

# A Swim Lesson Curriculum

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## 1 Skirmishes in a War with the Age

Your role as teacher: You are an instructor. You are here, first and foremost, to teach *skills*. Many instructors, and unfortunately many parents, behave as though swimming is *a priori* knowledge and the teacher's job is to get kids to toughen up and just do it. Parents will say you aren't challenging their children and that they can swim x amount of yards. So-called teachers will advise you to "just dunk" a kid so they "stop whining". You're not here to teach grit, you're not just a cheerleader, and nobody learns how to swim by drowning. Have respect for yourself as an educator and demand that respect from anyone who challenges it.

Attitude: Never break a promise, never dunk. Remember that children aren't as simple as we like to think.

Hands: At no point should you ever teach swimmers to cup their hands. A swimmer's hands need to be straight and flat, almost rigid but still reactive to the water. Fingers should be mostly together but need not be pressed tightly so. Pressure is exerted from the fingertips and pad of the hand, with thumb positioning not mattering much but ideally with the other fingers.

Elementary Backstroke: I see a lot of teachers spending lots of time on this stroke, and I really don't see much reason for it. I've long supposed that it's a crutch for instructors who aren't sure what to work on or how to help a certain swimmer and want to just demonstrate some kind of progress to parents. The arm motion has some value as a safety skill, but it's nothing a child who isn't already floating on his or her back won't think of doing innately and certainly doesn't warrant more than five or ten seconds of explanation.

I want to stress something very important: the notion that doing Elementary Backstroke with whip kick will help a student better understand breaststroke is the worst kind of wrong. Not only does the kick change insidiously when done on one's back, the timing of the two strokes **could not be more different**. Elementary Backstroke is not helpful for learning breaststroke, and indeed it actively encourages precisely the wrong timing and will set your swimmers back a great deal. I encourage any teacher to spend little, if any, time on this skill and to never teach it with a whip kick at all.

## 2 Water Adjustment:

Remember that merely going underwater has no pedagogical value, and that breath holding undermines the true goal of early lessons: breath control.

A person's natural panic reaction is to take a quick, sharp breath. **Do not let a child go underwater who still shows signs of this reaction when getting water near his or her face.** Children who are scared and crying/hyperventilating will simply not be able to blow bubbles, so work on calming and comforting them before continuing with bubbles. Above all remember that your goal is to teach the child how to breathe around the water, so don't worry about whether they go underwater and try to discourage them from breathing in through their noses when in the pool. Take care to never allow them to hold their noses when putting their faces in the water either.

Start with mouth bubbles. Blowing on the surface and putting chins in water if the children are nervous, but more often than not they will be willing to blow mouth bubbles right away. Some kids will easily hum underwater to blow nose bubbles, but most require practice and acclimation. I like to have them hum with

their mouths just under the water, telling them to not blow mouth bubbles at all. This helps you to be sure that they bring their mouths out of the water before breathing in and that they aren't breathing in through their noses. Once they seem comfortable with this it's time to tap their noses on the water while humming. This can be done either by the child or by a small wave as you move through the pool. Very often, since they're focusing on humming already and don't know a swell is coming, they'll "accidentally" blow some bubbles and the celebration begins.

**Don't be afraid to explain breathing to them in some detail, even if they are young.** A three-year-old may not understand your explanation to the letter, but they'll get that you're focusing on how they breathe and they'll know you're paying close attention.

The next step is bobs, and this is a very specific and technical skill that often gets misunderstood. Again, the goal is not simply going underwater but to begin learning how to breathe during a stroke. The most important thing is to get the children to exhale all of their air through their noses and mouths while underwater. It's also important to try to get them to take a single, deep breath when they surface. You're teaching them the pattern that side breathing, and all breathing in swimming, will follow. Getting kinders to inhale properly is often difficult, but in youth lessons this should be stressed—don't let them exhale when they're above water during bobs, and don't let them stop and take multiple breaths when their heads are up.

What will go wrong: Kids want to do the right thing, and I've found that no matter what attitude I take some children are going to fake their nose bubbles by just blowing mouth bubbles. Sometimes you can really tell, sometimes you have to look underwater to see it. I frequently don't even catch this until I realize that a child who can blast off for a while with his face in the water is still getting half the pool up his nose.

