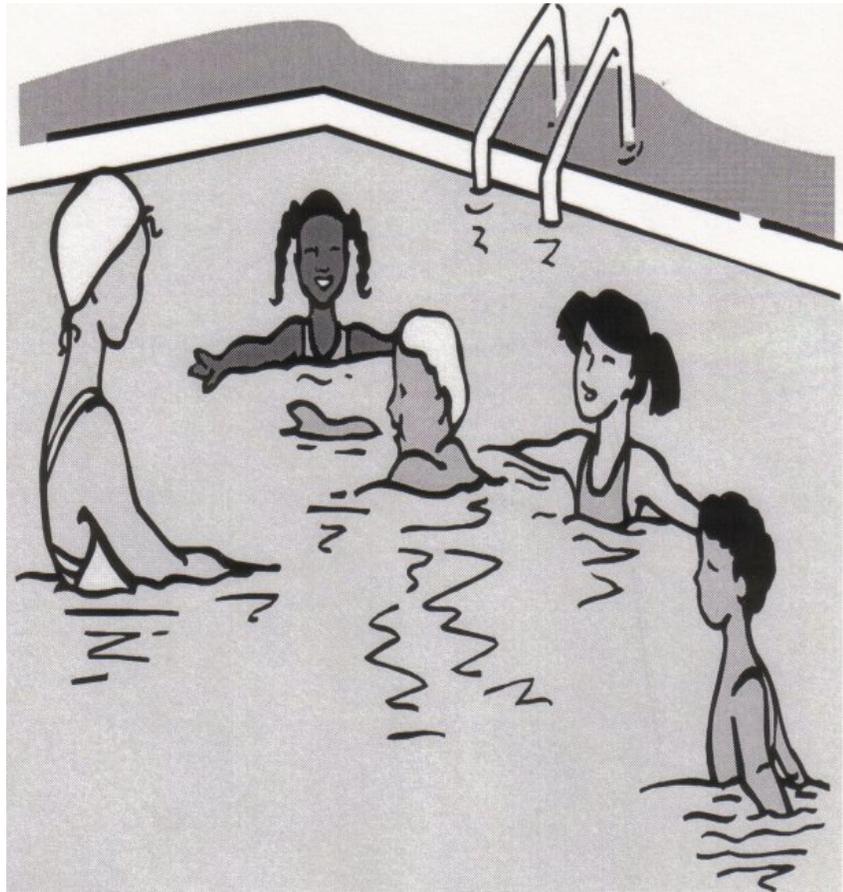


SWIM



INSTRUCTION



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INTRODUCTION

As I look back on twenty years of personally teaching swimming to several thousand children and adults, I sense a need for a manual such as this. Parents often spend unnecessary hours of fear for their youngsters prior to their learning to swim, and often find formal instruction a real chore. Typical city classes are set up so as to take unnecessary time for the student and/or the parent who spends a lot of time transporting and waiting for classes to end. Even though most city courses are inexpensive, a parent too often ends up having a child take several sessions when it may not be necessary.

I claim that I can take any youngster 7 to 10 years of age who wants to learn to swim and teach him in 5 minutes. Several factors are a part of this success. This will be presented later. Most parents and instructors can get the same results. It's just a matter of being aware of the basic skills, and how and when to apply them. I hope I can present in this manual a clear outline on how it's done.

Although it definitely can be beneficial for all persons to take a Senior Life Saving Course and later a Water Safety course to qualify as an official instructor, it isn't necessary, unless you wish to teach under the Red Cross program or standards. Being certified as an instructor doesn't necessarily make a person better qualified any more than a credentialed teacher is better because of his official training.

Certain ingredients go into making a good teacher, in this case a good swim instructor. These ingredients include a love for people, allowing them to be themselves, patience, and understanding of how and when to apply the basic truths or skills to help someone. Being able to demonstrate all the skills and being "in shape" are assets because an example definitely is a good teacher. However, these skills are not a necessity, especially needing to be well conditioned. A lifeguard needs the strength and stamina to perhaps make a swimming rescue. An instructor pretty much stays in one area and does very little physical exertion. Even in cases where an instructor is unable to demonstrate a skill, someone else can do it, or a slower and well-explained procedure will do the trick.

Before getting into the manual, I want to make some comments about the age for a student. Two factors may determine this. One is of necessity, such as when a pool or other body of water is available for a youngster to get attracted to. In this case, the toddler must begin to like and respect water as soon as possible. Survival strokes or skills would be taught, hopefully as soon as a child can walk. Basically, following the beginning procedures for older children will apply to a younger child. Communication skills and patience will need to be developed.

The second major factor to determine when to learn, is readiness. The amount of exposure to water and how it is introduced helps determine this. Otherwise, the age I have found easiest to teach is around 8-9 years. This pretty well agrees with readiness in regards to academic learning also. Usually teenagers and adults take longer on a beginning level due to ingrained fears and possible loss of coordination in older adults.

The few books I have seen on swimming instruction are very limited, although many certainly are excellent. Some strictly present "how to do it" by explaining what the various body parts are doing. Very few are scientific in their approach. Fewer offer much in the way of water games with instruction. I don't believe I've seen any book present all that I wish to share. I will be neglecting the science of swimming, only attempting to present explanations in "laymen's terms" as if I was speaking with a novice face to face.

Present steps and information are from my own experience even though other theories may exist. Presentation will be as brief and clear as I can make it. The manual is designed in binder form so you may get magazine articles, games and other notes, you can easily add them. Also, when you begin teaching you may find it valuable to outline lesson plans for your specific needs that can neatly be organized into your binder. Beginning instructors especially, should plan in advance what they want to teach and related activities before teaching a class or individuals.

A key ingredient to successful classes is the element of fun. At the end of the chapters on swimming level instruction are listed a number of games and activities. It would be well worth your time to become familiar with other activities related to games, synchronized swimming, diving, stunts, shows, and organizing swim parties. Your local library can provide a lot of this free information. Without further delay, let's dive in and get wet!

THE FACILITIES

Any place where there is water at least somewhat healthy, some phase of swimming or water fun can be had. It is strange in some ways, how authorities have allowed classes to take place in lakes and rivers that were contaminated, had algae growth or you couldn't clearly see more than a few inches of depth. Swimming pools need to be perfectly clear and free from algae and bacteria, etc. while these other places are allowed to function. This is somewhat of a resentment of mine that I can do little about. However, I hope a prime concern for you and your students is healthy water.

Lessons can be given in lakes and rivers but if there are better alternatives available, I hope you use them for several reasons. First, let's talk a little about fear. It is natural for most everyone to fear a new experience. Speaking especially from a beginning swimmer's point of view, what appears to be dirty water isn't very inviting, especially if I can't see much under water or know about the bottom. Is the bottom muddy, full of rocks, weeds or glass? Will a fish come along and bite me? Will I step into a hole or suddenly into water over my head. The unknown raises many fears. Good talking and maneuvering will seldom overcome the fears. Even now, as an excellent swimmer, I still feel a little anxious swimming in "dirty water". Try to imagine a young beginner and what is going through his mind. If he is thinking about fears, he won't be very open to instruction.

So a first priority for a good place to learn swimming, is water that is clear, and hopefully healthy. In regards to the health aspect, in my opinion water that is highly chlorinated can be a handicap, despite its germicidal effect. Chlorinated water hurts the eyes in large amounts or prolonged exposure. Even the smell of chlorine often repels students and keeps them from opening their eyes. Often a good swimmer with his eyes closed will have a little fear about where he is, etc. A fearful swimmer is not relaxed, not learning well, and is not enjoying the activity as much as possible.

If possible, I recommend one of these two kinds of water. First, would be water that is clear, clean, with no chlorine but is well filtered. A second kind of water that I experienced a few years ago had a salt content. Our eyes and body fluids are naturally saline. Slightly salted water does not hurt the eyes or cause them to turn red. I hadn't seen a system for years but there used to be one that was able to remove the chlorine from salt (NaCl) that in turn purified the water in some way. Perhaps someday, someone will perfect this system that uses a fairly cheap commodity in sacks of salt for our pools. The slightly salty taste was easily adapted to, the water was always very clear, and the swimmers experienced no red eyes.

In using a pool of some sort, be sure the bottom is well vacuumed. A roll of dust, hair, or other particles can make many potential swimmers wary of going into the "dirty water".

The next major facility consideration is water temperature. A cold student is only anxious to get out. His mind is "frozen" too. He will be very difficult to communicate with. Cold, tense muscles are not relaxed muscles, and there goes the lack of enjoyment. Water comfortable for active swimming generally falls between 70 to 78°F for most people. Instruction water is best around 80°F. Too warm of water over 86, for example, is comfortable to get into but detracts from active involvement, and even makes some people uncomfortable.

A factor that is important to consider for temperature is wind. Even when the water or air temperature is comfortably warm, a wind on a wet body causes fast evaporation and cooling. Plan to teach during the calmer part of the day or plan to have good windbreaks. In most areas, morning and early afternoon hours are those with calmer atmosphere.

It looks as though I'm plugging a home swim pool as potentially the best facility. Commercial pools will probably have too many distractions unless you're part of a learn-to-swim program and even then there is often a lot of confusion, so it often seems. By my promoting a home pool, doesn't mean a person has to have one of those expensive in-ground pools, either. They're nice if you can easily afford one but they are very impractical.

In-ground pools are very much an expensive luxury. Most often they don't add to the resale value of property despite what many people think. Because they are permanent, you will probably have added property taxes each year. What would you do with one that you no longer use, as often happens with people? They tire of it or lose interest for one reason or another.

Without getting into brand names, I highly recommend the portable above ground pools, even if you could afford something built in. True, the portable pools probably won't have deep ends or diving boards. But for swimming and swim instruction, you don't need deep water. When ready, a student could experience deeper water with the instructor on a special trip to the local swim center. Usually water 3 to 4 feet deep is just right. If you plan to teach students younger than 6 or 7 years, plan on 2 1/2 feet as a good maximum shallow depth. You may want to consider a water slide for use during recreational swimming.

These above ground pools are easily installed in just a few hours, depending on their size. Filter systems are simple to install, quiet, and easy to operate. If you don't care to use the pool in cold weather, it can be easily covered or drained and put in storage.

I have two other recommendations about your pool, whether it be in-ground or not. In addition to making sure it is large enough for your needs, consider its shape. Doing only private instruction, you may not need to be concerned but try to have at least two straight sides opposite each other. Having students going from side to side on curved edges can cause problems. Also, the top edge of the pool should be close to water level and easy to grab.

PERSONAL VERSUS GROUP INSTRUCTION

City and private commercial pools offer most swim instruction. Their programs are mainly geared to teaching groups of 10 or more, and in many instances, using an assembly line method to have perhaps dozens being taught at any given time. In my opinion, these set-ups are very much like our public school systems trying to teach the masses instead of individuals.

Perhaps my comparison isn't completely accurate. Group swim lessons at least teach groups that have certain skills or levels of ability and are designed to teach new skills. This certainly is commendable to this point, as the students have certain things in common which will also make the instruction easier. Could you imagine trying to teach backstroke to someone who had no confidence in floating while other students were ready to progress? Being ready emotionally, physically, mentally, and skill-wise, are the real keys to attaining success. We must sense this readiness in order to progress as well as possible. And this is where group instruction is limited.

Each person in a group is different, just as any two people are different. If we really desire for a person to progress in his skills, we must be in tune to his readiness. This is next to impossible when there are 10 or so in a group unless they have been very carefully screened prior to instruction and then placed in a homogenous group - a group in which the students are as near alike as possible.

For the moment, let me assume that as an instructor you have a chance to teach several people. First, I suggest that most adults feel very awkward if they are taught in the presence of children, so try to arrange separate times for them. Our young people need to be separated and placed in groups or with others of comparable readiness.

Even if a teenager has the same skills and needs as a young child of 6 or 7, they should not be taught together. Most older youth feel a "put down" or suffer poor self-esteem as they think they are being compared or asked to participate with those a lot younger. Gender makes no difference. Having mixed groups of boys and girls usually makes no difference to the students, as this is how they are taught and play in society. Even though physical strength or coordination may differ between sexes at certain ages, it doesn't matter to them.

Your responsibility is to separate individuals according to personal levels and needs. In trying to separate students, asking them what they can do usually is not sufficient. Some students will say they can swim when they can't even float. Others purposely exaggerate to impress. You must see what they can do. To start with, ask students to perform the following skills and place them in these classes or groups:

Skill To Perform

Class Or Groups & Skills To Learn

- | | |
|---|--|
| I. put face in water
hold head under water about 5 sec.
open eyes under water | a readiness group to be taught
these skills plus floating on
the front and back |
| II. prone or face float
kick glide face down
back float
back kick gliding | <u>Beginner's</u> group to perfect these
skills, rhythmic breathing, front
crawl, finning and perhaps back
crawl (backstroke) |
| III. level off and swim
<u>Beginners</u> to perfect
front crawl at least 15 feet
finning | <u>Advanced</u>
these skills plus breathing, and
elementary backstroke (frog or
whip kick on back), back crawl,
basic diving, tread water ½ min. |

- IV. front crawl at least 75 feet Intermediate to perfect these skills plus learn breaststroke, sidestroke, and develop ability to swim at least 100 yards, surface dive and underwater swimming, tread water one min. proper breathing in front crawl
- elementary backstroke
 finning
 crawl with breathing
 not necessary
 back crawl
- V. Advanced (called "swimmers" by American Red Cross
breaststroke, sidestroke, learn inverted breaststroke, trudgeon crawl,
100 yard swim desired but not necessary, survival floating, possibly butterfly, elementary backstroke, surface diving & underwater swimming, 100 yards with 3 strokes, 10 minute swimming, sidestroke on both sides, front dive desired but not necessary
- VI. Lifesaving skills and techniques taught:
breaststroke, inverted scissor kick on either side, sidestroke, inverted frog or whip kick with no arms, surface dive and touch bottom, quick reverse, shallow entry "dive", evidence of strength & stamina, leveling a victim, use of reaching assists, minimum age for certification, disrobing, hair carry, head carry, cross-chest carry, underwater approach, artificial respiration, CPR, develop stamina, tired-swimmer's carry, defense methods: block and parry, block and carry
release methods: front head hold, rear head hold, wrist grip

If possible, all people should experience these lifesaving skills. For certification, minimum age for Junior Lifesaving is 11 years or sixth grade; a senior must be 15 years or 10th grade to take the course. Persons with a valid Senior Life Saving or Water Safety Instructor's Certificate are qualified to lifeguard in public areas. Check with the Red Cross/YMCA for updated information and requirements.

