



Montgomery Dive Club

Excellence in Competitive Diving Since 1989

Coaches,

Thanks for joining me for the Summer League Coaches' Clinic this year. I have taken quite a bit of time to assemble the materials on the pages that follow. They are based on many years of experience, and I gathered much of the information from some of the greatest diving coaches in US history. I hope you will take some time to look it over, as I am confident that you will find it helpful.

I hope you have a great summer working with your team. Just remember to have fun with it. Your enthusiasm, praise and attention mean a lot to these kids.

If you have any trouble, please don't hesitate to contact me - I would love to hear from you. My email address is below. Whenever my schedule allows, I really enjoy visiting the summer team practices and getting to know the kids and coaches. Let me know if I can come out and help sometime!

Have a great summer and I'll see you at the pool!

Doug Beavers, Program Director
Montgomery Dive Club
MDCBeavers@gmail.com
www.montgomerydiveclub.com

Montgomery Dive Club

Excellence in Competitive Diving Since 1989

Diving Coaches' Resources

Tiffin Mats, Elkton MD - www.tiffinmats.com

Folding Mats: used for stretching, light tumbling, and as take-off stations into the water. These mats can get wet, and last for years. We use a 5"x10" x 1 3/8" thick version with velcro on both ends.

<http://www.tiffinmats.com/products/tumbler/>

Training Mats: used as a landing area for skills such as flips, hands and knees drops and back drops. Last for years, but don't get them wet! We use a 4'x6'x8" thick mat. This is perfect for 13 & under divers. For older/heavier kids you may consider a 12" thick version.

<http://www.tiffinmats.com/products/training-mats/>

Diving Boards - Springboards & More - www.springboardsandmore.com

They sell lots of diving related stuff here.

Diving Board Repair and Installation - The Fulcrum Guy - www.thefulcrumguy.com

If you need to install a diving board stand, someone installed it incorrectly and you want it fixed, or if your board is making a racket and you need it fixed, this is the guy you want. Very professional.

Instructional Videos - <https://www.youtube.com/user/MDCTrainingVideos>

A continually growing library of video resources for developmental diving coaches. Videos cover a wide range of subjects and are targeted at the skills likely to be taught in summer league.

Year Round Diving Instruction - www.montgomerydiveclub.com

MDC provides instruction in springboard diving for absolute beginners through international competitors. We have classes year round at five locations in Maryland.

Dryland Diving Classes - www.montgomerydiveclub.com

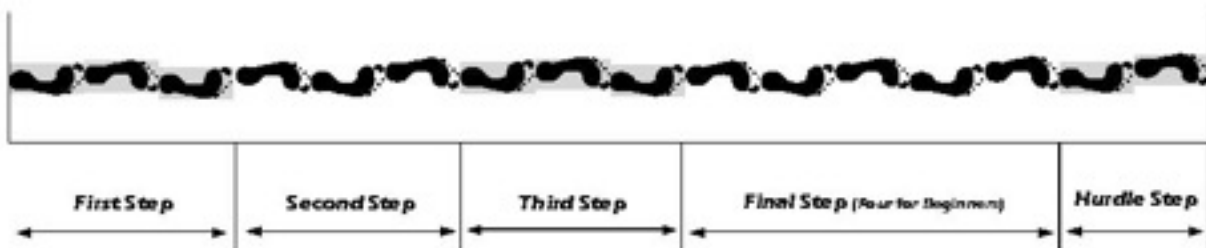
MDC offers specialized training on trampoline and dry diving boards to enhance your summer practice schedule. Great way to get kids over the hump on inward dive, reverse dive and front 1 1/2.

A Simple Formula for Teaching a Four-Step Hurdle

Teaching the forward approach is one of the biggest challenges to coaching beginners. In this method we are teaching a four-step approach.

