SPORTS SCIENCE INSTITUTE OF SOUTH AFRICA

Discovery Vitality

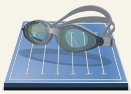
Junior swimming

coaching manual

CATHSSETA

Primary

school



Junior swimming

coaching manual contents

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Introduction

Junior swimming coaching manual

"We wish to change our nation's children by instilling in them the desire to be more active, not just now but for all their lives. We aim to achieve this by teaching each child a competence in and passion for at least one sport. This we will do by building a sports coaching culture for our children..."

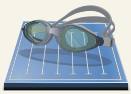
Teach kids the vital skill of swimming

Many factors in modern society have resulted in children and adults becoming increasingly inactive. This has had an alarming effect on their health. Regular physical activity plays an important role in the prevention and treatment of many lifestyle-related diseases such as coronary artery disease, strokes and type 2 diabetes (non-insulin dependent diabetes). Sports are a great way to encourage children to get more physically active and healthy. That's why Discovery Vitality has developed a series of sports manuals for primary schools in South Africa.

The purpose of the Junior swimming coaching manual

This manual provides teachers and coaches with relevant information on how to coach swimming so that children get the maximum benefits from doing the sport – to get physically active, healthy and fit. The focus of the manual is on developing the basic skills needed for juniors (up to the age of 12) to be competent in the pool. The main focus is on providing exercises and drills to help you plan your practice and develop skills, rather than to give a comprehensive framework of the rules of swimming.

Professor Tim Noakes of the Sports Science Institute of South Africa has a dream to make South African children the fittest in the world by 2020. He believes that through initiatives like the Vitality Schools Programme we can reach this goal. You too can play a part in making this vision a reality!



Understanding the sport

Swimming can be done by boys and girls across all age groups. It improves physical fitness, is good for all-round development of muscles, and strengthens the heart and lungs. It is also known to improve posture and is a good way to get a whole body workout without causing too much strain. Most importantly, swimming is a vital life skill and can prevent children from drowning. Swimming is all about moving confidently in the water, which is achieved through learning the correct swimming technique. When it comes to children aged 8 to 12, the focus is mainly on teaching them the basic swimming techniques. In this manual, we focus on four swimming strokes: freestyle, backstroke, breaststroke and butterfly.

The aim of swimming

Swimming is considered an individual sport where one swimmer competes against others; however, there are some team events as well (refer to page 45, Relays). The main aim in swimming is to be the fastest swimmer over a given distance, in a specific stroke and age group.

Safety

Though swimming is considered a safe sport, you need to be aware of the following:

- Swimming lessons should always be performed on the outside lane of the pool so that children can hold onto the side of the pool
- Sunburn: Make sure children are wearing waterproof sunscreen
- At the beginning of a swimming lesson, allow children to enter the water slowly so that they can adjust to the water temperature
- Cold water can cause ear pain and headaches. Children experiencing either of these should stay out of the water. Hypothermia: if a child starts shivering, encourage the child to warm up outside the pool
- Avoid collisions in the lane by telling learners to always stay on the right side of the lane and swim anticlockwise, one behind the other
- Allow children to rest if they are feeling exhausted
- Chlorinated pools can cause eye and skin irritations. Children can protect their eyes with goggles and have a shower (with soap) after the swimming lesson.

Safety rules for children to follow

The following tips should be clearly communicated to children:

- No running around the pool (otherwise they might slip and fall)
- No unsupervised jumping or diving in the pool (otherwise they might jump on top of someone else)
- No pushing others in the pool (otherwise they might fall on top of each other or one of them might not know how to swim)
- No pushing others under water.

Attributes of a good swimmer

The following tips should be clearly communicated to children:

- Body control (position)
- Agility
- Strength
- Endurance
- Patience.
- Focus
- Speed
- Coordinaton
- Explosive power for acceleration

Planning your practice

Practice frequency and duration

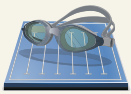
For children aged 8 to 12 years, aim for two to three 60-minute swimming sessions a week.