VII. Completed requirements for Advanced Water Safety Instructor' Course and Lifesaving is 18 years of age.

Let's now assume that your potential students have been screened for skills and placed in appropriate groups. The easiest thing to do now that you are ready for instruction, is to direct them as a group, everyone performing the same skills and drills. In the advanced skills this is probably an effective approach. However, in the readiness, beginner, and advanced beginner groups, a personal approach is more effective. This is especially true if students are 10 years or younger. Most intermediate children need personal help too, particularly since coordination is a big part of these new skills.

At this point, I want to point out that personal attention is what is best and will be my primary approach from here on. So whether you are an

instructor with a small group for personal help or a parent with one child, the techniques I stress will be geared to this approach.

The most I could effectively teach in a group and give personal help was 6 students, 4 or 5 usually depending on the level and the students. A person doing this kind of teaching must be in the water and is constantly working with someone. To begin a class I may ask everyone to do the same thing such as bobbing or kicking practice while hanging on to the side and practicing their breathing. Then one by one I would ask them to work on a particular skill while I move on to another student. Sometimes 2 or 3 may be doing the same thing, particularly at the start of the class.

While teaching this way, it is easy for an instructor to stand and watch longer than needed. Develop an eye for certain movements, problems, and ways to improve. As soon as one student starts to follow your directions, immediately move to another, trying to keep your attention in order and divided equally between the students.

Students taught in this manner will advance more quickly and develop confidence sooner than typical larger groups. Because they advance easily, they can be moved from the program to make room for others wanting instruction. Generally, a student should be able to pass through their stage of instruction or class in 10 lessons or about 5 hours or less. This is about half the time I usually see in assembly line or other large group classes.

In regards to the length of each class session, keep in mind the attention span of the students. Twenty to thirty minutes is maximum time for youngsters, and adults below the intermediate levels. Teenagers and older in the more advanced skills can usually handle 45-60 minutes per class, especially if the activities are varied.

GETTING READY

A major factor contributing to a child's readiness and/or the fear of water, is the attitude of the parents or those around the child. Without being told, a child can sense apprehension or fears in a non-swimming parent. Hopefully the parent will have learned to enjoy water before the children are born. After birth, seeing his parents swim and enjoy water is very important.

When a child is just an infant, it is important that he be played with while bathing. With the support of the parent, allow the child to be on its back with the ears under water on occasion so that he gets the feeling of "being under water". Use very mild soap. I recommend using natural "soaps" or cleaners. These cleaners produce suds, bubbles easily, clean very well, are easy on the skin, and generally doesn't hurt when in the eyes. As a concentrate, it takes very little of the liquid to produce needed effects.



Allow the child to play with toys, blow bubbles, and even splash about within reason. Be aware of what is going on to prevent accidents. Often playing with a brother or sister while bathing adds to the fun and activity. Bathing (water) must become a fun time, not something the non-swimmer is forced to do and made to do hurriedly. Rinse the head and body with water that is not too hot or cold, but tending to be on the cool side to close the pores and ready the child for the cooler air while drying.

As the child gets older or even as a toddler, take him to your swimming area for water play. Let him play with the hose and in the sprinkler. Particularly when it's hot, let him sense the refreshing water while playing.

Avoid unnecessary dramatization about drowning and other potentially fearful ideas related to water. Stories about man-eating fish and sea monsters should be avoided. Caution as you would in regards to playing in the street, and be certain children are supervised when they are around water to prevent accidents but don't over-emphasize fears and dangers. Allow small children to see others having a good time around water when possible.

As soon as possible allow children to play in shallow water at the lake, creek, river, wading pool, or wherever. In their play, they will eventually be on their own, beginning to put their head under water and opening their eyes. These are the two most critical factors needed to master before a student can really start making progress in swimming.

Play with your children as much as possible. Running tag games, looking for things in the water, and lots of other things can be done. At the end of many chapters, I will describe games that are appropriate to the level of swimming skill covered to give you and your family some ideas.

As an instructor, I usually got swamped with eager parents wanting their 4 and 5 year olds to learn to swim. This would be fine if they were ready to learn. Unfortunately, most parents expected real miracles. Most of the children had not been conditioned as I have described. Couple this with the lack of readiness with their not wanting to leave their parents to go to this stranger and you can see the problems. These preschoolers generally hadn't had much exposure to other children and adults in a teaching situation. If possible, the "tadpole" should have a chance to be around the teacher before instruction time, perhaps watching other children have fun under his direction.

When I find a tadpole or an older beginner who is afraid of the water to the point of refusing to even walk in the shallow water with the instructor, I usually ask the parent to withdraw the child from the class. I suggest as I have here, that they expose the child to as many fun experiences with water as possible.

One technique I find helpful for those afraid of water, is the use of the bathtub. Fill it with a couple of inches of water. Ask the child to lie on his back. When you are certain he or she can lie comfortably, have the child sit up while you add a little water. Again, the child lies on their back in a "go to sleep with your eyes open" attitude. Repeat this procedure until the child actually senses that the water is holding him up. You can tell if the head is relaxed by gently placing your hand behind his neck or watching the tendons on the front of his neck.

It is important that a student keep his eyes open, whether he is lying with face in the water or on his back. Whenever the eyes are closed, there is always an element of fear followed by tensing. Keeping the eyes open adds a lot to confidence and relaxing.

Activities For Water Adjustment

1. Touch your nose to the bottom of the tub, slowly
2. Make the penny in the tub move with the help of the nose and the penny is yours to keep. (A coin to a very young child has little meaning or value unless he can buy something with it - soon)
3. Count my fingers that are underwater. Good. Now with your eyes and mouth closed, put your face under the water. Then open your eyes and count my fingers. (If a child puts his head into the water with his eyes open, the force of the water splashing against his eyes will be uncomfortable) State: It is easy to open your eyes isn't it? It doesn't hurt at all does it? Let's see if you can count them right this time.
4. Running races are fun. Try some backwards.
5. Play "Ring Around the Roses"
6. Can anyone touch their toes while standing on both feet? (Be careful that a very small child doesn't lose his balance and fall. If this happens, don't make an incident of it.)
7. Sit on the steps at the shallow end, so the water is about chin level. Ask the child to slowly bend his head forward with his mouth closed.
8. Blowing bubbles may be fun for some but some children also suck in water during the same process and sometimes cause them to choke. Rhythmically blowing into the water in later stages has value for learning how to breathe while swimming. However, for young beginners, I don't recommend this till they begin to relax.
9. Ride piggyback on an older youth or adult.
10. Dive for pennies. This is a real fun way to end a series of classes for most groups. Scatter pennies all over the bottom of the pool. On "go" each student dives for and keeps all that he can get. Older or better swimmers may need to be confined to the deeper end.
11. A popular game for all levels is *Marco Polo*. One person is "it" who must keep his eyes closed as he tries to tag the other players. "It" calls out "Marco". Everyone responds by saying "Polo" to help the seeker know about where they are. When someone gets tagged, he takes turn seeking someone with his eyes closed.

BEGINNERS

Recall that we are approaching Instruction on an Individual basis. Group lessons will be presented later in the manual. I have presented ideas on how to encourage beginners to get their face wet or put their head in the water. At this beginner level, I will assume the child can do these things even if it's momentarily.

A valuable aid to getting a student to put his head underwater is trying to pick up a small rock. Start by holding the rock in your hand as you touch his knee that helps him know where it is. As he closes his mouth to reach for it, extend your thumb so he can tell when he gets close. Gradually, advance to holding or dropping the rock next to his feet. Mention that it's hard to go under water "because the water holds you up

so good." Offer to give a gentle push when he is ready to help him get down. Suggest that opening the eyes will make it a lot easier to get it. Perhaps 2 or 3 rocks at a time will later help the breath holding.

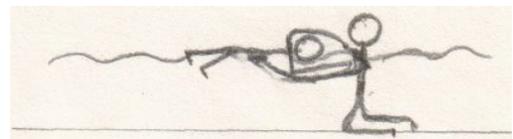
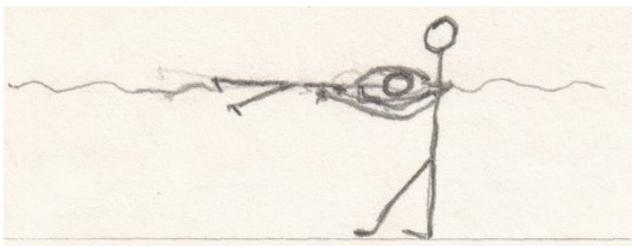
Children of all ages are often slow to start as they enter a pool. We must get them really wet first. I usually start my beginners by asking them to bob up and down. To start with, they may keep their eyes and mouth closed. I ask that their head go all the way under and come back up for air. After the air is out, lift or preferably turn the head out of the water for air to repeat the process 10 to 15 times.

Kicking

The next step involves kicking practice with the head in the water. If possible the handhold should be at the water level. This can often be done on an entry step into the pool or gutter. Most pool edges are higher than water level. This is unnaturally hard to hang onto and contributes towards the next stage that will be a prone or stomach glide. An excellent help to achieve this level of hand hold is to have the child gently lay his hands on your shoulders that is at water level. You may need to kneel in the shallow water or stand in deeper water if it doesn't scare the student.

Touching and facing the instructor is very secure for the child. It is easy to talk quietly to the youngster and you can sense his tenseness by the touch. The child's arms and legs should be straight. Depending on the size of the child and the length of your arms, support the child's floating position by placing your hands gently on his hips or preferably the upper legs.

The child is asked to place his head between his arms so that his ears are covered by water and perhaps feel his ears touched by his arms. Ask the child to keep his mouth closed under water for several seconds before exhaling. Ask him to keep his eyes open which will help him relax. Once in a while, hold some fingers under his submerged face and ask him to tell you how many he saw when he raises his head above the surface.



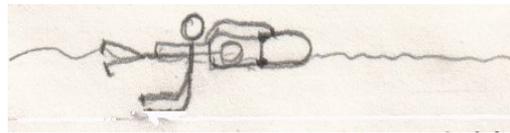
The child will need to rest in a minute or so because there is usually a strain on his shoulders after awhile. When he is kicking, it should be a gentle "patter" making little splash. The knees will only slightly bend. As the child takes his breath, encourage him to keep his kick going.

This technique is excellent for teaching the face float. Hold the child in the same position with his extended arms and extended fingers lightly touching his shoulders. Very lightly support the legs or hips. Tell the child to let go of your shoulders after his face is in the water and his eyes are open. When his face is down, bend at your knees slightly so his hands are on the water surface. The next time, release the

hips completely. Resume supporting him when he comes up for air. Say to him, "Can you feel how the water holds you up?" Compliment his progress and ask him to count your fingers when he does it again.

Next, after he is floating by himself, ask him to kick his feet while his arms are straight and head is down. Let go again and slowly walk backwards so his finger tips touch very slightly to let him know you are still there. Encourage him to kick face down for longer periods.

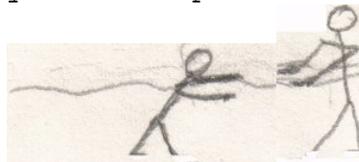
An alternative to the above is using a kickboard, although the child usually feels less secure because it can move. The beginner will hold on to the end and have his shoulders at water level while one of your hands holds the board. Your other hand will support his leg or hip. Don't attempt this in water over the child's shoulders as he may suddenly let go of the board. This is also a very tiring support position for the instructor.



When the student does this for a while, ask him to gently set his hands on top of the kickboard so that he isn't grasping hard.

Our next major step will use the kickboard, assuming now that he senses the water supporting him. Perhaps while he sees you grasping the kickboard with both hands, ask him to place his hands on top. Starting with his shoulders under water, have him gently lie face down in the water and float till he wants to stand up. After he can do this easily with his eyes open, ask him to start kicking gently. Hold your fingers for counting on occasion.

Now we are ready for the most important step to swimming. Ask the student to face you with his arms extended at water level. Stand about four feet away and put your hands in front of you face up so the child can see them.



Ask the child to put his face in the water first, and then fall or float to your hands. Ask him if he kept his eyes open. Tell him to kick his feet a little while you move slowly in front of him, getting further away as you see he is ready. Tell him to stand up by himself by pushing his hands down and lifting his head while you are watching. After a few practices, let him kick glide on his own, trying to go further each time. Some students can accomplish about the same by facing the entry steps a few feet away, and lowering themselves toward the steps each time. If a child practices this for a while, you could go to someone else to assist.