1. Jump from tip, arms above head, straight position until under water ("H" jump)
2. Start with arms above head, circle straight jump (H>O>Jump)
3. Start two foot-lengths from the tip, arms above head, hop on two feet to end and jump in. Arms stay up the entire time (Hop Jump)
4. Start two foot-lengths from the tip, arms above head, hop on two feet to end. Just as the diver begins to drop down to the tip of the board, they swing their arms down and slightly behind them in a 360 degree circle and jump in. Arms should pass hips just as the divers feet make contact with the board and swing up quickly to overhead position without bending. (Hop>O>Jump)
5. Start two foot-lengths from the tip, arms above head. Raise dominant knee into hurdle position and show balance. Hop from one foot to end of the board, land on two feet at the tip of the board, and jump into the water in a straight position. Arms stay above head the entire time. (Hurdle Knee Jump)
6. Repeat step five, adding arm-circle as they jump from the end.
7. Back up four foot-lengths from previous starting position. Begin with arms angled back 12-18 inches behind body. Step forward with non-dominant leg, raise knee and arms together as the diver jumps off one foot and lands on two feet. If divers have difficulty with this skill, have them leave their arms by their side until they master the steps without arm swings.
8. As divers master these steps, follow the illustration below to add additional steps to the hurdle, ultimately ending up with a full four-step approach.

Step Layout for Four Step Hurdle



Some people find that 4-5 foot-lengths is too long for the final step. You may prefer a 3 foot-length final step for some beginners. The length of the hurdle step is the most critical. A hurdle step shorter than 2 foot-lengths can create dangerous situations.



Montgomery Dive Club

Excellence in Competitive Diving Since 1989

The Fundamental Physics of Diving

Diving instructors must combine a wide range of knowledge, from kinesiology to physics to psychology and more, if they want to effectively guide their students to competitive success. Success as a diving coach begins with a clear understanding of how each of the dives work, and this comes only through an understanding of the fundamental physics involved.

It may seem difficult to say “This motion is incorrect.” Can we really define correct motion vs. incorrect? It may seem difficult, but it isn’t once we understand the physical laws that govern a diver’s movement. Part of what makes a dive beautiful is its simplicity. In other words, great divers perform skills with as much height and speed as they can muster, without introducing unnecessary movements. This is the basis for analyzing a dive - **make only those motions that are absolutely necessary to the execution of the dive and eliminate unnecessary motions.**

If we agree that any motion that does not contribute to the execution of the dive should be eliminated, then we can use scientific principles to reveal whether a movement is improving the dive, spoiling it or simply wasting motion. For this we turn to famed 17th century physicist and mathematician Sir Isaac Newton. Specifically we need to look at Newton’s Three Laws of Motion

- I. **An object in motion stays in motion unless acted upon by an outside force.**
- II. **The relationship between an object's mass (m), its acceleration (a), and the applied force(F), is $Force = mass \times acceleration$.**
- III. **For every action there is an equal and opposite reaction.**

According to rule, a diver is required to take a jump (or hurdle) from one foot to the end of the board, and then must jump off of the end of the board from two feet. How can the diver get the most lift possible from this one-footed hop to the end and two-footed jump into the air?

The springboard acts (in some respects) like a slingshot; the further you push or pull it in one direction, the faster it recoils when it is released. The deeper the board is bent, the more forcefully it recoils, lifting the diver into the air. In order to bend the board deeply the diver uses both action/reaction and force.



Montgomery Dive Club

Excellence in Competitive Diving Since 1989

Action/Reaction

If I stand on a scale and I lift my arms up above my head as quickly as possible, then that action will cause an equal and opposite reaction - a force applied down against the scale. Therefore, during the time that my **arms are swinging up**, my **bodyweight appears to increase** according to the scale. The opposite is true if I start with my arms above my head, and swing them forcefully down. This is called weighting and un-weighting. The straighter my arms are, and the faster I swing them up or down, the more force I can create in one direction or the other, and the more my apparent weight will change. This is Newton's 3rd Law in action, and it is a crucial element in understanding how diving works.

This explains why a diver swings his arms and knee up as he pushes into the board on the last step before the hurdle. The knee and arm motions exert force into the board, bending the board further down. The board responds by recoiling upward with greater force.

The arms can be used to generate a great deal of force in combination with the legs. To take advantage of the arms, the diver must understand how force relates to mass and acceleration. Think of the baseball player attempting to hit a home run. In order to hit the ball with the most force possible, he takes the bat (the mass) and accelerates it through a wide arcing circle, often greater than 360 degrees of rotation. Acceleration is speed over distance, and the baseball player uses that arcing motion to build up tremendous acceleration of the end of the bat. Note that if the ball hits the bat close to the batter's hands, the force will be much smaller, because that part of the bat has traveled a shorter distance. Less acceleration means less force. Now we apply this principle to the diver.

