approach amusing levels, and blaming poor performance on the conditions is something that will always be present in our sport. It's gusts, okay. Gusts or lulls are a great enemy since they are invisible, or any environmental condition will do nicely in this regard. It could be the kite, which needs adjusting, or the lines are stretching, due to the ineptness of the manufacturer. When these excuses are offered, make a sincere effort to investigate each one so that your student can't continue to deceive himself or herself with a distortion of reality.

### **Flight**

This mechanism is a hand me down from our hunter/gatherer past. It is half of the "fight or flight" that you may remember learning about in school. The most frequent occurrence of this one is on the mental side, and you will see it when your student is daydreaming or sort of "out there". If a concept confuses a kid in Algebra class, for example, he may find something more interesting out the window. You can counter this by forcing your student to stay involved mentally by asking questions that require thoughtful answers.

The other side of flight is the physical side. Stomachaches are a great way for a kid to get out of doing something that would be easier to avoid, as are headaches. By no means, under any circumstances, should you ever express disbelief when a student claims to be suffering from something physical that will prevent them from learning. Your job would be better fulfilled if you recognize the illness as a psychosomatic



response to the stress and anxiety associated with possible failure, and tailor your plan accordingly.

### **Fight**

This defense mechanism is more commonly referred to in today's contemporary world as aggression. An aggressive student is many times being aggressively defensive, especially the student who shouts and blames others directly for his own personal shortcomings. This is rare, and is a special challenge to deal with because the aggressive student disrupts activities, intimidates other students, asks irrelevant questions to try to "stump" the instructor, and may refuse to participate in activities. Sometimes it's best to only work one on one with this situation, so it won't hamper the progress with the other students. In fact, it may be the actual presence of the other students that causes the aggressive student to stress.

### **Resignation**

This is the most severe of the defense mechanisms. This happens when a student becomes so frustrated that they no longer think that it is worth it to continue, and so they give up. An instructor who is facing this situation is also facing failure, unless the instructor agrees that this particular student is better off without kiteboarding or snowkiting in their lives because of safety concerns.

With an earnest student who has lots of potential, resignation occurs when a student completes early lessons without grasping the fundamentals. They will advance to a point at which they simply can't continue for lack of skills. To remedy this, go back to the earlier lessons and make sure that your student "gets" each lesson to the point of correlation. Recognize that motivation and positive self-image are the issues that you are dealing with, and not simply the failure to learn the motor skills. Some of the students who learn slowly become the most competent in the long run. Learning how to kiteboard is not easy, so keep in mind these barriers to learning and how to overcome them.

The opposite situation is the overconfident student. This student will display a failure to understand the need for preliminary training. He seeks only the final objective, and will pressure you to allow him to get in the water before he has proven his readiness. Be careful in this situation, you may be tempted to appease him, thinking that indeed it will be a lesson learned. Don't do it. In the long run, your student will never hold it against you if your standards are uniform and fair.

Being overconfident results in faulty performance, and an instructor should never knowingly allow a student to struggle with skills they are not ready for. If a student is doing very, very well, a good instructor will constantly raise the standard, demanding greater and greater effort on the part of the student.



## **MENTAL FACTORS**

### **Fear**

The number one problem you will encounter is fear. Fear is natural in any strange, new endeavor. Fear of injury, fear of failure, and fear of performing in front of others. These are commonly encountered at the training site. These fears may come in any combination and intensity.

Your job is to detect and allay your student's fear remembering that there is a fine line between fear and healthy respect. Common signs such as obvious shaking, wandering attention, tight grip, over compensation or control, abundant questions, lack of response, hesitation, speech changes, or silence can all indicate fear. Be alert for the student who tries to hide his/her fear, this situation can cause you to misread problems. Most students are motivated to overcome their fears, but if they enter the panic zone they are not learning so you must keep their fears at a minimum.

The best single way to reduce fear in a student is to slowly build their confidence step by step. It should go without saying that students should never be moved to a higher level of challenge until they are comfortable and performing well at a lower level. Remember to keep it comfortable and use a calm, reassuring tone even if problems arise.

The ideal situation is to start reducing your student's fears beginning with the very first ground school. You can do this by exuding confidence yourself, adopting a relaxed manner and avoiding unnecessary histrionics and yelling. Develop your students' trust from the beginning. Remember, confidence is infectious. Good organization of your course and equipment is a must in building trust. Your presentation, verbal and physical, are also very important.

### **Summary**

#### **Signs of Fear:**

- Sweaty palms
- Clenched jaw and white knuckles
- Shallow or irregular breathing
- Shaking
- Wandering attention
- Silence or stilted speech
- Hesitation in performance
- Poor response to commands

- ➔ The best way to detect fear: Observe and ask the student if he or she is afraid.
- ➔ The best way to reduce fear: Move back to the comfort zone.
- ➔ The best way to prevent fear: Keep your students learning in the comfort zone.



### **Timidity**

Some students will come to you with a bad case of timidity or shyness. Such a trait can hinder learning if the student is reluctant to ask questions or perform in front of the group. Private lessons are one solution in this case, but it is better for the instructor to draw such students out by asking them easy questions and assigning them a practice position and to another student (let the able or aggressive students go first to break the ice).

Remember, even the learning experience should be fun, so don't embarrass a very shy person by pushing him or her too much or making unfavorable comparisons. Your enthusiasm for the lesson and the manner in which you bring the group together as a cohesive bunch of fellow fledglings will go a long way toward putting a timid person at ease. Constantly reassure students with positive feedback and praise.

Many students bring emotional baggage into the lesson. Such problems may consist of job stress, loss of a loved one, the souring of a relationship, a bad attitude, or an overly excitable personality. The first three of these problems are dealt with empathy and awareness that such problems can cause errors that may be dangerous. Observe and talk to your students. Find out if anything in particular is bothering them. Let them know you care and inform them how important it is to have a clear, relaxed mind during training.

### **Attitude**

Attitude problems come in many forms. Sometimes a student will not listen to your commands due to ego or inability to pay attention. You must take control of the situation and nip such problems in the bud. As a last resort, you can readily offer to terminate the lesson if a student won't listen to you. This works fine in most cases. You can control an overly aggressive or over-confident student who insists on going too fast by challenging them to execute a task perfectly before they move to the next level.

Impatient students must be controlled or they will disrupt your whole class. It often helps to harness them if you pass on the truism: students that learn slower learn better and usually turn out to be better kiteboarders. Have them focus on achieving quality. Keep them busy helping out the class by retrieving kites, boards, or whatever else needs to be done.

### **Too Much Excitement**

Excitable people don't lack enthusiasm but they can be a problem if they can't follow instructions or can't perform controls in a relaxed manner. Calm them down by using imaging, breathing, and stretching exercises as well as having them verbalize what they are going to do. Be sure to observe such individuals for sudden onset of fatigue.



### **The Net Solution**

Students are individuals and the drive to seek out and pursue kiteboarding or snowkiting lessons often reflects a strong personality. You may have to deal with a whole group of strong personalities in a given lesson. To do this you must be part Sigmund Freud, part Mussolini, part father confessor, part parent, part diplomat, and 100% confident. Observe your students, empathize with their individual problems, command their respect and attention and then share your enthusiasm and knowledge. They will become your friends and be forever grateful to you for giving them wings.

### **PHYSICAL FACTORS**

The most common physical problem you will encounter will be weak, small, or out-of-shape individuals. Pacing your lessons goes a long way toward addressing this problem.

### **Fatigue**

Almost every student suffers from both physical and psychological fatigue toward the end of a lesson. For many people, learning to kiteboard or snowkite uses energy and muscles that they don't usually use much. You must know how to detect and deal with fatigue.

Signs of fatigue are panting, sweating, lingering, slow response, random errors (mistakes that were not happening earlier) and tripping over their tongue. Many indicators are the same as those that accompany fear. This should be expected, for fear can lead to greater fatigue since adrenaline pumping in the body eventually runs out and all the body's systems shut down.

As with fear, one of the best ways to assess fatigue is to simply ask the student: "Are you getting tired? Do you need a break?" Most students will be honest, but beware of the ones who don't know they are almost worn out.

Often, the onset of fatigue is sudden and occurs when students get relaxed enough that their excitement level diminishes. This is when errors begin to occur. Be aware of this human condition and take preventative measures. As an instructor you must stop the lesson to watch for the well being of your student. The student cannot progress any more when exhausted!

Another important physical factor that can instantly lead to both physical and mental fatigue is getting too cold or too hot. Stay aware of the temperature as well as the intensity of the sun, to prevent your student getting a heat or sunstroke. If you are spending a lot of time explaining kiting on land, stay in the shade, encourage your student to wear a hat, especially in tropical areas.

You as the instructor are also responsible to keep an eye on your student as well as yourself to prevent and recognize the onset of hypothermia. This is especially important if the water or air temperature is cold, wind chill factor is high and your student spends a lot of time wet and exposed to the cold.



To reduce or prevent undue fatigue, the simple use of frequent breaks, stretching sessions and changes of attention are effective. Have plenty of water available to keep your students hydrated. Warm-up breaks are very effective to avoid getting too cold.

Finally, be sure to inform your students beforehand to eat a hearty breakfast (starch, not sugar, complex carbohydrates are best for a balanced blood sugar level) and bring a lunch (when appropriate) and/or power/granola bars. The body needs a long-term source of energy. Candy bars are a quick fix but actually make things worse in the long term. The best choices are fruit juice or water.

### **Signs of Fatigue:**

- Hard breathing
- Lying down
- Slow or slowing responses
- Profuse sweating
- Change of facial color (much paler or redder)
- Lingering
- Poor performance
- Blue lips
- Shivering

- |                                    |   |
|------------------------------------|---|
| → The best way to detect fatigue:  | Observe and ask the student.  |
| → The best way to reduce fatigue:  | Rest (or if slightly cold: warm up)   |
| → The best way to prevent fatigue: | Pace your students, take breaks, have them well-fed and hydrated, and use a system of assistance. |

### **Physical Limitations**

In the course of your teaching career, you may choose to work with students with some physical handicaps. These may be impaired vision or hearing as well as limb problems.

The best way to prepare for such students is to have a place on your sign-up form to indicate physical or medical considerations. In lieu of this you should ask your students to inform you of any problems. Limb handicaps will be fairly obvious if you watch students running around during warm-ups. Impaired senses will be equally apparent if you are observant. It is also a good idea to inquire about any heart or other internal problems before teaching.

After determining an individual's physical challenges and their effect on learning, you must develop a plan to deal with the problem. This plan must be carefully considered before you begin the lessons.



Individuals with physical problems will demand special attention. You may have them handle the equipment differently or require special conditions to ease their load. Typically you should alter the pace for those with structural problems while you simply must take extra care to communicate with students whose senses are impaired. Older and weaker students come into the category of those needing extra care.

### **DISTRACTIONS**

Students who are not paying attention to your demonstrations or delivery of wisdom will obviously not learn as efficiently as possible. Taking breaks and varying the intensity of your teaching will serve to hold their attention, as we shall see later.

The most distracting things of all are spectators with cameras, cheering friends or loved ones making comments. You should take great care to prevent such distractions by informing your students to ask friends to remain at a distance. If such distractions appear unannounced, simply stop the lesson and request they go away then be sure to refocus your student's attention.

### **SLOW LEARNERS**

People may be slow to acquire new skills or knowledge due to a variety of reasons. If the problem is a learning disability, it probably isn't a problem, for students don't really need to understand the technical aspects of kiteboarding or snowkiting to excel. Keep your demonstrations simple and clear – that's the best policy in any case. Don't make slow learners feel inferior by asking confusing questions. Simply teach them to fly with hands on experience. Focus on a simple skill until they've got it.

Break a skill down to more elementary steps to aid slow learners and keep them motivated. Sometimes you'll encounter language limitations. Approach this case as above and have their friends translate if possible. Most importantly, be patient when confusion occurs.



## **CHAPTER 4**

### **Planning Instructional Activity**

To properly plan instructional activity, you must tie all the information in the manual together and develop a specific lesson program. PASA has developed specific lesson plans for your use and evaluation. These plans are in the manual.

You should use the PASA skills progression chart as a model for your own program, and come up with a plan slightly more customized to the local environment where you will be teaching. The most important thing, however is to completely plan and organize all of the materials of your lesson program from the beginning to the end. Consider it a map of where you need to go, and a way of determining how much further you need to go.

#### **DETERMINE OBJECTIVES**

The very first thing you need to do is to determine the overall objectives and the standards of the course. In other words, how will you know that you have finished? This should be related to a specific accomplishment and not a general objective like "to teach my student to kiteboard or snowkite". The steps should make it easy for a student to self-evaluate themselves and know where they are in their own skills.

#### **LEARNING BLOCKS**

The next step in planning your program is to identify the blocks of learning, which constitute parts of the objective.

For example: If the beach where you teach requires a specific launching technique for whatever reason, then this is what would constitute a learning block that constitutes part of your ultimate objective.

Make sure that each block is truly an integral part of the entire process. Extraneous blocks detract from your ultimate objective.



For example: There is no need to practice jumping during a beginner lesson, since this skill won't be safely learned until the student has learned the foundation of being a proficient kiter.

These learning blocks must be developed and arranged in the proper sequence. As an instructor, you approach each block individually, and then you progressively combine them.

## Kiteboarding Skills Progression Checklist

- Can demonstrate how the Wind Window works
- Has basic weather / meteorological knowledge for kiteboarding
- Understands the requirements for a good launch area
- Can perform communication signs for kiteboarding
- Understands the Right Of Way for kites
- Is able to steer the trainer kite and fly it in a sine pattern on both sides
- Demonstrates safely taking twists out of kites while flying trainer kite
- Understands and performs power strokes with trainer kite
- Demonstrates use of harness with trainer kite
- Is able to fly trainer kite blind / one-handed
- Can simulate water start with trainer kite
- Is able to control speed and run with trainer kite
- Can simulate upwind body drag with trainer kite
- Can set up 4 line Leading Edge Inflatable (LEI) kite both independently and safely
- Can perform a Pre Flight Check
- Can deploy and reset all safety releases on equipment
- Can perform a safe assisted launch and assisted landing of LEI
- Can simulate a deep water self rescue
- Can demonstrate how a kite powers and depowers using a quad line sheeting system (Chickenloop)
- Can properly water-relaunch LEI
- Can control kite and take out line twists while flying kite
- Demonstrates Upwind Body Drags in both directions
- Performs a in-water self rescue, disarming the kite, rolling up the lines and swim / kite-drag into shore
- Is able to control a larger kite
- Performs a Board Assisted Body Drag
- Can retrieve board with Upwind Body Drag



- Can show body position for water start and keep body from twisting out of position
- Successful completion of water start with LEI
- Is able to ride the board for extended periods of time
- Can ride powered up
- Is able to perform transitions
- Can consistently ride upwind
- Is able to jump
- Can perform a safe self-launch of LEI
- Is able to perform jumps and land them

## Snowkiting Skills Progression Checklist

- Can demonstrate how the Wind Window works
- Has basic snow and weather / meteorological knowledge for snowkiting
- Understands the requirements for a good launch and snowkite area
- Can perform communication signs for snowkiting
- Understands the Right Of Way for kites
- Is able to steer the trainer kite and fly it in a sine pattern on both sides
- Demonstrates safely taking twists out of kitelines while flying trainer kite
- Understands and performs power strokes with trainer kite
- Demonstrates use of harness with trainer kite
- Is able to fly trainer kite blind / one-handed
- Can simulate board/ski start with trainer kite
- Is able to control speed and power intake with trainer kite
- Can set up 4 line Leading Edge Inflatable (LEI) / Ram Air kite both independently and safely
- Can perform a Pre Flight Check
- Can deploy and reset all safety releases on equipment
- Performs safe assisted launches and landings of LEI / Ram Air kite
- Can demonstrate how a kite powers and depowers when using a quad line sheeting system (Chickenloop)
- Can properly relaunch LEI / Ram Air kite
- Can independently and safely self-land and disable LEI / Ram Air kite
- Can control kite and take out line twists while flying kite
- Is able to control a larger kite
- Successful completion of board / ski starts with LEI / Ram Air kite
- Is able to ride the board / skis for extended periods of time
- Can ride powered up



- Is able to perform transitions
- Can consistently ride upwind
- Can perform a safe self-launch of LEI / Ram Air kite
- Is able to jump
- Is able to perform jumps and land them

## HOW TO DEVELOP A SYLLABUS / LESSON PLAN

The next thing you do after identifying the learning blocks is:

You develop a syllabus or lesson plan. The syllabus forces you to arrange your blocks so they can be completed in the most efficient order.

Sometimes, because of our dependence on the weather to cooperate with the lesson, you need to alter the order to fit your situation. Skipping from block to block should be done sparingly, however, since the completion of one learning block should constitute moving on to the next.

When it comes to organizing your program, it is best to include some sort of introduction at the very beginning. Introducing yourself as an instructor is the first impression you will make, and it helps to prepare an overview of the outline program at this time. Explain why kiteboarding or snowkiting is so much fun and bring up the final objective of the program.

It's best to have some sort of introduction that precedes each new learning block. Develop the block from simple to complex, past to present, known to unknown, or any way that proves applicable to your individual situation. Then include a conclusion at the end of each learning block that reinforces the material and improves retention. It's important not to introduce new ideas at this point, since your student needs to practice the motor-skill until it becomes second nature before combining a new skill.

Most importantly, your lesson plans need to be in writing. A mental outline is no good unless you are an individual instructor with your own school and no other instructor will influence your student. Even this rare situation will benefit from a written plan, the main idea being that the very best program will be structured so that any qualified or and certified instructor can administer each lesson block with the same goals in mind. This promotes consistency and makes it easy to evaluate the effectiveness of the program over time. It allows the instructor to keep track of his own activity, as well as the students.



If you keep your student informed of the lesson objectives and the completion standards you can keep your student motivated and minimize insecurity.

## **LENGTH OF LESSON**

One of the most important decisions you need to make when developing your program is the lesson time length. Fatigue is the primary consideration when it comes to determining the length and frequency of instruction periods. It's vital to understand that a student, particularly a beginner, can reach a point where additional practice is not only unproductive but also harmful.

Remember the three zones of learning and tie this in with the sometimes harsh physical environment that we deal with while teaching.

As your skills as a communicator develop, you will find it easier to progress more quickly. Because you will have such a variety of levels of athleticism with your students, you will need to keep out a watchful eye for fatigue.

A good rule of thumb is to stop the lesson when it becomes clear that the fatigue is debilitating your students' progress. Some of the contributing factors to fatigue include, fear, anxiety, dehydration, over-exposure to the sun, unusually cold or hot air or water.

Not all students are able to handle the demands of kiteboarding or snowkiting. They may say they are in good shape, but in reality they may not use the muscle groups needed for kiteboarding or snowkiting regularly. Keep an eye out for this and recognize your students' limitations. Set proper goals for each student and don't rush. Everyone learns at their own pace, so set the pace for each student based on their performance.

## **INSTRUCTIONAL AIDS**

Kiteboarding and snowkiting instructors will spend a majority of their time outside either holding a land, water or snow lesson.

However, when the weather doesn't cooperate you can for certain parts of the lesson have a back-up plan / option that you can conduct indoors. This could be a well-planned informal lecture or simply popping in the newest instructional video followed by discussion.

Whatever instructional aids you use, whether it is a model, chalkboard, chart, or projected material like videotapes, movies, and slides, you should first decide which ideas warrant the use of a visual aid.

It's important not to use the visual aid as a crutch, it should be considered a tool that will most benefit a visual type learner with reinforcing a concept that has been clearly defined and incorporated into your written lesson plan.