### 3 Streamline:

The next step is balance. A characteristic of inexperienced swimmers is that they try to use their arms to stay at the surface of the water. Our job is to teach people to balance in the water such that they are always already floating and use their arms solely to achieve forward motion. This means body position is all-important to their future as swimmers.

When doing blast-offs remember that the goal isn't just to launch off of the wall, and while they obviously should practice good kicking that isn't the focus of the skill either. The most important things are their arm and head positions. When in the water our bodies are most buoyant at our lungs and least buoyant at our arms and legs. Putting one's arms down puts all of the "weight" on one side of one's lungs, causing one's back end to sink. By extending one's arms in front one is better balanced around one's lungs, meaning the legs are up and one's body is at the surface of the water. I like to describe this as using one's arms as a counterweight to one's legs. It can be helpful to explain to adults that they should be pitched forward when they swim, but children seldom care about the details of this.

If your students are lifting their heads up during a streamline glide their balance will be mostly all right, but they will immediately find themselves sinking until their heads are underwater. As early as kinder classes I ask kids to have their arms all the way behind their ears in a completely extended streamline. This means their heads will be all the way down and their arms all the way up. This is possible for any kinder who is comfortable putting his or her face in the water, but it will take a while for some to learn the position and it's not necessary to master it early.

Since streamline is so important for one's entire future as a swimmer, I recommend teaching it not simply as a skill but as a default behavior. Every pull of every stroke begins and ends in a position very much like streamline, but if a swimmer isn't used to thinking of it as such their strokes will be ineffective and off-balance.

## 4 Flutter Kick

After having got a handle on the push and the streamline glide it's time to make sure the swimmer's flutter kick is in order. This is usually extremely difficult, and most swimmers will need a *lot* of practice before they can reliably demonstrate the correct form. The good news is that in order to succeed at learning crawlstroke the kick only needs to not be a hindrance, although swimmers who excel at the kick early will have a much easier time working through later skills.

The most common mistakes involve bending the knees too much, either by keeping one's thighs still and kicking entirely from the knee or by "stomping" the water with a linear foot motion along the body's axis. Most instructors overcorrect these mistakes, encouraging locked knees by telling swimmers to use "straight legs". Some say to "kick from the hips", which causes a swimmer's body to rock side to side instead of moving forwards. In the former case I recommend "long legs" and in the latter "kick from the thighs".

Flutter kick, perhaps more than any other skill, requires instructors to teach a behavior they no longer think about. Imagine trying to teach someone to walk in a detailed and technical way when they have barely begun to crawl. I have come up with an explanation of the process which is usually helpful for adults, but I always remind my students that they should not be thinking through this process as they do it:

Consider how one's leg would move with perfectly relaxed joints. On the down kick, the resistance of the water would fold the knee closed. Therefore, one must force the ankle down to keep the leg long. On the up kick, the resistance would now fold the ankle, so one must force the knee up to keep the leg long. Every step of the way these joints must remain supple and reactive to the water—think of the legs as long, flexible strips rather than jointed or rigid objects.

## 5 Back Floats

At the same time you're working on bobs and streamline you can work on back floats. Students will need to raise their hips/bellies out of the water (a hand supporting the lower back helps with this) and tilt their heads back so their chins are elevated. Most instructors will say "tummy up, head back", which usually does the trick, but after I saw several kids putting their heads all the way back until their noses were in the water I switched to "tummy up, chin up". It also tends to make sense to them that they want to get their mouths as high up out of the water as possible.

You can start by having the child rest his or her head on your shoulder. Getting ears in the water is tricky for some kids, so make sure you cast it in a non-negative light ("does that tickle your ears?" or "does that feel silly?" do the trick). Kids who are really, really agitated by it will usually calm down if you tell them they're putting their ears in the water to the count of five. You can gradually increase the number you count to and in a couple of classes' time they'll be able to do it without you counting.

If they are bunching their shoulders forward or shrugging you can hold them by the shoulders and help roll them back, but I usually hold kids on the back with one hand and the back of the neck with the other. If they're not fidgeting I let go of the back and put both hands on the head, making sure it's tilted right. If they're still calm I move to a single hand on the back of the neck, and if they aren't lifting their heads up I relax my support and let them float.