The diver wants to push the board down as far as possible so he wants to generate as much downward force as he can when he lands on the tip of the board. Using action/reaction we know that he can increase his apparent weight by swinging his arms upward. We also know that moving the arms through a large accelerating 360° circle will allow him to generate more force. So, as the diver pushes the board down preparing to jump into the hurdle, he simultaneously swings his arms up into an overhead position and lifts his knee up into a right angle. This arm-swing is commonly referred to as the "first reach." Both the first reach and knee lift motion should be made in an effort to push the board down, and then the 90° knee position should be held until the moment that the diver's pushing leg leaves the board.

Balancing through the Apex - Inertia

We all recognize intuitively that a two objects of equal mass but different lengths behave differently. A short stick is easier to flip than a long stick, even if they weigh the same. A long stick is much more resistant to being rotated. This resistance is known as "moment of inertia." Long sticks have a high moment of inertia (MOI), and short ones have a low moment of inertia.



Montgomery Dive Club

Excellence in Competitive Diving Since 1989

Divers can change their MOI by holding arms up, pulling into a tight tuck or kicking their legs out of a flip.

As soon as the diver is propelled up off of the board in the first jump of the hurdle, the work of the raised hurdle knee is complete. We know that the diver must land on two feet on the end of the board, and so the asymmetric movement of putting the knee down will inevitably cause some twisting and loss of balance due to action reaction forces. To contend with this problem, the diver needs to take action.

At that moment the athlete needs to maintain a high moment of inertia as the hurdle knee is moved back into place to prevent loss of balance and twist coming down to the end of the board. We also want to maintain that highly balanced position to increase our odds of a high trajectory on take-off from the tip of the board. For this reason, the diver should immediately step the knee down out of the hurdle while maintaining the arms above the head in the first reach. With the arms held straight above the head at slightly wider than shoulder width, he or she stands the best chance of counteracting the forces incurred during the step out.

The step-out should be completed before the apex (or highest point) of the hurdle. The arms should be held steady at the 12 o'clock position throughout the ascent and remain motionless until the body begins to drop to the end of the board.

It is essential that the diver time the downward swing of the arms so that he is increasing his apparent weight into the tip of the board immediately after making contact with it. Simply put, the diver's arms should be passing the hips as he makes contact with the end of the board. Using this simple principle of action/reaction, the diver can increase his apparent body weight and therefore dip the board even closer to the water. Because we know that $\text{force} = \text{mass} \times \text{acceleration}$, we know that the arms should be as straight and fast as possible at all times during this circular board-pressing action.

Creating Spin

Once the board is fully depressed, the diver must make a move to create the desired somersaulting and/or twisting action. All of this motion is made after the board has been depressed, and before the feet leave the board. Any motion made in order to create somersault before the board begins its recoil will result in a low, slow spin, and any motion made too late will not help the diver to create spin at all.

Using the front double tuck as an example, we can determine the proper timing and execution of the throw action. When the diving board is fully depressed it stops moving for a split second, and then begins its movement up, or its recoil. The recoil starts slowly and builds speed; all the while the force available under the diver's feet increases. Therefore it becomes crucial for the diver to make his quick thrusting and throwing motion late in the board's recoil in order to get the maximum amount of force from the board. To create spin,



Montgomery Dive Club

Excellence in Competitive Diving Since 1989

the diver must throw the arms down and out in the direction that he wishes to rotate while still pushing against the board. The straighter the arms are and the further the arms extend out over the water, the more rotation can be generated. In the case of the front double and any other front spinning optional, the diver chops the arms forward after the board begins to rise. The diver extends from the ankles and thrusts the legs into a fully extended position as the board finishes its lift. In order to create more somersaulting action, the diver can bend at the waist while throwing, thereby using the entire upper body as a throwing lever, instead of just the arms. This action is crucial to higher DD tricks.

But if every action has an equal and **opposite** reaction, why do we throw forward to spin forward? The answer to this question lies in the fact that the throw is performed while the feet are still on the board. The motion of the arms and upper body throwing forward causes an equal reaction of the lower body and feet wanting to pike up. However, the feet are planted firmly against the board. So the feet move down and forward against the board, and the board reacts by pushing up and backward. The upper body is moving out and down and the lower body is thrown up and back, creating spin.

In conclusion, when the diver is depressing the board action/reaction and force are used to maximize the force applied to the board. To create somersault the arms and upper body move in the direction of the spin. While the feet are on the board, the body will rotate or move in the same direction as the throw.