A good example of a concept that is complimented by a visual aid is the “wind window”, because it is an essential part of the learning process and it is invisible, so it warrants a good, clear diagram.

## **INSTRUCTOR RESPONSIBILITY**

- Teach safely and instill safe attitudes in your students
- Teach in an efficient manner
- Make it fun

Teaching safely means keeping focused on safety and staying positive.

If the student feels endangered, fear and negativity can develop and the lesson must stop or be redirected. You are very much responsible for your students’ future safety as well.

The attitudes you develop in them and the judgment you teach them will greatly affect their behavior for the rest of their kiting experience.

Teaching in an expedient manner means many things. It means having the knowledge, skills, facilities, and equipment so that students can learn as efficiently as possible. With a good instructor working with a good program, students get their money’s worth because they learn solid skills quickly.

Your objective is to get them kiting safely on their own as quickly as possible.

The main reasons students come to you as an instructor are:

**To learn easier, faster and safer than they could on their own.**

Keep those three points in mind as you deliver your daily lessons.



## CHAPTER 5

### Giving Students Practical Instruction

So far, we have focused on how people learn. Once we understand how people learn, we need to understand different teaching styles. It is then that we can identify our own teaching style and begin to tailor our teaching to be most effective.

First, let's take a look at some elements of teaching and then some teaching styles. We are teaching people to kiteboard, so while the elements of teaching are the same in all cases, we need to choose a specific style to suit our needs.

Learning is the acquisition of knowledge or skills. We cannot learn for the student, so our real job is to guide the student safely to the brink of learning. Thus our role as a teacher is to provide guidance and encouragement. We emphasize this idea in the following discussion.

#### TEACHING ELEMENTS

For simplicity's sake, we will discuss four factors that you as an instructor must carefully consider and perfect in order to teach well.

##### ***The Four Elements of Teaching***

1. Know your material
2. Organize your lessons
3. Communicate your ideas effectively
4. Demonstrate the principles

#### **1. Know Your Material**



It goes without saying that you can't teach something about which you know nothing. To instruct properly, you should have a certain minimum knowledge as well as competence in kiteboard or snowkite techniques.

As we mentioned before, being an instructor means constantly upgrading your knowledge and abilities. Do it. Of course, you aren't expected to have an engineer's understanding of the technical aspects of aerodynamics and weather, but you should understand well the material provided in this manual so you can pass along essential information to your students.

Students with technical backgrounds will occasionally try to involve you too deeply in technical discussions of controls, stalls, aspect ratios, or what have you. Avoid spending too much time on such non-productive forays into technicalities by simply pointing out how basic our kites are and how only a simple understanding is needed until more advanced levels are reached.

We leave this subject with a bit of guidance. Develop a child-like curiosity for all matters related to kiteboarding or snowkiting and you will grow as an instructor. If you don't know the answer to a question, say so and tell your students you will research it and come back with an answer.

## **2. Organize Your Lessons**

In order for students to learn readily, the information you have to deliver must be served in an easy to consume manner. That means in a logical order.

The first step is to organize your own material. This applies both to classroom material (ground school) and lessons at the site. Start with easy ideas first. Build on these easy basics to form more complex ideas or skills. Put related material or practices together. By all means, work from a lesson plan or a syllabus.

A lesson plan is simply an outline of the material you are going to teach. A syllabus is the same as an outline. At the end of the instructor certification course you will be asked to develop and write your own syllabus. We suggest you use this syllabus to guide your kiteboarding or snowkiting lessons.

## **3. Communicate Your Ideas**

There are whole careers built on the problem and perfection of communication. We can only touch the surface here and point out two different items related to teaching kiteboarding or snowkiting. First, be very sure you have your student's absolute attention before you begin communication – what they don't hear **can** hurt them. Secondly, be very sure you communicate exactly what you mean to say. Let's elaborate:

Distractions, excitement, rampaging hormones, and aerial or water fears untold can lead your student's attention astray. The best way to bring it back and hold it is to speak their name, capture their gaze, and ask them a question that demands a



response. The best question? Have them repeat what you just told them or better still ask a how or why application.

“I know you heard what you thought I meant, but what I said is not what I intended.” This statement embodies all the sources of miscommunication. What I think isn’t necessarily what I say. What I say isn’t necessarily what you hear. What you hear isn’t necessarily what your brain registers and acts upon. To overcome such problems, repeat your important statements (in several different ways if possible). The way to check for proper communication is simple...we repeat.

How to check a communication:

- Have the student repeat the communication, correctly stating the important points, or applying the information to a new situation.

#### **4. Demonstrate the Principles**

Most humans learn best by doing. Next we learn by watching others doing. After that we learn by hearing, reading, and other forms of knowledge acquisition. Before we put the student on the spot, we must demonstrate the proper skill we are striving for. This is an exceedingly important principle and we discuss it in a later section.

### **TEACHING STYLES**

There are many styles of teaching. Some of these styles fit the personality of the teacher, some fit the subject matter, and some suit a bit of both. Here is a common list of styles from which you may fashion your own approach. In the following sections, we’ll provide two suggestions for effective learning of aerial sports.

1. **Command method** – Here the focus is on the instructor who makes all decisions and carefully controls the direction of lessons. Demonstration is important.
2. **Task method** – Here a partial shift to the student occurs, for he or she determines when or where to perform a task after the instructor has thoroughly explained and demonstrated. Independence from the instructor begins to evolve.
3. **Reciprocal method** – With this technique each student has a partner who performs as an observer, corrector, and re-enforcer after the instructor explains and demonstrates as above. The instructor talks to the partner and the partner talks to the student. The student and partner then switch roles.
4. **Group method** – This method is the same as above only more “partners” are present to critique the student performing the task. Group discussion is encouraged.
5. **Guided discovery method** – Here the focus is on the student. The instructor uses questions or clues arranged in a manner to gradually lead the student to the desired result or expression or EUREKA! The instructor resists telling the answer, but waits (patiently) for the correct response.



6. **Problem solving method** – In this case, the instructor poses a problem for the student to solve within a given time frame. The student seeks out the solution and learns to develop the ability to find, explore, and select from alternative solutions.

From the above list, we can imagine where all of these methods can come into play in a kiteboarding or snowkiting lesson. For example, on the first lesson, we may start with method 1 for complete control then move to method 2 once the student has gained confidence. Introducing method 3 and 4 part-way through the lesson keeps all students involved and induces them to observe flying actions very carefully. You might try to use method 6 by asking a student “how would you perform a landing?” before you actually teach the technique for landing a kite.

Now carefully review these teaching styles and suggest which method would be effective for ground school discussions.

### **Developmental Teaching**

If you selected method 5 above, you are most correct. This method can be called developmental teaching, guided discovery, or Socratic method (we can imagine that Socrates would have used this method if he had taught Daedalus and Icarus how to fly.) It is very useful for holding a class’s attention, inducing all members to think and producing a solid grasp of the material to be taught. It is most appropriate for classroom (ground school) material. The drawback of this method is that it is slower than merely lecturing and it requires a more knowledgeable and confident instructor. However, since students learn so thoroughly with this method perhaps it is the most effective overall.

Can you see the logic of this method? When the question is asked, all the students must think of the answer because nobody knows who is going to be called on to answer. It is important not to allow students to respond unless called upon.

A lot depends on you, the instructor. Your question must be carefully prepared and designed to take students step-by-step to the correct solutions. Quality questions produce quality results. If you have asked for too large a leap of logic, back up and ask a simpler question. Be sure to explain the method to the students beforehand to avoid confusion. We suggest you use this teaching technique whenever possible, for with the proper enthusiasm on your part you can instill the thrill of discovery in your students. It is certainly more fun than listening to your own voice droning on and on. Use a training video and emphasize key points with the guided discovery technique.

### **At the Site – Demonstration and Performance**

On site, where true kiting takes place, we suggest a different method. We call this the demonstration and performance method. Elements of the first four methods



outlined in the previous section are contained in demonstration and performance. You can tailor it as you will for effectiveness, but the essential steps are listed in the side bar. The five steps in this method should be carefully followed. We can see that it incorporates all we have discussed before. The first step helps set a goal for the student and puts everything in perspective. The second step provides the student with a perfect image of what is expected. The remaining steps provide feedback.

This method is what most instructors use at the teaching site. Defining it specifically lets us be aware of the importance of each step and prevents a failure to include an important element. Use this method with the blessing of Socrates.

## PRINCIPLES OF LEARNING AND TEACHING

We close this chapter with a brief discussion of fifteen principles that you should understand and enlist in your teaching approach. These matters are important and will become a key to your success as an instructor.

- **People learn by sight and practice** – Show your students the proper technique then let them try it. If you spend too much time talking you will slow down the learning process. Make use of training videos.
- **People learn best after a break** – Frequent brief rests can accelerate learning.
- **Set attainable goals** – Let the student's self-image build by setting many little goals rather than one large and possibly unattainable goal.
- **Fit each experience into the overall picture** – This matter is part of goal setting and motivation. A simple statement such as "we're going to learn how to fly this kite with one hand so that we have one hand free to grab the board" suffices to keep a student focused and striving for perfection.
- **Establish a clear picture of the skill to be learned** – This is the demonstration principle and it produces an internal model for the student. A demonstration may be the performance of a gifted student. Make use of training videos.
- **Motivate student with feedback of his or her progress** – When students are caught up in the excitement or labor of learning to kite, they may lose awareness of what they have achieved. Simply pointing out "that you've learned to do a water relaunch" makes it clear that their struggles are paying off and provide a surge of incentive.



- **Make positive corrections** – Emphasizing the proper technique keeps students focused on what to do rather than what not to do. Positive reinforcement leads toward a solution: Begin your critique with a positive. Focus on the corrective procedure, not the mistake. Time your positive reinforcements to occur just prior to the anticipated error to prevent it.
- **Reinforce with an oral (verbal) reward** – Congratulating students on their little successes keeps them pumped and enthused. Enlisting the whole class to clap and cheer when a student performs is a great way to keep everyone having a great time.
- **To fix problems concentrate on one correction at a time** – Students have enough to contend with given all the new inputs and experiences. To avoid overload, work on one solution at a time (proper figure eight flying, for example).
- **Be willing to change your approach if a student is having difficulty** – There are broad guidelines to many of the techniques we can use. Changing a viewpoint, posture, holding method, kite, or instructor can sometimes produce a breakthrough for a student.
- **Let the student experiment to see what works** – This principle goes with the previous one and points out the prevalence of individual differences. Obviously supervision is required to keep the student within the realm of safety.
- **Encourage students to progress in a conservative manner** – Remember, each one of us learns at an individual pace. Let a student operate in the comfort zone and step back and forth into the stretch zone.
- **Learning must be used to be retained** – Use it or lose it. If a beginner student waits 6 months for the next lesson, you will most likely have to start from scratch.
- **Practiced skills become automatic** – Repetition of learned skills builds muscle memory. If you want students to retain a skill or information, they must practice and repeat the practice. Reviewing skills with students periodically aids retention.
- **Keep all students occupied and enjoying** – Prevent students from getting bored. Involve them in the discussions and have them assist their fellow students. Their offering of praise enthuses them as much as it does the



student receiving the praise. By all means, remember that people want to learn to kiteboard to have fun!

### **Summary**

There are many factors of human learning such as above that we must be aware of when we design our instruction courses. It is our experience, knowledge, and skill as professional instructors that make us worthy of such an undertaking. In this chapter we discovered some of the key elements in learning. All instructors must know this material well because a truckload of good intentions will accomplish nothing if you don't have the equipment to deliver the goods.

## **CHAPTER 6**

### **School Organization**

Instruction in a physically demanding sport such as kiteboarding or snowkiting is not like a regular job at the office, it is more of a way of life. As an instructor, you are responsible for maintaining the teaching site, the equipment, evaluating the weather, the condition of every student, and being a personal coach and counselor to every single student. You must be aware of the particular conditioned habits that students may bring with them to the school environment. This section is devoted to some of the matters that must be considered for a total instruction program. In addition to this topic we also address particular problems you may encounter in your daily lessons. It is our goal to illuminate the entire instruction experience.

Schools should be organized so students can learn rather than so teachers can teach.

### **GET ORGANIZED**

An instructor is organized. This is one of the qualities of an instructor that we feel is very important. In this part, we discuss some of the matters that you must organize in order to have a functioning training program. These suggestions are not carved in stone, but instructors will do well to consider them carefully.

“An ounce of planning is worth a pound of cure.”

### **Class Size**



The size of a class determines how much time you can spend with each individual student. The weather conditions can also dictate the teaching style that is used and therefore have an impact on the class size. Although these factors determine how your plan is implemented, the plan itself is flexible enough to remain established in its core format.

Too many students, and you will lose the effectiveness of being able to teach. Ideally, **lessons should consist of two or three students per instructor.** It may appear at first look that a private lesson is the best way to assure individual attention. That may be true, but group lessons are recommended because each student gets to watch many trials, rests are more frequent, and the enthusiasm of all students lends support in what is a potentially stressful situation. Each individual instructor should find the group size that works best for him or herself and try to set up such groups.

### **Reservations**

An organized reservations system should be in place to eliminate overbooking or underbooking of students. Make sure that all class times available are represented in the system. Be certain that there is clear communication between the reservation personnel and the instructors and that there is a clear cut-off time for last minute reservations. This can also be a good time to deal with payments of the lessons. This planning will eliminate the “surprise” factor of an instructor showing up to teach and finding an unmanageably large group of students.

### **Group Lessons**

Group lessons can cut down on student fatigue and greatly enhance learning if you can carefully organize your teaching methods. The larger the group, the more space will be required. For the land lessons, it is possible to safely have multiple trainer kites up at the same time and to run between students offering instruction. For the water portions of the lessons, it is required to have more focused concentration on the students because the larger kites can create potentially hazardous situations. The water-based instruction also requires you to constantly retrieve your ground and walk the kites back upwind. Keep this in mind when structuring your class sizes for the land-based and water-based lessons.

A very good method during the water portion of the lesson is to have students share a kite. Then, one student is taking repetitive trials to keep matters fresh in his or her mind while learning to body drag in one direction or to water start. The beginners will inevitably be carried downwind during this process. The next student can help the kiteboarder walk the kite back upwind by either landing the kite and walking it back or keeping the kite in off-center neutral and walking backwards which may require the assistance of someone holding onto the harness, etc. The instructor can supervise and offer continuous instruction and guidance for all students to witness. This format allows



for more flying and fewer errors since a student doesn't get completely tired out from constantly walking the kite back upwind. Furthermore, a student just about to fly the kite has time to witness the successes and mistakes of the previous student.

Important: The instructor to student ratio must stay at or below 1 : 3 to stay within PASA's guidelines.

## **BUSINESS MATTERS**

The business of instructors is instruction, but other matters must be carefully handled in order to apply the trade. The reality in today's environment is a conscious concern to always be aware of "taking care of business".

### **Coping with liability**

The main concerns of this nature are liability and money. We live in a country that is suffering from an epidemic of litigation that visits us all like a plague. Our economics and everyday life are affected by the structure of our litigation system. The very nature of our sports, kiteboarding and snowkiting makes you, the instructor vulnerable to ruinous lawsuits. Here is how to protect yourself.

### **Waivers**

First, have every student that sets foot in your classroom sign a waiver. As soon as they commit to your lesson the next step should be putting ink to paper with their name scrawled on your waiver. You should be sure to have your volunteers, school, landowners, and any other potential liable parties named on the waiver.

You may have heard that waivers "aren't worth the paper that they are written on" or "you can't sign away your right to sue." This is only partially true. As any lawyer will tell you, in order for a lawyer to prosecute he needs reasonable assurance that he'll get money. If your waiver is impressive enough to convince judge and jury that your injured student was well informed of the risks and voluntarily performed the actions that caused injury, you are ahead of the game.

### **Limiting Liability**

Prepare Waivers

Teach Safely

Teach the Approved Method

Keep Good Records

Incorporate

Make friends with your students



If you teach with safety as your utmost concern you will greatly diminish the possibility of an injured student. You can't eliminate injuries altogether since rare circumstances may occur, but the odds will be in your favor. Your safe attitude will be reflected in your students and other students may testify on your behalf. Make friends with your students, for friends don't sue friends (usually). Teaching the approved method assures a safe method. In addition, your greatest defense in a court of law is when you are operating to the standards set in your profession. The best way to avoid the repercussions from accidents is to not have any.

### **Keeping Records**

The better your paperwork, the better your defense. Courtrooms thrive on paperwork.

- Keep a file of student application forms, Declaration of Fitness and Waivers.
- Keep a Student Log where you can also include emergency contact and medical information and log your student's progress in the PASA Recreational Kiteboarder or Snowkiter certification system.
- Keep copies of your Student Feedback Forms.
- In case a student gets injured during instruction, fill out and submit the PASA Incident Report Form within 24 hours to PASA.

You will find copies of all these forms in the Operations Manual.

### **Logging of Students**

It is very important to make sure that students' records are kept on file. In a properly structured training program, any certified instructor can teach each individual lesson block. By keeping a record of a student's progress, instructors can be changed at any time during the learning process without affecting the student's progress. Before a change in instructors, the records can be reviewed and the areas that need to be covered in more detail can be discussed by way of written notes on the performance of the student.

This will help to maintain the structure of the program and it will ensure that uniform standards are being adhered to. It also serves as a way for the different instructors to evaluate the student even before meeting them. Some things that should be included in this logging process are student habits, areas that need attention, the number of lessons completed along with the dates completed, the phases of the training program completed, and the number of lessons included in the student's lesson package. Make sure to log your student's progress in the PASA Levels of Recreational Kiteboarder or Snowkiter certification system. Mark on each student's log whether they achieved recreational level 1, 2 or 3.

More and more schools include PASA recreational kiteboarder certification in their instruction fees. This way, after taking a lesson, your student can receive a card



showing the level of riding skill they have achieved as well as individual liability insurance that allows them to kite at certain restricted kite spots.

If you sell kite equipment, you can also include equipment that the student purchases in the **Student Log**. This allows for better communication between instructors and is an ideal place to store long-term data that concerns the wants and needs of the customers. It is an important business practice to keep track of all equipment sales for the purposes of long-term customer service. Customers can be contacted in the future and made aware of any industry notices that may come in the form of equipment recall or potential hazard warnings.

A copy of the completed waiver forms, correctly filled out, signed and dated, should also be included in the **Student Log**. This information should stay on file indefinitely in the event that it needs to be accessed in the future. The waiver includes important student information and may be needed in the event of an accident. It includes information concerning emergency contact information, so it should be readily accessed at all times.

As a PASA instructor, in order to reach **PASA Instructor Level Two** you are required to log the students you taught and submit *copies* of all student feedback forms to PASA. Once 30 students are taught, PASA evaluates these feedback forms and you can qualify to become a PASA Level Two Instructor. A student feedback form is filled out by the student or can also be entered online at [www.pasakiteboarding.org](http://www.pasakiteboarding.org) at your PASA website instructor profile.

### **Incorporating**

Even if you do everything right, sometimes things happen beyond your control. Students may not sue you, but their family may on their behalf. It is therefore a good idea to investigate forming a corporation to limit your personal liability. A lawyer or a good accountant / bookkeeper will tell you how to do this, how far the benefits extend, and what responsibilities accrue with running a corporation.

### **Marketing your School**

Signs, brochures with detailed explanations and pictures help you to explain what is involved with your school, plus can save you lecture time.

Segment your lessons into phases and show prices and projected instructional hours for what students can expect. Make sure you don't leave anything out. Make sure your students understand that they get a great value!

Register your school on the PASA website so people know where you are and your operating season.



Wear school and / or instructor shirts. When you act and look professional you receive respect from your students and other businesses in your area, which in turn will attract more customers!