Another effective face float can be taught in water about 2 feet deep. The student places his hands on the bottom as if in a push-up position, head above water. As the head is put down, the legs float to the top and the arms, can slowly be brought up.



Back Float

After the face float is almost mastered, begin teaching back float. Stand alongside the child and place your hand behind his head. Tell him to lie back on your hand, being certain he understands that his face will be on top of the water and his eyes should stay open. As he lies back, place your other hand under the hips or upper leg to help support him. Tell him to be "fat" or arch his back as he lies back and to relax. Tell him to sleep with his eyes open.

Some pools have steps wide enough for a child to lie on which can be used for practice. When the child can lie on his back relaxed, tell him you will keep your hands under him as you slowly move him away from the steps. Slide one hand under his neck and the other under the upper legs and slowly move him off the step.

When the student can float with little fear with your support, you are ready for the next step. Keep in mind that the backfloat is usually the scariest thing for a young child to learn because he doesn't know what is behind him, and even though he knows the water will hold him face floating, he isn't too sure that it will on his back. Also, he isn't sure how to stand up from a back float.

Our next step involves your placing one or both hands behind the child's head as he lies back. Again, tell him to arch his back and gently kick as you support the head. Just barely support the head as he begins to back kick. Tell him to stand up by bending his knees and putting his chin on his chest (lifting his head). Next time, ask him to lie back while you stand behind him to help him if he needs it. Each time the student lies back, his arms should be relaxed next to his sides.

For some, a kickboard can be used for a support as he lies back. Placing it behind the head and hanging on with both hands is usually awkward for beginners though. Another way that often works involves the kickboard being held by both hands in front as he stands in the water. While the child hangs on to the board, he gently lies back, possibly with your hand(s) under the back of his head. The board will be floating flat over his stomach as he kicks his feet. After a couple of successful tries, have the student lay his hands flat on top of the board as he lies back.

When the student can float on his back easily, start to teach him to fin with his hands.

Finning

The steps for the arm stroke is as follows while the feet flutter kick:

The motion begins with arms at the side and progresses with the hands moving up towards the shoulders while touching the sides of the body. The arms are quickly put straight out to the side "like a scarecrow" and then forcibly moving the hands to slap the hips. It is then repeated. Flutter kicking doesn't stop. As the child first starts this, support his head a little. Perhaps have him practice with the arms while standing. Try to show him how easy it is by your example.

Front Crawl

First on dry land and then standing in the water, ask the student to "windmill" his arms slowly while holding his head steady, looking straight ahead. Now in the water, ask the student to do the same thing while bending forward with his face next to the water and looking at the bottom. Check to see that his arms are mostly straight while going very slow and that his head is faced towards the bottom. Without changing anything, tell the student to fall forward. If he hasn't changed his arms or his head position and he kicks gently too, he will be swimming with pretty good form. Have him repeat this several times, asking that he swim as far as possible before standing up.

Don't let the student try to breathe while swimming yet. Most always students will lift their head instead of turning it. A lifted head will cause the arms to bend too much, form a bad-breathing habit, and perhaps cause water to go in their mouth. To begin the breathing techniques, have the student do the following as he readies to swim.

Breathing

Tell, or if possible, show how a breath is taken while swimming. Then ask him to try. Watch carefully as to which side he tries to turn his head and remember which side it is. It doesn't make any difference for a beginner which side is used.

Let's assume he turns his head to the left for a breath. You are going to have him start in a certain position before falling forward to swim. Ask him to put his extended right arm on the top of the water in front of him and to lay his head on the right shoulder so that the right ear touches the shoulder. The left arm is extended directly behind him. He next takes a "bite of air" from his left shoulder as he falls forward. When he closes his mouth while falling he looks at the bottom. He glides for a moment in this position while his left arm slowly comes over the top and his left hand enters the water in front of him.

The arms continue to windmill slowly while the head stares at the bottom. Have the student swim as far as possible with the single breath before standing up. Just as he stands up, ask him to exhale into the water before the face turns out of the water. If these procedures are followed for the duration of the beginner class or level, he will be very ready to learn correct breathing techniques.

Notice that I emphasize very slow arm movement. This habit will later allow enough time for a good breath to be taken before the arm will get in the way. Fast moving arms are no advantage. It's more important to kick steadily, be relaxed, and to pull

through the water correctly. As you know, the paddling feet will help keep the body from twisting. Also, keeping the arms fairly straight and moving sideways through air will keep the body from snaking or twisting through the water.

Once a beginner has developed some confidence with swimming and maneuvering on his back, he is ready to adjust to deeper water.

Deep Water Adjustment

The first thing I usually do, is to convince the student that the water does lift a person. I try one or both of the following methods to start with. One starts by having the child hang onto the edge of the pool in deep water. I then ask him to push himself under, relax, and see himself bob to the top like a cork. When he comes up along side of me while I watch, he can again grab the edge. I ask that he do this with harder pushes and counting my fingers each time. Remember, closed eyes lead to fear and difficulties.

The other thing I do is to stand with him in water over his head and hold him under the arms while facing him. I then tell him to take a breath and I will gently push him under a little ways. I tell him to watch me under water and that I will grab him when he comes up. This is repeated 2 or 3 times with finger counting again.

Next, the student stands on the pool's edge at the deep end and I wait in the water next to him. I tell him that when he jumps in, he won't go under very far and will come up just like he did before. He then jumps in about 3 times and I help him grab the side, if necessary.

I then move away from the deep edge about 6 feet. I tell him that he will next level off or get flat on top so he can swim to me. I ask him "What happens to the other end of a teeter-totter when one end goes down?" His reply will be that the other goes up. That is what happens to a swimmer. When the head goes down, the feet come to the top of the water. "What I want you to do is to jump in the water and float to the top. Only this time when you come up, take a breath of air and put your face down in the water. Your feet will come up and you can swim to me."

After I catch the student, I tell him to take a breath, put his head down again (with eyes open) and swim to the side. I then move a little further away for practice. Encouraging them to jump off the diving board and swimming to the side while I am nearby, usually ends beginner "classes".

Turning Over

A valuable skill to be taught is that of turning over on one's back to rest, and then returning to the prone position to swim. I usually start with the latter first because it is easier. When the student is comfortably resting on his back, tell him to take a breath as he moves an arm across the body. The head goes under till another breath is needed while swimming.

Moving from prone to back is more difficult. This can be done by leading with an elbow. Force the elbow up out of the water and attempt to cross the back with it. At the same time the head is forced back so as to "keep the chin dry". I often tell a beginner trying to float, to "pretend to keep the band aid on his chin dry so it doesn't come off." Once over on the back, the person must relax, which sometimes helps by exhaling.

Basic Dive

A basic dive is often a part of beginners. Let me share the methods I use to teach this skill which will add to the student's confidence and enjoyment. I hope most students can do this, which starts with the student standing at the edge. One foot is on the very edge, toes slightly over. The other foot is set about a foot behind. The student bends forward towards the pool with his arms stretched over his head. He should feel his arms covering his ears. He is told to keep his chin on his chest while he reaches for the water. He then falls "like a falling tree", not looking up because that causes a belly flop. Tell him to keep his arms straight so he will be able to start swimming easily.

Some students either end up jumping or straightening up when they fall and end up flopping. So I then try this idea. I ask them to kneel at the edge on one knee. One foot is on the edge with the other knee just behind the first foot. The arms are stretched over the head, hugging the ears as before. The student bends way over, head down, almost touching the water. He slides in "like a seal". Once he hits the water, his straight arms stretch forward to swim. Eyes can be kept closed just as the student is in the water to prevent a bit of an impact on the open eyes.

Some Beginning Activities

1. All the games for readiness are good for beginners.
2. Relays or races using kickboards
3. Finning races are okay. Swimming races probably are okay at this stage since their form isn't established yet, and some may need to stand every few feet. Too much of this could form some bad habits though, if they are allowed to "get sloppy".
4. Ping pong ball race. Without touching the ball, either blow or splash the ball to the opposite side of the pool.
5. Who can stay under the longest?
Dog paddle race. I don't teach dog paddling because it enforces incorrect arm movement and keeping the head up which counteracts proper form in the crawl and breathing. However, for a fun thing, show them the "human stroke" or dog paddle. After a short practice and lining them up on one edge, tell them to dog paddle to the opposite edge, bark 3 times, and dog paddle back to the finish.
7. Running races, front wards or backwards, are enjoyed by all.
8. Motorboat race. Each student walks to the opposite end while blowing bubbles. They must stop walking when they stop for more air.
9. Poison - The class forms a circle while holding hands in shallow water. A ping-pong ball is thrown in the center. The players try to make someone touch the poisoned ball. Those who touch it, drop out.
10. Table setting race - Place as many metal sets of dishes as you have players on the pool bottom about waist deep. Arrange them according to a proper setting and be certain that each player sees the arrangement. From the farthest end of the pool, the swimmer swims to get one of the pieces, swims to the start and swims after the next piece. The first person to re-arrange the setting properly is the winner.
11. Red Light, Green Light - is played like we all did as youngsters. Now the moving and motionless advances are done in shallow water.
12. Touch - Two teams are at one end of the pool about 5 to 10 feet from each other. The instructor names an object at the other end. When he says, "go" everyone swims to touch the object and then returns to their home base.

first team to completely return wins.

ADVANCED BEGINNERS

The major skill to be developed by this student is coordinating breathing processes for the front crawl. In beginners we began preparing for this by asking the student(s) to bob at the beginning of the class. If you will recall, the bobbing adjusted the student to the water at the beginning of the class, and began teaching some breathing techniques.

Before continuing with my suggestions for teaching breathing, be aware there are two major theories or concepts regarding breathing. Picture a person with his head in the water while he is swimming the front crawl, sometimes called the Australian or American crawl. Does the swimmer "properly" turn his head for a breath on every cycle of his arms or only when he needs a breath? It depends on the swimmer and the type of swimming he is doing.

For example, long distance swimmers often breathed on each cycle of arms. Competitive sprinters usually keep their head down, especially in sprints to keep an eye on the lane markings and for better efficiency. Generally, a swimmer will develop what is best and/or most comfortable for him.

When I teach breathing, I emphasize keeping the head down and only breathing when needed. The main reason I use this method is connected with coordination. I have noticed that when a young beginner tries to breathe on every cycle that he often runs into his arm that pushes water into his face and mouth. His body usually ends up "snaking" and his total efforts are very inefficient.

You will recall from the last chapter that the student was asked to keep his head down while his semi-straight arms slowly move around. This was to keep his body in line, his hands entering the water in front of the shoulders, and to teach him to exhale before breathing or in the case of the beginner, to stand up.

Let's return to the start of the class. Again, the student is asked to bob about 10 to 15 times to adjust to the water and practice rhythmic breathing. Remember when the student gently goes under water he pauses, then slowly lets the air out. When he comes up for air, he only opens his mouth for air, not to take a big breath. The big breath makes the swimmer become tense as he nearly fights to hold the breath. When he does come up for air, he takes his breath immediately and goes back down to complete the actual breathing process.

After the bobbing, I usually have the student go to the edge for kicking and breathing practice at the same time. Most pools have the edge above the water level a few inches, so we need to "bracket" the student for practice. Before doing so, determine which side the student naturally would turn his head for a breath as described in the last chapter. This is important because if the arm on his breathing side is holding on to the edge when practicing, the arm will interfere with his head turning.

Let's imagine we have a student that prefers to breathe on his left side. His right hand is placed on the top edge. The left hand is placed against the pool under the water to help hold the body in position on the water's surface. This bracketing position for drill is good to use for a beginning student too, if they are ready for it.

The bracketed student starts and keeps his feet paddling in a steady, rather fast pace during the entire drill, even when the breath is taken. While kicking, the student takes a normal breath "off of his shoulder" and turns his face down for a few seconds. A breath is taken from that same left shoulder when it is needed after exhaling slowly. The breath should not be forcibly held. Relaxation and breathing as needed is what we want. The first drills in a series of lessons probably won't last more than 4 or 5 breaths. As the student develops stamina and breathing ease, increase this to 15 to 20 breaths.

As we did towards the end of the beginning lessons, the student will prepare himself before falling or sliding into a front crawl. Again, the right arm is extended in front on the water while the left hand is placed on the water behind. The student lays his head or right ear on his right shoulder. The student then falls forward as he "bites" the air from his shoulder and turns his face downward. The left arm then makes its arc over the head and placed in the water in front of his left shoulder while the right arm is being pulled back towards his hip.

Usually the student will take 2-3 slow cycles with his arm before wanting a breath. The head will exhale and start to turn as the left arm is being pulled back. The mouth will be opened for a breath and closed to return to the water before the left arm comes over the top. Perhaps you can see why I emphasize that the arms go slow. Sometimes a student will run into the arm when attempting to take a breath. Usually this will disappear if he continually starts using this "ready" position and told to look behind him at his left hand when he takes the breath. If not, here is a technique I have found helpful.

Recall the student has been taught to have his eyes open when his head is underwater. Let's suppose that the student has been swimming correctly with arms for a couple of rotations and decides he wants a breath. As soon as his left hand hits the water, he begins to exhale. As soon as he sees the left hand, his eyes and head follow the hand, even as it leaves the water behind him. At this moment when the hand is in the rear, his head will have turned (having exhaled the air too) and he can again "bite some more air" from his left shoulder before his left hand begins its move over the top. As soon as the breath is taken, the head is again turned downward till another breath is needed. This same procedure is used by a person that breathes on the right side, only the opposite right side is used.