In the Air

Once the diver has left the board, it is impossible to generate rotation. All of the spinning action is created on the board. In the air, the diver must use whatever rotation was generated on the board as efficiently as possible. For multiple somersaulting dives this means moving as quickly as possible to an extremely compact position, either tuck or pike. Now our main consideration becomes action/reaction.

Consider the back one and one-half somersault tuck. Once the diver has generated somersault on the board and extends off, he has a set amount of rotational force (called angular momentum). We may think of angular momentum as fuel. In order to conserve this fuel the diver needs to close into his tuck immediately after extending fully off the board. Knowing that every action has an equal and opposite reaction, it makes sense that the chin should be tucked down while the knees are brought in. The tuck down of the chin cause the knees to move into the tuck more quickly. A tighter tuck results in a faster rotation, thereby conserving the fuel that we have generated from the take-off.

Often the diver will begin this closing motion before the extension off the board is complete, which will result in a very slow spin. But once a diver discovers the correct timing of this move, the spin will be quite quick. In addition to moving the head, the diver can also forcefully push the entire upper body back toward the center of the tuck.

Montgomery Dive Club

Excellence in Competitive Diving Since 1989

Lining-up the Entry

A common mistake for beginners is made during the movement of the arms to grab for entry. Imagine the diver performing a forward dive pike. After touching the toes, the diver brings his straight arms directly overhead, swinging straight arms out in front of the body. Suddenly the dive arches and flops over. The problem is not necessarily in the way that the dive began, but in the arm motion after the touch. Remembering action/reaction, we know that swinging the arms in front of the body will cause the legs to push back behind the body-line, causing the arch. In order to prevent this problem, the arms should be brought out to the sides of the body-line in a lateral circling motion. This is referred to as "circling out." When the arms circle out, the action of the left arm cancels out the action of the right, and vice versa. Thus there is no reaction to disturb the body-line. It is critical that the arms move in a symmetric (or mirror-image) pattern or the dive will twist.

This method of circling out should be used whenever a diver has enough time. It can be used on all basic dives (front, inward, reverse and back dives, tuck, pike or straight.) This method can also be used on any somersaulting dive in which the diver finishes the rotations well above the water. Another advantage of the circle-out is that it is less likely to twist. By extending the arms out to the sides it acts to stabilize the body. For lower-finish diving dives I recommend kicking the legs and punching the hands straight up overhead, keeping the hands close to the body on the way up.

Applying Physics at the Pool

I have given you a very brief overview of the fundamental physics of diving. It is a superficial treatment, but with this information you should be able to recognize the true causes behind many of the difficulties your divers experience. Much of the fun of coaching diving is in discovering why a dive does not work, applying simple laws of physics, and seeing the dive transformed. In this way we coaches are like doctors. We observe, diagnose, prescribe treatment, and hopefully heal. But the accuracy of our diagnosis is based entirely on our understanding of the fundamental physics behind the dives. If you can keep working with these ideas, keep playing and experimenting based on the logic of action/reaction and generating force, your divers will benefit greatly.



Montgomery Dive Club

Excellence in Competitive Diving Since 1989

Fear Management for Diving Coaches

If you think about it, diving is kind of crazy. As coaches, we sit on the side of the pool and ask young people to attempt things that a normal person would never even consider. Ours' is a sport of real risk. Every time a diver steps onto the board, he or she risks a wipe out. While the risk of serious injury is very low, the threat of real pain is ever-present.

As a result, all coaches must deal with the anxieties and fears of each individual athlete, as well as the group dynamics that result from unsuccessful dives. I refer to this process as fear management. Certainly good progressions and care will help to prevent many crashes. And a diver who smacks less will tend to have fewer issues with fear. But, even when we do everything right, somebody's going to belly-flop sooner or later.

The question is how do we react to smacks? The coach is often looked to as the barometer of the team. How he or she responds to various situations will set the tone for the rest of the team to follow. Do you coddle your divers, hugging and consoling them after a smack? Are you the Drill Sergeant that wants to rip into a kid for not spotting while he is still trying to get the water out of his eye sockets? Here are some ideas to help you determine when the time is right for which kinds of reactions. Of course, there are no hard and fast rules when dealing with athletes and other types of human beings, but these concepts will help you to make your pool less fearful and more focused on improving skills.