Keep addresses of students. Send out a newsletter, your best referrals come from former students.

### **Costs**

The overhead you have to put forth to run a successful school is mainly made up by the cost of equipment, landowners fees or rent, 3<sup>rd</sup> party commercial liability insurance, labor, site upkeep, marketing and vehicle costs. You should be able to easily figure out your operating expenses. Kites deteriorate and require maintenance. Typically, in business it is reasonable to pay for capital equipment in a period of 5-10 years. However, with kites seeing heavy use this should be reduced to 1-3 years.

From these general figures you should be able to come up with a reasonable charge for lessons once you decide what your time is worth. Ideally, you will sell a package of lessons or a program that takes students to a given level. Such a program assures returning students and provides continuity to lessons. To learn effectively, students need to take consecutive lessons, which a package plan induces them to do. Remember, people expect to pay for quality. You can charge any reasonable amount as long as they come out of your program with the feeling they received true value.

### **EQUIPMENT**

The equipment you use in your school will play a large role in the overall success of your school. Choose your equipment carefully and evaluate the equipment extensively before committing to using the gear to teach someone. Evaluate the equipment from the eyes of the beginner. Is it safe – does it have a primary and secondary release system and is it easy to use? Does it work for self-rescue practice? Does it work in a variety of wind conditions? Are there multiple options for very low or high wind? Is the equipment predictable enough to get a consistent behavior that makes it easy to teach? Is the equipment readily available for purchase? Is the equipment extremely rugged since you know it will get a lot of punishment from being used by beginners? Use all equipment yourself before putting it in the hands of a beginner.

### **Kites**



Kites will most likely be your biggest expense and the most likely to be damaged. Additionally, the kites must be safety oriented and be user friendly for the beginner. Your selection of the proper kites will greatly affect the success of your school.

#### Kite Attributes

1. Easy to launch
2. Stable predictable flight
3. Available in a variety of sizes
4. Easy to repair
5. Reliable water-relaunch
6. Durable
7. Resistant to luffing
8. Readily available to purchase
9. Easy to assemble
10. Floats for long periods

Not all kites that are sold have all these fine points; you should try the kites you intend to use for training. You should try the kites in lower and higher winds to get a feel for their performance in all conditions. Keep the beginner in mind and put the kite in situations that would be common for someone learning the sport.

It will be very important to have a kite that can float on the water for as long as possible as beginners will be slower to re-launch than an experienced kiteboarder.

**Correct kite maintenance and storage** is important:

Frequently check your complete quiver for leaks, tears and possible bridle line frays and repair/replace kites immediately.

Be careful not to get any water into the kite bladders. Allow all kites to dry completely after use. If you had to pack a kite wet, immediately take it out of the bag and hang or spread it out to dry completely. Fresh water especially encourages mold growth on kites.

Kites are primarily made up of nylon or polyester cloth with different coatings on the fabric. Most kites have some kind of UV coating and waterproofing on their canopy. If a kite is extremely dirty, do not wash it with soap, only rinse it with fresh water, then allow it to dry. If you use soap, the kite fabric coating will be compromised.

If you have sand on your kite, shake the sand off your kite instead of wiping it off, to avoid thinning the sensitive kite material.

Avoid storing the kites in direct sunlight anymore than necessary. Don't let your inflated kites sit around for long periods of time; extended exposure to the sun (UV and heat) and wind (fluttering canopy) will shorten the lifespan of your kites. When the air expands in kite bladders, bladder sleeve stitching will stretch and can lead to kite fabric and thread failure.



The kite bridles can be a constant source of an entangled mess if you don't learn how to store the kite bridles properly. The main key to storing the bridles properly is to avoid any loose ends. Keep all the bridle lines inside the canopy while folding so they can't get caught up in the zipper of the kite bag.

**For snowkiting:** Ice can build up on your kite and damage it. If you packed your kite wet, it may freeze and develop ice, which can slice up your lines and kite fabric. Thaw and dry before storing.

### Harnesses

Your training equipment will include kite harnesses for your students. The harnesses should be secure, simple, and adapt to a variety of different shapes of people. The harnesses should provide good back support and keep the bar at waist level. Look for a harness that is built tough and is easy to grab onto if you need to pull someone. There are kite specific harnesses on the market today and we suggest you use them. Harness maintenance: Rinse and dry after use to keep salt and dirt-free, and adjustment straps in good shape. Also check spreader bars regularly for potential rust and breaking points.

### Lines

Your flying lines for the kites should be strong enough to avoid the potential hazards of a broken line and a lost kite or stranded kiteboarder. You are safe using at least 500 to 600# test strength in most cases. You should also have a variety of lengths to accommodate the changes in the wind speeds and skill level. Longer lines will allow the kite to stay in motion longer and therefore create more power. Shorter lines decrease the kite's path and therefore reduce the amount of power the kite produces. These days, standard kite line lengths vary from 70' to 100' feet. It is a good idea to have several control bars set up with 12, 15, 20 and 25 meter lines sets to accommodate different winds, sizes and skill sets of students.

You should be using nothing but 100% Spectra fibers for your flying lines. Spectra is the strongest available fiber with the smallest diameter. Spectra 2000 line is available and works the best for water applications, it floats and comes in a high visibility yellow or orange that makes it superior for instructional purposes. Spectra kite lines can be as much as 7 times stronger (in tensile strength) than steel for their size. They provide maximum strength with a minimal diameter size.

These days, most kite manufacturers supply all kite bars with pre-stretched lines. However, new lines need to be inspected prior to use to ensure that they are stretched evenly.

It is also important to correctly **maintain and store the lines**. Rinse and clean bars and lines thoroughly after each use and allow them to air dry. Check lines and sleeving frequently for knots, wear marks and over-stretching. Knots in kite lines will weaken the



fibers in the line by as much as 60%. Check safety releases on your bars after and before each use.

**For snowkiting:** Don't let your wet bar and lines freeze, spectra fiber can get damaged if you roll or unroll it when frozen, thaw the bar out first. Also: Safety systems can freeze and become unusable, thaw out, then deploy and reset before using. If teaching for long periods of time on the snow, frequently take time to double check your safety systems for ice build up.

### **Safety Systems on Control Bars**

It is absolutely imperative to have a solid safety system equipped on every single control bar. The safety system should have a primary and a secondary release system. The primary safety system should immediately kill the power in the kite and force the kite to fall quickly from the sky. The primary safety system should not release the kite entirely from the kiteboarder. Releasing the kite and bar completely with the secondary safety system should only be a last resort option. Free flying kites and bars can travel downwind and injure people. If you can, use a safety system that de-powers the kite, but keeps the bar close enough to the kiteboarder to swim to the bar and successfully re-launch the kite. Make sure your students fully understand the safety system and have them practice deploying and resetting it before they fly the kite.

### **Snowkite Specific Equipment:**

- Impact vest
- Gloves (not too bulky)
- Padded pants
- Wicking under-garments, so students don't stay wet and then get a chill.
- Shatter proof glasses or goggles
- Snowshoes for deep snow conditions
- Snow shovel
- Ice anchors and straps
- Body, foot and hand warmers

### **Snowkiting Specific First Aid Items:**

- Blankets (space, wool or polar fleece)
- Water (hot in thermos is a good idea)
- Hand warmers, foot warmers and body warmers (crush activated)
- Dry polar fleece top and pants
- Flares
- Large orange flag
- Good scissors and tool kit
- Camping Heater, stove with fuel/propane
- Energy Bars, trail mix, Electrolyte drinks
- Have phone numbers and map directions to nearest hospital in First Aid Kit



- If using GPS and / or 2-way radios, use lithium batteries (more cold resistant)

### ***Additional equipment for snowkiting in the backcountry:***

- GPS coordinates for Heli / Life Flight landing zone
- Avalanche probe and transceiver (beacon)
- Shovel
- Headlamps (use lithium batteries)

### **Miscellaneous Training Equipment**

Other equipment that you will need to have include:

**Personal flotation devices** – Get a thin vest that won't impede the ability to hook in and out of the harness. A thin jacket that allows for maximum flexibility is best.

**Helmets** – Helmets will protect the head from getting struck with the board.

**Whistle** – A good loud whistle will come in handy when an excited student gets up on the board and travels a long ways away. A shrill whistle can let them know that they need to stop and go the other way. Identify whistle commands with your students so that they will know what to do when they hear the whistle.

**Kite Pump** – Always have an extra working pump around if you are using Leading Edge Inflatables (LEI's). Make sure you teach your students how to use it properly.

**First Aid Kit** – A good first aid kit for minor cuts and abrasions.

**Cell Phone** – Make sure that you have a cell phone handy and the battery is fully charged, in case there is a serious accident and you need to contact the appropriate medical authorities. It is a good idea to let your students know where to find the cell phone.

**Jet Ski:** Being able to have a jet ski as an emergency vehicle or being able to follow the student on a jet ski can be a valuable teaching tool.

Here are the most important things to remember about Jet Ski instruction:

### **Using a Jet Ski for water instruction**

- Always approach from upwind
- Stay upwind plus to side of student
- Don't idle for long times directly upwind of your student (fumes)
- Remember you have no steering when the engine is off
- There is no immediate brake =>pre-plan, don't run into your student!
- 4 versus 2 stroke (don't 'fumigate' your student or yourself)
- 2 stroke only for emergencies, not for teaching
- Watch out not to suck up the lines into the impeller...
- Student can get emotionally dependent on jet ski
- Don't run out of gas



- Have a good battery (stress on battery, starting engine again and again)
- Limited equipment, consider bringing several bars with diff. line lengths instead of several kites, might bring extra pump
- Make student land to you, instill 3D awareness
- Hard on instructor, chop, temperature, boating awareness
- Hard on student, often tired before instructor notices (physical, water temp)
- Coast guard: Must have anchor, C.G approved PFD's, fire extinguisher, First Aid kit and increasingly: 6-pac license

## TRAINING SITES

The biggest challenge in securing a good spot for teaching is often dealing with a landowner or the appropriate state or federal officials that control the land. Private landowners have every reason in the world to refuse the use of their land due to liability concerns. Your greatest chance of obtaining permission will occur if you present yourself in a professional manner. Approach the landowner with appropriate documentation, such as a waiver that includes the release of the landowner from liability. Also show him your PASA instructor certification, school brochure, business card, and if requested, a certificate of "Additional Insured" naming the landowner. The kind of insurance you will need as a kite school is called **3<sup>rd</sup> party commercial liability** insurance. PASA instructor certification makes you eligible for this kind of coverage.

Another thing to consider is whether your teaching site will be in the vicinity of an airport. If you are within a 5-mile radius of an airport, you fall under **FAA regulations**. There is an existing FAA waiver that can be applied for if this is the case.

### **Good Kiteboarding Instruction Site Attributes:**

- Launch area free from debris
- Soft bottom surface that won't cut your feet
- Clean winds with no shadows or rotors
- Side shore or side on-shore winds
- Winds max 25mph with a max 15mph gust variance
- Water with minimal surf and chop
- Clean water with minimal dangerous marine life
- No power lines within 300 to 400 ft. of training area
- Clearly mark site with flags and/or buoys

### **Launch Site**

The ideal site for kiteboarding will have a decent launch area as wide as possible that is free from any hazards. You will need a fair amount of space to practice land launches and to bring the kites back in for a landing. Make sure the area is free of sunbathers

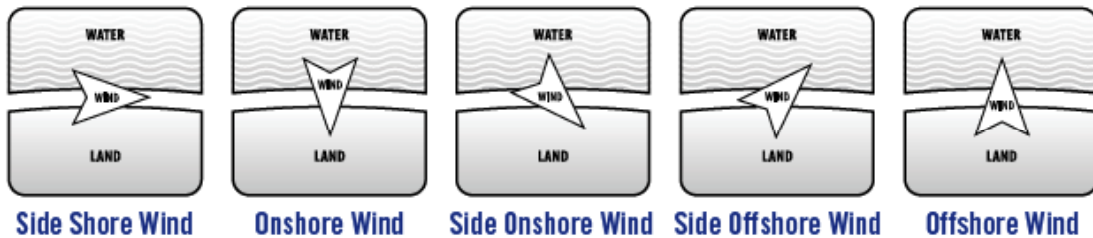


and others that may not understand the potential hazards of a kite. Examine the site closely for any sharp objects that could cut your feet, i.e. rocks, shells, glass; how close any trees, buildings, roadways, or power-lines are to the launch area. **Your buffer zone around you should be 3 to 4 times your kite line length.**

You need to mark your beach site clearly with flags that designate the launch area as a training area for kiteboarders. If at all possible, include buoys with flags or some other type of marker for the water sections of your training site as well.

### Wind Direction/Quality/Speed

Your teaching site should have predominant side shore or side on-shore winds.



Never attempt to teach students in offshore winds as they could get carried far offshore. Remember that the students will go downwind quickly while learning. Be prepared to have a pick up point if they get carried too far downwind. Make sure your students know when to stop and that they don't go out any further than they can swim in.

Especially watch out for anything that could be causing wind shadows or turbulence. To have clean wind, you should be a minimum of eight to ten times the height away (downwind) from something in distance.

**This means:** If there is a tree or object *upwind* of you that is 10 feet tall, it will create wind turbulences for at least 80 to 100 feet *downwind* of it.

Cold wind is denser than warm wind and packs “more of a punch” – i.e. is stronger.

You can determine wind speed by either using a handheld wind meter, checking local wind/weather stations that you know represent the accurate wind speed or use your environment to determine how strong the wind is.

**Here is a chart for determining how strong the wind is by observing your environment:**



|   |                             |
|---|-----------------------------|
| <b>No Wind</b><br>No air movement, water looks like a mirror  | <b>0mph = 0knts</b>         |
| <b>Light Air</b><br>Very light breeze, hardly noticeable on your face   | <b>1-3mph = 1-3knts</b>     |
| <b>Light Breeze</b><br>Beach sand will start to move  | <b>4-8mph = 3-7knts</b>     |
| <b>Light to Medium Wind</b><br>Loose sand will get picked up and blown downwind, larger branches will sway, and fairly frequent white caps occur        | <b>13-19mph = 11-16knts</b> |
| <b>Optimal Kite Wind</b><br>Surface waves form on water and small trees sway, consistent white caps on the water  | <b>19-25mph = 17-22knts</b> |
| <b>Strong Kite Wind</b><br>Trees begin to bend, power lines whistle, sand gets blown up your leg, water spray from waves starts to get carried downwind | <b>26-31mph = 22-27knts</b> |
| <b>Very Strong Kite Wind</b><br>You have to lean into the wind while walking, sand blows into your face, large trees sway                               | <b>32-38mph = 28-33knts</b> |
| <b>Wind too strong for kiting</b><br>Larger twigs break from trees, long streaks of foam appear on the water  | <b>39-46mph = 33-40knts</b> |

**Never teach when the sustained wind speed is at or exceeds 25mph or the gust variance is or exceeds 15mph.**

When teaching **snowkiting** in rolling or mountainous terrain, be aware of wind rotors being created uphill and downhill.

### Water Conditions

Try to find a training site that has a lot of shallow waters that are around waist to chest deep. Shallow waters will make it much easier to learn the sport because you will be able to balance yourself against the kite while learning all the necessary skills. You will also want to make sure it is free from any damaging pollutants, any rip tides, undertows, strong currents, or any threatening marine life.

You should be intimately familiar with your training site. Walk the shoreline frequently and walk the shallow waters to stay familiar with any changes. You should kiteboard



the site in all wind conditions and directions to properly evaluate the site for instructional purposes.

### **Snowkite Conditions and Teaching Site**

- Don't kite on ice
- Launch and instruction/riding area must be free of trees and obstacles
- Clean winds, max. 25mph constant winds with max. 15mph gust variance
- If the conditions are sunny and warm followed by cloudiness, the snow will become soft, then freeze over creating icy conditions.
- Be aware of potential avalanche conditions. If you are teaching in the backcountry, pass an avalanche safety course.
- Before heading out, always evaluate the quality of:
  - Terrain
  - Snow pack
  - Weather

## **CHAPTER 7**

### **Practical Instruction**

We have tried to combine what works for teaching kiteboarding or snowkiting here in this section. We follow a step-by-step method of instruction that has proven to be effective. In this section, we hope to pass along the basic techniques that help students learn to kite. It will be up to you to adapt these methods to your site and style. The insights and visions we may offer here are but a small part of the potential that you can develop to provide a creative and capable program for teaching kiteboarding or snowkiting.

### **THE TOTAL INSTRUCTOR**





customize commands but remember to teach your students the international kite signals such as for landing, launching and also the rules for Right of Way.

### Right of Way Rules

#### You have the “Right Of Way” when:

- Kiting with your right hand forward (on a starboard tack)
- Outgoing (launching) kiter has right of way over incoming (landing) kiter
- Downwind kiter has right of way over upwind kiter
- When riding a wave, the kiter closest to the lip of the wave has right of way

*It is common sense to also teach your student that when in doubt, always YIELD.*

The reason: Many kiteboarders and water sports participants ignore or do not know the Right Of Way rules. ALWAYS maintain a 200-foot clear zone around other area users.

### Managing the Student

A big part of your communication skills will be used in providing feedback to the student. Remember to keep this feedback positive and focused on producing little successes.

To do this you must define success (it's when the student achieves the goal you have set). When a success occurs, point it out and let the student bask in glory.

Be sure to use your positive reinforcements at the appropriate time and place. The story is told of a man who acquired a new puppy. The man wanted to house train him so every time the puppy did his business on the floor the man threw the puppy out the window. The puppy was a fast learner so in short order he was careful to pee on the floor and quickly jump out the window!

Make sure your compliments come immediately after your student's success and make sure they are sincere.

Many instructors have a tendency to babble on about the details of flying. All good information, to be sure, but every student needs hands-on experience. For example, instead of telling students how to perform a pre-flight check, lead them through it. Have them touch the bridle and let them make the larks head knots to feel the parts. **Involve their tactile sense and they will remember your words.**

In a safe situation, such as preparing the kites position for a launch, you can lead your students on a guided discovery adventure by having them figure out the details.



Ask them to tell you where the wind is coming from, where the kite should be placed, where they should be standing, and which way the kite should be launched.

This approach guarantees learning and keeps idle brains that are prone to get overly excited busy.

Perhaps your biggest job in training a new student is stress management. Over the course of a lesson, stress can and will develop. It is your job to recognize and alleviate this stress. Relieving stress is your constant duty. A very good way to control stress, anxiety, fear, and nervousness is to break the student's tasks down into small components – building blocks if you will. This approach allows little successes and certainly takes care of one fear: That of failure.

Simplify wherever and whenever possible. Remember to review often and let your students repeat their successes. Beware of sensory overload. If a student is overloaded, learning will cease. Keep your students relaxed, enjoying and progressing gradually but steadily.

### **Teaching Good Judgment**

Good judgment is simply risk management. It involves time, thought, experience, and maturity. We can learn good judgment, but too often such learning is left to trial and error. Too often good judgment is based on fear. It is your duty as an instructor to teach good judgment. Failsafe, dependable judgment. Good judgment that will extend far beyond the training site.

Verbally go over the local conditions with your students.

***When an instructor demonstrates good judgment, students learn good judgment.***

Evaluate the following criteria: Wind speed, kite sizes available for use, wind quality, wind direction, and any potentially hazardous objects near the launch, teaching and riding site, as well as physical skills and condition of the kiteboarder. Go over each of these detailed points to teach your students to learn good judgment and how to evaluate conditions before a dangerous situation occurs.

### **Behavior Training**

Kiteboarding and snowkiting are physically demanding sports. We can philosophize all we want about aerodynamic theory or the benefits of one kite design over another as advanced kiteboarders, but the fact remains, students are mostly struggling to perform or survive on the gut level. It is on that plane that we must address their needs.