Even though the main focus in your swimming lesson should be on teaching correct technique, it is important to include 'fun and play' time. Ideally, this should be combined with a swimming-specific exercise. We recommend that you don't include weight and resistance training at this stage of swimming training.

Putting the practice together

It's a good idea to stick to a framework that will help you cover all the important aspects of swimming training. The table below summarises the framework for how to set up a good practice session:

Phase	Description and principles	Length
Warm-up*	• Objective is to prepare swimmers physically and ease them into activity • Activities should be done inside the water • Possibly add extra warm-up activities outside the water	Between 5 and 10 minutes



Phase	Description and principles	Length
Skills development	• Pay attention to correct technique performed in each exercise • Skills include stroke-specific arm and leg movement, and breathing technique	20 - 25 minutes
'Fun and play' time	• Similar to skills development, except that exercises focus on movement skills and a 'feel for the water'	10 minutes
'Mini competition' time	• Expose swimmers to proper competition rules by ending off practice sessions with a short race • This can be either an individual race or relay	10 minutes
Warm-down*	• This is a good opportunity to get all swimmers together and reinforce key points of the lesson • It also helps ease swimmers out of activity	5 minutes
		Total 50 - 60 minutes
Make sure that swimmers use correct technique, but also reward them with fun and play time afterwards.		

* Refer to the General coaching manual for a list of dynamic and static stretches.

Warm-up drills and activities

Warm-up activities in swimming should ideally be done in the water. There are a few simple warm-up exercises that can be done outside the pool before the children get into the water, and these can be found in the General coaching manual. You can find some of those that can be done inside the water in this manual.

1. Swimming 2 - 4 lengths

Allow children to be creative and choose their own swimming strokes to warm up.

2. Diving to retrieve an object

If available, an object that sinks (eg swimming goggles) can be thrown into the water. Children can then dive in and fetch the object.

3. Open legs

This exercise works best if children can stand in the pool. Get the swimmers to stand in a row behind each other and open their legs. The last child swims through the open legs all the way to the front. Once completed, the next child starts from the back, and so on.

4. Balancing

Swimmers swim breaststroke with heads above water while balancing a kicking board or pull buoy on their heads. This exercise also works with other swimming strokes. For example, swimmers can balance the kicking board / pull buoy on their stomachs during backstroke to warm up.

5. Cross-swimming

Swimmers can do the breaststroke arm movement with the front crawl leg kick, or vice versa. This exercise also works with other swimming strokes. For example, they could do the backstroke arm movement with the breaststroke kick, or the breaststroke arm movement with the butterfly leg kick can balance the kicking board or pull buoy on their stomachs during backstroke to warm up.

Key coaching point

Children are often excited at the beginning of a swimming lesson. Remind them to swim at an easy pace during their warm up so they don't exhaust themselves before training begins.

The Warm-down

Some of the activities in the warm-up can also be used for the warm-down. Also use this time to reinforce key skills and aspects that were covered during the session.

Skills development and training

Teaching correct technique

Basic swimming skills

Three essential skills are required for swimming. These three skills are:

- Pushing off the wall
- Streamline position
- Gliding.

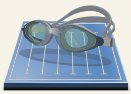
1

Pushing off the wall

Pushing off the wall is applied during starts and turns, and allows the swimmer to generate speed by pushing off the starting block or wall as hard as possible. Pushing off the wall can either be done when swimmers are swimming on their chests (front crawl, breaststroke and butterfly) or on their backs (backstroke).

- Stand at the end of the pool with back facing the wall and feet placed against the wall
- Bring body in at a horizontal position close to the wall
- Put head onto chest
- Push off the wall as hard as possible into a streamlined position (see page 9)
- Glide in streamline position, ie do not kick the legs or move the arms.

You can also practise this on the back as an exercise for backstroke swimming.



2 Streamline position

The so-called 'streamline' position is a key element in swimming on which all strokes and movements are based. It also reduces drag after swimmers have pushed off the wall or starting block. It is the starting position for each swimming stroke and should be practised on a regular basis, either individually or during general stroke drills.