Remember, kids love attention. In fact, most humans love attention, and we learn more than we realize by conditioning. Example: Little Kristin lands on her back on a front flip from one meter. Coach stops practice to see if she is all right, and the other four girls in line rush to the side of the pool to console her as well. Now Kristin doesn't know anything about diving, but judging from the reaction she sees from the coach and her teammates, she can deduce that she may, in fact, **be dying**. So, Kristin's first smack is painful, and the pain is supported by a complete stop of practice while everyone rushes to her aid. If she is like most little kids, when everyone gathers around, she will burst into tears. The whole situation adds up to a mild trauma that this kid will never forget. Add into this the fact that everyone in your practice just saw this drama unfold, and kids who were not afraid before are now a little spooked as well. And don't forget, Kristin was the center of attention during her crying episode, which is actually a powerful reward for behavior.

Let's try another scenario: Same situation, Kristin smacks, she comes up and the coaches' reaction is minimal, encouraging her to swim to the side, assuring her she will be okay. At the same time, the coach instructs the next diver to go, hardly missing a beat in the practice session. If divers are tempted to rush to Kristin's aid, the coach can wave them off, saying, "She'll be fine, stay in line." Now the coach has minimized the drama surrounding



Montgomery Dive Club

Excellence in Competitive Diving Since 1989

a smack, and can call Kristin over for a little talk, perhaps telling her, "I know that hurt, but it doesn't hurt as bad now as it did when it first happened, does it? And in a few minutes it will be almost completely gone." This is a good opportunity to assure her that no one ever died from a one-meter smack, although sometimes it kind of feels like you are going to.

The same principle applies when a diver makes contact with the board. The vast majority of board hits are very minor. In fact, you probably do more damage when you stub your toe walking in the dark at your own house. If a diver hips a back dive in a little bit and also leaves it short of vertical, he or she might just tap a toe or heel on the board. This will not result in a lifelong debilitating injury. However, if you freak out and turn it into a giant scene, there is a good chance the kid will never forget that moment, and shortly thereafter they will probably join the swim team. Of course sometimes it really is more serious. Even if someone is actually bleeding, the best thing to do is stay calm. Lead by example, assess the situation and respond appropriately. Panic is never, ever appropriate or helpful.

The key is compassion without drama - reacting in accordance to the real severity of the situation. The benefits to your team when you institute these practices will become apparent over time. First, you must change the way that people perceive a smack. Smacking is a simple fact of life for divers. If you play football, you get tackled. In gymnastics you eat the mats. And in diving sometimes you smack. That's what makes it a sport, rather than a game. So participants must recognize and accept that risk. And if you can help them to minimize the drama surrounding this inevitability, or even find some humor in it - you have helped your team tremendously.

Think about it: Where else in an average person's life would one fly through the air in a full body flail? Most people who experience such things have just stepped into an empty elevator shaft, or fallen off their roof. But almost every diver has had this experience at one time or another, where they forget what dive they are doing or lose a leg in the middle of a trick. It is a truly unique experience to go through without being actually injured. So when the momentary terror is over, it is perfectly reasonable to laugh yourself sore. Laughter can take the fear right out of a pool.

When a coach truly understands how to manage fear, the team is transformed. Welts from the occasional smack are regarded as badges of courage. Divers take a hit and giggle about it. New dives are much easier to get off the board, and therefore training sessions are much more efficient. Teach your athletes to accept smacking as part of the sport. Demand proper progressions, and continually educate yourself to ensure that your teaching methods are minimizing this unpleasant occurrence. Then, when it does happen, react with compassion and humor, because sometimes it really is funny.

Montgomery Dive Club

Excellence in Competitive Diving Since 1989

Summer League Workout Planning

An essential component to success in any project is to develop and work from a plan. In planning for a successful diving season, it is helpful to break your training time down into phases, each with its own goals and objectives. Understanding the nature and requirements of each phase will allow coaches to organize daily and weekly training, and give the team every opportunity for success.

Three Phases of a Competitive Diving Season:

- Memorial Day - First Meet = Pre-Season
- First Dual Meet - Last Dual Meet - Competitive Season
- Last Dual Meet - All-Stars = Championship Season

Pre-Season:

Overview: Emphasis on conditioning, flexibility and basic skills. Teaching initial list of dives for early meets. Water is usually cold so emphasis on conditioning and warm-up will help to get kids warm before they get in the water.