A drill that practices this "looking and breathing" is done with the student standing in waist-deep water. He simply bends forward and places his head in the water as if he was swimming and practices the technique described. This, by the way, is a good drill for beginners after they master holding their head still and keeping their arms fairly straight when their head is above the water looking at the bottom.

Encourage the advanced beginner to swim longer distances. If there is still a fear of deep water, have the student swim from the deep end to the shallow where he knows he can stand if needed. As soon as possible have him swim the opposite direction to gain confidence.

Many students will either run into their arm or tend to look forward while lifting the head for a breath. To help break them of this, I would ask them to get in the water at the deep end of the pool, usually in the middle by the diving board. If the

student breathes on his left side, I would stand at the deep end corner on his left side as he faces the shallow end. Before he starts to swim towards the shallow end, he hangs onto the edge with his left hand, puts his right arm in front on the surface, and rests his right ear on his shoulder as he looks back at the instructor on the outside edge.

The swimmer then slides forward after getting the air from his left shoulder. The instructor walks slowly along the edge and behind the student. When the student takes a breath, he looks back at you to count your fingers. When he gets to the other end, he tells the instructor how many fingers he saw. This technique causes the student to turn his head backward for a breath when his arm is out of the way. He needs to go slow which also allows more time for the breath.

A kickboard can be used for both kicking and breathing practice. The swimmer is kicking with his head in the water. When he needs a breath, he lowers his arm or strokes on his breathing side only and turns his head for the breath after he exhales. The stroking arm then returns to the kickboard until the next breath is needed.

Finning

Our advanced beginner student needs to practice finning on his back from the deep end to the shallow to start with. It may be helpful for the instructor to swim a little ahead of him, lightly touching the back of his head to give assurance. We must recognize that on the back a swimmer doesn't know where he is going. Hence, the element of fear can easily be there. Sometimes just talking loudly can direct and give the assurance that is needed.

Treading

Generally, I wait to teach treading water till the student is very confident with his swimming skills. If taught too soon to tread or even dog paddle, these skills may be used as "crutches" for a non-confident student. These may be easier to learn than actual swimming and often learning to swim correctly.

Perhaps the easiest treading for a beginner is the slow bicycle movement with the legs while the arms are doing a slow dog paddle under water. The body bends forward slightly. Going slow and relaxing is the key to success. The instructor can be of help to the learner by getting in with him at the deep end. While the instructor hangs onto the edge with one hand, the other outstretched arm and hand can help support the student under the arm while he tries the new skill. Release him as you see him support himself. Also, remind him that all he needs to do to swim again is to take a breath and put his head down to swim. His feet will come to the surface to help him.

Advanced beginners will want to review the basic dive although much time doesn't need to be devoted to it. Also review the beginner skill of turning over on the back and resting.

Elementary Backstroke

The elementary backstroke is a new skill to be learned. I usually start this stroke by slightly modifying the finning arm stroke. When the hands have slid up along the sides, they are placed straight out from the shoulders and then pushed forcefully down to the hips. You will see why I emphasize that the arms go slow.

The modified "frog kick" can be practiced with the instructor supporting the student who is lying flat on his back or by using the bracket drill pictured in the intermediate skill for the breaststroke kick. Holding on to the side with both arms on the edge while backed up to the edge doesn't work well as some might think. In my opinion, the practicing of the kick works best with the bracketing. After the student gets the movement down pretty well, help him get started on his back with a little support at first. The skill is executed by starting in a straight position. The knees are bent slowly as the feet begin to move apart. When they are apart about two feet, force them together so that the legs end by being straight again.

The whole stroke is done by having the arms and knees drawn up together, put out to the side at the same time and brought together at the same time. Now the body is straight again and resting between each cycle of strokes. The elementary backstroke is supposed to be the most relaxing and restful stroke in swimming. Teach the student to glide at the end of the stroke till the body stops moving. Then the arms and legs start over again.

Since the leg movement seems to be the new difficult skill, I usually start with a land drill. I have the students sit on the edge of the pool with about five feet between them. The instructor sits on the opposite edge facing them to demonstrate. The demonstration starts by leaning back on the arms while holding the legs up out of the water. Feet are together. The knees are then slowly brought up towards the chest while the knees and feet move apart. As this motion is beginning, the feet begin to make a full circle. When they are at their furthest point apart they are brought forcibly together, ending with the legs being straight again. The feet are held or "rested" in this together position for about 3 seconds before starting again with the kick.

Have the students practice this for a few times before getting back in the water. Allow the students to hold a kickboard behind their head as they lie on their back to practice the kick or perhaps hold him while he tries the stroke. They may get a little discouraged because they don't seem to move much. Tell them that it doesn't matter. Then show them how the stroke works when the arms and legs are combined. Often having the students stand outside the pool will help them see better while you are demonstrating.

As you show how to do it, describe how your legs and arms move at the same time, and that the arms come to your side fast while your feet whip together. Emphasize the long rest or glide in between. Tell them that this is the most restful stroke in swimming.

After the students have begun putting it all together correctly, have a contest that helps prevent rushing through the stroke. Ask each one to do the elementary backstroke the length of the pool, and to count how many times their feet come together. The winner will be the one who brings his feet together the least number of times.

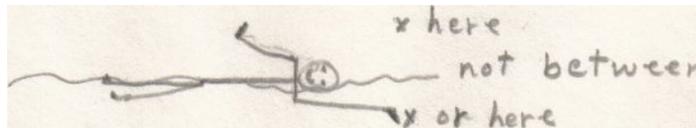
Back crawl

The back crawl generally isn't taught till the intermediate level. Perhaps a major reason is that the usually younger advance beginners have little more trouble with the coordination.

Before getting started with arm movement, it is necessary that the back flutter kick be mastered first. Otherwise, the student ends up doing a sort of backward walk while his arms go in various directions. Up to now the swimmer has been told to keep his head back (chin up) while he either flutters or fins on his back. We now alter that a little. Without using the arms, the student flutter kicks continually while his eyes are focused over the top of his splashing toes. I tell the student to watch the pool's edge from where he started. This will help him swim in a straight line.

The hand turns over and enters the water, little finger first. The head is held still, watching the starting point while the feet are fluttering and the arms moving slowly.

Once the head and kick is mastered, the arms simply rotate the opposite way of the front crawl - slowly. As each arm moves over the top, they would be in line with or just outside the width of the shoulders.



Mastery of the backstroke isn't necessary and isn't usually a favorite, but it is good to learn and adds to the confidence and potential enjoyment of swimming.

Some Advanced Beginner Activities

1. Most of these students are ready for a little competition in the pool. This can be swimming races or even relays. Using kickboards to kick the length of a pool is a worthwhile activity.
2. Who can tread water the longest? Or let's see if you can tread longer than you did last time. Let's count aloud together.
3. Dog paddle race as in beginners is fun.
4. Scatter pennies or small rocks in a small area. "Let's see how many you can pick up in one breath." This is also good for beginners. Seeing how many can be picked up with one breath is a good skill building activity since it teaches breath control, keeping the eyes opened and builds confidence.
5. Use Your Head Relay - Each team member when it's their turn, will swim with the elementary backstroke. On their forehead is any object that stays well, especially something that is ring shaped. This stunt helps the swimmer to keep his head stationary and level.
6. Porpoise Tag - a player is safe from being tagged if he is underwater.
7. Kick Away - Two swimmers stand about 5 feet away, facing each other with a kickboard in between them. Each person places hands on opposite ends of the board and proceed to kick. The person becomes a winner when he can forcibly kick his opponent backwards about one body length. This could also be done with a breaststroke kick later in intermediate. This is a good conditioner.
8. Ball tag - is fun as long as the ball is soft.
9. Chain Tag - When "it" tags someone, he holds the hand of the tagged person. Each of them can then tag a new person who then joins the chain. Only the end person is allowed to tag. The player last to be tagged starts the next game. This is a fun beginner game in shallow water. Advanced players get challenged by

playing in deeper water.

10. Snatch- Two teams face each other on opposite sides of the pool. Each player is numbered, perhaps from one to six on each side so both teams have corresponding numbers. Two rocks are placed in the center. The instructor calls a number between one and six. The called number from each side swims to the middle as quickly as possible, gets a rock and returns to his side. The player getting to his side first scores a point for his team. Any level of swimmers can play this game, perhaps in deep water for the advanced classes.

11. Object Hunt - Each team is lined up in or out of the water on opposite ends. The instructor places about 4 to 5 times as many objects as there are players in the middle of the pool. On "go" the players dive in and swim underwater to pick up as many objects in the one dive as possible and bring them back to their own side. The winning team is the one that gets the most objects.

INTERMEDIATE

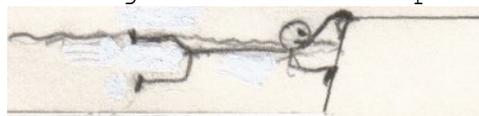
The first part of your intermediate instruction will be in heavy review of the beginners and advanced beginner skills. Typical classes have some young students needing skill reinforcement or will have students that haven't been practicing under an instructor's eye. The previous season's advanced beginners and intermediates will be very "rusty" and may seem to need to "start from scratch".

This level of swimmer typically needs conditioning as well as perfection of the previously learned skills. Kick board practice for the flutter kick for the length of the pool is helpful. Practicing the back flutter with a kickboard is valuable, although I prefer not to use them unless a weak swimmer needs it.

As you instruct a student, be aware of their physical condition and possibly their boredom. For example, after some exhaustive laps with flutter kicks, following up with back flutters may be very difficult physically and also boring. It may be good to learn surface diving skills, practice the elementary backstroke or diving. The activities must be kept from becoming resented work. Keep students busy all the time with varieties of things to do.

Breaststroke

Before teaching the breaststroke, spend time practicing the elementary backstroke. Continue emphasizing the glide after the legs are brought together. While this skill is being mastered, begin teaching the breaststroke kick by having the student bracket himself at the pool's edge. The kick is done the same way as on the back, using either the wide leg spread of a "frog kick" or the whip kick.



Competitive swimming skills are useful or most often better to use in swim instruction because of their overall efficiency. The whipkick is a good example. Without getting into the scientific description, the lower part of the leg isn't extended as far as the frog and is whipped back to the legs-together position. As the student practices the kick, I try to get him to imagine a circle being drawn with each toe.

When the student learns the kick, transfer to practicing with the kickboards. The boards are held in front with extended arms as the swimmer lies out

water. The head is held up while repeating the kick with the legs. Don't let the student turn his head, as this usually causes the legs to scissor instead of breaststroke kick.

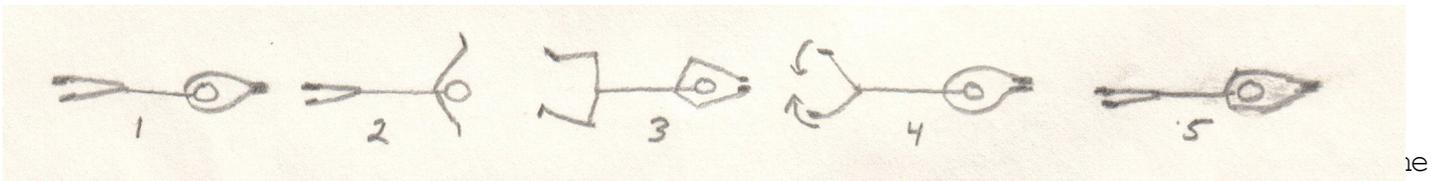
As soon as possible, have the swimmer practice breathing while repeating the kick across the pool. Each time the legs squeeze together, the mouth will exhale into the water. This lowering of the head to exhale relaxes the neck and will later become part of the gliding phase of the stroke. At this point emphasize that as the legs and feet are squeezed together, there will be a few seconds of gliding and exhaling. Then the feet are again moved up toward the body as they move apart again.

The arm movement is all done underwater. For arm practice, have the student stand in water about chest deep with his arms extended in front about two inches below the surface. The palms face downward with the fingers together. The stroke begins by turning the palms outward while pulling them to the side and back to being level with the shoulders. When they reach the shoulder, both hands come to the chin where they meet for an instant and quickly are pushed forward to the starting position. When the hands reach the arm-extended starting point, tell the student to count to 3 slowly. This will be the gliding part of the breaststroke.

The breathing is done when the arms are pulled back. That's when the head is lifted enough to get a mouthful of air. When the arms are thrust forward, the air is exhaled as the face goes into the water for the glide.

If I have a student that is usually relaxed in the water, I have been able to help them practice the arm stroke in this manner. Have them lie on top of the water on their stomach while you hold their feet together. They will start the arm stroke from the outstretched position. They will start the arm stroke from the outstretched position. As they pull back and get their breath, push them forward a little so they feel the effect of the pull. Allow the student to glide a little after the pull. When you see the arms and breathing coordinated, we are then ready to put all the parts together.

Unlike the elementary backstroke, the legs and arms will squeeze and pull at different times. Looking down at a swimmer, the figure would look something like this:



arms start pulling back, the knees begin to separate and bend (2 & 3). As the feet begin to whip together, the withdrawn arms are thrust forward (4). The body is now in its starting or gliding position (5). Remember, the breath is taken when the arms are pulled back, and the exhaling done when the legs squeeze together and the arms thrust forward.

To help the student remember the last part, I suggest they think of themselves as a tube of toothpaste. The student's head is the top of the tube. The cap is removed. The legs are the bottom of the tube. When the bottom of the tube (legs) is squeezed, the toothpaste (hands and arms) comes out of the top.