- Push off the wall (as described on page 7)
- Straighten arms out next to the head so that upper arms touch the ears. One hand should lie above the other, with arms stretched out
- Straighten legs and feet
- Pull chin to chest and keep body in a horizontal line
- Glide in streamline position.

Children can also practise this on the back as an exercise for backstroke swimming. When doing this, children should lift their chins instead of pulling them into their chests.

Figure 1

Correct technique for streamline position (arms and legs)

Figure 2

Incorrect technique for streamline position (arms and legs)

3 Gliding

Each time the swimmer pushes off the wall or starting block, a short gliding phase occurs in streamline position before the actual swimming movement begins. The length might vary according to the distance that needs to be covered. The gliding phase is shorter in the sprint compared to long distance. Refer to Figure 1 on the previous page for correct technique.

- Push off the wall
- Get into streamline position
- Stay in streamline position while gliding through the water
- Start with swimming movement when gliding speed decreases.

Stroke-specific skills

Front crawl

The terms front crawl and 'freestyle' are often used interchangeably. The term 'freestyle' refers to the 'free' use of any swimming 'style' in a competitive event. In other words, in a freestyle event a swimmer is allowed to use any swimming stroke, including breaststroke, butterfly or backstroke (as long as the swimmer doesn't change stroke). Front crawl is commonly chosen for these events as it is most often the fastest stroke for children to perform.

1 Front crawl – Leg movement

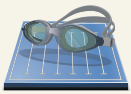
The leg movement during front crawl provides a small amount of speed, but, more importantly, it also serves to stabilise the body. It involves the so-called 'flutter kick' where legs alternate in their movements up and down:

- Streamline position
- Left and right leg alternate moving up and down
- Feet come slightly out of the water
- Knees should be kept straight and relaxed (not bent), although the force of the water may make them bend slightly during the kick.

2 Front crawl – Arm movement

Front crawl is swum on the chest. The arm strokes in front crawl provide most of the forward movement. The arm movement can be broken down into three phases:

- Pulling phase
- Pushing phase
- Recovery phase.



The arm movement alternates which means that while one arm is pulling under the water, the other arm is moving forward over the water.

- Streamline position
- **Pulling phase:** Once the hand has entered the water, the arm begins the underwater movement pulling towards the body, fingers point downwards
- **Pushing phase:** This phase begins once the arm is underneath the body. The arm pushes the water towards the pelvis
- **Recovery phase:** Once the hand has reached the pelvis, the arm is ready to start the recovery phase. This phase allows the arm to go out the water and move towards the front.
  The elbow is taken out of the water first, followed by the lower arm and hand. Once the hand has reached the front, the arm is stretched out again in the streamline position.

Make sure that only half the swimmers' face sticks out and that the head is in line with the body when breathing. A common mistake is to lift one's head too far out the water as in Figure 3.

3 Front crawl – Breathing

Breathing occurs when the arm is in the recovery position (towards the side which arm is out of the water). Children should be taught to breathe every third arm stroke so as to practise breathing on both the right and left side:

- Start off in streamline position, breathing out, ie blowing bubbles
- The arm completes the pulling and pushing phase
- Once the arm and hand surface the water, the head starts turning to the side as if to look over the shoulder of the arm that is out of the water. While the arm is in the recovery phase (out of the water and moving forward), the swimmer can breathe in
- Once the arm is halfway through the recovery phase, the head starts turning back to the water. The arm is stretched out and enters the water in front of the body in streamline position. The swimmer's face is now back in the water, eyes facing downward and forward.

Figure 3

4 Front crawl – Turn

Generally front crawl swimmers turn at the end of each lane by doing a tumble turn. This is the fastest way of reversing directions if the swimmer still has one or more lengths to go. However, it is also possible to do a turn simply by touching the wall with one hand and then turning around on the chest to carry on swimming.