Dry-land Activities: Strength exercises using diver's own body-weight. Emphasis on abdominal, leg and upper body strength. Repeated dryland pattern drills, such as dry hurdles, entry stretches, kick-out drills. Once divers have thoroughly warmed their bodies up, some stretching is helpful. More rigorous warm-up before stretching will lead to greater gains in flexibility.

In-water Activities: Plenty of front and back jumps straight, emphasizing excellent body alignment and holding straight position in the air. If you have two 1-meter boards, have the divers do their jumps synchronized to improve efficiency. Entry drills from the side of the pool, such as "rainbow dive" (front dive hollow) and front dive tuck are very helpful in allowing kids to practice good form and proper entry alignment.

If you have lots of kids who all need to learn a single dive, group them together and dedicate a single session to that dive only. Plan your dry-land activities around preparing for this new skill, then take everyone to the boards together to learn it. Have the diver most likely to do it go first. Having someone be successful at the start will help everyone's confidence.

Time Management: For a 90 minute session, consider using 30 minutes of the time on dry-land activities, then the last 60 minutes for in-water work. If it is colder, dedicate more time to dryland. Be organized. Have a plan and then be willing to adjust as needed. Break each practice group into smaller sub-groups and set up stations to work on specific skills for 5-15 minutes at a time.

Montgomery Dive Club

Excellence in Competitive Diving Since 1989

Sample Workout Plan:

For example, with 12 divers you might split them up into 4 groups of 3 each:

- 1 group on a one-meter doing front jumps
- 1 group on another 1-meter doing back jumps
- 1 group doing rainbow dives from the side
- 1 group doing front dive tucks from the side
- 5 minutes at each station and then rotate
- 20 minutes later everyone has accomplished a LOT of good basic work

Competitive Season:

Overview: Emphasis on repetition of basic dives and initial competitive list, honing the current competitive list and laying groundwork for more difficult dives to be introduced later in the competitive season for championship meets.

Dry-land Activities: Strength exercises continue to use diver's own body-weight. More emphasis on practicing the patterns of actual dives. Introduce visualization to be used during pattern practice. Volume and intensity of conditioning should be increase weekly, peaking one week before the championship meets.

At least two weeks before the Championship Meets begin, the last new dives to be considered for championship meets should be introduced. This allows the diver to gain confidence before attempting to perform a dive in a stressful competition setting.

Championship Season:

Overview: Emphasis on flexibility and basic skills, and championship conditions.

One week before the championship meet, divers should stop doing conditioning and let the body recover to maximum strength. Focus on simulating a competitive setting. Play games that challenge divers to compete for rewards. Have divers wait while you announce dives and then give them scores. Encourage them to really imagine that they are in the meet. This means no balking, no breaking position, no giving up on dives etc.

Dry-land Activities: Visualization, pattern repetition, flexibility.

Montgomery Dive Club

Excellence in Competitive Diving Since 1989

Quick Tips for Coaching Diving

General

1. Body alignment and posture is critical - belly in, back straight and ears over your spine
2. The head should stay still and arms straight during stance and takeoff
3. Keep your eyes open during all dives
4. Focus on making one correction at a time
5. Model skills on dryland before attempting in water whenever possible
6. Show consistency before adding difficulty

Learning Basic Dives

1. Rehearse on dryland first
2. For front/inward dives, start standing with no arm-swing, then add arm-swing, then T>Y>O, then hurdle
3. For reverse, start with T>Y>O, then add front approach after it is consistent and safe standing

Forward Approach/Jump

1. Rhythm/pace of walk: Take your steps in time with the song "Row Your Boat"
2. Focus your eyes on the tip of the board until you reach the end of the board
3. As you land on the tip shift your vision out to the first lane-rope or far edge of the pool
4. Watch the first lane rope or far edge of the pool as you rise into the air
5. Swing straight arms up to 12:00 position as you lift your hurdle knee
6. Straighten hurdle leg with arms still in 12:00 position
7. Circle straight arms down and behind the body as you begin to descend out of hurdle jump
8. Arms swing straight but smooth and relaxed on the way down out of the hurdle/first reach
9. Arms passing hips at the moment toes contact end of board
10. Arms swing quickly to 12:00 when board is bent all the way down
11. Push off of board after it begins to recoil