This is important: the moment where you let go of a kid for a back float is pivotal. They are putting an enormous amount of trust in you, and it's entirely possible to mess up and betray that trust, so you have to pay close attention to their anxiety level and their body position. I use a kickboard or another student to demonstrate to anxious students that when they feel me let go my hands are still very close underneath them so there's no chance of them falling underwater. Sometimes I remind them that I'm not here to trick them into sinking, and that "sinking is in fact *not allowed* during back floats so don't you even try it". When you do relax your hold make sure the student doesn't lift his or her head up, as that's the most common reason you'll see a back float fail at this stage.

## 6 Crawlstroke Arms:

I see a lot of different approaches to teaching crawlstroke arms, and I have small misgivings about most of them. “Ice cream scoops” tend to encourage cupped hands, “rainbow arms” encourage straight-arm pulls, and in general I see a lot of instructors worrying more about what’s happening above the water than what’s happening underneath. It’s actually a useful drill to have your students swim with their arms completely underwater at the start, since this gives them an opportunity to be aware of their hands both pushing back against the water and sneaking forwards through it.

As with streamline position, an integral part of crawlstroke arms is the “catch-up”, where the swimmer keeps one arm straight out in front while the other arm recovers. See the appendix on crawlstroke for details, but teaching this as early as possible will be enormously helpful for learning side breathing later on.

## 7 Shoulder Roll:

Teaching a good shoulder roll is difficult, but there are ways to introduce it as early as three years old. When I have kids practice their crawlstroke arms I usually hold them at the torso and turn them a little with each stroke. Just make sure this rotation is directed forwards rather than purely side to side. Since the arms move independently, and not through a stiff shoulder line, a swimmer must be able to roll one shoulder blade up and around while keeping the other shoulder still. This does not come naturally for some people, and many will have a very powerful preconceived notion that their arms should move like spokes of a single wheel. Practicing catch-up crawlstroke from the outset is a great way to keep each arm movement independent and discourage the stiff-armed, diametric crawlstroke.

## 8 Breathing:

Once your students have mastered bobs and streamline kick it’s time to work on side breathing. To accomplish this you can take a couple of approaches, depending on their ability levels and goals.

Rollovers: A comparatively easy intermediate skill that confers a safety benefit is to teach them to roll onto their backs from a streamline kick. From this position, have them make a single crawlstroke pull but keep rotating their shoulders until they are on their backs. To roll back onto their fronts just have them reach across their chests until they roll over with an arm forwards.

If they are pushing off to you, you can stand just in front of them and grab the arm that isn’t pulling, bringing it towards you to encourage the body roll. On the way back you can hold both of their hands in front of them and actually force the arms to do what they need to, helping them make the connection between the reach and the rotation.

Side kicking: After that, or in lieu of that if the swimmers are ready, it’s time for them to learn to kick on their sides. This skill relies on exceptional balance and poise, so you will have to be very involved physically before they are ready to do it on their own. When doing this skill it’s important to remember that you’re using it to teach correct arm and head position, but the hips and legs will be in the wrong position for actual side breathing. This will need to be corrected later, and it’s a good thing to mention beforehand when teaching adults.

Students will need to have an arm held straight in front, with the other at their side. Both shoulders and hips will be turned about 90 degrees (perpendicular with the surface of the water), but as long as they aren’t on their backs and they stay balanced it’s fine if they’re a little off. Heads should be in line with the arm, with the ear in the water a little inside the arm (not on top of the arm, but rather next to the arm pit). In this position the normal instinct is to lift the head out of the water and pull the arm down, and much of the work on this skill is correcting this instinct. You will have to support the arm in front for a long time before they can do it independently, but make sure you are supporting the forearm and not the hand since the pulling instinct will cause swimmers to grab your arm and push down on it. Make absolutely sure their head is in the correct position.

For beginners you will probably have to hold them at the waist and forearm (I call this “the waltz”). Adjust their heads if necessary, and keep an eye on their kicks. Some swimmers get that a rotated kick works the same, but others will move their legs sideways to keep it the same relative to the surface instead of the body. When they are more advanced you will be able to support them just at the arm, and ultimately they will support themselves.