A physical activity is best taught by training the participant's body to respond correctly to outside stimuli. If a stressful situation occurs, you want your student to respond with sheer instincts and muscle memory and to make the right split second decision.



This is best done by *repetitive* exercises. Repetitive motions with the kite should be practiced during the land lesson, where the student is comfortable and the wind window doesn't shift because they are not in motion.

The land lesson is the time to put a smaller kite in the hands of the student and have them begin to move the kite in the same fashion that will be necessary to kiteboard. Make them practice the repetitive motion until they are performing the task effortlessly and consistently smooth. The complete exercise is detailed in the next section. This repetitive motion is critical in building the muscle memory skills that will be necessary when we are teaching the student how to ride the board.

Once in the water and the excitement of getting up on the board takes over, the student will be much more probable to execute a perfect dive pattern because of the repetitive motion practiced during the land lesson.

### **Instructor Positioning**

We cannot over-emphasize how important it is for an instructor to focus on specific points of a student's posture and positioning in order to detect the source of problems.

As an instructor you need to be located in the appropriate place so you can see the desired skills.

You should be conscious of the student's ability to control the kite at all times. Since your student's kite could power up at any moment and pull him/her forward, you will almost never stand directly in front of a student.

The best position to be in (for most cases) is slightly to the side and behind the student located on the side that points out toward the water or riding area. Here you can see the student's movements, body positioning plus kite positioning, and be available to immediately take control of the kite when necessary and also hold on to the student's harness if necessary.

Being slightly upwind of your student also helps being acoustically understood, since sound carries better downwind than upwind.

It is particularly important to be conscious of your positioning if aiding a student into the foot straps or bindings on the board. Watch the kite and be prepared to move yourself and the board quickly out of the path of the student if the kite gets powered up at all. Once they have their feet in the straps, you can stand behind them and help support them by holding onto the back of their harness or impact vest. Help them learn to keep their body positioning straight while getting into the straps and then diving the



kite for the board start. Don't hold on to your student too long, but let them learn the feeling of becoming "one" with board and kite.

### Instructional positioning and conduct examples

- Always stay behind and to side
- For both men and women: Touching/holding on to the student's elbow is less intimate than their shoulder
- Always ask and / or announce before grabbing or touching your student (All within reason of course, the nature of this sport is very hands on...)
- Use different ways to help your student learn to steer a trainer kite (-> Use students' life and background sports examples to correct your students' steering mistakes)
- When co-steering a kite with your student, watch out for elbow pressure points

### **SUMMARY**

The ultimate determinate of success in our field of endeavor is the number of quality students you produce. A quality student is one who uses good judgment, flies accident-free and progresses to become an advanced kiteboarder in time. Many kiteboarders receive little formal instruction once they leave the training site. It is up to you to influence your students to have the right attitude and care for safety. You must leave them with well-developed good habits. It is also your duty to leave your students with certain minimum skills, which they can carry to all the sites they may encounter.

The most important item you can instill in your students as they leave your close guidance is good judgment. They acquire this not only through your direct instruction, but also by observing your habits and decisions.

## **CHAPTER 8**

### **Teaching Novice Skills**

We will now turn our attention to the actual teaching of kiteboarding and snowkiting on land, water and snow. In the course of the lessons we present the key elements to each step. Also, remember to focus on helping the student break natural habits that may be detrimental to learning to kiteboard or snowkite.

**Anyone who has instructed much will tell you that routine lessons are very rare.**

Students are individuals and each day will be different.



Here are a few good points and instructor's tricks for correcting potential problems. Use this material as a reference or inspiration to improve and customize your own lessons.

### **The Kiteboarding Teaching Sequence**

This sequence is generally split into 3 portions that each last between 2 and 4 hours (Depending on your style, location, student and wind conditions)

- |  |
|--|
| <ul style="list-style-type: none"><li>• Land Lesson / Ground School ~ 1.5 to 3 hours</li><li>• Body / Board Drag ~ 2 to 4 hours</li><li>• Getting Up On The Board ~ 2 to 4 hours</li></ul> |
|--|

The next teaching goal will be to go upwind, about 50% of students will take lessons in order to achieve this goal, the other 50% will practice riding the board on their own.

Further lessons are a growing market, there are an increasing number of students that desire intermediate and advanced coaching and some even pay to have a certified instructor ride with them as a paid "kite buddy".

### **The teaching sequence or lesson plan you choose depends on your teaching site.**

PASA offers 2 distinctly different approaches to the kiteboarding teaching sequence, depending on your school's teaching site. They both teach the same skills, but use differing tools.

- **The Deep Water Kiteboarding Teaching Sequence**  
This is for teaching locations where the water gets deep quickly and there is not much standing-depth area to be had.
- **The Shallow Water Kiteboarding Teaching Sequence**  
This approach works for teaching sites that have large standing-depth (thigh to hip-deep) water for instruction.

PASA offers a complete teaching sequence for snowkiting, much of the initial land lesson is identical to the kiteboarding land lesson.

- **The Snowkiting Teaching Sequence**

The teaching sequence for snowkiting is slightly shorter than for kiteboarding, since there is no body or board dragging involved.

- |   |
|---|
| <ul style="list-style-type: none"><li>• Land Lesson / Ground School – 1.5 to 3 hours</li><li>• Getting Up and Riding the Board or Skis – 2 to 4 hours</li></ul> |
|---|



## **Novice Lesson Building Blocks**

The following building blocks and tools for an initial beginner's lesson are used in **both** the Shallow Water as well as the Deep Water Approach and are also used in the Snowkiting Teaching Sequence.

The term **Land Lesson or Ground School** in the broad sense means any instruction relating to flight that takes place off the water. Land lessons are an introduction to kiteboarding or snowkiting and are designed to build fundamental skills with less powerful / potentially dangerous kites. These are skills your students should master before they are allowed to fly a kite with enough power to kiteboard or snowkite with and before they enter the water.

Certain matters that you must cover with your students are best addressed in a land lesson. Among them are introductory material, skills progression chart, goal setting, communication symbols, weather, aerodynamics, risk management, equipment options, pre-flight set-up, basic kite control, simulated kiteboarding or snowkiting movements, and launching and landing the kite safely.

The land lesson is for familiarizing your students with the kite so they can produce a consistent source of power in the proper part of the wind window. You are training muscle memory as well as presenting knowledge and theory.

You want to concentrate on teaching repetitive kite control motions so that they become instinctive and create muscle memory.

Your students will easily learn the basic skills in this controlled and comfortable environment before they progress to the water where they have to rely more on acquired muscle memory and learn new skills slower due to the higher fear potential in the water.

The first introductory session lets the student become familiar with you, the instructor, and presents a brief introduction to all the important topics. Beware of boring your students here. They usually don't yet have much motivation to learn complex details about aerodynamics or design theories, so keep the information light and let your enthusiasm shine through. Relate all kite skills they learn here to skills they will and want to acquire later; also reference their background sports and experiences to allow them to learn and process the information better.



## Welcome and Orientation

This intro varies with each school's reservation procedures and should include: Welcome, introduction of yourself, school and your program. Filling out proper forms such as waivers and declaration of fitness, and if not already arranged: Payment for the lesson.

Use your school's lesson handouts / brochures which could include kiteboarding or snowkiting history, a quick introduction to equipment (kites, boards, lines, bars, harnesses, safety equipment), as well as questions and answers. It is also a good idea to have a video playing at your school location to expose the students to more kiteboarding and / or snowkiting excitement.

We highly recommend that you have a skills progression chart or lesson description, which you can hand out to your students. This will define the goals you set for the lesson, the skills necessary to be achieved in order to move on to the next skill level and will allow the student to self-evaluate themselves throughout the lesson. It will also help to satisfy the over-excited person that wants to go immediately to the water start. PASA provided an example of a skills progression chart earlier in this manual.

Your orientation will depend greatly on the amount of time that you have with your student. It is a good idea to save an extensive kiteboarding or snowkiting equipment talk for times when the wind is too low or when finishing off a lunch break to fill the time and allow students to digest their food.

Especially at this first session, your students will also be evaluating you, so be organized, confident and give them value for their time. This is also your chance to evaluate your students and figure out how they might learn and communicate best. Take this first opportunity to find out what kind of background (sports) your students have, find out (for kiteboarding) if they know how to swim, and try to judge their mental and physical state (What did they eat prior to the lesson -> blood sugar level, excitement level, also never teach an intoxicated student!) and generally show your professionalism, organization and business sense.

## At The Teaching Site

**Wind and weather awareness** are one of the most important parts of learning to kite. Your students will need to develop this awareness right away.

Constantly talking about wind quality, speed, and its effects on the kite will help them to learn awareness of the wind. Keeping an eye on wind and weather should become second nature to your students.

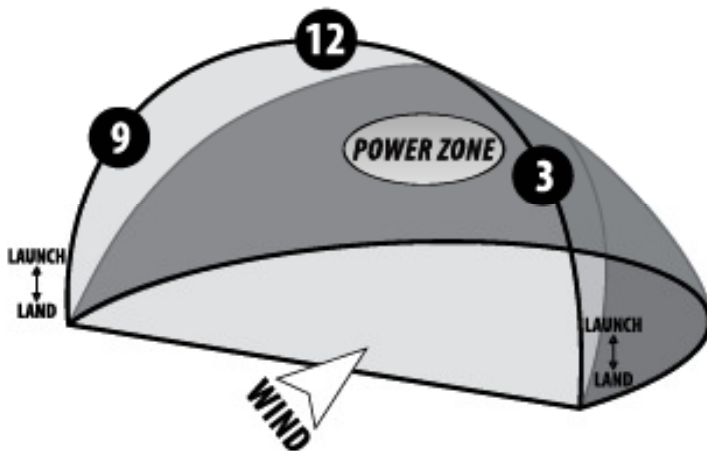


**Awareness of your surroundings** should be next in line.

What could be a potential danger or obstacle, how crowded is it? How many other kites, beachgoers or water users are there? How could their actions influence me? What will my sphere of influence be? What could become my safe downwind 'takeout' point?

*It is important not to overwhelm your student with too much information the first time out, but to gradually instill safe kiteboarding habits and awareness in your students as you continue to teach them.*

### Identifying the Wind Window



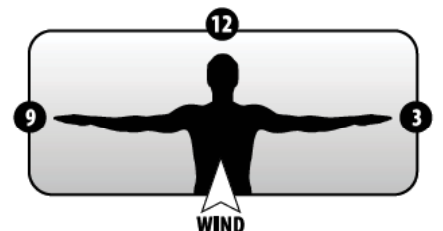
The kiteboarding wind window is the quarter sphere shaped area that your kite can possibly fly in.

You can explain the wind window by standing with your back to the wind, your face pointing downwind. Point your arms over your head. You are now pointing at 12'o clock, which is the center of the neutral zone or arc.



Then point your arms to your right and left. Your left arm is now pointing at 9 am and your right arm is pointing at 3 pm.

This defines the "edge of the wind window" where the kite has the least amount of power. It is what we also call the "Neutral Rainbow", the wind zone, in which we launch and land a Leading Edge Inflatable kite.





We use the clock analogy to describe the positions the kite flies in the wind window.

Directly downwind, just above ground level, is the 'power zone' - where the wind is at maximum strength. Here the kite will pull hardest and fly fastest. As soon as a student has learned how to steer a kite, we split the wind window into 2 parts – left and right. When explaining the wind window, we mention that the kite has to be moved within the right part of the wind window to propel us to the right and moved within the left side in order to propel us to the left.

One phenomenon you as kiteboard or snowkite instructor should be aware of is that the wind window temporarily increases in size during a gust. The best way to explain this is to use a 'balloon analogy', which gets inflated during a gust. This can cause a kite to over-fly especially when it is being held at the 12 o'clock position. When the gust abides, the kite then loses power and can fall out of the sky, which we sometimes call "Hindenburging"...

Another interesting fact to point out is that towards the bottom of the wind window, at both 9am and 3pm the kite creates 100% pull versus the 100% lift it can create at 12 o'clock.

When the 'balloon' of the wind window temporarily expands during a gust, a kite held at 12 (o'clock) has only one way to go: Up. This can result in **lofting**.

QuickTime™ and a decompressor are needed to see this picture.

Therefore, it is important to teach your student from the beginning of their very first lesson that **12 o'clock is not necessarily a safe zone** but holding the kite slightly to the side in the neutral zone, i.e. around 11am or 1pm is safer in order to avoid possible lofting. (See green arrows in above graphic)

**The reason:** You can lean against pull, but not against lift.

Illustrate the wind window for your students by (for example) kneeling in the sand or snow to draw the wind window or if you have one handy - use a dry erase board in order to explain the terminology of the wind direction, the edges of the wind, the power zone, etc. You can even make a 3D model if you'd like to use it in your lessons.

## Choosing the Right Equipment for the Conditions



From the very first day of kiteboarding or snowkiting, the teaching of Preflight is critical, for this is where students develop habits that will remain with them throughout their flying experience.

### **Preflight Elements**

- Care of & Examination of equipment
- Selecting the proper gear
- Preparing for the proper launch
- Preparing the kite
- Preparing the lines

There are essential elements to a good Preflight.

First, we must evaluate the conditions and select the proper kite, lines and board. Selecting the proper kite for the conditions is particularly tough for someone who has

had minimal experience with the sport. Educate your students on the different kite and board sizes and evaluate the conditions out loud with them so they can see the process and begin to learn the proper equipment choices.

The main factors in determining the proper kite size are:

- Wind Speed
- Size of the Kiteboarder
- Experience of the Kiteboarder
- Type and Size of Board
- Length of the Flying Lines

Wind speed is probably the single largest factor to consider when selecting your kite. Each kite is designed to safely perform in an optimum wind speed range. You should be very familiar with the safe range of every kite size that you are using for instruction. The lower the wind, the larger the kite. The higher the wind, the smaller the kite.

The larger and heavier the kiteboarder, the larger the kite that they will need to pull them.

The smaller and lighter the kiteboarder, the smaller the kite that they will need to pull them.

You will undoubtedly be teaching people of various sizes and must accommodate them with the appropriately sized kites. It may be necessary to split a large class into a couple of smaller sub classes if there are major size differences among your students.

If you cannot walk backwards when the kite is flying overhead in the neutral zone, the kite is too big and/or the wind is too strong.



Less experienced kiteboarders will not be advanced enough in their skills to handle being very overpowered. You should try to give them just enough power to get them up and riding the board and going slightly upwind. Don't give them any more power than is necessary for them to learn. Too much power will intimidate them and potentially could lead to injury.

The size and the design of the board will also affect how much power is needed to kiteboard. There are many different types of boards and you should familiarize yourself with the boards available. Select a board that is easy for beginners to get their feet in and out of easily and is large enough to help them balance easily.

For teaching, we recommend staying with only a couple of different styles of boards so that you can always accurately determine the safe size of kite that will be needed for various students.

The length of the flying lines will also determine the amount of power that is generated by the kite.

The longer the flying lines the more power the kite will generate. The shorter the flying lines, the less power a kite will generate when it moves through the wind window. It is a good idea to have at least two different flying line sets in case it is necessary to increase or decrease the power that is generated by a kite.

Following is a kiteboarding and snowkiting equipment overview list that can be used when discussing equipment with your students.

### **Kiteboarding / Snowkiting Equipment Overview List**

Remember that personal preference, riding style, kiteboarder size, riding area, and kiteboarder skill should all be considered with equipment choices. Use appropriate safety gear **at all times**, including, but not limited to, helmets, impact / flotation vests, wet suits, footwear, etc.

#### **Boards**

- Twin Tip boards
- Wake Style boards
- Directionals (surfboards)
- Hybrid / Mutant style boards

- Fin setup
- Foot straps or bindings
- Strap placement on board
- Board size and shape
- Snowboards or Skis

Different design options:

#### **Kites**



- -> Inflatables (LEI kites)
  - Single skin, more rigid, unsinkable, stable, launching methods, etc.
  - C-Kites
  - Bow Kites
  - Hybrid LEI kites
  - 4-line or 5-line kites
- -> Foils (or RAM Air kites)
  - Airfoil, double skin, faster, more power, etc.
  - 2, 3, or 4-line setup

- Strength
- Knots / Sleeving
- Material

**Harness**

- Seat harness
- Waist harness
- Impact vest harness
- Hybrid harness

**Other**

- Impact Vests, PFD's
- Helmets
- Wetsuits
- Booties

**Snowkite specific:**

- Gloves (not too bulky)
- Padded pants
- Wicking under-garments, so students don't stay wet and then get a chill.
- Shatter proof glasses or goggles
- Snowshoes for deep snow conditions
- Shovel / Ice Anchors

**Bars**

- 2, 3, 4 or 5-line systems
- Different bar lengths
- Differing safety systems

**Lines**

- Different lengths

**Teaching Equipment Organization & Care**

Even before we prepare for flight, there are many important things to learn about the proper care of the equipment. Be sure to explain in detail the care, storing and handling of gear, cleaning the gear, care of the lines such as sleeving, bridles and larksheads. Inspect the equipment for potential failure; show how to store the bridles, and how to orient the kites into the wind.

All of your demeanor, habits, and comments should clue students in on how important it is to protect the kite and gear from damage. Familiarize students with the respect and care of kites and lines. You should cover the differences between an inflatable kite and a foil kite. Even if you only teach on one of the styles, it is your responsibility to discuss



the differences between the two popular styles of kites and the differences they will need to know.

(SEE **Chapter 6** Equipment for the details)

***Inspect the gear for potential failure*** - All manufacturers' instructions and safety guidelines must be read and followed, in particular the limitations of the product. Equipment must be regularly checked for wear and tear and repaired accordingly before going out onto the water! Always kiteboard with adequate safety equipment! If using a kite with inflatable bladders, make sure that you go over the proper method of inflating the kite and the proper amount of air to put in the kite.

***How to orient the kite into the wind*** - Teach your students how to orient the kite into the wind for a safe inspection and assembly. With large kites, there are particular ways to orient them into the wind so that they don't try to fly away or launch unintentionally while pumping up.

If you don't have a pump attachment for a single point inflation system in the center of the leading edge, hold the un-inflated kite by the wingtip and pull the wingtip into the wind so that the rest of the kite lays out into the wind like a large sheet. Lower the kite onto the ground and secure the wingtip, which is furthest upwind with sand or soft ballast. Pump up the struts of the kite first, and the leading edge last. Once the struts are inflated, lay the kite leading edge down, canopy up with the main strut facing directly into the wind. Secure the kite by holding on or placing soft ballast (taking care not to damage the kite) on top of the canopy to the right and left of the center strut.

When carrying an inflatable kite that is already pumped up, you should hold the kite in the center of the leading edge with the wingtips pointed up so that the bridle lines are on top of the kite. The kite has the least resistance like this and has the least possibility of snagging on anything or getting punctured by any sharp objects.

***Understanding the Safety Release*** - It is extremely important that your students understand how the safety system works and that they are comfortable enough with it to use it during an emergency situation. You should always teach with a proven safety system. Your safety system should be easy to activate and have two stages.

First, it should completely de-power the kite 100% of the time without completely releasing the kite and the lines and the bar to fly wildly downwind.

Second, the students should be able to detach themselves from the safety system if the kite is still dragging them.



The most popular and safest primary kite release systems involve attaching a leash to the harness, which in turn is connected to the de-powering line or re-ride system of the kite, allowing the kite to “flag out” when activated.

For inflatables, it usually goes to a line that is threaded through one end or the middle of the control bar and allows the bar to slide up one line and lay the kite out / flag out completely to de-power and drop the kite.