For most students, the breaststroke (except for the competitive butterfly stroke) is the most difficult to master. It is usually a favorite of adults once mastered. Lots

of practice and encouragement will be needed.

Sidestroke

The sidestroke shouldn't be taught until the breaststroke kick is mastered. If the scissors is taught at the same time, then confusion of coordination may result. A breaststroke kick that scissors is often difficult to correct but I will present a way in the chapter on competitive swimming.

The regular scissor kick with the top leg going forward is usually emphasized in Red Cross instruction. I teach this in intermediate but even though a student may practice this, they may naturally do the inverted scissor kick once the full stroke is put together. If this happens, I mention the correct way to the student but don't push its mastery. Emphasizing an insignificant error to a student can be discouraging. In addition, the inverted scissors is stressed as correct when the student may later learn lifesaving skills.

The regular scissor kick is learned at the pool's edge by bracketing. Before telling a student to bracket a certain way, I try to determine which side the student will prefer to lie on. To determine this, I first demonstrate the stroke and then I ask the student to try it. Even though the swimmer can't really do it correctly, I decide which side is more natural and then I tell the student to remember which side will be on top when he later practices. If allowed to switch from side to side, the student will take longer to learn the stroke because of the confusion.

For our purposes here, let's pretend we have a student who prefers to lie on the right side. The bracket is started by standing next to the wall with the right shoulder almost touching it. From that position, the left hand reaches across the body and grabs the top edge of the pool. This will help the body float up to lie on the right side while the back of the right forearm presses against the side underwater for stabilizing.

Our practiced regular scissor kick starts with both legs together and straight. As both knees start to bend, the top left leg will extend forward and the bottom right leg reaches behind. When the feet are far apart in a giant stride, they are brought together quickly with legs ending together straight. Remind the student that his legs are like a pair of scissors, perhaps using your hands to demonstrate how the blades or legs rub against each other. If the lower right leg goes downward, then a variation of the breaststroke kick is being done. Suggest that when the feet are apart, they will both be about 3 inches below the water surface.

At the end of each time when the feet and legs come together, pause about three seconds. This is the gliding phase of the stroke. After this is easily demonstrated, have the student use the kickboard for drill.

Still doing the scissor kick on the right side, the kickboard is held by the right hand going under the board, as it lays on the surface, and grabbing the far edge of it. The student's right ear lies on the board as if it were a pillow while the left hand steadies the corner by the chin. As the student gets confident doing the kick only, he can add part of the arm stroke. That is, as his feet come together at the end of the kick, the left hand can push the water along side towards his hip.

A drill that I use to teach the arm stroke has the student stand in water about chest

deep while I stand facing him, either in the water or on the edge. Recall that he strokes on his right side for our demonstration here. He puts his right arm ahead of him with his right ear on his right shoulder. As I face him while standing, I do the same on my left shoulder. Our other arm is extended on the surface of the water. I tell the student "you be my mirror and do exactly as I do". I then slowly bring my hands toward each other. They circle one another once. Our back hands (my right and his left) pushes to the extended position as we take one step in the opposite direction with my left and his right arm jutting forward, with our hands resting on the shoulder. At this moment I say "g-l-i-d-e". I repeat the entire process again and tell the student to lie in the water as he pushes with the back hand. I also tell him to add the scissors kick when he lies down when it seems natural to do so.

I continue to be the student's mirror as I walk facing him and trying to time my arm strokes to his pace. Most always the student will put the entire stroke together and just needs practice swimming lengths of the pool. Emphasize the long rest or glide as most students tend to rush.

Surface Dive

This skill is easy to do after the breaststroke has been mastered. As the swimmer swims along and decides to surface dive or swim towards the bottom, he simply forces his head down quickly and allows his bottom to come up. As he ducks his head, he reaches down with both hands and breasts or pulls towards the surface. This should force him to go down. As most students start going down, they usually flutter kick while they breaststroke with the arms. Surface diving for rocks encourages them to try harder and is fun.

I usually like to teach students to do the full breaststroke underwater as it works very well. If the instructor can demonstrate swimming across or the length underwater, it usually makes a big impression on how easy it is. Have the students stand outside the pool looking down at you swimming along the bottom. Ask them to notice how your arms pull, followed by the legs squeezing. This is also a good time to emphasize the glide so they can see its value.

When its time for the students to practice, have them stand next to the pool edge. From there, they drop as if to sit on the bottom but then duck their head and push off the side with their feet. As they push off, they extend both arms as if diving. From this position, they can easily begin to breaststroke.

Sculling

This is a skill done with the hands that is often used in synchronized swimming and treading water. It is used to stabilize or keep a person in one place or perhaps guide a floating person the same way certain movements with an oar will guide a row boat.

The hand motion is done as follows: Place your hands in front of you, palms down and fingers together and about 2 inches under water. Turn the hands to a 45 degree angle with the palms facing outwards and push forcibly about 12 inches. Quickly turn the hand over and pull quickly back again. Very little of the arm is moving and practically all of the motion and force is in the hands and wrists.

After this motion has been practiced about 2 inches under water, have them try sculling while floating on their back. The hands will be moving next to their hips while the

feet are motionless. There will often be a tendency to take large strokes as if finning. Simply remind the student that only the hands move. The more forcibly they make these quick movements the more effective they are.

Next, let the student experience how effective sculling is while treading water. At first, let them use any leg stroke they wish while they scull. Then let them try sculling while their feet hang motionless, to feel the power in sculling.

Ask the students to use both the scissor and their breaststroke kicks while treading to see how much easier they are than the "bike riding" they may have done. Again emphasize the importance of relaxing between each leg motion to help them stay afloat. They may even try treading without using their hands to help them. Students should be able to tread at least a full minute.

Changing Positions

To help insure confidence in the water, have the student practice changing to different positions from the treading position. From the tread have the student lay his head back and relax for a back float. Reverse this by lifting the head so that the legs go down. Tucking the legs under the body will help.

The tread to the crawl is simply done as in beginners, by putting the head face down while pushing the feet out behind. Then the kicking and arm strokes follow. Stopping to tread is accomplished by lifting the head and pulling the knees under the body.

Also, go from the treading to the breaststroke by again lowering the head to help bring the feet up. The arms stretch forward at the same time to begin the arm stroke, followed by the frog or whip kick.

Perhaps the easiest is going from the tread to the backstroke. As the back of the head is placed in the water, the arms begin rotating backwards. The arms will lift the feet more easily where they can begin their flutter kick.

As mentioned earlier, a major component of intermediate skills is conditioning. As the students begin to master correct techniques, provide time for swimming laps with the crawl, back crawl, and the newly learned sidestroke and breaststroke. Keep an eye open for making positive corrections, suggestions, and compliments when appropriate.

Intermediate Activities

1. Whirlpool - Take a few minutes to talk about swimming with currents rather than against them. Then tell them that they are going to make a current in the shallow pool. Depending on the pool size, you will probably need 6 or more students. Have each of the students stand next to the pool's edge in the water, evenly distributed on the perimeter and facing in one direction. On "go", everyone walks in one direction, picking up speed as they go. When the instructor yells "turn and swim", each student will turn and attempt to swim against the current. When you see they have experienced the difficulty, tell them to "swim with the current: as you point in the direction. They will easily feel the difference and enjoy being carried gently by the current.
2. Swimming Races - may be appropriate if the students are evenly matched. The front and back crawls and breaststroke would be appropriate and perhaps the best

paddle. The sidestroke and elementary back are not racing strokes.

3. Relays - with the front crawl and breaststroke or dog paddle would be fun. Others could include:

- a. Hat relay - wear hats and exchange them with the person at each end
- b. Dress relay - If the swimmers are strong, use large old dresses for the relay. Each swimmer must jump or dive in wearing the dress, swim to the other end, get out and give the clothing to the next person who puts them on.
- c. Ping pong relay - The ping pong ball must be blown or splashed to the next waiting swimmer.
- d. Kickboard relay - on front or back
- e. Newspaper relay - If the students have strong back flutter or inverted frog or whip kicks, they will enjoy this one. They will kick on their back holding a newspaper out of water as if reading it. The paper must be dry at the other end of the team is disqualified. In case a swimmer's paper gets wet, have another one ready for the next swimmer so that everyone can try it. This often works best in just straight racing.

3. Underwater Tag - The person who is it stands on one side of the pool in the water. The rest of the swimmers are in the water on the opposite side. Either on command or when they want, the swimmers try to get to the other side without being tagged. However, they must swim underwater. This can also be done with the swimmers standing on the outside edge to dive in and swim underwater.

4. Tunnel - Children enjoy diving and swimming between an instructor's legs. Make it more challenging by having another long legged person stand in front or behind the instructor to make a longer tunnel.

5. Hide The Rock - Have all students turn their backs to the teacher or "it" while the rock is hid. It helps to have the class practice kicking while the rock is being hid so they can't hear the hiding process. When told, they all search for the rock. The finder becomes the hider.

6. Shark Tag - In water about chest deep, the "shark" stands on one side of the pool and the other players line up on the other side on the edge. "It" yells "shark" and the players dive in and swim underwater to the opposite side. As the shark tags an underwater swimmer, each tagged person also becomes a shark until one player remains who becomes the new shark. Some games are played with the shark(s) getting out each time, also to dive in. In pools that are 20 feet wide or less I don't recommend this because the opposite divers may collide in the center.

7. Dive Relay - Two teams line up outside the pool facing the instructor who stands in 4 to 5 feet of water. On "go" the students dive in and swim between the instructors legs, circle and swims back to the next person in line. Each person does this once, trying to have all their team members finish before the other team.

8. Inner Tube And Mattress Races - usually need a good-sized swim area. Having the completed swimmer hand the tube up to the next swimmer can run relays. The next swimmer then falls in with it.

9. Chariot Race - One participant sits in an inner tube while two other "horses" pull him to the finish. This can also be run as a relay.

10. Leapfrog And Dive Relay - Four or more swimmers make up a team which forms a line at one end of the pool, facing the other end. The race begins by the last person in the line leapfrogging over the person in front of him and then diving under the next person's legs. When he reaches the front of the line

the new last person repeats the same stunts. The race is won when the first person that started the race again ends up on the end of the line, thus completing a complete cycle for each team member.

11. Ball under relay - Use a large ball, 8 inches or more in diameter. Each team forms a single file line with the ball in the hands of the first player. On "go" the ball must be pushed underwater between the legs and released. The ball is caught by the next person and passed the same way. When the ball pops out of line the retrieving player brings it back to the line before passing it on. When the last person gets the ball, he must turn around and pass it back towards the other end. The winning team is the one whose original starter again receives the ball.

12. Towel And Bucket Race - Each swimmer swims to the opposite end of the area with a towel. A bucket or towel is waiting on the edge. He gets out and wrings the water into the container. He keeps doing this till the bucket is filled, at which time he dives back in and swims back to the finish. Variation: This could be a continuous relay. The first swimmer after wringing the towel out only once, swims the towel back to his waiting teammate who dives in and does the same thing. This continues until a team's container is filled with water.

13. Water Basketball - is best played with a basketball hoop on a backboard but a large bucket or even an inner tube could be substituted. The game can be played in shallow water but works best in deep water for stronger swimmers. Use a light waterball so that no one gets hurt. Make two teams with about 4 members on each side. Generally, play with regular basketball rules and courtesies. The ball may only be passed from player to player and not carried, unless your own rules might allow this. Pre-establish a winning score or set a time limit to define the end of the game.

14. Water Baseball - needs an area at least as big as a competition pool and is played with a light waterball. Five players or more can make up a team. Depending on the area's size and shape, establish 3 or 4 bases. The pool's edges are usually good places, the players arm and hand is the bat that must hit the ball in fair territory. If the ball is hit out of the pool, on the pool's edge or is caught in the air, the batter is out. He may be put out while he is "running" the bases when someone holding the ball tags him. Three outs on a batting team causes them to "take the field". Different rules can be made to adapt the game to different circumstances but should be made clear before the game begins. If the students can accept being hit by the ball, the game will be more active if a "runner" can be hit with the ball for an out.

15. Watermelon Scramble - is a good way to end a swimming party. Toss a watermelon into the center of circled participants that has been divided into 2 teams, or have the teams line at opposite ends while the melon is tossed in the center. The team that can get the melon back to their side gets to eat it. This can be quite rough unless players are told they cannot attack each other.

16 Water Volleyball - would be played using the regular volleyball rules or agreed upon changes. A net would be set up across the middle

of the playing area and regular volleyball could be used, although a lighter plastic waterball is safer to use. Allowing any number of hits per team may work better also.

ADVANCED SWIMMING SKILLS

The skills described in this chapter are generally taught in Red Cross Swimmer and Advanced Swimmer classes. I am combining these skills and adding some others as we proceed. Primary emphasis at this level is mastery or near perfection of the skills already described and learned. Becoming near perfect adds to the confidence, self-esteem, and enjoyment. Increasing one's repertoire or knowledge of more skills will do the same.

In addition to the broadening and perfecting, a major emphasis needs to be placed on strength and stamina building. A lot of time will be spent on swimming many laps so class time needs to be extended to 45-60 minutes, particularly if new skills are also to be taught. It is very important as an instructor to have a critical eye as the swimmer does his laps. If bad habits are being practiced, they will be harder to correct. As you spot an improper movement, stop the swimmer and try to make the correction. Practicing good habits develops a more natural use of them.