**Side Breathing:** Once they only need a little bit of arm support you can move on to the next skill. This is a really exciting skill for most students because it’s where things come together into a functional side breath. You want to have your students push off of the wall in a streamline and take three crawlstroke pulls before turning onto their sides to kick. When they do this you’re still going to help support their front arm. The new element you’ve introduced is the turn from crawlstroke into this position and back. There’s a lot of detail to go into here, but for now just make sure they aren’t lifting their heads or bending their necks at *any* point during this skill. The head should turn with the shoulders as though the body is on a spit. When going back into the water try to make sure the back arm starts to move forward before the front arm pulls, since that is usually a difficult skill to teach down the road.

**Back to Bobs:** Recall that bobs teach the rhythm for all breathing in swimming. With the previous skill your students will be spending a long time on their sides breathing in and out before going back into the water. What you want to do is have them breathe out the entire time their faces are underwater (during the first two strokes) and take one very big, full breath on the third stroke. The pulling arm should not pause or slow down for this breath, and the hips should not turn.

When simply kicking on one’s side, one keeps one’s hips turned along with the rest of the body. This is an effective way to take a breath, but it has an impact on the rest of the stroke. Some momentum is usually lost, one’s balance shifts during the rotation, and frequently you will observe the kick twisting and the swimmer’s legs tangling. Once the swimmer has mastered the breath control necessary for a *quick* side breath it is time to correct this behavior. During the breath a swimmer’s hips should rotate no more than they would on any other stroke. This means maybe ten or fifteen degrees, far less than the ninety degrees the swimmer has been practicing and generally even less than the amount one’s shoulders are turning. This works because when the breath is taken quickly there is no need to reposition one’s body, so the breath has a minimal impact on any part of the stroke besides the head. This is generally a goal to aspire to in crawlstroke: do not let the breath affect the stroke.

**Bilateral breathing:** Now that side breathing has been put together completely, it’s time to talk about breathing patterns. This has been a hotly debated topic over the years, but recent consensus is that during a race swimmers benefit from breathing every other stroke, which means only breathing on one side. While this is most likely correct for a race, the fact remains that one always wants a symmetrical workout. For an alternating motion like crawlstroke, this means breathing on both sides. Swimmers who use the same side to breathe every time will suffer from shoulder problems down the road, and their strokes will become lopsided and inefficient. My recommendation is to teach all swimmers to breathe every third stroke, and when coaching encourage the same during training. If a swimmer is having trouble and needs to breathe more they can breathe on a 3-2-3-2 pattern, or at least change which side they breathe on every length of the pool. If a swimmer is physically incapable of breathing on both sides then so be it, but watch their strokes closely and warn them to be especially vigilant about their timing and technique.

## 9 Whip Kick:

This can be introduced earlier, but it has been my observation that most children excel with either symmetrical or asymmetrical swimming so before introducing the former make sure you aren’t going to disrupt a swimmer’s progress with the latter.

Many swimmers are introduced to this kick on their backs, and while this isn’t the worst thing ever it raises some concerns that are worth mentioning: namely, that when kicking on one’s back the knees stay at a consistent depth and the feet drop whereas on one’s front the feet stay mostly at the same depth while the knees drop. A swimmer will usually self-correct this, but sometimes will be more inclined to kick his or her feet out of the water during whip kick.

The first thing to emphasize about this kick is symmetry. Fixing an asymmetrical whip kick is such a difficult task that it's best to enforce this as much as possible from the outset. Some swimmers will do a scissor kick (one leg goes up and one goes down), some will sneak flutter kicks in between whip kicks, and some will do dolphin kicks. Having the swimmer practice while sitting on the side can work, but be aware of the above considerations about doing the kick on one's back. I prefer to have the swimmer hold onto the edge of the pool facing the wall while I manipulate their legs from the feet.

I see a lot of people teaching this kick as three stages: the feet come in, the legs kick out into a V, and then the legs come together. This is **not** how whip kick is supposed to work. The correct steps are as follows:

1: Begin with the legs completely straight and together behind you.