For foils, the leash or safety system usually goes to a line which connects both brakes and allows the student to release the bar, putting all the tension on both brake lines simultaneously and causing the kite to flatten out and drop. Smaller foil kites, mostly 2-line trainer kites, sometimes use a re-ride system instead, where upon primary safety release, the bar slides up one line, flagging the kite out and dropping it.

The secondary system (used both in LEI as well as foil kites) usually involves a mechanism, which allows detaching the leash from the harness in an emergency, which will completely release the bar, lines and kite from the kiter.

## **Launching and Landing**

It is important to select the proper placement for the kite and the lines for launch. Launching properly can be one of the most important things to teach and should be covered extensively. Launching properly is particularly important because it is one of the more potentially dangerous situations. Launching the kite is normally done on land for the initial take-off, although this is not completely necessary with the inflatable kite that can launch initially from the water. Because you are close to land and the kite can generate an enormous amount of pull, an improper launch can easily drag a student into nearby obstacles.

For training purposes, you should practice the launch during the land lesson with a smaller kite in an area with plenty of room. Have the student visualize the layout of the lines, the position of the kite, the position of the kiteboarder, and the direction the kite will launch. This is a great opportunity to start the training with hands-on-experiences. Have them lay out the equipment under your supervision and coach them on the correct and incorrect methods. Launching a foil is different than launching an inflatable, so be sure to point out the differences and if possible expose them to both styles.

Teach your students to talk to area locals about specific protocol before launching in an unfamiliar area. The ideal site for kiteboarding should have a launch area as wide as possible that is free from any hazards.

Make sure the area is free of sunbathers and other site users that may not understand the potential dangers of the kite. Also examine the site closely for any sharp



objects that could cut your feet, i.e. rocks, shells, glass; also be aware of trees, large walls, buildings, roadways, or power-lines near the launch area.

Your buffer zone around you should be 3 to 4 times your kite line length.

### **Optimal Kiteboarding Site Characteristics:**

- Launch area free from debris
- Soft bottom surface that won't cut your feet
- Clean winds with no shadows or rotors
- Side shore or side on-shore winds
- Water with minimal surf and chop
- Clean water with minimal dangerous marine life
- No power lines within 300 ft of the beach

### **Kiteboarding Preflight Check**

- Check kite for tears, leaks
- Check lines for knots, abrasions and length
- Check bridles and pigtails for wear and proper attachment
- Make sure kite is disabled until launch
- Check all safety systems
- Check all equipment (kite, board, harness etc.)

Double check that you have your lines hooked up correctly!

Be ready to pull your emergency release, ready for deployment, while launching.

Make sure you announce your launch, then launch your kite.

**KEEP IT LOW AND GO!**

Launch kite out in direction of water, pointing away from shore, keep it between 9 am and 11 am if you are launching out to the water to the left or between 3 pm and 1 pm if you are launching out to the right. Do not bring kite to 12 o'clock until safely offshore.

This helps prevent you from being lofted accidentally if a wind gust hits you.

If there are waves, consider body dragging out through the breakers before getting on the board.

### **Launching Foils**

Foils are double skin kites that inflate with ram air pressure to form a true airfoil shape with individual cells separated by curved ribs. Foils have no rigid framework and rely on the wind and the bridle to form its shape. They are designed to launch with the leading edge opening facing up into the wind and pulling the kite upwards into the wind.

The kite must be initially pulled up into the wind from this position. Because of this design, you should secure the trailing edge of the kite with sand or another source of weight that will hold the kite in position, but will shed off the kite canopy once



adequate pressure is put on the kite. Once the kite begins to rise it will be necessary to repeatedly pull back on the control bar in a pumping motion to inflate the kite completely.

The methods used to do this and the severity of the motions will be dictated by the wind speed. The more wind the easier the kite will inflate. **You should start the kite towards the edge of the wind window** and as the kite starts to inflate and create power it is particularly important to keep flying the kite to the side of the wind window and then up into a neutral overhead position to de-power the kite. It is best to demonstrate the process with narration to your students and then land the kite and push the air completely out of the kite to allow them to start the launch from its initial stage.

### **Launching Inflatables**

Inflatables are single skin kites that utilize tubes with air filled bladders to give them rigidity and to allow the kite to float on the water. One must first inflate the bladders with a pump before attaching the lines for launch.

These kites are designed to launch on their side more than they are designed to launch directly upward. When teaching the LEI (leading edge inflatable) kite launch, it is best to teach and use the assisted launch until your student is a proficient kiter.

To launch an LEI kite, you orient the kite out toward the water or snow riding area, towards the edge of the wind window (~90 degrees to the wind). This is the safest direction to allow you, the kiteboarder, to stand at the opposite corner of the wind window. Explain why you launch out to the water or riding area, away from obstacles by explaining the pendulum effect (what would happen to the kiter when the kite rises too fast into the power zone: Being pulled into the direction the kite is being launched).

Teach "Keep It Low and Go" by gently launching the kite to about 45 degrees between ground and 12 o'clock. Go over the reason for this by explaining lofting. The probability for being lofted in a gust is highest when holding the kite directly overhead at the 12 o'clock point, this being the point in the wind window where the kite can create 100% lift. In contrast, both 9 o'clock and 3 o'clock can create 100% pull. Explain that you can lean or edge against pull, but not against lift. Move to the water or riding area as soon as possible.

If re-launching a kite after the control bar has been released, ensure that no lines are wrapped around arms, legs, bridles or bar before attempting to re-launch. Always be ready to release the bar again to avoid injury.

### **Landing**

Choosing a safe landing set-up is one of the most important aspects of landing a kite. Deciding where you are going to land is the first step in preparing for landing. A bad landing can drag a student much faster than they realize. Awareness of your surrounding, other people in your sphere of influence as well as wind quality all play into



choosing where to land your kite. When in doubt, always land out in the direction of the water or open space, so that worst case scenario, the student gets pulled out away from obstacles and people. You should have the students practice controlled landing with the smaller kites early on in the land lesson portion of your instruction. This will give them a good introduction into what to expect when they have the larger kite in their hands.

- ➔ If space allows, have them practice bringing the kite down into the hands of another student who is standing on the far edge of the wind window.
- ➔ Next, have them practice landing the kite themselves in the water a safe distance from the shore.
- ➔ Show them how to roll up the lines after such a landing. Remind them to always wrap lines unevenly to ensure the kite stays flagged out if the kite is unattended.

Emphasize the importance of having only knowledgeable kiteboarders or snowkiters assist them in launching or landing the kite.

## **Steering the Kite**

Steering the kite should become second nature. Try to spend enough time on land so that your students' kite steering is done with muscle memory and they don't even have to think about the turns to execute them.

Steering the kite well will make the difference between a sweet ride and short ride involving much water or snow being forced into multiple openings on your body.

The amount of steering that you do with the kite will greatly depend on the conditions.

The lower the wind, the more aggressively you will need to steer the kite to generate enough power to stay on top of the water or snow. The higher the wind the less you will steer the kite and can actually ride with the kite sitting out on the far edge of the wind window. The more that you move the kite or rather the longer the distance is that the kite travels the more apparent wind is flowing over your kite.

As the kite picks up speed it rushes the wind over the wing and increases the amount of lift the kite has. This higher relative wind or apparent wind on the kite translates the tethered lift into more pull.

To turn the kite to the right or clockwise, you pull back with the right hand. The harder the pull, the tighter the turn.



**Tip:**

Emphasize using elbows to steer. "Bend" your elbows. If your student keeps trying to steer the kite like a steering wheel of a car, or keeps pulling on the bar, etc...use steering analogies your student can relate to; i.e. steering the kite like a shopping cart or a bike. Some students might also relate to the analogy of boxing (push and pull on the bar).

The kite will continue to turn as long as tension is pulled on that line. Watch the nose of the kite and when the nose of the kite is pointed upwards bring your hand back forward so there is equal tension on both lines. This will allow the kite to fly in a straight line and it will fly in the direction the nose is pointed.

Slight corrections may be necessary to fly the kite directly overhead. To turn the kite to the left or counterclockwise simply pull back on the left hand. The harder the pull, the tighter the turn.

If your student is having difficulty with turns, have them simply fly the kite right and left high in the wind window. They will be making turns, but not complete loops. Let them get a feel for the kite and how much pull is required to turn the kite. Be patient and break each step into smaller steps and be very clear on your instruction.

### **Taking Out Twists**

For best control, you should teach your students to fly the kite without any twists in the flying lines. Get them used to looking for twists or wraps in the line before launching the kite. Have them rotate the control bar to remove wraps before launch. This should be practiced on land and in the water; especially after the safety release has been utilized.

If the kite is launched and it has a wrap in the flying lines, it will need to be removed safely with the kite in the air. The kite should never be looped into a large circle to remove the twists. This can generate an enormous amount of pull and lift and can be potentially dangerous to the kiteboarder. Even if you are on land, flying a trainer kite, discourage your students from looping the kite, in order to get them used to respecting the power a kite can create.

### **How to remove line twists while flying a trainer kite:**

- ➔ Steer the kite up into the neutral position.
- ➔ Hold the control bar level and at about the eye level.
- ➔ Rotate your body 360 degrees under or around the bar.
- ➔ Pause and make certain the kite is motionless in neutral.
- ➔ Check the twists to see if you went the proper direction or need to twist more.



### **Finding the Neutral Zone**

The first thing to learn is where to put the kite to de-power it. You will want to know where the brakes are before things get too out of control. The 'neutral rainbow' is located at the upwind edge of the wind window. Define this term for the student and demonstrate the placement of the kite. Stress to the student the importance of this position. The student should be able to return the kite to neutral at any time. Have them practice this by periodically telling them to take the kite to neutral. The student should be able to hold the kite motionless in neutral. Once they are hooked into the harness, they should also be able to control the kite in neutral with only one hand on the control bar.

### **Using the harness during the land lesson**

The harness is used to allow the kiteboarder to manipulate the incredible power that the kites can generate. "Hooking" into the harness and harness use should be practiced during the land lesson after the student exhibited consistent control of the trainer kite.

It is also a great help to be able to hold on to your student when the winds are gusty or when even a small (1 to 2m) trainer kite pulls a smaller student enough to lose balance. Using a harness already with a trainer kite also allows the use of a safety leash clicked onto the harness (get your students using a safety leash right from the start).

Hooking in is initially best done when the kite is in neutral. Make sure, that you use releasable harness loops on your trainer kite bar.

**Review harness release system before hooking in!** For teaching purposes you should have the student practice hooking into the harness and unhooking during the training sessions. Force them to keep the kite under control while doing this. It will be a natural tendency to look down at the harness while hooking in and often the students will turn the kite unintentionally while doing this. Have them practice without looking at the harness. Hold on to student's harness loop if necessary.

Having your student hooked in flying a trainer kite also allows you to already during the land lesson practice the motions of **how to get up on a board** as well as the **upwind body drag** position, thus early-on gaining muscle memory for these skills.

### **The Power Intake - Powering up the kite**

The kite is the engine and you must know how to deliver a little bit of power and how to deliver a lot of power. This is essentially done through the dive of the kite. Where the dive starts and stops and how steep the dive is will dictate the power the kite creates.

Teach your students where to position the kite to increase the power or the pull of the kite. Once the student can consistently turn the kite and keep it in control and in the parameters of the wind window, begin to show them the dive pattern to power up the kite.



Take the kite from the student and show them the dive sequence while explaining the relevance of the pattern to learning how to kiteboard or snowkite.

- ➔ Start with the kite in the neutral (directly overhead) position and fly it into a steep dive to a side of the wind window position and then turning to the outside edge and back up to a neutral position.
- ➔ Continue to repeat this pattern making sure to restrict the kite's movements to only one side of the wind window.
- ➔ To increase the power, have them practice the dive with sharper angles downward to create more power.
- ➔ To decrease power, have them practice with shallower dives to create less power.
- ➔ Make sure they are returning back up to neutral without veering too deep into the power zone of the wind.
- ➔ Point out that how far to the right or left of neutral the dive is initiated will also dictate the amount of power that is created by the kite. To avoid confusion, break your instruction down into elements that are easily understood and discussed.

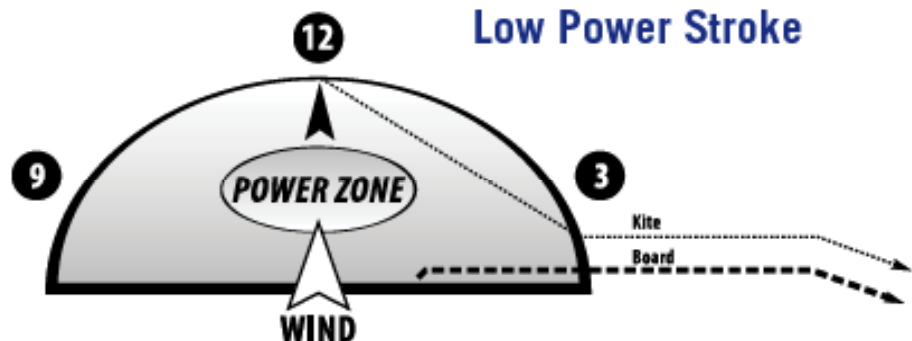
## The Power Stroke

When you talk about how to create the right amount of power with your kite in order to get up on the board, it is important to teach your students that the power stroke they choose depends mostly on the current wind conditions. It is always best to practice power strokes on land or in shallow water for the first time.

This way your students will get a feeling for how the kite responds, how fast it turns and how it feels to pull yourself forward and up on purpose. The following are 3 different kinds of power strokes for differing wind conditions:

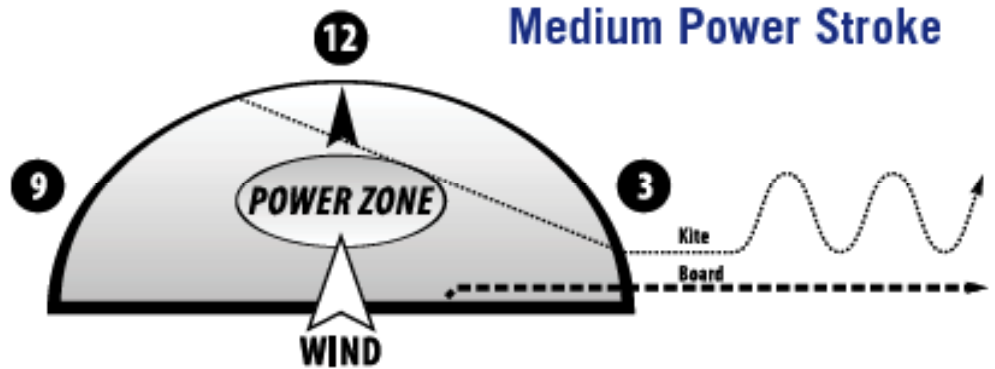
### Low Kite Power

Powerstroke used in high winds to create minimum amount of power



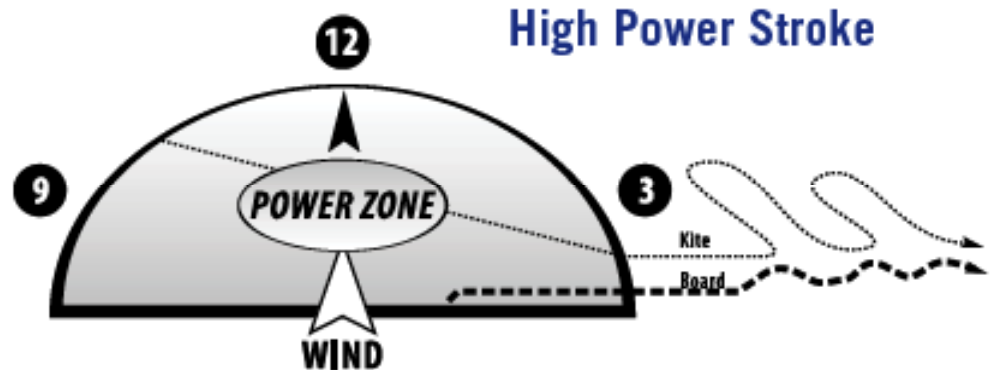
### Medium Kite Power

Powerstroke used in medium winds to create medium amount of power



### High Kite Power

Powerstroke used in low winds to create maximum amount of power



Where the student positions the kite to start the dive and how long and how steep the dive is with the kite will dictate the amount of pull the kite will deliver.

## CHAPTER 9

### Lesson Plans

Lesson plans are basic outlines of a day's lesson or a course. They are important tools for organizing a teaching program and it can be said that every instructor should have some sort of lesson plan in order to present a cohesive program. Here we present examples of lesson plans for a course from beginning to fully powered up kiteboarding



or snowkiting. These model plans are a combination of teaching techniques that have proven to be both safe and most effective in accelerating the student skills. Each lesson is not necessarily one day, since class size, conditions, gear and student progression speed vary greatly.

## **Site Specific Lesson Plans**

### **The Deep Water Kiteboarding Teaching Sequence**

This teaching sequence is specifically for beaches and teaching locations where the water gets deep quickly and there is not much standing-depth area to be had. This approach starts with a “Land Lesson” where the student learns kite basics, steering and wind window awareness on land. The student then progresses to the water where learning takes place in flat to lightly choppy deep water. There should be no surf.

The instructor can use graduated line lengths both on land and in the water and progress to full line length once the student is proficient enough. Shorter lines decrease the student’s sphere of influence, thus increasing buffer zone and also decrease the power of the kite in motion.