How many laps for each stroke will depend on the condition of the students. Cause them to physically tire with each stroke but don't push to exhaustion. Change strokes, perhaps after a hundred meters or so of each. Generally, I recommend swimming the crawl first, followed by the backcrawl, breaststroke, and finally the backstroke and sidestroke.

Trudgeon Crawl

The trudgeon crawl is fairly easy to learn. This is a combination of the American or Australian Crawl and sidestroke. To begin with, the student must rotate his arms very slowly and relaxed while swimming the crawl, breathing about once every other stroke. The trudgeon or side-stroke kick is executed on the breathing side when the breath is taken.

For example, as the swimmer is taking his small breath on the left side, his body will roll on its right side. The left leg moves forward and the right leg to the rear for scissoring. As in the sidestroke, both feet will be about 3 inches below the surface. The breath will be taken as the left arm pulls back and the legs start to come together. The face returns to its downward position for another couple of strokes or whatever is comfortable for the swimmer.

After the trudgeon is mastered, the double trudgeon crawl can be attempted if desired. It requires a lot of concentration and coordination but is fun to attempt and perhaps master.

As soon as the trudgeon is completed and the head is returned to the water, the left hand we used in the example goes over the top and enters the water ahead of the shoulder. At that same moment, the right arm is lifting from behind in its cycle. Allow the right arm to complete that cycle and do one more. As the right arm pulls back the second time, the legs scissor on the right side while the breath is taken on that side. The process is again repeated on each side alternately. Be certain the arms go very slow to allow time for the breath and scissor kicks.

Inverted Breaststroke

This is a breaststroke on the back and is practically identical to the stroke face down. In some ways, it is similar to the elementary backstroke except the legs and arms move alternately.

Recall the idea of the toothpaste tube we used earlier. On our back now, when the bottom of the tube is squeezed (the legs) the toothpaste will come out the top. The arms will slide alongside the ears to extend in the water over the head and glide for about 3 seconds in that position before pulling to the side. Take note of what I underlined. Difficulties appear for most swimmers because these two ideas aren't concentrated upon.

A common error is to swing the arms overhead through the air. The resulting weight will force water on the face as the head lies flat. The chin must be "kept dry" to help keep the body flat. Suggest that the student feel his hands touch his ears as they glide by. At the point of the extended arms, the hands will have rolled to a back-to-back position to glide and be ready for the pull.

Once learned, the inverted breaststroke is just as relaxing as the elementary backstroke and more efficient. That is, more distance will be covered with the same amount of effort. Occasionally, adults have difficulty with extending the arms overhead, especially "muscle-bound" shoulders of men. Try to recognize this inability and accept the elementary back as the better stroke. More flexible young people won't have much difficulty as long as they execute the above underlined parts of bringing the arms up next to the surface and ears, and gliding.

Drownproofing

Here are survival skills that everyone should learn. Not only are these skills lifesaving techniques but they are excellent for learning how to really relax. Perhaps the most common technique taught is from the shoulder and the face turned down again. Meanwhile, no other body parts move. This is difficult for many, especially men because their feet tend to sink more readily and uneasiness develops.

Once learned or experienced, the vertical float works best for most for two reasons. First, the feet are already "sunk" and it is accepted that this will be their position. Secondly, there is no concern about breathing since the face is always above water.

An easy way to achieve this position is by starting with a back float. The chin is up and "dry". If or when the feet start to sink, let them. Concentrate on keeping the head back and still dry while completely relaxing. If it happens that the entire body drops to a vertical position, let it. Even if the face goes underwater while it is being held chin up, the body will rise in its vertical position. The entire success lies in complete relaxation with the face looking straight above.

Other Skills

Although not required in formal instruction, I like to teach the following. Usually for the intermediate and swimmer classes I hold a discussion that I start by asking "If you saw someone in deep water having trouble and you were the only person around, what would you do?" Practically always, the response is, "I'd jump in and save him". I then follow up by discussing the danger of coming in contact with a victim, even for lifeguards. Then I talk about reaching assists with clothing, poles, ears

ring buoys, etc. I also discuss and play the whirlpool game described in the intermediate chapter.

Encouragement is given to those who may be interested in competitive swimming for its many values. This is also encouraged in the advanced beginner and intermediate levels.

In the advanced swimmer classes, a discussion and practice is given on artificial respiration. I also try to create interest in students taking lifesaving classes for the fun and value there. All of the techniques will not be presented here. The Red Cross offers an excellent book "*Lifesaving and Watersafety*" that is well-illustrated and described. You might also be able to obtain a number of other materials that assist in your teaching.

Games And Activities

1. Water Polo - or its variations is an active game best played by fairly strong swimmers. The group is divided into 2 teams. Each team is lined up at opposing ends of the pool. When everyone is ready, a ball is thrown in the center of the pool. Each team will try to get the ball and move it to the opposing team's side and touch (not throw) the ball to the edge. The ball may be moved by passing or swimming with it. To minimize problems, players should not be allowed to wrestle each other or the ball from each other. After each score for a point, teams should switch ends so that the different depths can equally be experienced. If all players have a lot of stamina, keep the game in a diving pool or water over the player's heads.

2. Inner Tube Upset - Inner tubes or air mattresses can be used. Two teams or individuals are equipped with the tubes and sit in them. When told to begin, they try to upset each other in any way that doesn't hurt anyone. The last person left is the winner.

3. Shoulder Wrestle - Usually a smaller person sits on a larger person's shoulders. When everyone is set, those on the shoulders try to pull each other off until a winner remains. Those carrying a partner may not use their hands but may butt with their bodies. Make certain that all participants stay away from the edges.

4. Waterline Dodgeball - A large group is divided into 3 teams. Two teams face each other about 20 to 30 feet apart in shallow water. The other team is in the middle while the outside teams throw soft balls at them. The instructor counts how many times the middle team gets hit. After each team has about 5 minutes each in the center, the hits are compared with the winning team being hit the least number of times.

5. Apple Relay - The first swimmer of each team tucks an apple under their chin. On "go", they flutter kick on their back to the other end and return to the next person in line. Without using their hands, they pass the apple to their teammate. If the apple is dropped, it must be put back under the chin without using the hands. The first team to have all its members successfully complete the stunt is declared winners.

6. Two At A Time Race - Swimmers are paired with each other. During the race, they both will be lying face down in the water. The first person will crawl with his arms while the partner holds his feet and kicks with his own feet. A variation of this could be with the swimmers side-by-side holding their inside hands and attempting to swim.

7. Spoon And Potato Relay - The first person in each line holds a spoon with a potato in it. He must swim and hold this above water without losing the potato

and hand it to his teammate at the other end. If the potato is dropped, he can replace it with his free hand and continue. The first team to have all its members complete their laps are declared winners.

8. Kickboard Straddle Race or Relay - Each contestant must swim the crawl or breaststroke with the kickboard kept between his legs.

9. Somersault Relay or Race - Each swimmer while swimming their lap will do a somersault in the middle of the pool or when they hear the instructor use his whistle. After completing the somersault they finish swimming to the end or to the next person.

10. Medley Relay - Each swimmer on the team is assigned to swim a particular stroke, usually with the backstroker starting first in the water. A standard relay consists of backstroke, breaststroke, butterfly and freestyle or crawl. The butterfly may be too difficult and could be substituted with a dog paddle, twisting crawl or most anything. Even additional stunts can be added such as kicking with the legs only or performing stunts of different kinds.

11. Lame Dog Race or Relay - Participants on "go", dog paddle to the finish or their teammate with one leg bent so the foot is held out of the water. A relay race can be more fun when the swimmer is required to bark three times before the next teammate dives in, and the last swimmer barks three times at the finish.

12. Dress Relay - The first swimmer of each team wears a dress, pajamas, or large nightgown over their swimsuit. On "go" they jump or dive into the water and swim to the other end, undress, and give the clothing to the next teammate. This teammate puts on the clothing and dives in. This continues till the winning team has all its members dress and swim to the opposite end.

COMPETITIVE SWIMMING

If I were asked to rate sport activities for young people, competitive swimming would be at the top. I have started community teams and been involved in coaching not only swimming but other sports as well. As a youth and during my college years I was very involved in competing in sports and had a wide range of exposure to physical activities as a physical education major in college.

In my opinion, the training and competition has many benefits to offer. The very young of both sexes can compete, generally from six years on up into the adult years where master's programs are sponsored. Having just the basic swim skills mastered, a child can be placed into a competitive program and receive excellent training. Coaches and the overall spirit that generally exists on teams do very well in encouraging the development of skills and stamina. Rebound exercise on the "mini-trampoline" and perhaps a well-rounded yoga exercise program will compare with the total fitness of swimming. Nearly every muscle is used and developed in swimming, and yet even in very rigorous training for years, does a person become "over-developed" as far as muscles go.

A well-coached team will provide a variety of activities for skill development, fun activities, perhaps a "dry-land" program in the off-season, and even counseling. Swimming is a very personal sport and a good coach usually spends personal time not only to develop skills but also to build morale and teach a lot of self-improvement attitudes.

Even though team spirit is keenly felt on a swim team for its value, a lot of concern and encouragement between swimmers for each other's progress is generally felt. This

gives a person a needed feeling of self-worth and acceptance that are basic needs sometimes not adequately met in other life activities. As the youth begins to get involved, he develops a sense of self-improvement that I believe carries over into other aspects of his life. An active competitor who trains and is involved is seldom in much trouble in school or elsewhere.

I have never known a truly involved swimmer whose school efforts suffered because of extra time in training. Most swimmer grades improve, I think because of his keen sense of self and his worthiness. Self-discipline and responsibility skills are developed along with the idea of commitment to something.

Swimming regularly, like most forms of regular exercise, helps relax and relieve many pressures that we all experience. This more relaxed person is then more capable of being receptive to his environment and has a more rational approach to it. Even his spiritual and mental awareness is made keener.

When should a child get involved? When he or she is ready. They must have confidence in their swimming ability. I would hope that a parent wouldn't *push* a child into a program because he sees the value and/or wants to build a champion. Sure we all like winners and want to be one. However, forcing someone to do something when they don't want to, can be detrimental. One of the best values of this sport is that a swimmer can always be a winner, even from day to day. Competition is offered in most programs and provides many chances to win a race or an event. Even those who may not be constant event winners can also be winners. They can see their times and skills improve steadily as they put out the effort. And isn't that what life is about? The ladder of success is achieved one step at a time - not without effort.

Probably the greatest percentage of champions started at early ages of about 6 to 8 years, although many started later. When a child is physically and emotionally ready for a program, then is the time to start. In my opinion, the highest early age year will be about 8 years. A child of this age usually won't be overwhelmed by the seeming confusion, new faces, and unusual routine because he has been exposed to many different people in school and other aspects of his life.

As a parent, check out a potential competitive programs before enrolling a child. Visit a couple practice sessions and try to sense the attitude of the coaching staff. Do they take personal interest and time with those who need it? Do all swimmers benefit from their training, despite their skill development? Become aware of how you may be involved. As a parent, you will take on a big responsibility in seeing that your child can attend the practices and swim meets. Can you afford the cost? Can you afford not to?

Some parents take a passive interest and occasionally attend the various functions or not at all. Children need the parent's genuine interest. Aside from that, swim programs offer more parent involvement opportunities than any other sport I know. Many people are needed to conduct swim meets, operate concessions, and take an active part in the parent's clubs that most teams sponsor. A great deal of fun, learning, and personal satisfaction is gained by becoming involved. No one needs to know much about the sport to help. Willing parents and coaches are usually delighted to help new people get involved.

In this chapter I don't intend to get into the specifics of competitive strokes or

training. There are far more qualified persons to present these topics than I. There aren't too many books available on competitive swimming but one I highly recommend is Science of Swimming by James Councilman. This book is very well illustrated and is a coach or interested parents "Bible" on the subject. Everyone, whether they are interested in competitive swimming or not, would benefit from the contents.

As I mentioned earlier in this manual, the ways in which competitive swimmers do "their thing" are the best methods to teach. They are efficient and when executed properly, are beautiful and enjoyable. One of the skills I desire for my beginning students to learn is breathing only when it is necessary. Most swimmers lose time in their freestyle (crawl) each time they take a breath. Those who swim long races learn to breathe on each side so that they become aware of where their competitors are. Aside from that, a "breath when necessary" swimmer is able to keep his body on one plane and uses a more effective stroke.

If you happen to have a child who is on a team and taking intermediate or more advanced classes too, consider this. These classes are valuable but try to minimize the amount of time on the sidestroke. Once it is learned properly, let it drop as it may "unlearn" the swimmer's proper breaststroke kick. If there is any scissor at all to a breaststroker while racing, he will be disqualified.

I would like to share a technique that I found effective in undoing a breaststroker's scissor kick. This involves using a kickboard to do laps on the side opposite the offending leg. For example, if the breaststroker scissors with his right leg, then he should do laps lying on his left side and forcing the right leg forward in a regular scissors. This tends to "re-educate" the leg's actions. Also, when the swimmer does breaststroke kicking with a board, tell him to concentrate on the right foot and be sure the toes are pointing to the sides of the pool as the legs part each time.

As your beginning students get the hang of a basic dive, encourage them to spring forward and reach towards the other end of the pool. This shallow dive is needed to take advantage of distance with the racing dive. The dive is done with both feet parallel to each other with the toes on the very edge of the pool.

Let me re-emphasize the need for well-developed flutter kicks on the front and back. These regular beats are key factors for maintaining body stability, endurance, and a well-engrained habit before getting involved with a team. This will save a lot of time and perhaps frustration when a child may first start to train.