Backward Approach/Jump

1. Stand with feet slightly apart, placed evenly on the board.
2. Stand with $\frac{1}{2}$ - $\frac{2}{3}$'s of the foot off the board
3. Focus your eyes on the far end of the board throughout the jump
4. Hold good posture throughout, especially stomach tight and back flat
5. Begin with arms in "T"
6. Lift heels 2-3 inches while moving from "T" to "Y" position
7. Hips under in "Y"
8. Circle straight arms down and behind the body as you begin to bend your knees
9. Arms swing straight but smooth and relaxed as you bend your knees
10. Arms pass hips as you begin to push the board down with your body weight
11. Arms swing quickly to 12:00 as board is bent all the way down
12. Push off of board after it begins to recoil
13. Keep the head still throughout the jump

Montgomery Dive Club

Excellence in Competitive Diving Since 1989

Front dive tuck or pike

1. Take off should feel/look the same as front jump
2. Leave board with arms at 12:00
3. Look at far side of pool as you are leaving board
4. Shift vision to entry point as you get into tuck or pike position
5. Kick out of tuck/pike position with lower body and arms only - do not move head or chest
6. Close for entry by bringing straight arms up the sides of the body through "T" position
7. Dive deep and curve under in the direction you rotated in the air - no arching underwater
8. Advanced divers may pike-save
9. Master front dive tuck before performing pike
10. Do not teach front dive straight until front dive tuck and pike have been mastered

Inward dive tuck or pike

1. Take off should feel/look the same as back jump
2. Leave board with arms at 12:00
3. Look at back end of diving board as you are leaving board
4. Shift vision to entry point at the highest point of the jump just as you grab tuck or pike
5. **Moving head down before leaving the board can cause diver to hit the board**
6. Throw with straight arms down the center of the diving board as you push off
7. Kick out of tuck/pike position with lower body and arms only - do not move head or chest
8. Close for entry by bringing straight arms up the sides of the body through "T" position
9. Dive deep and curve under water in the direction you rotated in the air - no arching underwater
10. Advanced divers may pike-save
11. Master inward dive tuck before performing pike
12. Do not teach inward dive straight

Back dive tuck or pike

1. Take off should look and feel identical to back jump
2. Chest should stay perpendicular to the water during knee bend and jump
3. Leave board with arms at 12:00
4. Look at back end of diving board as you are leaving board
5. Watch back of the board until just after you grab tuck or pike
6. **Moving the head back/looking up as you push may cause diver to hit the board**
7. Kick out of tuck/pike position with lower body and arms only - do not move head or chest
8. Watch your feet as you kick out
9. Tip your head gently back to see the water after straightening hips
10. Close for entry by bringing straight arms to "T" position or close to the front of the body
11. Dive deep and curve under water in the direction you rotated in the air - gentle arch underwater
12. Advanced divers may knee-save
13. Master back dive tuck before doing pike

Montgomery Dive Club

Excellence in Competitive Diving Since 1989

Reverse dive tuck or pike

1. Take off should look and feel identical to front jump
2. Chest should stay perpendicular to the water during knee bend and jump
3. Leave board with arms at 12:00
4. Look at lane rope or edge of pool as you leave the board
5. Watch lane rope of far edge of pool as you lift your knees or toes into tuck or pike
- 6. Moving the head back/looking up during push may cause diver to hit the board**
7. Kick out of tuck/pike position with lower body and arms only - do not move head or chest
8. Watch your feet as you kick out
9. Tip your head gently back to see the water after straightening hips
10. Close for entry by bringing straight arms to "T" position or close to the front of the body
11. Dive deep and curve under water in the direction you rotated in the air - gentle arch underwater
12. Advanced divers may knee-save
- 13. Master back dive tuck before doing reverse dive**
14. Master reverse dive tuck before doing reverse dive pike

Forward Somersaulting

1. Create spin by throwing with straight arms while pushing against the board
2. The faster you throw the faster you spin
3. The straighter your arms, the better
4. The harder you push, the better
5. If you want to spin faster, make your position (tuck or pike) more compact
6. Keep your eyes open during the entire dive
7. As you push and throw, look at the first lane rope or the far edge of the pool
8. Keeping looking at that spot until you are in the tuck/pike
9. See the lane rope again after completing 1 somersault
- 10. Moving the head down during push and throw may cause the diver to hit the board**
11. Do not perform front somersault until you have learned front dive tuck