### **1<sup>st</sup> part Deep Water Kiteboarding Lesson Plan:**

#### **Land Lesson / Ground School**

##### Welcome, Intro and Orientation

(See page 82 for details)

##### Instructor’s Gear Considerations

(Before heading out to the Land Lesson teaching site)

- Bring water, juice and snack bars
- Ensure that students have good shoes, sunscreen and sunglasses
  - ➔ Teva / Chaco-like sandals with back strap are OK, but no slippers (Ankle or fall injury potential)
- Bring Trainer kite RAM Air/Foil or LEI
  - ➔ (1m<sup>2</sup> to 3m<sup>2</sup> - have several sizes to be able to increase power)
- Make / bring releasable harness loop on trainer kite bar
- Make / bring kite leash for flagging out / releasing kite (instills safety leash habit)
- Fit and bring kite harness (first for holding on to student and later also to hook in)



### Onsite Safety Talk (see also page 83)

- Hand out Safety Guidelines (if you have them)
- Location considerations
  - ➔ (Site layout, local rules, etc.)
- Awareness of surroundings
  - ➔ (Other site users, boat traffic, obstacles, roads, buffer zone etc.)
- Wind direction & quality
- Weather considerations

### Kite Setup

Take out small (1m<sup>2</sup> to 2m<sup>2</sup>) RAM Air trainer kite or if it is a small LEI:

➔ Put valve plug in 1/2 way

(Instructor's trick to keep leading edge from bursting on impact)

- Explain kite (What kind of kite it is, what makes it fly, bridles, etc...)
- Weigh down / secure kite on ground (emphasize this even if kite is very small)
- Lay out bar and lines (emphasize proper placement even if the kite is small)
- 2 reasons for "running lines":
  - ➔ To untangle the lines
  - ➔ To check line integrity (up to 60% tensile strength is lost in a knot, frays and / or weak spots will compromise line strength)
- Explain kite & bar care + maintenance (see also page 68 & 88)
- Connect lines to kite (explain / teach larks head knot)
- Put harness on student (to be able to hold on and for safety leash use)
- Explain safety system(s) (see also page 69 & 89)
- Instill the habit of always using a safety leash (first on, last off)
- Explain to not touch the kite lines once the kite is powered up
- If space / buffer zone is an issue, consider shorter lines to increase your buffer zone

### Wind Window Explanation (also see page 83 & 84)

- Use kite, model or prop for hands-on explanation
- Clock analogy (9, 12, 3 o'clock)
- Neutral rainbow/arc, power zone, flying zones
- WW expands in gust, contracts in lull -> like a balloon
- Introduce 100% pull, 100% lift zones
  - ➔ Talk about possibility of lofting
  - ➔ You can lean against pull, but not against lift



## Learning How to Fly the Kite

- Explain and demonstrate steering (first with bar only, no kite)
- Launch kite (instructor always launches kite first) if possible launch even the RAM Air kite on the edge of the wind window
- Teach the assisted launch (safety on, line check, hand /head signal, positioning, safe launch/landing zones...)
- Talk about Pendulum effect (you are the teabag, etc...)
- Teach controlling the kite (avoid steering wheel effect, pulling on the bar, etc...use steering analogies your student can relate to; i.e. shopping cart or bike)
- Keep bad habits from forming
- Instill off-center neutral ->12 o'clock is not a safe spot-> lofting potential (see p. 84)
- Figure 8's on both sides (Split wind window as soon as student can steer the kite)
- Teach changing direction with the kite / make transition
- Teach the assisted landing (pat head) the kite
- Teach kite landing to YOU (make student move, not you => teaches 3D Awareness)
- Flying the kite with subtle movements on the edge of the wind window to simulate a slow launch or landing
- Taking out line twists (by rotating body, not looping the kite)
- Using the harness and flying "hooked in"
- Talk about buffer zone (3 to 4 kite line lengths)
- Practice one-handed flying while flying hooked into harness
- Perfect the flying skills to obtain consistent power from the kite
- Explain (and draw) different power strokes (see page 95 & 96)
- If appropriate, increase trainer kite size (use good judgment!)
- Practice landing and launching the larger kite and understand the safety release mechanisms.
- Practice different power strokes
- Simulate getting up on the board (use appropriate prop to keep student safe)
- Getting up on board Simulation, then keep walking (trains student to keep moving the kite after they pull themselves up)
- Walk around a marked course with kite up and hooked into harness while flying kite (improves split attention) if space and ground allows
- Introduce and simulate upwind body drag position on ground if possible
- Engage Safety (let go of bar, get comfortable with safety system)
- Talk about complete release in extreme emergency (2ndary safety-if on leash)
- Teach how to put kite away and organize
- Student Feedback Form / Instructor evaluation



## 2<sup>nd</sup> part Deep Water Kiteboarding Lesson Plan:

### Body / Board Drag

#### Welcome, Intro and Orientation

Same beginning procedure, waivers, payment, etc.  
New date → new waiver

This portion of the lesson is designed to accomplish three primary objectives.

- First, to get the student comfortable with a kite large enough for kiteboarding.
- Second, to get them used to being pulled in the water.
- Third, to develop better kite control and learn to use a kite to pull them in a particular direction.

#### General Guidelines for Water Instruction:

- When flying larger kite (over 3m<sup>2</sup>) → student wears helmet + impact/flotation vest
- Coast guard approved PFD, depends on requirement of spot
- Make sure wetsuit will keep student warm for long periods **in** the water

#### LEI Kite Setup

- Explain difference RAM Air – LEI
- Explain specific kite you are using  
(Launching, landing, bridles, safety systems, preflight check, etc.)
- Pump up and set up LEI
- Weigh down kite (emphasize)
- Let student pump (keep them busy but don't wear them out)
- If not a single point inflation kite: wingtip into wind, pump up struts first, LE last
- Talk about valves, "Pling", inflation pressure, kite maintenance
- If it is appropriate or student is interested, talk about kite repair and care
  - Alcohol based marker instead of petroleum based for LE repair
  - Attach string to valve before taking out bladder
  - Use baby powder for "lubrication"
  - Use experienced repair shop if available...

"A Kite once pumped up and not weighed down, is like a gun lying around with the safety off..."



- Unroll bar and lines
- 2 reasons for running lines (see land lesson)
- Re-explain safety systems (pull and reset a few times, then let also student do it and let them finally deploy the safety with closed eyes)
- Talk about complete kite release (Emphasize: in absolute emergency only)
- Self landing / Self rescue simulation + demonstration of the 2 different ways of self-rescuing with a kite:  
For onshore, side shore and side-onshore winds: “Kite Taco” + direction switch demo  
For offshore or no wind situation: Deflate and roll-up LE and paddle in

### Practice Launching and Landing

- ➔ (Again, instructor always launches kite first, explains and demonstrates, then lets student explain and demonstrate back to instructor)
- ➔ Always safety leash on first, then line check + launcher eye contact
- ➔ Consider using shorter lines
  - Per 3m less line=> 1m<sup>2</sup> less power when kite is in motion; works with 15m to 30m kite lines
- ➔ Bar: mostly horizontal, explain chicken loop / trim strap, visual line check, launch signal, etc.
- ➔ Talk about “happy kite” = filled out canopy, LE neither pushing nor pulling up or downwind (LE tells the exact spot where to launch)
- ➔ Launch: “Keep it Low and Go” (launch up to 45 degrees out towards the water and go out)
- ➔ Demonstrate and teach relaunch
- ➔ Once student is launching the kite: Use assisted launch, instructor is holding on to student with the hand towards land and the other hand (towards the water) is ready & free to help with steering of the bar, or bring the kite down if necessary

### Before student ‘takes off’, go through and reiterate:

- Hand signals
- Boundaries (how far should they drag out, before turning around)\*\*
- Communication (agreed upon hand / whistle signals / radio helmet)
- If using a radio helmet: HAVE A BACKUP PLAN IF IT FAILS!! (Agreed upon signals, boundaries etc.)
- Right of Way and other site specific considerations
- Buffer zone & other water and beach users



\*\*Never go out further than you can swim/walk back unless assisted by a watercraft.

Depending on student and location this will vary:

- Do assisted body drag first (buddy body drag)?
- Upwind body drag position possible right away?

Work to achieve

- Sustained kite movements on both sides
- Change and control of direction
- Learn to restrict the kite movements to only one side of the wind window to control the direction that you are being pulled.
- Identify the “Power Intake” generated by the kite’s movements. Learn how to create more power and less power by moving the kite.
- When student is proficient in body dragging:
  - > Add the board to lean onto during body drag for a ‘board drag’
- **Upwind body and board drag**  
This is helpful for when you get separated from your board and don’t have a leash on:

Dive the kite with one hand on the very edge of the wind window while simultaneously taking the other hand and extending it out to act like a rudder to pull you upwind.

Your extended arm points in the direction of travel. Extend your arm out stiff with an open palm and rigid fingers to create as much resistance as possible. It will be necessary to twist your body and use your whole body to create the maximum resistance to take you slightly upwind.

When you stop to change directions be careful not to generate any downwind movement by swinging the kite widely to the other side of the wind window. Now with your other hand out repeat the diving motion on the new side of the wind. Repeat this process as necessary to carry you across the wind and slightly upwind each time until you reach your board.

- Letting go of bar at the end of the lesson (safe buffer zone but close to shore)
  - > Supervise student performing self-landing/self-rescue in water (Make sure to save some time and energy for this at the end of your lesson)
- *IF instructing off a jet ski:* Also practice student landing the kite to you (Builds 3D awareness in your student)



- Go through cleaning and organizing the gear with your student
- Have the Student Feedback / instructor evaluation filled out

### **3<sup>rd</sup> part Deep Water Kiteboarding Lesson Plan:**

#### **Getting Up On The Board**

##### Welcome, Intro and Orientation

Same beginning procedure, waivers, payment, etc.  
New date → new waiver

- If possible, start this lesson by first re-simulating getting up on the board with the trainer kite on land
- Re-enforce your student flying the kite one-handed if necessary
- Student is hooked into the harness, re-emphasize split attention between trainer kite and board / ground
- Re-iterate different power strokes will create different amounts of power
- Re-iterate the Pendulum Effect
- Set training area boundaries, signals, talk about Right of Way or other site specific rules / information before launch

##### LEI Kite Setup

- Gear combination: Kite big enough to pull student up, but not overpowerer the student; + a beginner board which is easy to get up onto, (usually a larger twin tip)
- Have student setup the LEI kite - Instructor always double-checks equipment!
- Have student deploy and re-set safety systems at least a couple of times
- As always, explain and demonstrate all new skills first then have student explain and demonstrate back to you
- Launch (Low & Go, out towards water, etc.)
- Make sure that student is able to retrieve the board with an upwind body drag

##### Body position for getting up on the board:

The challenges of this step is to hold the kite in the proper spot while getting the board on their feet and then maintaining a good position for the initial dive. This may sound easy in theory, but we can all remember how tough it seemed in the beginning. If possible, start this lesson in water that is still shallow enough for the student to touch the bottom and be able to resist against the kite when necessary. You should



demonstrate the process for the student first so that they can see how to get into the board without assistance.

1. Keep the kite positioned in a neutral position directly overhead or slightly tilted if the conditions are light or gusty. A slight tilt will keep the kite from luffing or flying over the edge of the wind window.
2. Use your free hand to grab the back foot strap of the board and hold the board at a slight angle in front of you.
3. Explain the importance of keeping control of the kite with your other hand. You will lose the position of the board if the kite dips into the power zone.
4. Start by placing your front foot in the foot strap. If you are using a twintip board, the front will be the end of the board that is pointed in the direction that you plan to travel.
5. Immediately push the board in front of you and place the back foot into the other foot strap. You can now balance yourself against the board and resist against the kite with the board. Try to get both feet on the board as quickly as possible to prevent being pulled forward over the board.
6. Explain how to keep the board positioned flat in front of you and how to not get pulled around one end of the board. You can make adjustments by steering the kite subtly to the left or right to pull your body in that direction. You can also simply push the bar to the right or left to change the pull on your body. You can also use your legs to push one end of the board away from you to center yourself on the board.
7. Now we are ready to position the board for the water take-off. Recoiling the back leg and extending the front leg while pushing water so the board isn't plowing through the water while water starting. Put more weight on the back leg to help the nose of the board out of the water.
8. The kite should be close to directly overhead. This also often helps to redefine the middle of the wind window. Remember that the further to the opposite side of desired travel you initiate the dive, the more power the kite will deliver. Start the kite dive in the direction that you want to be pulled.
9. The dive depends on the amount of power that you need. If you desire more power, the dive will need to be steep and long. If you want less power, the dive will need to be short and shallow. It may take several times for the student to experiment with the dives to get just the right amount of power.
10. When you feel enough power, you should stand up on the board.
11. The board will need to travel toward the kite for a short distance to pull you up on top of the water.
12. Once up and moving on the board, you will need to swing the nose of the board more away from the kite to increase the tension on the kite lines. If there is no tension on the kite lines, the kite will not be able to turn and will crash into the water. If the power from the kite is strong, you will need to begin edging the board at this point to resist against the kite and arc upwind.



13. Almost simultaneously, you will need to pull with the opposite hand to turn the kite away from the water and back up to the top of the wind window to start another dive.
14. If the kite is generating a lot of power, it is not necessary to make many movements.
15. If the power is light, you will need to return the kite high into the wind window to make another aggressive dive.

#### Summary:

- Get feet into foot straps (easy to enter and exit and make the student feel safe and comfortable)
- Crunch up body
- Bend back leg more (closer to butt)
- Straighten front leg more
- Point board at the kite during power stroke (point board downwind ~45 degrees)
- Then push/edge against the kite and keep kite moving
- Teach not to pull on bar, instead to let the bar pull you

#### Practice with your student:

Have them practice getting into the board several times before allowing them to take off. This is because they are likely to travel a fair distance away from you and then lose control and crash. When this happens, they need to be comfortable enough to get the kite under control and then get back into the board themselves to come back the other direction.

- Starting the kite dive in the proper placement in the wind window for the direction of travel that you choose and the amount of power you wish to generate.
- Coordinate the dive of the kite with the student standing up on the board.
- Make sure the proper body and board positioning are taking place simultaneously with the dive of the kite.
- Work on not letting the student roll his / her body out of position while getting into the foot straps
- Practice “turtleing” – i.e. At least 2 line lengths away from shore, put feet into foot straps then keep the kite moving gently around 12 o’clock in neutral, in order to get used to the feeling of flying the kite in the foot straps, then slowly increase the kite dives into power strokes
- Start with slow, short dives, then increase the power stroke until pulled up enough to get up on the board
- Remind the student to keep the kite moving once they are up!

#### Common Mistakes:

Student can’t get their butt out of the water:

- ➔ Dive the kite more aggressively



→ And / or bend the back knee more, plus straighten the front leg more

Student is always pulled over:

- Dive the kite less aggressively
- And / or point the board more downwind during the power stroke

Common windsurfer mistake: pulling on the bar

- Remind them to let the bar pull them instead

Common wakeboarder mistake: forgetting to move kite once up

- Reinforce keeping the kite moving on land with a trainer kite after the getting up on the board simulation

Common surfer mistake: following the kite downwind too much

- Emphasize pressure on back foot to edge against the pull of the kite

### Transitions / Turns

(On a twintip board)

Start by slowly raising your kite to 12 o'clock while steering your board slightly upwind to slow down. Initially, your butt will fall back into the water and you can start in the new/opposite direction by making another water/board start.

After getting more comfortable riding, progress to moving transitions by pointing the board slightly upwind, then pushing your back foot slightly toward the kite (tail slide), while slowly bringing your kite up and over to the opposite direction.

Start applying more pressure on your new rear foot; and straighten your new front leg more. Your board will naturally start moving in the opposite direction with a new lead foot, if necessary; point the board slightly downwind and/or complete a slightly more aggressive kite dive in the new direction to pick up speed.

### Finishing the lesson

- Option: Finish the lesson with a close to shore self-rescue.
- Go over gear cleaning and after-session maintenance

Have Student Feedback / Instructor Evaluation filled out by student

### Going Upwind

This can be a new lesson, however, if a student learns fast, this might be part of the Getting Up On the Board lesson. Going upwind is the ultimate goal of every kiteboarder. Going upwind means you can return to where you started and don't have to walk back upwind every time you go out for a session. Going upwind takes a bit more practice and requires harmonious control of kite and board.



- ➔ Once you are planing on the water, you need to learn to swing the nose of the board more away from the kite and more upwind. This will create more resistance against the kite and allow you to steer the kite better. Try and keep the kite lower so it does not pull you off your edge when you pick up speed. Remember you can resist kite-pull easier than kite-lift.
- ➔ The idea of going upwind is to find the balance point between too much and too little of an angle upwind for the amount of power that you have from the kite.
- ➔ As you swing the board more upwind, you will need to put more weight on the back leg and begin to edge the board. Edging means rocking the board back onto its edge much like a snowboard so that the rail of the board is buried in the water and creates more resistance against the kite. This can be an awkward position for a beginner. If the student is having trouble with this, tell them to curl their toes, which will shift the weight to their heels.
- ➔ As you continue to edge and angle more upwind, you will need to steer the kite further towards the upwind edge of the wind window. You may need to keep moving the kite in an up and down pattern to keep generating enough power to keep planing.
- ➔ If you continue to apply pressure with the back leg and edge upwind further, you will eventually reach a point where you lose all speed and kite power and fall backwards into the water. The idea is that you must coordinate the power of the kite with the angle upwind. The more kite power you have, the more upwind you will be able to reach. The trick is to find the “sweet spot” between too much upwind board edge where you lose kite power since the kite is too close to neutral and too little board edge where you still go downwind, either picking up too much speed and losing ground or even slacking the kite lines resulting in dropping the kite.
- ➔ If you go upwind too aggressively with too little power, you will need to correct this by applying more pressure to the front leg and swinging the board more downwind to pick up more speed and once moving again, edge the board harder upwind again.

Emphasize:

- Keep the kite lower
- Body position & eyes pointing upwind
- Put more pressure on the back leg (bend back leg more, straighten front leg more)
- Practice “stomping” the kite



- Edge board harder (trick: curl toes to shift weight back onto heels)
- Point board upwind
- Talk about kite position lift versus pull (see graphic p. 84)

### **The Shallow Water Kiteboarding Teaching Sequence**

This approach works only at teaching sites that have a large shallow area (standing-depth; thigh to hip-deep water) for instruction. You can use a graduated kite line length system right from the start and don't need to hold a full "Land Lesson" on land. Kite steering and handling is taught mostly in shallow water using LEI or closed cell foil (RAM Air) kites.

#### **General Guidelines for Water Instruction:**

- ➔ When flying larger kite (over 3m<sup>2</sup>) → student wears helmet + impact/flotation vest
- ➔ Coast guard approved PFD, depends on requirement of spot
- ➔ Make sure wetsuit will keep student warm for long periods **in** the water
- ➔ If the bottom is rough, rocky or has sea shells, use booties

#### **Static exercises on the beach with control bar hanging from a tree or wall**

- Learn kite posture, sheeting and steering
- One handed steering,
- Bar pressure down / back for upwind leverage
- Safety releases
- Body drag with board protocol

#### **Static exercises on the beach with LEI kite**

- Kite setup and handling
- Self Rescue Simulations

#### **Progression with 7m Lines on full size kite in the water**

- Flying / sliding the neutral rainbow one handed - switch hands passing 12 o'clock
- Water re-launch
- Park kite at 10 o'clock, then practice sheeting and steering kite with one hand, then park at 2 o'clock and repeat.
- Drag upwind with board and kite at 10 o'clock and then at 2 o'clock
- Self rescue with board.

#### **Static board start exercises on the beach**



- Water start theory, power stroke / kite input, core leverage on board
- Navigation primer - 30 degrees between board angle and kite lines
- Angle of attack to waves

**Progression with 15m lines on full size LEI kite in the water**

- Flying / sliding the neutral rainbow one handed - switch hands passing 12 o'clock
- Water re-launch
- Park kite at 10 o'clock, then practice sheeting and steering kite with one hand, then park at 2 o'clock and repeat
- Drag upwind with board and kite at 10 o'clock and then at 2 o'clock

**Water start practice with 15m lines on full size LEI kite and big board in the water**

- Learn efficient use of power and leverage
- Water start, point upwind and stall – body drag back up wind when needed

**Water start with 22m lines on full size LEI kite and big board in the water**

- Water start and ride upwind – body drag up wind when needed
- Transitions

**Options:**

- ➔ On 7m lines, dragging on 8' soft top twin tip surfboard for students without strong abs and muscle control.
- ➔ On 15m lines, for students without board skills, (or less core / abdominal strength) have them sit on an inner tube for their first few attempts at waterstart requiring less power since they are already halfway up.

**Other General Kiteboarding Teaching Tools and Ideas**

- ➔ On light wind days instead of canceling, refunding or rescheduling your lesson => Practice Board Skills  
Use a SUP and fly small LEI or water re-launchable foil (up to 4m<sup>2</sup>)
- ➔ If your *designated* training site has deeper water (not standing-depth but no deeper than ~10') you could use the inner tube for => Assisted Board Starts  
Use a longer rope attached to a larger sand anchor on the bottom.

*General Snowkite Instruction Hints:*

- ➔ Bring hot tea or cider in a thermos or bring water and keep it from freezing.
- ➔ Take electrolyte-replenishing drinks and keep them from freezing.



- ➔ It is especially important on the snow to prevent your student from getting cold, so ask frequently how they feel, watch for blue lips, exhaustion, slurred speech, slowing responses to instructional input, etc. also see CHAPTER 3 Barriers to Learning...
- ➔ Prevent hypothermia by having a 'warming location' after your lesson/session, bring hand, foot and body warmers. (Remember that especially foot warmers are designed to function in a low O<sub>2</sub> environment, exposed to too much air they can get extremely hot)
- ➔ Altitude sickness is a possibility when snowkiting at higher altitude (depending on the physical state of each individual, this can mean >6000 feet) also: dehydration and getting cold can potentially speed up developing altitude sickness.
- ➔ Ensure student has a balanced blood sugar level throughout the lesson and keep them hydrated.