By the way, don't feel that a swimmer needs to know a lot before joining a team. Basically, if they have the flutter kick mastered, feel comfortable on their back and with their face in the water while swimming, they are ready skill-wise. The more advanced skills of the breaststroke and butterfly is usually taught and developed in their training programs.

GROUP INSTRUCTION

The skills explained and the techniques shared to this point have been geared towards individuals either separately or applicable to *group* use. Here I will review various group-teaching ideas that may be of help.

Earlier I referred to assembly line teaching. The Red Cross has literature on this but

I want to share some of my own ideas. Assembly line procedures occur when you have large groups, several instructors, and a large pool or waterfront facilities. The principle idea is to establish various teaching stations that students may advance to when ready. If the instructors, professionally trained or not, are familiar with individual differences and techniques, this can be an effective way to teach large numbers.

When I used this system in the past, I was the only Water Safety Instructor. My assistants were high school lifesaving students that I trained in the skills that their station would teach. I gave them all an overview on how all our efforts worked together so they could see their importance. The students who were moved into their station could be transferred at any time, which meant that their group of up to 6 students had to be taught individually. The instructor's responsibility was to have each student master the station's skills as soon as possible and move on to the next station.

If the system being used is the way I describe, the assembly line method is a good one. Students are evaluated for their skill level and placed at the station accordingly. There they receive personal attention. When the student is ready, s/he is advanced, so the program is really geared to individual needs.

Most community pools and perhaps some home pools are set up so that the instructor is teaching a group of 8 to 20 at a time. Individuality has to be pretty well abandoned because if the instructor spends a minute or so with one student, he will often lose control of the group. I feel uncomfortable using the word control because I like to have my students expressing their freedom and desire to learn. However, in large groups there must be order and control, otherwise chaos will result. The instructor must have undivided attention when he gives instructions, otherwise control will be lost, if he has to re-explain something.

Large groups will be set up so the students are lined up on one edge of the pool. When the students have been instructed to perform a skill while going across the pool, they should not all go at one time. This could cause them to run into each other and they may tire too soon. Students lined up to be sent to the other side will be sent across in waves. Dividing the group into 2 or 3 groups by numbering off, such as 1-2-1-2-1-2 or 1-2-3-1-2-3-1-2-3, etc effectively does this. After they number off, ask all the ones to raise their hand to make sure they remember who they are. Then do the same for the other groups. Also, instruct them to remember who their neighbors are on each side of them. If they get mixed up, then your waves won't be as effective.

To make good use of the class time and keep the students constructively busy, send them across as soon as possible. If the first group has to wait very much, they may tend to start playing, going under water, splashing, etc. Start the first group and when they get started about 10 feet, then start the next group.

When speaking to a group, insist that each student look at you. If possible, see that the sun is at their back so they aren't looking into it while trying to watch you. As you speak, speak to them not at the group. Look at each student in the eye as much as possible while you speak or demonstrate. This will help them feel that you have a personal interest in them.

Generally, your most tiring activities will be done at the start of the class, such

as kicking drills. Try to get them tired but not to the point where they have trouble continuing.

If possible, end your classes with a game or unusual activity that will leave a sense of fun with them when they leave for the day. Select games that teach something to your particular level and instruction of the day. Games for fun's sake only is good at the right time but remember, they are paying instruction fees and are there for skill learning. There are always skill-related activities to be found or created, many of which are scattered throughout this manual. Games should be ended while the students are having a lot of fun, not when they tire of the activity. You may get some moans and groans but they will have left the activity or class at the peak of fun and thus have a desire to return the next time because "we had fun in class".

TEACHING FOR INCOME

For The Pool Owner

If you have a pool at home, let it be used to instruct others and at the same time offer you some income that can at least pay for the season's expenses. You may offer instruction yourself, even if you aren't a water safety instructor. Learn the various skills from someone else or in a local swim class. Listen well and remember their techniques. Then use this manual for my ideas.

Even if you don't teach yourself, the newspaper, local city pool, or the employment department may suggest others desiring to teach swimming. Offer to let them use your pool for half the gross fees. He or she could teach 3 to 5 students at a time and charging only \$6 per hour each, would net each of you \$9 to \$15 per hour for the efforts. Of course they would be self-employed, so you don't need to make them an employee. To encourage such an instructor, suggest to them that they make similar arrangements with other neighborhood pools around town. This would provide a good service for neighborhoods so that students wouldn't need to be transported to town facilities, saving a parent transportation time and expenses. The instructor could easily distribute brochures to obtain neighborhood customers.

For the Potential Instructor

Having been a Water Safety Instructor for 20 years, I can easily see the potential of offering swim lessons. Once you have access to a pool or other swimming area, your cost is minimal. If you have your own pool, you will have maintenance and utility costs. Lessons can more than cover the expenses, if you desire. Renting other facilities will of course limit your profits.

Generally, I would not recommend teaching in a lake or river if you have a choice. A student not being able to see the bottom very well, most often creates some fears. Water sanitation is a concern because sometimes a student will swallow some water.

Water should be calm and preferably warm if a student is at all cold, his (her) mind is set on getting out or being cold instead of relaxing and enjoying the water. Swimming lessons, as in all forms of instruction, should be pleasurable as well as rewarding, if possible. For someone who actively swims, water temperature of around 78°F is comfortable. A beginning student usually prefers about 80°F to 82°F.

If possible, the swimming area should be shielded from wind, or the lessons be

scheduled for the warm and calm time of the day. When a person is wet and a breeze hits them, they feel cold due to the evaporation from their skin, even if the water and air temperature is warm.

Lessons can be held in your own pool with minor considerations. Water play can be a noisy activity. Consider the welfare of neighbors as a disturbed neighbor could cause problems. Don't generate a lot of car traffic or parking problems by your home. Check the local ordinances regarding signs. If you advertise as a commercial set up, you will need health department inspections, which usually charges for their services. Changing and rest room facilities are good to have available.

Become familiar with sanitation requirements. Pool chemical companies often furnish free literature on proper PH and chlorine contents and testing of water. Talk to other pool owners about their methods of maintenance and be sure your pool is sanitary and clear before offering instruction. Beautiful water helps a student feel comfortable and attracted to swimming.

Teaching swimming isn't done just because the teacher knows how to swim well. An effective instructor knows all the beginner skills, back crawl, elementary backstroke, sidestroke, breaststroke, and preferably the advanced skills of inverted breaststroke, butterfly, drown-proofing, and lifesaving techniques. A parent usually looks for a certified instructor. This usually means someone who has successfully completed lifesaving followed by a Water Safety Instructor's course. The American Red Cross provides these courses at no cost or a small pool fee in most community swim centers. The YMCA also has a good program.

Most swim students are usually small children. Someone working with children must develop patience, firmness, and respect towards young people. In a sense, an instructor is almost a psychiatrist who needs to really know how to communicate, especially in helping people overcome fear. Fun, encouraging, and complimenting is a big part of the process.

Experiencing a WSI course, watching professionals teach, and assisting in a swim program are valuable experiences. There are also swim instruction and water game books available in your local library. If the selection is limited, ask the reference librarian about books through the inter-library loan system. The Red Cross also has instruction aids.

What you charge will be based on going fees in your community, and your effectiveness. After teaching many hundreds of students, I could guarantee to teach a willing student to swim in just 5 minutes. A successful teacher on a private basis like that could charge \$10 to \$20 a half hour lesson. After a lot of experience you will be able to effectively teach 5 students at a time and give them individual instruction and perhaps charge each student \$3 for each half hour.

I would recommend the instruction last only a half hour, except for advanced classes and lifesaving that can easily go for an hour. Children can chill easily, especially if they aren't relaxed. Also, the attention span has left after about 20 minutes or so. Usually, the best hours to teach were about 10 AM to 3 PM. These are the warmest and the best with a break about noon. Scheduling several full classes can net you a pretty nice income for a partial day's work. Be aware that constant exposure for yourself is also very tiring, as well as potentially dangerous for your health.

Most instructors work with larger groups - perhaps 10 or so and charge about \$3 per half hour lesson per child. Students in a class should be of the same ability. That is, they should all be beginners, advanced beginners, intermediate, swimmers or lifesavers. Swimmers and lifesaving students should have access to a swimming area at least 25 yards long, and a depth to at least 8 feet, if possible. If you have access to teaching aides, you may be able to set up an assembly line or have stations where different skills are taught.

If you teach swimming under a Red Cross program and are a WSI, you can get charts, certificates, and other teaching aids from the Red Cross Center. I recommend your doing this at first to expand your knowledge and service. After a few years, I chose to drop this source because I found the paper work and hassle more than it was worth at that stage. Children and their parents like to have a card to show that they have passed certain skill levels, so I had cards printed for that purpose. Lifesaving classes will always require paper work and the issuing of badges and certificates because most employers require certification.

You can also offer classes in drownproofing, scuba, water ballet, competitive swimming, and diving, if you have the skills and/or facilities. These special classes or interests are quite popular. Babies and pre-school children are classes in demand but require special patience and abilities, and shouldn't be attempted by just anyone. Watch and/or help other professionals before teaching these specialties yourself.

If you have access to an indoor area, lessons can be taught year round. Otherwise, spring vacation and summer are your instruction seasons. Place ads in newspapers, in Laundromats, and on community bulletin boards. Your most effective advertising tool is the distributing of brochures to people's homes. Information about this is found in Making and Distributing Brochures, a chapter in my *Personal Assisted Learning* manual.

For Youth

Locate swim programs that teach groups of children, such as most city-sponsored programs. Offer to serve as an aide. Sometimes courses are provided for training aides. Some programs will require that you have lifesaving skills in order to assist. Large set-ups using the assembly line method or stations commonly have need for aides. Even small groups of students will sometimes have need to help a student who can't keep up or needs personal attention.

Other Pool Income Sources

A home pool wouldn't be good for having people swimming in your pool for a fee. The neighbor's are surely to object and you would be required to go through permits and inspections, etc. However, if you live in the country and have a little acreage, you might want to consider operating a membership or public facility.

The income to support a public type facility could come from a variety of sources including the memberships or entrance fees, snack bar activities, special events, and your lessons. Swim lessons can operate in the morning hours till perhaps 12:30 or 1:00 PM at which time you would open for general swim and recreation activities. This manual isn't intended to cover all the details on how to establish such a business but be sure to carefully weigh all projections for income and expenses before getting too involved.

Such an operation involves a lot of work and many considerations, especially if it is operated only by yourself. Operating only swim instruction scheduled at your convenience can bring you good return for your efforts and still provide freedom for other activities. However, if you want to consider a larger recreation business, digest the remaining chapters well and you will have a good start for its operation.

GUARDING TECHNIQUES

Our primary concern as a lifeguard or parent is the safety of swimmers. A pool with too many posted rules may overly-restrict the bathers. The lifeguard ends up becoming a baby-sitter or a rule enforcer. These should not be the roles of supervising persons. However, I believe there are some basic rules and techniques that I would recommend in all supervised areas.

A guard should, if possible, seat himself above the heads of all persons so that he or she can look down into the pool and see the edges. Sometimes a daring novice will move along the edge and either push himself away or be pulled away from the edge by another swimmer. The stand is best located on the pools edge not only to better see the edges but also for quick entry into the pool if needed.

Methodically scan the water's edges, moving your eyes carefully to observe the entire perimeter, glancing occasionally to the center area. The middle of the pool at about the 4 foot depth, is probably the second most hazardous area because the novice will often walk out "as far as he can" to about chin level and lose his balance.

If there are two or more guards, one should be positioned up in the guard stand while the other walks around the edge to observe the swimmers and minimize deck horseplay. The presence of a guard often discourages horseplay that can lead to accidents, much like a teacher that circulates in a classroom.

Absolutely no running should take place around a pool. Usually, the deck can be slippery or certainly the coping (sometimes called tile) on the pool's edge is very slick when wet. Many accidents occur by the diver or jumper from the edge who ends up clipping his chin on the stone edge when jumping in backwards. If you have a diving board, be aware of its slickness. You may need to caution divers about running off the board.

I would allow splashing of water, as long as no one is annoyed. This means a guard needs to develop respect from his clientele so that he can get their support when asked to stop splashing if needed. Water fun shouldn't be discouraged unless someone's freedom and enjoyment is threatened.

I would seldom allow "chicken fights" where a person sits on someone else's shoulder and tries to wrestle another opponent off the other's shoulders. In a crowded pool the falling or wrestling parties can easily hurt a passing swimmer. Perhaps this could be allowed as you supervise it when there is no conflict from other swimmers. Teenagers and some adults thoroughly enjoy activities such as this and a form of water soccer where things get a little rough.

When you operate a public or especially a membership type facility, I think it is good to call 10 to 15 minute breaks every hour. This allows the very active young to rest a little, the filters to "catch-up" on cleaning the water, perhaps the guard to take a quick dip, a chance to thoroughly scan the bottom for objects, hand-apply chlorine if this is the practice, schedule special events, or provide this time for adult

swimming only. Most adults don't enjoy swimming with a lot of noisy children around. They enjoy some lap swimming or just conversing with a friend while leisurely enjoying the water.

If allowed, I choose to let swimmers with long hair swim without caps if they want. Yes, you may need to clean the strainers and filter more often. But allowing this freedom will keep most people happy and prevent a lot of hassles that can arise from trying to enforce wearing caps and keeping them on.

Don't allow eating while in the water. Activity can sometimes cause the eater to lose control of swallowing processes while playing, and force a piece of food to lodge in the throat.