Inward Somersaulting

1. Create spin by throwing with straight arms while pushing against the board
2. The faster you throw the faster you spin
3. The straighter your arms, the better
4. The harder you push, the better
5. If you want to spin faster, make your position (tuck or pike) more compact
6. Keep your eyes open during the entire dive
7. As you push and throw, look at the far end of the diving board
8. Keeping looking at that spot until you are in the tuck/pike
- 9. Moving the head down during push and throw may cause the diver to hit the board**
10. Do not perform inward somersaults until you have learned front dive tuck and front somersault tuck

Montgomery Dive Club

Excellence in Competitive Diving Since 1989

Backward Somersaulting

- 1. Back somersaults are the most common cause of injury in diving**
2. Create spin by reaching up and slightly back while pushing against the board
3. The faster you reach up the faster you spin
4. The straighter your arms, the better
5. The harder you push, the better
6. If you want to spin faster, make your position (tuck or pike) more compact
7. Keep your eyes open during the entire dive
8. As you reach, look at the far end of the diving board
9. Keeping looking at that spot until you are in the tuck/pike
- 10. Moving the head back during push and reach may cause the diver to hit the board**
11. Do not perform back somersaults until you have mastered back dive tuck and reverse dive tuck

Reverse Somersaulting

1. Takeoff should feel identical to front jump
2. Create spin by reaching up and slightly back while pushing against the board
3. The faster you reach up the faster you spin
4. The straighter your arms, the better
5. The harder you push, the better
6. If you want to spin faster, make your position (tuck or pike) more compact
7. Keep your eyes open during the entire dive
8. As you reach, look at the first lane rope of far edge of the pool
9. Keeping looking at that spot until you are in the tuck/pike
- 10. Moving the head back during push and reach may cause the diver to hit the board**
11. Do not perform reverse somersaults until you have mastered back dive tuck, reverse dive tuck and back somersault tuck.

Front flip full twist

1. Master front flip tuck and pike before attempting front flip full twist
2. Learn to **consistently** perform front flip "open pike" with body in "L" and arms in "T" during flight
3. Practice moving from "T" to twist position on dryland
4. If open pike flip is consistent tell diver you will call twist **IF** it's a good flip
5. At first call the twist late, just before feet hit water
6. Call randomly, forcing diver to focus on flip and "T"
7. Call earlier as diver improves, eventually calling just after feet leave board

Montgomery Dive Club

Excellence in Competitive Diving Since 1989

Suggested Practice Rules and Guidelines

General

1. Stay off the boards and mats until the coach instructs you to begin
2. Come to practice ready to learn and improve
3. Do not distract teammates from learning and improving
4. Keep language and discussion appropriate for the age of all divers present
5. Only coaches and divers in the practice area
6. Parents should not communicate with or distract divers or coaches during practice
7. No cell phone use/text messaging during practice by coaches or divers
8. No balking and standing on the board forever -- it's unfair to your teammates

On the Boards

1. One person on the board at a time
2. Know what dive you are supposed to do before you get on the board
3. Get on the board and set the fulcrum as soon as the diver in front of you goes
4. Stand ready to start your dive as soon as the coach tells you to go
5. Do not bounce the board unless instructed to do so by the coach
6. Never bounce the board while another diver is swimming back
7. Wait for the previous diver to clear the landing area before you dive
8. Surface from your dive in the same spot you landed
9. Immediately swim directly back under your board to exit the pool
10. If a water-line is allowed, all divers must hold the wall in line at all times

On Mats

1. Always warm-up before diving
2. Model skills on dry land before attempting in water
3. Wet mats are slippery and dangerous - keep towels on hand to dry them
4. Stand mats up when not attended
5. Mats get very hot in the sun - keep them shaded whenever possible

Coaching Guidelines

1. Have a plan. Come to practice with a written workout
2. Start with simple skills and build complexity piece by piece
3. Teach positions and movement patterns on dry land before going to the boards
4. If a diver can't make a correction, simplify the skill (standing, no arm-circle, model on land)
5. Emphasize the CORRECTION not the ERROR
6. Be enthusiastic, positive and professional
7. Say the correction, show the correction, and have the diver model the correction
8. Provide corrections just before the diver dives
9. Provide one correction at a time
10. Keep corrections simple and clear