2: Bring your feet in towards your butt and apart slightly. Your knees will drop and maybe separate, but be sure to keep them on the inside of your feet. Feet will be angled so the toes point out and down, with ankles flexed. You will feel the tension here.

3: Kick your feet around behind you in a **circle**, from their position at the end of #2 until your legs come together straight as they were at the beginning of #1. The inside of your calf and foot will be pressing on the water, and you should accelerate through it. Use your thighs for power, letting your knees finally come apart as much as they need to as your feet make their circle.

4: Glide. The exact amount will vary with the swimmer's pace and ability, but it's usually best to start out gliding too much.

When teaching this kick it can help to stress the differences from flutter kick: its symmetry as well as its "burst" nature. Flutter kick provides constant and streamlined power, whereas whip kick is a fair bit wider and gives all of its power in one moment (the end of #3 above). This kick and its accompanying stroke require timing more than they do brute force and speed.

## 10 Breaststroke:

As with the kick, this stroke requires a lot of proper timing and attention to detail. In the advanced stages it requires a lot of difficult upper body movement in careful relation to a strong kick, and for this reason I like to point out to swimmers that breaststroke starts out as the easiest stroke but will ultimately be the hardest (as opposed to butterfly, which starts out as the hardest by far but settles down into merely difficult when mastered).

**Pull:** You're going to see a few different wrong arm motions as you teach this, with the common theme being they are way too large. Early on it can help to have kids "scrape the ice cream off the sides of the bowl into your mouth", but even this will need attention later. The simplest explanation is to think of the pull as being shaped like a triangle pointed at one's face, where the hands leave streamline and perform the catch, then pull in towards one's face while the elbows bend outwards. After the breath, when the power phase of the kick happens, the arms shoot forwards up the middle of the triangle and stop in a streamline.

Swimmers are going to want to pull all the way down to their thighs, but should not pull past their chests. They'll also take really wide pulls with their hands facing outside, but should pull not much farther out than their shoulders and the hands should catch to the inside. This is usually the last part of the stroke I spend much time on, because it's the easiest to correct and won't otherwise interfere with the stroke.

**Breath:** The breath is very simple, especially at the outset, but as with the rest of the stroke timing is everything. Make sure the swimmer lifts his or her head to breathe right at the very beginning of the pull (during the catch). Breathing early or late will either delay the kick or clash with the swimmer's elevation.

**Timing:** Every single part of breaststroke requires careful timing and control, which is one of the reasons I consider this the hardest stroke. Conveying the feel and rhythm of a proper breaststroke is extremely difficult, especially given that each swimmer will come at it from a unique perspective. I've come up with numerous great ways to explain it that never seem to help, such as reminding them that the stroke begins and ends in streamline position, or that they should pause not during the breath but during the streamline glide.

Instructors everywhere will tell their swimmers to remember "pull, breathe, kick, glide" as they swim. A colleague of mine said he had success with "kick, glide, pull, breathe" but I had no such experience. The

best thing I've discovered is to emphasize the above breathing timing first and then trying anything you can to make the streamline glide happen even a little bit. You should look for the kick finishing (feet together) before the hands come apart for the pull.

## 11 Butterfly:

Like breaststroke, having a firm grasp of the kick is essential to begin learning the stroke. Unlike breaststroke, the same can be said about the pull. I usually begin the stroke by teaching the kick, but starting with the pull is just as valid and it's probably best to do both on their own before even thinking about synchronizing.

Dolphin Kick: This is an often-misunderstood motion. At first glance it resembles doing flutter kick with both legs pressed together (much like a dolphin's tail), and indeed you will see the same mistakes from swimmers as with flutter kick. Watch out for swimmers kicking entirely from their knees, or kicking in and out with their feet instead of up and down with their legs. The main deviation from a flutter kick motion is that dolphin kick begins in the core.