Figure 4a

Figure 4b

How to do the tumble turn:

- Move towards the swimming pool wall, head facing down into the water
- When the swimmer is about an arm's length away from the wall, the turn begins with a forward somersault – head goes under water and knees are pulled towards the chest
- Halfway through the tumble turn, the swimmer is on his back, head facing towards the water surface
- He presses the feet into the wall to push off. As he pushes off, he turns sideways and then onto his chest, and straightens his arms to the front to get the body in the streamline position
- After a brief gliding phase, the swimmer begins with the leg kick and then adds arm movements to continue with the full stroke.

Backstroke

Backstroke is the only stroke that is swum on the back.
While the advantage of this stroke is that swimmers are able to breathe easily, the disadvantage is that they cannot see where they are going.

1 Backstroke – Leg movement

The leg movement during backstroke is very similar to the movement in front crawl. It provides a small amount of speed, but, more importantly, it also serves to stabilise the body.
It involves the so-called 'flutter kick' where legs alternate in their movements up and down.
Legs should be kept straight but relaxed. Knees should not break the surface.

- Start off in streamline position
- Left and right legs alternate, moving up and down ('kicking the water')
- Downwards movement continues until the foot passes below the hips
- Throughout this movement the legs are kept straight but relaxed. The feet break the surface of the water, but the knees should not (Figure 5 shows incorrect technique with knees breaking the surface).

Figure 5

2 Backstroke – Arm movement

The arm strokes in backstroke provide most of the forward movement. The arm movement can be broken down into three phases:

- **Catching phase**
- **Pulling phase**
- **Recovery phase.**

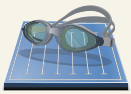
The arm movement alternates, which means that while one arm is recovering out of the water, the other arm completes the arm movement under the water:

- Streamline position on the back
- **Catching phase:** The arm sinks into the water (baby finger first), moving towards the hip, while the hand tries to 'catch' the water. The arm should enter the water as close to the head as possible.
- **Pulling phase:** The arm then continues its movement towards the hip, pulling the water towards the body.
- **Recovery phase:** Once the hand has reached the hip, the recovery phase begins. The arm surfaces the water (thumb first) and is kept straight as it moves alongside the body, past the ear and above the head.

Figure 6

3 Backstroke – Breathing

In backstroke, the face and mouth are mostly out of the water so it is easy to breathe. Breathing doesn't rely on any arm movement and can be done whenever needed, although it does help to try and breathe in on one arm movement and out on the other.



4 Backstroke – Tumble turn

Similar to front crawl, a backstroke swimmer can use a tumble turn at the end of each length to change directions. This is the fastest way of reversing directions if the swimmer still has one or more lengths to go.

- Swim towards the pool wall on back
- When about an arm's length away from the wall, turn onto chest and use one arm stroke (no more) to begin the turn with a forward somersault, pulling the knees towards chest
- Halfway through the tumble turn, press feet into the wall and push off in streamline position while staying on the back
- After a brief gliding phase, begin with the leg kick before adding arm movements to continue with the full stroke.

Figure 7

Breaststroke

In competitive swimming, breaststroke is considered the most difficult stroke. This is because the arm and leg recovery phases happen under and not above the water as in other swimming strokes. Correct technique and timing for arm and leg movements are important for reducing drag. Breaststroke is swum on the chest with legs under water and arms only just breaking the water's surface. Breathing happens with every arm stroke. Another special feature of breaststroke swimming is the underwater pullout (see page 17). This can be added after the start and at each turn to increase swimming speed.

1 Breaststroke – Leg movement

The breaststroke leg movement is very important for increasing speed. It is generally referred to as the 'frog kick' and is divided into three phases:

- **Insweep phase**
- **Thrust phase**
- **Recovery phase**
- **Insweep phase:** Slowly bring legs into position for the actual breaststroke kick by bending knees and pulling feet towards buttocks (under the water). Do not bring knees under the chest
- **Thrust phase:** The feet start opening outwards, opening the knees and upper legs.
  Some swimmers naturally keep their knees together, which is fine
- During the thrust phase the legs move in a circular motion into the streamline position where the feet and legs 'clap' together
- **Recovery phase:** During the recovery phase the legs are stretched out and feet point towards the rear. It is important to hold this glide for about two seconds.