### **1<sup>st</sup> part Snowkite Lesson Plan:**

#### **Land Lesson / Ground School**

##### Welcome, Intro and Orientation

(See page 82 for details)

##### Instructor's Gear Considerations

(Before heading out to the Land Lesson teaching site)

- Bring (warm) water, tea or juice in a thermos and snack bars
- Ensure that students have good snow boots (to avoid slipping you can also use rubber ice walker grips), sunscreen and sunglasses or snow goggles
- Bring foot and hand warmers
- Bring Trainer kite RAM Air/Foil or LEI
  - ➔ (1m<sup>2</sup> to 3m<sup>2</sup> - have several sizes to be able to increase power)
- Make / bring releasable harness loop on trainer kite bar
- Make / bring kite leash for flagging out / releasing kite (instills safety leash habit)
- Fit and bring kite harness (first for holding on to student and later also to hook in)

##### Onsite Safety Talk (see also page 83)

- Hand out Safety Guidelines and go over them (if you have them)
  - ➔ Most important Snowkite "Rules of the Road"



- Layout your lines where they do not interfere with other site users.
  - Always disable your kite and roll up your lines when not in use.
  - Leave at least three kite line lengths down wind room for safety buffer.
  - At small launch areas, launch kites one at a time.
  - Outgoing kiter has the right of way over incoming kiter.
  - Down wind kiter has the right of way over upwind kiter.
  - If you are kiting with your right had forward, you have the right of way.
  - BUT: Don't insist on the right of way, when in doubt: Yield and stay safe.
  - Help keep your spot safe by assisting other kites that are new to the area.
- Location considerations
    - ➔ (Site layout, local rules, etc.)
  - Awareness of surroundings
    - ➔ (Other site users, ice fishing, snow mobiles, trees, fences, power lines, general obstacles, roads, buffer zone etc.)
  - Wind direction & quality
  - Weather considerations

### Kite Setup

Take out small (1m<sup>2</sup> to 2m<sup>2</sup>) RAM Air trainer kite or if it is a small LEI:

➔ Put valve plug in 1/2 way

(Instructor's trick to keep leading edge from bursting on impact)

- Explain kite (What kind of kite it is, what makes it fly, bridles, etc...)
- Weigh down / secure kite on ground (emphasize this even if kite is very small)
- Use snow or ice anchors to secure brake line of kite
- Or use snow on the trailing edge of a foil kite or sand bags on LEI kite
- Lay out bar and lines (emphasize proper placement even if the kite is small)
- 2 reasons for "running lines":
  - ➔ To untangle the lines
  - ➔ To check line integrity (up to 60% tensile strength is lost in a knot, frays and / or weak spots will compromise kite line strength)
- Explain kite & bar care + maintenance (see also page 68 & 88)
- Connect lines to kite (explain / teach larks head knot)
- Put harness on student (to be able to hold on and for safety leash use)
- Explain safety system(s) (see also page 69 & 89)
- Instill the habit of always using a safety leash (first on, last off)
- Explain to not touch the kite lines once the kite is powered up
- If space / buffer zone is an issue, consider shorter lines to increase your buffer zone



### Wind Window Explanation (also see page 83 & 84)

- Use kite, model or prop for hands-on explanation
- Clock analogy (9, 12, 3 o'clock)
- Neutral rainbow/arc, power zone, flying zones
- WW expands in gust, contracts in lull -> like a balloon
- Introduce 100% pull, 100% lift zones
  - ➔ Talk about possibility of lofting
  - ➔ You can lean against pull, but not against lift

### Learning How to Fly the Kite

- Explain and demonstrate steering (first with bar only, no kite)
- Launch kite (instructor always launches kite first) if possible launch even the RAM Air kite on the edge of the wind window
- Teach the assisted launch (safety on, line check, hand /head signal, positioning, safe launch/landing zones, happy kite etc...)
- Talk about Pendulum effect (you are the teabag, etc...)
- Teach controlling the kite (avoid steering wheel effect, pulling on the bar, etc...use steering analogies your student can relate to; i.e. shopping cart or bike)
- Keep bad habits from forming
- Instill off-center neutral ->12 o'clock is not a safe spot-> lofting potential (see p. 84)
- Figure 8's on both sides (Split wind window as soon as student can steer the kite)
- Teach changing direction with the kite / making a transition
- Teach the assisted kite landing (signal: patting the head)
- Teach kite landing to YOU (make student move, not you => teaches 3D Awareness)
- Flying the kite with subtle movements on the edge of the wind window to simulate a slow launch or landing
- Unspinning lines (by rotating body, not looping the kite)
- Flying hooked in (Begin with hooking into harness loop in neutral + not looking down, hold on to student if necessary, review harness release system)
- Re-enforce buffer zone (3 to 4 kite line lengths)
- Practice one-handed flying using harness
- Perfect the flying skills to obtain consistent power from the kite
- Explain (and draw) different power strokes (see page 95 & 96)
- If appropriate, increase trainer kite size (use good judgment!)
- Use helmet when flying larger trainer kites
- Practice landing and launching the larger kite and understand the safety release mechanisms.
- Practice different power strokes while sitting down



- Simulate getting up on the board (use appropriate prop to keep student safe)
  - Getting up on board Simulation, then keep walking (trains student to keep moving the kite after they pull themselves up)
  - Walk around a marked course with kite up and hooked into harness while flying kite (improves split attention) if space and ground allows
  - Engage Safety (let go of bar, get comfortable with safety system)
  - Talk about complete release in extreme emergency (2ndary safety-if on leash)
  - Teach how to put kite away and organize
- Student Feedback Form / Instructor evaluation

## **2<sup>nd</sup> part Snowkite Lesson Plan:**

### **Learning To Ride**

#### Welcome, Intro and Orientation

Same beginning snowkite procedure, waivers, payment, etc.  
New date → new waiver

#### General Guidelines for Snow Instruction:

- ➔ When flying larger kite (over 3m<sup>2</sup>) → student wears helmet
- ➔ If you are using a different kite for this lesson portion, explain the kite and its safety systems, if the kite now has a 4-line setup, practice the depower strap usage and kite handling

#### Using Skis versus Snowboard Discussion

If the student has no previous ski or board knowledge / preference, we recommend using skis

- ➔ Skis offer more movement and stability on the snow
- ➔ Skis are more efficient and a smaller kite can be used
- ➔ Snowboard needs 30-40% more power (larger kite)
- ➔ Snowboard setup (15 degree ducky) heel side only
- ➔ Board skills from water kiting transfer better onto snowkiting and vice versa

#### LEI specific Kite Setup

- Explain difference RAM Air – LEI
- Explain specific kite you are using



(Launching, landing, bridles, safety systems, preflight check, etc.)

- Pump up and set up LEI
- Weigh down kite (emphasize)
- Let student pump (keep them busy but don't wear them out)
- If not a single point inflation kite: wingtip into wind, pump up struts first, LE last
- Talk about valves, "Pling", inflation pressure, kite maintenance
  
- If student is interested, quickly talk about kite repair and care
  - ➔ Alcohol based marker instead of petroleum based for LE repair
  - ➔ Attach string to valve before taking out bladder
  - ➔ Use baby powder for "lubrication" when putting bladder back in
  - ➔ Use experienced repair shop if available...

"A Kite once pumped up and not weighed down, is like a gun lying around with the safety off..."

#### General Bar & Line Setup (for both LEI and Foil/RAM Air kites)

- Unroll bar and lines
- 2 reasons for running lines (see land lesson: untangling, line integrity check)
- Re-explain safety systems (pull and reset a few times, then let also student do it and let them finally deploy the safety with closed eyes)
- Talk about complete kite release (Emphasize: in absolute emergency only)
- Self landing demonstration

#### Practice Launching and Landing

- ➔ (Again, instructor always launches kite first, explains and demonstrates, then lets student explain and demonstrate back to instructor)
- ➔ Always safety leash on first, then line check + launcher eye contact
- ➔ Consider using shorter lines
  - Per 3m less line=> 1m<sup>2</sup> less power when kite is in motion; works with 15m to 30m kite lines
- ➔ Bar: mostly horizontal, explain chicken loop / trim strap, visual line check, launch signal, etc.
- ➔ Talk about "happy kite" = filled out canopy, LE neither pushing nor pulling up or downwind (LE tells the exact spot where to launch)
- ➔ Launch: "Keep it Low and Go" (launch up to 45 degrees out towards the riding area, away from obstacles)
- ➔ Demonstrate and teach re-launch



- Once student is launching the kite: Use assisted launch, instructor is holding on to student's harness with the hand towards land and the other hand (towards the riding area) is ready & free to help with steering of the bar, or bring the kite down if necessary

#### Before student 'takes off', go through and reiterate:

- Hand signals
- Boundaries (how far should they kite out, before turning around)\*\*
- Communication (agreed upon hand / whistle signals / radio helmet)
- If using a radio helmet: HAVE A BACKUP PLAN IF IT FAILS!! (Agreed upon signals, boundaries etc.)
- Right of Way and other site specific considerations
- Buffer zone & other site users

\*\*Never go out further than you can walk back unless you are teaching assisted by a snowmobile.

#### Useful Pre-riding Exercises

- Simulate pull starts with a bar and leader or short lines while student is hooked into harness
- Teach the student not to pull on the bar, instead to let the bar pull student
- Teach student falling the right way (backward, not forward)

##### Skis:

90 degrees to wind, ready to resist the pull of the kite

Teach student to first resist the kite pull and then utilize the pull to move sideways

##### Snowboard:

Sit down facing downwind and learn to point the board slightly downwind during initial pull

#### Tips for Learning to Ride

- Keep using the assisted launch as long as it is necessary (use good judgment)
- Use a kite size that will provide power to move but not overpower the student



➔ Keep initial rides short and sweet, then give feedback

### Body position for getting on the Snowboard:

- Both feet are strapped into bindings
- Student sits down, snowboard perpendicular to wind, pointing slightly downwind in the direction of desired travel
- Crunch up body
- Back leg is bent more while getting up
- Straighten front leg a bit more
- Point board at the kite during power stroke (point board downwind ~45 degrees)
- Then push/edge against the kite and keep kite moving

### Starting to ride on a Snowboard:

Use power strokes to get up on the snowboard. The dive of the kite depends on the power needed. Experiment with low, medium, and high power strokes. Recoil the back leg while pushing the front leg against the snow.

Keep your legs bent deeply and be prepared to use the pull of the kite to stand up on the board. The board will need to travel towards the kite for a short distance to pull you up onto the snow. After the initial power stroke, once moving in a standing position, put more weight on the forward leg, then using the heel-edge of the board, steers the nose of the board away from the kite and increase the tension on the kite lines.

Almost simultaneously, you will need to pull with the opposite hand to turn the kite away from the snow and back up towards either a parked position or, if underpowered, you might have to bring the kite toward the top of the wind window to initiate the next dive.

Stay on your heel-side to ride to the left and right, you can integrate toe-side once kite control and board control are synchronized.

If you slow down too much, point downwind a little bit to increase speed.  
If you're going too fast turn up wind a bit to slow down.

### Starting to ride with Skis:

Skiers will be locked into their bindings and standing upright. Keep your knees bent and skis perpendicular to the wind direction and pointed in the direction you'd like to go.



Begin with the kite overhead and remember where 12 o'clock is (splitting the wind window is essential). For skiers it is much more important not to initially pull yourself backwards.

Use one or two power strokes to start moving. The dive of the kite depends on the power needed. Start with low power strokes and if necessary, increase power. Almost simultaneously, you will need to pull with the opposite hand to turn the kite away from the snow and back up towards the top of the wind window to initiate the next dive or 'park' the kite.

If you slow down too much, point downwind a little bit to increase speed.  
If you're going too fast turn up wind a bit to slow down.

#### Common mistakes and how to remedy them:

Student on snowboard can't get their butt off the ground:

- ➔ Dive the kite a bit more aggressively
- ➔ And / or bend the back knee more, plus straighten the front leg more

Student is always pulled over:

- ➔ Dive the kite less aggressively
- ➔ And / or point the board more downwind during the power stroke

Following the kite downwind too much:

- ➔ Emphasize pressure / edge against the pull of the kite
- ➔ Transfers the kite pull into sideways movement

Student is pulling on the bar too much during the powerstroke:

- ✘ Remind student to let the kite & bar pull them instead

#### Re-launching the Kite

When a bow kite inverts, release the safety!

If initially during a first lesson, the kite falls and needs re-launching, the instructor is still resetting for the student in a side-launch position. This is much safer than having the student attempt 'hot launching' the kite in the beginning. Use your judgment on when the student is capable of safely re-launching the kite himself or herself.

Discuss 2, 3 and 4-line kites differences and remember to teach with a safety leash at all times!

#### Transitions / Turns



Start with slowly raising the kite to 12 o'clock while steering board/skis upwind to slow down. Then point board or skis in the opposite directions and begin power strokes in the new direction.

After perfecting the above skill, progress to moving transitions

### On Skis

Slow down by edging the skis upwind and lessening the kite power intake. Then turn your skis downwind towards the kite and into the new, opposite direction while moving the kite from one side of the wind window to the other. If necessary, complete a power stroke in the new direction to pick up speed.

### On a Snowboard

Push your back foot slightly toward the kite (tail slide). This also slows you and the kite down. Slowly bring your kite up and over to the new direction. Continue with your board in the new direction, your board will naturally start moving in the opposite direction with a new lead foot, if necessary, complete a power stroke in the new direction to pick up speed.

### Going Upwind

- Look in the direction of travel
- Pick a landmark upwind
- Edge skis or board upwind and point your body upwind
- (Trick on a snowboard: Curl toes to shift weight back onto heels)
- On a snowboard, put more pressure on the back leg (bend back leg more, straighten front leg more)
- Practice "stomping" the kite
- Talk about kite position lift versus pull (see graphic p. 84)
- Keep the kite lower rather than higher in the wind window

The trick to going upwind is to find the balance point between too much of an angle upwind and too little of an angle for the amount of power that you have from the kite. Snowboarders will need to put more weight on the back leg and begin to edge their board.

Steer kite the kite further towards the edge of the wind window. Keep the kite moving up and down for more power if needed.

If you edge upwind hard enough, you will eventually lose all speed and power. The trick is to find the sweet spot.



## Landing

Depending on what kind of kite is used:

Have your student land an LEI to you on the side of the wind window until they have good kite control, then teach them to safely self-land. Use your judgment in keeping your students safe. Teach all self-landing methods hands-on and make sure that your student is comfortable in being a self-sufficient kiter.

If using a RAM Air or Foil kite, get your student comfortable with using the brake line or release system of the kite. Repetitive hands-on instruction is essential here.

Use snow or ice anchors to secure the brake lines while rolling up if applicable.

Always roll up all kite lines when kites are not in use (somebody could drive, ride or walk across the lines and damage them and you might not notice and have a line break next time you go ride)

Teach your student how to pack up and put away all gear.

## **Other Common Novice Mistakes**

We listed a few of them with their common causes and suggested solutions. The proactive professional instructor anticipates and prevents problems before they develop.

*Not turning the kite towards the closest edge to recover from a dive* – This can be a serious problem if the winds are up and the student is really powered up. Turning the kite into the wind window instead of away from it can cause an extreme amount of pull and loss of control. This is caused because they need more practice on land with a smaller kite. When the kite is upside down they are uncertain as to which hand to pull. You should have the student practice body dragging to learn control or have them go back to the land lesson and steer the kite with them into a dive and pull on their elbow to indicate the hand that should be initiating the turn.

*Keeping the board too perpendicular to the kite during the water or snow start* – This is a very common problem and results in a “tea bagging” effect of lifting and dropping the student into the water/snow on their back much like a tea bag being dunked into a mug. If the board is too flat against the dive of the kite you maximize the resistance against the kite and don’t allow yourself to stand-up and begin planing on the surface of the water/snow. Consequently, you get lifted only at the point where the kite has maximum pull and it results in a lift straight up and then drops you back down. There is very little forward momentum because the board is resisting too much against the kite. Have the student bend their knees deeper and point the nose of the board more towards the direction the kite is being dived. Be careful that they don’t angle too much or they will



get pulled around the front of the board. Also, tell them to stand up on the board when they feel the upward pull.

*Getting up on the surface of the water or snow and then immediately crashing the kite –* This results from traveling towards the kite too quickly and not turning the board or skis against the kite soon enough, not edging the board or skis, and forgetting to turn the kite quick enough. This is where it becomes important to coordinate several functions simultaneously. Tell your students to anticipate pulling back with the opposite hand that initiated the first dive soon after they are up and moving on the board. The student must aim towards the kite to get moving. Once they are moving on the surface of the water or snow, they have to turn away from the kite to increase tension on the lines and then pull back on the appropriate side of the control bar to turn the kite back skyward. It is helpful to call out commands to the student while they are executing the sequence. Tell them what to expect and the yell “Right” or “Left” for them to pull on the corresponding line.

*Pulling back on the entire control bar instead of one end or the other –* This is extremely common with students with windsurfing backgrounds. It is their natural habit to simply pull back on the bar to try to get the kite to turn. They must pull with one hand and push with the other hand. Explain the difference to them and have them practice aggressive turns and body drag before they get back on the board.

*Getting pulled over the front of the board –* This is typical of someone coming from a surfing background. Surfer will be inclined to lean forward on the board. As soon as the kite powers up, they are thrown forward off the board. They need to lean back hard against the pull of the kite and learn to ride the edge of the board, not trying to ride it flat on the water or snow. Tell them to lean their shoulders back past their butt and then tell them to curl their toes which will rock their weight back onto their heels to force them to edge the board. Be careful, they must first plane the board and then turn and edge the board.

## **CHAPTER 10**

### **Weather Considerations**



In kiteboarding and snowkiting you must learn to harness the power of the wind. The wind will always exhibit certain properties the kiteboarder or snowkiter should be aware of. Every kiteboarder should understand a bit about the air's behavior in order to avoid shortening his or her career.

As an instructor, it is your job to teach your students the basics of weather and micro-meteorology (local and small-scale effects) so that they understand the principles that will keep them safe and performing well. Of course, you cannot deliver them an extensive in-depth study of weather in the short amount of time you have with them – that would take months – but you should provide a brief introduction to the many important topics and point out the potential dangers. If students come to you with questions demanding more explicit information you should be able to explain the finer points.

We cannot provide great detail here, but we will briefly describe the important material which you should present to your students and suggest some techniques to teach this material. Kiteboarding / snowkiting participants need to be their own weathermen or women so they can make wise decisions. It is fascinating and fun to demystify weather and to break it down into its simple parts. There are many good weather books available, which you should use to further your own knowledge. With a good basis in meteorology your lessons will be enhanced.

## **The Atmosphere**

We start with the big picture. Most people have heard of fronts and general weather terms, so beginning with familiar territory will ease the passage into unknown areas. This material is important to let the student understand why the air moves and why it has varying characteristics.

### **The General Structure**

What is the air? That is the first question we must answer. The air is simply a gaseous mixture made up of mainly nitrogen and oxygen with a varying amount of water vapor and pollutants. This gas forms a shroud around the Earth because gravity binds it to our planet.

The air has mass and weight (about .076 pounds per cubic foot), so we feel pressure when we move through it. Because of this mass, it presses down on the earth (about 14.7 pounds per square inch at the surface) and squeezes itself so that the lower air is always the densest and its density drops off the higher we go above the earth.