At the start of each kick the swimmer must move his or her hips *down* in the water (assuming the kick is done on one's front), creating tension in the legs. This will cause the knees to bend (more than flutter kick but still not too much), resulting in a very powerful down kick with the feet. Because of this wave motion dolphin kick is sometimes called a "resonant kick", but that's mostly people trying to sound fancy. Some instructors stress that dolphin is a full-body kick, encouraging swimmers the wave their arms and heads around, but I've found this to be untrue. While the chest is engaged during the kick, it's mainly for the purpose of keeping the arms and head stabilized. The less one's upper body moves, the more the power generated by the kick goes into the legs and therefore into forward motion. This is easily observed by watching any video of high-level swimmers after a start or turn. During the stroke full stroke the arms and head will have more to do, of course, but when practicing the kick in a streamline it's best to perform the kick as effectively as possible.

One more thing to note about dolphin kick is that it isn't always best to do rapidly. I encourage beginners to slow down and make each kick count, since its role in the stroke relies on proper timing and strength rather than haste.

Arms: For many swimmers this will be the most challenging part of the stroke. Many others will think they're terrible at it when the problem is actually timing. This is another case where there are misconceptions about the stroke that obstruct learning the correct way.

The first thing I'll mention is about the recovery: in butterfly the arms do not bend backwards in the sockets like gull wings. In fact the arms should stick straight out from one's sides, parallel to the water's surface. What gets the arms out of the water is a combination of a powerful dolphin kick and the accompanying rise of the chest, such that one's entire shoulder line *and by extension* the arms come out of the water.

Accomplishing this requires the swimmer to think about the pull in a specific way. Like breaststroke, it begins and ends with the arms extended in front. Unlike breaststroke, the arms should be aligned with the shoulders instead of together in a tight streamline. The hands "catch" the water before pulling straight back into the finish, much like doing two crawlstroke pulls together. The swimmer must at this point be very careful not to stop with his or her arms in the back, since performing the recovery once the chest has fallen will simply not work. Instead the swimmer must follow through, bringing the arms out to the sides and back in front.

## 12 Appendix A: Crawlstroke

Teaching side breathing is a long and subtle process which relies on a deep understanding of the mechanical and phenomenal process of crawlstroke. I'll cover some of these elements first before discussing how to teach them (make this an appendix).

Power Phase: A crawlstroke pull should be thought of as a linear motion, catching the water in front on the inside and a little bit down (the old “S-pull” catch has been scientifically and anecdotally proven to be less effective) before pulling it more or less directly back with a bent arm. At the finish the swimmer’s palm should be facing up, but the swimmer shouldn’t make a big splash or flourish unless as part of a drill to encourage this arm position.

Glide/Catch-Up: When the swimmer’s arm enters the water in front, it should stay fully extended until the swimmer’s shoulders rotate again (usually about when the other hand is a little bit past the head). This is often called the “catch-up”, since one hand catches up part-way to the other before it pulls. There are three major reasons for this:

- 1: It maintains a better streamline in the water between strokes.

- 2: It provides stabilization for the reasons described above regarding streamline position.

- 3: Pulling earlier encourages “crossing over”, where the arm crosses the center line of the swimmer’s body. Waiting until the shoulders roll ensures the arm stays on the correct side the whole time, minimizing the danger of shoulder injury.

Recovery: The recovery (when the arm is out of the water) has been a subject of much discussion. Two main techniques have emerged, each valid depending on the swimmer’s innate preference:

- 1: A bent arm with the elbow pointing up and the hand moving forward in a linear path, similar to the underwater portion but above the surface.

- 2: A straight arm, pointing out from the shoulder at an angle to the water.

In both cases the most important feature is how the hand enters the water. With a bent arm the hand should be traveling forwards into the glide when it enters the water, whereas with a straight arm the arm will already be fully extended on entry and the main concern is stopping its motion as soon as it is straight in front (no crossing over).

Head Position: Head should be down, either facing directly at the bottom of the pool or sneaking a tiny glance forward (don’t let the face face forwards). During the side breath the head rotates *with the shoulders* but does not lift.

Hips and Legs: A very little bit of rocking is fine, but for the most part the swimmer should keep his or her hips flat, particularly during the breath. Rocking hips cause crossed legs in flutter kick and even scissor kicks, as well as poor balance and leverage from even a proper flutter kick. The kick does not need to be fast, but legs need to be long and the kick needs to be a narrow up and down motion (no kicking the feet in and out).