Figure 8

2 Breaststroke – Arm movement

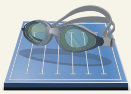
The breaststroke arm movement can be divided into three phases:

- **Outsweep (Figure 9a)**
- **Insweep (Figure 9b)**
- **Recovery (Figure 9c)**
- **Outsweep phase:** Hands pull outward, moving arms apart. The arms stay straight and parallel to the water surface
- **Insweep phase:** Elbows are at a 45-degree angle, at shoulder level. Fingers point downwards and palms backwards while hands push the water back. The hands come together in front of the chest with palms facing towards the torso and elbows pulled next to the body
- **Recovery phase:** During the recovery phase the arms move forward under water into streamline position.

Figure 9a

Figure 9b

Figure 9c



3 Breaststroke – Breathing

Breathing in breaststroke happens with every arm stroke.

- Breathing happens at the beginning of the insweep phase. Once arms start moving towards the chest, the swimmer lifts the head above the water surface and breathes in through the mouth
- When the arms move forward, the head returns to the water and the swimmer breathes out, ie blows bubbles.

4 Breaststroke – Arm and leg coordination

- Start off in streamline position
- Arms begin the insweep
- While the arms are halfway through the first phase of the arm movement (insweep phase) and the head is out of the water, the leg movement begins
- The arms recover (stretch out) during the thrust phase of the legs and stay in a glide position until the leg kick is complete
- After the arm stroke and the leg kick, the body is briefly kept in the streamline position so that the speed can be used for gliding
- It is easiest to teach the sequence as **'pull, breathe, kick, glide'.**

Figure 10

5 Breaststroke – Turn

During a breaststroke turn, both hands need to touch the wall. This is referred to as the 'two-hand touch' rule.

- After the wall has been touched with both hands, the legs are pulled underneath the body (Figure 11a)
- The body tilts sideways while one hand leaves the wall, sliding it past the ear (Figures 11b and c) under the water
- The other hand follows so that both hands meet above the head
- The legs then push the body off the wall
- After a short gliding phase, the swimmer can perform the underwater pullout (see page 17) before continuing with breaststroke.

Figure 11a

Figure 11b

Figure 11c

6 Breaststroke – Underwater pullout

The underwater pullout is specific to breaststroke and is only allowed straight after the start and turn. It is useful for generating additional swimming speed. It is an optional movement and no disqualification will take place if the swimmer chooses not to perform this stroke. However, if this stroke is performed incorrectly, the swimmer will be disqualified:

- The swimmer dives into the pool or pushes off the wall
- During the first arm movement, the arms pull all the way down to the hips (Figure 12a)
- The arms then begin the recovery phase (moving to the front), during which, one breaststroke leg kick happens (Figures 12b and c)
- Once the leg kick is completed, and arms are in front in streamline position, the arms then perform a normal breaststroke arm movement. At the same time, the head comes out of the water, enabling the swimmer to breathe in. The head must break the surface of the water halfway through the arm movement.

Figure 12a

Figure 12b

Figure 12c

Butterfly

Butterfly consists of synchronous arm movements and leg kicks (also known as the flutter kick or the 'dolphin kick'). The most important component of butterfly swimming is the wave-like body movement, which makes for better movement in the water and saves energy.

1 Butterfly – Leg movement

During the butterfly leg movement, legs are stretched out with pointed feet. The feet are pressed together and need to move together – no front crawl kick is allowed:

- Starting from the hips, the legs complete a wave-like movement
- Legs and feet are kept together while moving up and down
- At the end of each 'body wave' the feet come out of the water and then return to the water with a strong kick (keep both feet together!)
- The wave-like body movement then begins all over again, starting from the hips.

2 Butterfly – Arm movement

The arm movement can be broken down into three phases:

- **Pulling phase**
- **Pushing phase**
- **Recovery phase**

During butterfly, both arms need to move evenly above the water to the front.