The air's density changes with temperature, pressure, and water vapor content as well as altitude. Thus, the warmer the air, the lower the pressure. The more water



vapor, the less dense the air at any given altitude. We can combine all these items into a single factor known as *density altitude*. This term refers to the equivalent altitude we would be at if our present conditions were related to a given standard known as *Standard Atmosphere*. The higher the density altitude, the less dense the air and thus the faster our kites fly at any given angle of attack.

The important matters to teach your students are the factors that affect density altitude and how airspeed increases with density altitude.

### **Solar Heating and Circulation**

The sun is the engine, which drives all atmospheric movement from the largest air mass to the smallest swirl. The way this works is essentially the same on both the large and small scales: The sun heats the ground, the ground warms the overlying air, this air expands and becomes less dense so it is replaced by cooler, heavier air. Again this is the principle behind large-scale circulation and the buildup of pressure around the globe as well as the small circulations known as local effects. Differential heating drives the weather.

We should note that the sun's energy passes through the air readily without heating it unless water vapor is present. Therefore, we should expect the warmest air to be nearest the surface. Also we should expect surfaces that heat more readily, such as land areas as opposed to water, should produce the warmest air. This is true and we find that air circulates at the surface from cool to warm areas and returns aloft from warm to cool areas.

Because of the earth's rotation, all circulations lasting more than a couple of minutes follow a curving path. This deflection is to the right in the Northern Hemisphere and left in the Southern Hemisphere. It is called the Coriolis effect.

Students should understand the general rule that air circulates from cool to warm areas and eventually turns rightward (north of the equator).

### **Water Vapor**

One of the most important factors in the atmosphere's behavior is the role of water vapor. Water vapor is a gas and is simply evaporated water. Since it is made of light hydrogen and oxygen it is lighter than dry air, which is mostly nitrogen and oxygen. Thus water vapor mixed with air (this is humid air) is less dense than dry air. Also, because

water vapor contains excess energy, when it cools to the point of condensation to form fog or a cloud it releases this energy as heat. Thus water vapor holds heat energy and transports it throughout the atmosphere.

Water vapor all originates from the ground due to evaporation. Consequently we should expect more concentration of water vapor near the surface. Generally, clouds are below 20,000 feet in desert areas and 10,000 feet in moister climates except when



thunderstorms or cirrus clouds move ahead of a front. These clouds indicate the height to which water vapor has risen.

## **Weather Effects**

What most people think of when you say “weather” is the effects described on the TV weather program. These are air masses, fronts, pressure systems, the jet stream and clouds. Let us briefly describe how each of these work and affect our flying and teaching.

## **Air Masses**

Any large volume of air that shares the same characteristics of temperature and water vapor content is known as an air mass. We can describe two very general categories as a cold air mass (relatively dense) and a warm air mass (relatively less dense). Such air masses are formed by lying over a given area of the earth’s surface for some time until they are moved by pressure systems. Cold air masses naturally originate in the Polar Regions and warm air masses come from tropical regions. We can further classify air masses as moist or dry. The nature of the surface (water, wet land, and dry land) where the air mass originates largely determines the vapor content of the mass.

Your students should learn the nature of different air masses and their relation to flying. Cold masses are denser, but are often unstable and gusty. Warm masses may more often be stable but frequently they carry more moisture to assist thunderstorm buildup. Relating the current observed weather to the local air mass is the best way to illustrate these ideas.

## **Fronts**

A front is simply the boundary between two air masses. We identify fronts according to how they are moving: If the cold air is pushing forward, the frontal boundary is known as a cold front. If the warm air is pushing forward, the front is a warm front. We can also have a stationary front (neither mass is dominant) or an occluded front (a cold front catches up to another).

The significance of fronts is that they bring “weather” – clouds, rain, and winds – but they also announce the arrival of a new air mass and a change of conditions. Cold fronts bring cool, dry northerly air (in the Northern Hemisphere). They also tend to

move faster than warm fronts and be more vigorous. Warm fronts bring warm, humid southerly winds and tend to move slowly.

QuickTime™ and a decompressor are needed to see this picture.

When a cold front progresses, the cool air mass is denser so it ends



up pushing under the warm mass it is replacing. Similarly, if a warm front is progressing, the warm air rides up over the cold air, which it is moving out of the way. As a result of this lifting of the warm air mass near the frontal boundaries, great amounts of clouds are formed because the lifted air cools to condensation level (the dew point).

**It is common for rain and thunderstorms to accompany a front for this very reason.**

Generally, the faster a front moves, the more likely it is to present severe conditions, the stronger the wind will be behind it and the greater the temperature change will be.

QuickTime™ and a decompressor are needed to see this picture.

Students should learn the general conditions related to the passage of cold and warm fronts and the associated air masses. Prefrontal conditions can be unreliable because of their changeable nature. A good

student question is "Which is more reliable, a warm front or a cold front?" The answer is neither.

## **Pressure Systems**

Due to the complicated circulation currents in the atmosphere, the air tends to pile up in certain areas. These areas are the Polar Regions and a band around the 30 degree latitude (the tropics). When air piles up, it causes more weight on the surface so it becomes a high-pressure area known simply as a high. In a similar way, an area where the air is depleted aloft becomes a low-pressure system or low on the surface.

**Air flows from highs to lows.** However, because of Coriolis Effect (right turning effect in the Northern Hemisphere due to the Earth's rotation) the flow is not so simple. It turns out that the **air flows clockwise around a high-pressure system and counterclockwise around a low-pressure system (in the Northern Hemisphere).**

Those who use a digital clock will have to remember that the air flowing out from the center of a high turns right. Likewise air flowing into a low turns right initially and then curves left to circulate around the low.



This effect has two important results. First, instead of flowing readily across a continent, the air tends to circulate around highs and thus takes on the characteristics of a region to become an “air mass”. Secondly the wind we feel, which is the circulation, doesn’t flow from high to low but follows the **isobars or lines of equal pressure**.

This is important because we can predict wind direction and strength if we see a weather chart (at the surface we must modify this because the geography of an area slows and modifies the wind speed and quality). The greater the change in pressure for a given distance (the greater the pressure gradient), the closer the isobars will be and the stronger the wind.

You can note from weather charts that the center of highs exhibit lighter winds (wide-spaced isobars) while low pressure centers show higher winds and the strongest winds usually occur between close high and low pairs or along fronts.

Pressure systems drive air masses and thus fronts.

By looking at a series of weather maps we can see this fact and also note how the entire systems tend to move from west to east.

QuickTime™ and a decompressor are needed to see this picture.

## **Fronts and Pressure Systems**

An important matter relating to pressure systems is the weather they create when they are in our area. Because the wind flows outward from a high at the surface, air from above moves down to replace it. This falling air moves very slowly but it is enough to prevent clouds because the air warms by compression as it is lowered. Thus highs bring us clear skies, sunny days and generally calmer conditions.

Lows are the opposite of highs. The air flows inward to a low at the surface and thus must move upward above it. This slow lifting of the air eventually cools it to the condensation level so widespread clouds -- often hundreds of miles across -- form.



Lows bring us clouds, rain, and unsettled weather. Lows are generally poor for kiting except in desert areas where not much moisture is present. On their edges, where no rain is falling and conditions are stable they may be ideal for teaching.

Students should understand the circulation around highs and lows and be able to apply this knowledge to reading weather charts to predict wind velocities (direction and strength). Bring an actual chart to let your students practice this important skill. Also, make them aware of the different types of conditions expected under different kinds of pressure systems.

### **Jet Streams**

Along the boundaries of warm and cold masses flow curious rivers of wind in the upper levels. This flow is known as a jet stream and is caused by the circulation from cool to warm air that is turned to parallel the isobars by Coriolis Effect.

QuickTime™ and a decompressor are needed to see this picture.

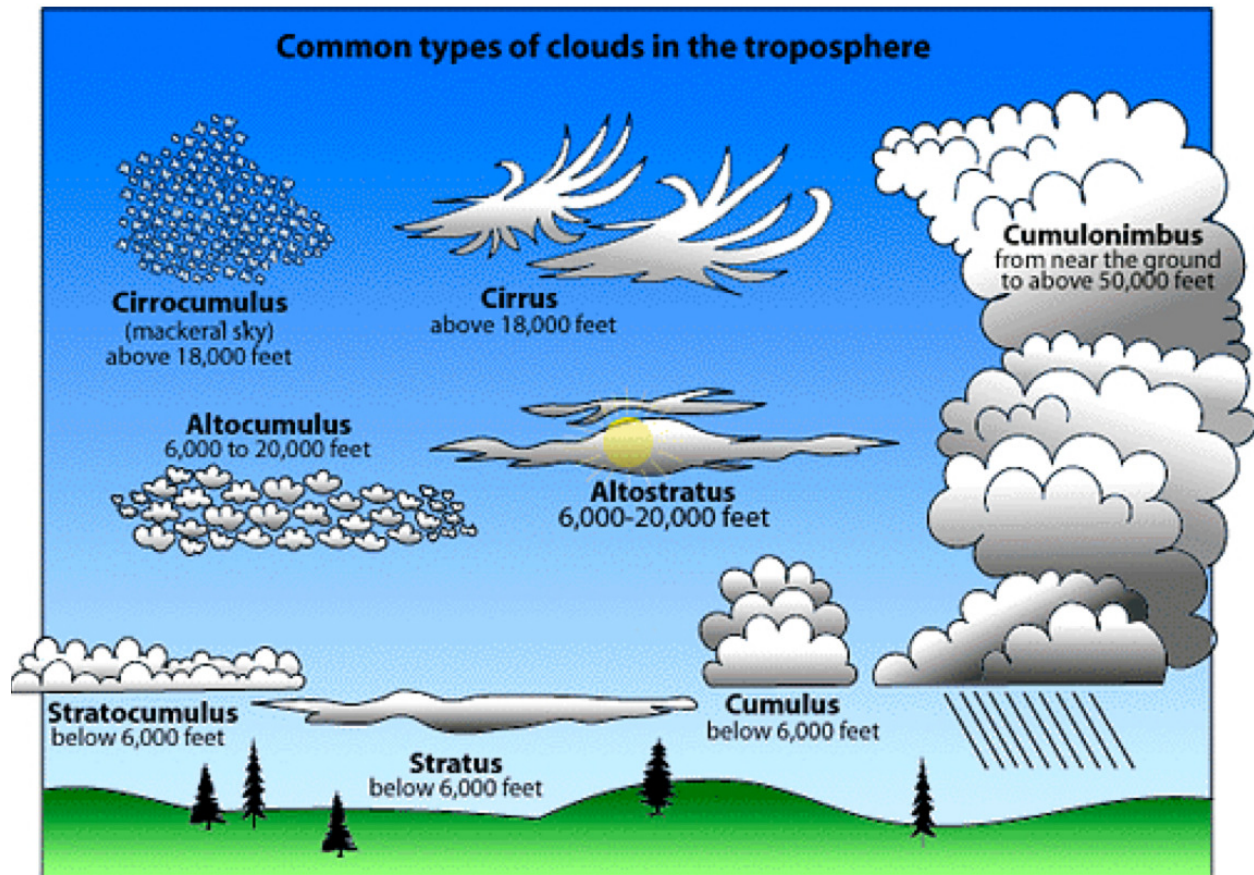
Jet streams can increase the winds at the surface areas below them.

More importantly to watchers of weather they foretell the approach of a front and bad weather. When a jet stream dips southward, a cold front with cooler air and low-pressure system will soon follow.

When the jet stream is level, weather will be fair and tranquil. When the jet stream bends northward warmer air will follow. You can use this knowledge in a conceptual way to predict kiting prospects in the future.

Students should be brought to the understanding that jet stream movement can help predict weather and that areas under a jet stream will experience more vigorous winds.

### **Cloud Types**



As we learned, clouds are formed when air is lifted and cools to the point where its water vapor condenses. This is known as the dew point. Naturally the more moisture the air contains, the more easily it will reach condensation level (its dew point will occur at a higher temperature which will be at a lower altitude). This is the reason why moister areas generally have lower clouds. The base of the clouds is where the dew point or condensation level occurs. Knowing the lapse rate, dew point and surface temperature we can calculate the cloud base height.

We can separate clouds into three general types:

Layered or stratus clouds, tumbled or cumulus clouds and wispy or cirrus clouds.

**Stratus** or layer clouds occur when large areas of air are lifted gradually more or less equally. This typically happens when a warm front moves by.

**Cumulus** clouds occur when local heating sends up columns and plumes of warm air (thermals) that rise to the condensation level.

**Cirrus** clouds are the highest and are often related to the jet stream.

### Pressure Gradients and Resulting Winds

Pressure gradients (difference in barometric readings) may develop on a local to a global scale because of differences in the heating and cooling of the Earth's surface.



Heating and cooling cycles that develop daily or annually can create several common local or regional thermal wind systems.

The greater the pressure difference between two locations, the higher the wind speed. Pressure gradient force points from high towards low-pressure zones. That is also the direction in which the resulting wind will travel.

The units used to report gradient are millibars, abbreviated mb, which are close to being thousandth-units of one standard atmosphere. Sometimes, "atmosphere" is also referred to as a "bar." For converting to English measure, one millibar is about 0.02953 inches.

#### **“8 to 10 Rule”**

An upwind object (house, tree, wall, object etc.) will render the wind downwind of it turbulent for at least 8 to 10 times its height (10' tall house => at least 80 to 100 feet downwind turbulence)

#### **Other general weather considerations for kiting**

- Never teach in or near stormy weather, lightening, sustained wind speeds at or above 25mph or in strong gusty conditions (gust variances at or above 15mph). Come in well in advance of storm clouds as sudden, very strong and damaging gusts can come on without further warning!
- Colder wind is usually denser (it has more air molecules) and packs more of a “punch”, meaning you might use a smaller kite than in warmer winds at the same wind speed.
- At high altitude, the air gets thinner; you might need to use a larger kite even though you are experiencing the same wind speed.

#### **Snowkite specific weather considerations**

- Low-level clouds will make the winds very gusty
- When teaching snowkiting in rolling or mountainous terrain, be aware of ‘wind rotors’ being created uphill or downhill
- If the conditions are sunny and warm followed by cloudiness, the snow will thaw and become soft, then freeze over, creating icy and potentially unsafe conditions
- At higher altitude: Anticipate rapidly changing “Mountain weather”

## **Glossary of Terms**

Following is a definition of terms that are commonly used in regards to kiteboarding or snowkiting.



**Angle of Attack** - Also referred to as the AOA. AOA is the angle at which the kite flies in relation to the wind. You can usually adjust this angle by adjusting the trim strap and also by moving the sheeting system (chickenloop) of a kite.

**Angle of Incidence** - Angle, which the kite takes, compared to the wind direction

**Apparent wind (AW)** - The wind felt by the kite or rider as it passes through the air. For instance, if the true wind is blowing North at 10 knots and the kite is moving West at 10 knots, the apparent wind on the kite is NW at about 14 knots. The apparent wind direction shifts towards the direction of travel as speed increases.

**Aspect Ratio (AR)** - The ratio of a kite calculated from its Height : Width. Kites are generally referred to as having a high aspect ratio (can create more lift, turn faster and fly closer to the edge of the wind window) or a low aspect ratio (can create more pull rather than lift and usually turn slower). High AR is 5 to 6, a low AR is 3.

**Brake Lines** - Refers to the lower flying lines of usually a foil kite. Pulling tension on the brake lines while the kite is in forward motion will slow or stop the kite's movement. When the kite is upside down, pulling the brake lines will cause the kite to fly in reverse and allow for reverse re-launch of the kite.

**Cells** - Double skinned parafoils or foils for short are divided up into equal ribbed compartments called cells.

**Chikara** - A nylon based sail material that is commonly used in constructing many foil kites. It is a nylon cloth developed in conjunction with Vlieger Op (Holland) and Flexifoil International (GB).

**Chord** - The measurement between the leading and trailing edges on the kite. Often referred to as the chord line.

**Creep** - The amount a line permanently lengthens when pulled. New lines will creep until the fibers align tightly. Loosely braided line has a lot of creep, tightly braided has less; linear core line has the least. If all the lines creep evenly, it's pretty much unnoticeable. On ram-air & hybrid kites, the power lines will creep first causing the kite to not fly at its optimal performance.

**Cross Venting or Cross Porting** - Refers to holes cut into the fabric of individual internal ribs between cells in a foil. It allows the air entering one cell to quickly flow



through into the next cell to increase internal pressure.

**Drift** - The kite's inability to keep a straight line. In buggying and kite-surfing, the sideways pressure due to the action of the wind on the sail.

**Foil** - A type of kite which is made up of two skins and cells which fill with air. They have no rigid framework.

**Icarex** - A type of polyester based fabric used especially for designing a lightweight sail. There are two types of Icarex. Icarex polyester (P31/P38 - P31 being lighter) and the newer Icarex polycarbonate (PC31) which has a lower stretch rate and looks less crinkly. Icarex is much lighter and stiffer than the older nylon fabrics,

**Jibe** - To change your direction on a board while going downwind. This is the common way to change directions on a directional kite board.

**Locked in** - When the kite is remaining stationary in the sky relative to the rider. Not moving the kite around in the window but just letting it fly straight in the direction of travel. Also called "parking" a kite.

**Luffing** - When a kite is at the edge of the wind window and tries to fly beyond the wind window. The kite gets back-winded or wind pressure gets behind the sail. Extreme luffing will cause the kite to fall into an uncontrollable free fall. A sail begins to luff when the airflow stalls while traveling across the sail. Luffing is a sign that the sail is not properly trimmed or that you are trying to sail too close to the edge of the wind.

**PFD** - Personal flotation device, lifejacket.

**Planing** - In kiteboarding, it refers to having the board rises up onto the surface of the water as your speed increases. As you begin planing, the pressure is decreased against the surface of the water.

**Pointing** - Going upwind. A board that points well is one that goes upwind at a better angle than others.

**Projected Area** - The apparent area of a kite while it is being flown, as opposed to lying flat on the ground. The amount of area that presents itself to the wind.



**Power Zone** - Is the centrally located lower portion of the wind window where the pull is strongest.

**Rail** - Hard rail or soft rail - The rounder the edge of the board the softer the rails are said to be. A hard rail means a sharper edge.

**Rocker** - The curve along the bottom of the board. The amount the nose & tail of the board are turned up. A board that is relatively flat doesn't have much rocker.

**Sea breeze** - The wind, which is blowing from the water towards land.

**Sheeting** - "Sheeting in" and "sheeting out" come from sailing where the leading edge of the sail is fixed at the mast and the trailing edge is "sheeted in" or pulled toward the wind to increase AOA or "sheeted out" is released into the wind to decrease AOA.

**Squall** - A sudden intense windstorm of short duration. Squalls are often associated with an advancing cold front.

**Submarine Ride** - With the kite low, the rider is dragged underwater on his back at an angle that makes it difficult to get his head above water. Usually ends with a kite crash and a shaken rider.

**Tombstoning** - The tail of the board is diving underwater due to tension on the board leash. The nose of the board sticks up out of the water and looks like a tombstone.

**Thermal wind** - Cold air over the ocean and warm air over the land result in a pressure differential that causes wind. Thermal winds sometimes blow at the coast when there is very little wind inland.

**Trim Line or Loop** - Refers primarily to sheetable foil or inflatable kites. Usually the 2 lines that attach to the leading edge get combined into one thicker line, which then attaches to the center of the control bar. Adjusting the length of this thicker trim line adjusts the "trim" or angle of attack (AOA) of the kite. Changing this adjustment is called either "sheeting" in (increasing AOA for more power) or out (decreasing AOA for less power).

**True wind** - The wind as felt by something that is not moving relative to the ground.

**Twin tip** - A board that rides equally well in either direction, like a wakeboard. Usually refers to a kite specific board (wakeboards are usually just called wakeboards).