Let's consider more about pool discipline. Every guard should wear and use a whistle properly. Notice I said properly. I have seen much misuse by guards that results in unnecessary problems. The whistle should be used only when needed and when needed, used in short bursts. The whistle is an attention getter only. The bursts will have "more authority" when it is blown loud, sharp, and rarely.

Before the whistle is blown, try to get the offender's attention by looking right at them. Most of the time when they know they are doing wrong, they will be glancing at you. Catch their eye and simply nod your head to say "no". Usually, that is all that is needed. Once in awhile you may need to point to them and either use your head and hand motions to say no or after catching their attention by the finger pointing, motion for them to come over to you. Seldom yell out instructions or discuss over the noise. This will be less effective and often encourages the offender to argue.

A private talk or disciplining is always better than allowing others to listen or take part. The offender if "called down" in front of others will often react and say inappropriate things due to peer pressure and the matter will become worse. If a whistle is needed to get their attention, blow sharply while pointing at them and motion for them to come to you. When they get to you, quietly and confidently tell them what is necessary. This is usually all that is needed in correcting situations. Notice I said situations. Don't make discipline a personal attack. Try to make the offender feel that it is the condition you are attempting to correct rather than the person.

Occasions may arise where an offender chooses not to obey, despite your counseling. In such a case, they should know in advance that repeated disrespect or rule violation could result in sitting out for a length of time or being asked to leave the premises. The safety and atmosphere of fun and relaxation should not be imposed upon by anyone not respecting others.

Hopefully, there will never be a need but in swimming areas where more than one guard is needed, an emergency communication should be established. For example, if a guard sees a need for rescue and/or needs quick help, he would give three blasts with his whistle as a signal to the other lifeguards to assist.

Policies regarding safe use of a diving board should be established, Diving straight off the end only, not allowing swimming on the diving board end of the pool, and immediately swimming away after a dive are among other needful policies.

The following pages on pool maintenance are important for those lifeguards to become familiar with, for they are usually part of the lifeguards responsibilities in most public areas. Even if it seems to not be needed at present, there is a good chance that the information will be valuable at some future date.

POOL MAINTENANCE AND SUPERVISION

During the 20 years or so that I managed swim centers and their programs, I was exposed to a predicament that pool personnel often find themselves. Lifeguards had little and usually no contact with instruction that applied to pool operation. They had learned from Water Safety manuals general information about types of swim areas and techniques related to rescue and safety but there was no background that really applied to practical lifeguard responsibilities.

The few things I mention here would also be valuable for homeowners or anyone needing to supervise or maintain swim pool areas. Chemical companies sometimes provide manuals that discuss pool PH and algae control, so I won't really dwell on that. Sunset's Pool book provides ideas for windbreaks, patios, and structures related to swim areas. Also, many library books on instruction will offer some ideas.

One of the critical factors desired for a pool is water clarity. The water must get adequate filtering time and have a proper balance of chemicals to insure this. In addition, the debris on the pool's bottom must be vacuumed clean at all times or it will suspend itself throughout the water when swim activity begins. This would contribute to unhealthy conditions even though chlorine content may be high enough. Vacuuming should be done early in the day before swim activities begin and the water is calm.

Generally, it is a good idea to brush down the pool sides at the end of everyday. This will not only dislodge potential algae areas. It will brush the dirt particles into the water for filtering, and allow the particles to settle on the bottom for vacuuming the following day. Be certain to brush the corners especially well as they don't get disturbed much during swimming. Also, areas around ladders, steps, and light fixtures are similar "protected" spots.

Debris gets into our pools by the swimmers, the wind and anything put into the water. A well-fenced or protected area is a necessity. It not only minimizes evaporation of water and chemicals but also the dust and seed particles from being blown in. As mentioned elsewhere, the protection helps keep swimmers warmer by not having a breeze blow on them. Landscaping immediately next to a pool should be minimal so that its watering and care won't cause debris to get on the walkways. Lawn areas and the like should be far enough away or engineered so that grass or mud isn't tracked onto the decks or into the water.

Bathers should be required to shower before entering the water to remove body salts, dead skin, oils, and dirt. Perhaps the biggest offender of debris is the swimmer's feet. A brief shower will help remove most, if not all the dirt. It is imperative that the decks be hosed down each day, the best time being immediately before pool use. Starting at the pool's edge, hose the dirt and water away from the pool into the drainage area.

A well functioning filter system is necessary to maintain water clarity for healthier water. Be certain you understand how the system works. Whether it be a sand filter

or diatomaceous earth, the system will become clogged periodically and need to be backwashed. Be aware of the pressure gauge readings that tell you when to backwash. Even observing the pool inlets to look for incoming particles is helpful. Occasionally, earth filters may have holes that need to be replaced or repaired. Also, filter elements may need to be cleaned in addition to backwashing.

In general, your water should be clear enough to see a contrasting colored disk on the pool bottom from above, even during pool activity. If this isn't possible, begin adjusting your procedures or equipment till the clarity is attained.

As mentioned elsewhere, a pool cover has many advantages, one of which is to keep cleaner water. If you do have one, be sure that when the cover is removed that it can be stored in a dirt-free storage container or bench. Otherwise, the cover will collect dust that in turn will end up in the water when the pool is recovered.

The tile around the inside edge of the pool must be cleaned on occasion. How often depends on pool use, chemical balance, hardness of water, and oils introduced into the water by bathers. Tile cleaners are of several kinds and you may need to try different ones to see which works best for your conditions. Generally, I have found ordinary household cleanser that has chlorine added to it, to work real well. It has a disinfectant property as well as light abrasive for cleaning. Caution must be taken not to splash cleanser onto the coping (tile on top) because the chlorine may leave bleached spots unless it is rinsed off by hosing.

If your pool has skimmers to remove surface debris, the baskets need to be checked occasionally to see that they are clean. Too much debris in a basket will cause less efficient filtering and add to a dirty pool. How often they need to be checked depends on the number of swimmers (their hair), possible trees in the area, and other conditions that would add debris to the water.

An often-overlooked area to keeping water clean, is the equipment and play materials brought into the water. An inner tube or water ball that has been lying on the lawn, especially if they are wet, can easily collect dirt and grass. The same would be true for flippers and the bathers, if they have been lying on the grass or deck.

Changing areas and especially restrooms need to be regularly cleaned. Guests dislike nothing worse than dirty restroom facilities. Swimmers with wet bottoms, to say nothing of thoughtless children will cause a toilet to be a problem in no time at all. I recommend even home pool restrooms need to be cleaned at the end of each day, at least. Commercial pool restrooms may need cleaning twice a day or more. In restrooms that get used a lot, it is a good habit for the pool personnel to frequently check restrooms to be sure toilets are flushed and in working condition. This checking may also help provide needed supervision to prevent problems from occurring in the usually unsupervised area.

Most people are impressed by the sanitary appearance of Disneyland or Marriott's Great America. Clean grounds free from litter will add a lot to a patron's enjoyment. Also, most people seem to want to help keep a place clean when the grounds and buildings are kept up. This is proven to be true in our public schools. An attractive and well-maintained building will have far less graffiti and other damages. Cleaned-up beverages, food, and litter will prevent unwanted ants and flies as well as provide cleanliness. Properly placed disposal containers and caring personnel that

will keep a place "spic and span" is a big asset. In fact, as an employer I would require my personnel to take this personal approach to caring for the facilities, and I would be more impressed if my employees put out this extra effort.

Perhaps some people won't be concerned with an end-of-season maintenance but let me mention a couple important things. First, protect all equipment from weathering. Cover the filter pumps with visqueen. Secondly, do not remove water from belowground pools. The winter's water table may cause the pool to float like a ship and pop out of the ground a few inches.

Pool Cover

Heating a swimming pool with gas or electricity is very costly. The set up I am about to recommend not only saves heating costs but also reduces pool cleaning, water loss, algae growth, and cuts down the use of chemicals. The basic cover is a 6 mil black visqueen. Commercially bought pool covers of various colors and design may be more attractive but they are also very costly and not necessarily as effective.

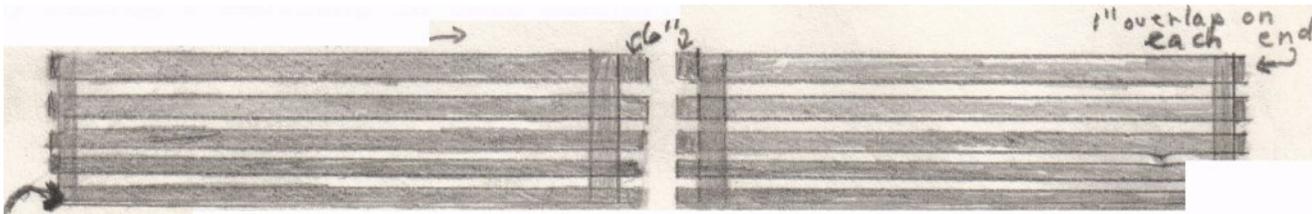
A properly cared for 6 mil black visqueen will usually last two seasons and is reasonably priced by comparison. Depending on the size of your pool, 2 or more covers can be obtained from a 24 x 100 foot roll. The money spent for the roll will last you 2 to 6 years. As you will begin to see as I describe other materials needed that for less than \$100, you will be able to heat your pool for years using the sun as your heating source.

Black is the best color for absorbing sun and becoming hot. When the cover has been on all morning on a warm summer day, for example, the water for about a 6 inch depth below the cover will be so hot, you will need to withdraw your hand. Another advantage for a black cover is that it doesn't allow light to pass through to the water. Without light from the sun, algae will not grow, thus reducing the need for algicides or other methods often needed for control.

Since the "plastic" covers the entire surface, water will not evaporate, thus saving a lot of water. The chemically treated water will also tend to keep its potency when the pool is covered. Without the wind and sun causing evaporation, the water and chlorine contents will stay longer. I found my chlorine costs cut about in half. Also, because your pool is now less dirty because of the cover, your cleaning time will be reduced and your filters will not need to run as often, which means more savings.

Let me try to describe a layout that you can adapt to your pool that worked for me for years. Construct at the end of your pool a "box bench". For example, if you have a 20 ft. wide pool, build a 25ft. long bench about 5 ft. or so from the end of the pool, preferably the end without the diving board. The bench would be about 16 inches high and 2 ft. deep. It can be made of wood, concrete block, bricks, or any material that fits into your landscaping decor.

The lid for your box will be made of 2 x 4's and perhaps laid out by making 2 sections in this manner:



This cross 2 x 4 will set on the end of the box when it is on top. The "lid" to the box will serve as a place to sit or lie. It may be left in its natural finish or stained as desired.

This is how the process goes for the actual use of the cover. Let's start with the cover on the pool surface. Around the edge are your weights to hold down the cover. Objects such as bricks can be used. However, I found that long sections of galvanized pipe worked best because wind was unable to get under the cover. The pipe is easily set at the edge of the deck or patio when not in use. Two people will be needed to uncover, and at another time to cover the pool.

The uncovering begins by setting the pipe sections off to the side. Each person then grabs an end corner, standing at the end closest to the uncovered box bench. As they step towards the box, they pull their corner towards the box and then place it in the box corner nearest them. Still standing at the end of the box, they reach to grab another hold on the cover that is also pulled and set in the box. This is repeated, laying the cover accordion-style into the box. The box is then covered with the top. With space between the 2 x 4's on the lid, the cover will be able to dry easily while it is protectively stored and out of sight.

When it comes time to cover the pool, the box lids are taken off. Each person grabs the corners at the end of the visqueen. Slowly they walk to the other end of the pool to lay down their corners. They then obtain the pipe sections to anchor the cover. It only takes a couple minutes for 2 people to cover the pool and about 5 minutes to uncover. As you can see this is a very easy, inexpensive, and practical way to heat and care for your pool.

Another Pool "Heater"

Another effective way to heat pool water naturally is by using 100 foot rolls of polyethylene 3/4" black pipe, black again being heat absorbing from the sun. Although possibly unsightly, the coils of black pipe can be stretched across the roof of a bathhouse or other building. The return line of the filter system can then be routed so that the filtered water will go through the pipes before returning to the pool. A more permanent copper piping system is also very good. Painted black, the copper will conduct heat more efficiently and you won't need as much as the plastic that tends to last 3 to 5 years. Covering the black pipe with a clear plastic will help keep cooling winds from lowering the temperature.

Depending on a lot of factors, a system such as this will cost very little and be sufficient for heating your pool. A handyman will need to consider pump size, filter size, distance from the pool and be prepared to make adjustments in the

system as he develops this source of heating. Once worked out by experimenting, the system can be heat controlled by simple valves at the pump and filter sources.

Other Pool Alternatives

May I suggest that a pool can be an asset and not necessarily a big expense. If I couldn't easily afford a built-in swimming pool, I would not have one built. They are not only expensive but usually don't increase the future sale price of the property much, and additional property taxes will usually result. I highly recommend an above ground pool which cost far less, can be removed if desired, and won't result in higher taxes.

Swimming pools have other values other than for pleasure. In case of a water shortage of some type, a pool provides a good emergency supply. Also, in case of a fire, the availability of a pool's water can be of value. Many insurance companies provide lesser rates because of its emergency availability.

Another use of a pool could be for raising fish. In the wintertime, your outdoor pool probably wouldn't be used for swimming. Trout, catfish, and other fish can be raised in these off months. With a little filtering and especially an economical source of feed for the fish, this interesting project can bring some very healthy food and enjoyment. Fingerlings or small fish can be purchased and placed for winter growth and provide good-sized fish by the following spring.