- **Pulling phase:** From the streamlined position of the dive or push off, the palms turn outwards below the water surface and then with straight arms move outwards to create a 'Y' shape (see Figure 13a)
- **Pushing phase:** During this phase, the arms move from the 'Y' shape underneath the body towards the hips, hands point downwards and palms face backwards
- **Recovery phase:** Once hands reach the hips, the arms are taken out of and across the water towards the front. Hands then enter the water surface ahead of the body. Arms should only be slightly bent when coming out of the water during the recovery phase (see Figures 13b and c).

Figure 13a

Figure 13b

Figure 13c

3

Butterfly – Breathing

Breathing in butterfly is highly dependent on the swimming technique. There is only a short period of time in which breathing can happen without impacting on the arm recovery phase or swimming speed:

- The breathing process begins during the 'push' phase of the arm movement. When arms are underneath the chest and moving towards the hips, the chest will naturally rise out of the water (Figure 14a)
- The head then follows the movement of the chest and is slightly lifted up to break the water surface, at which point the swimmer can breathe in
- As the arms are swinging forward over the water surface, the head follows the chest movement back into the water to breathe out, ie blow bubbles (Figure 14b).

Figure 14a

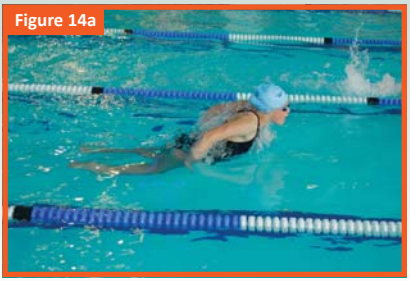
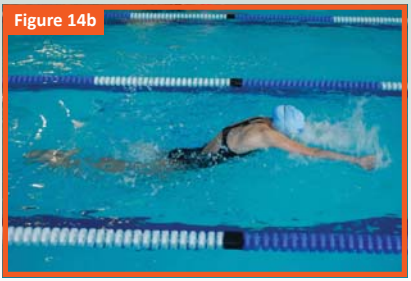
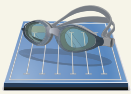


Figure 14b





4 Butterfly – Body movement

Correct timing of the arm and body movement makes swimming butterfly a lot easier. The wave-like body motion helps the body move through the water:

- During the second phase of the underwater arm movement (pushing phase) the chest moves up, the hips are at the lowest position, and the legs are in the downwards phase of the dolphin kick
- The arms are taken out of the water and move towards the front
- Once the arms have reached the front, the chest dives into the water
- The buttocks follow the wave-like body motion by breaking the water surface, and the legs complete the movement with a final kick
- This is most easily taught as 'kick your hands out the water, then kick your hands into the water'.

Figure 15a

Figure 15b

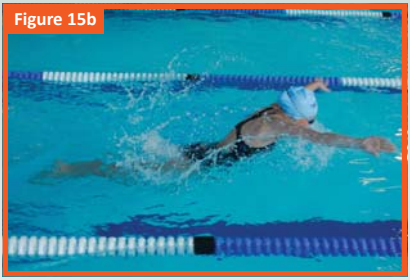


Figure 15c

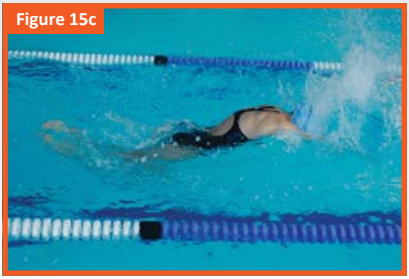
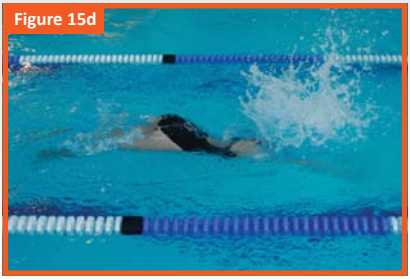


Figure 15d



5 Butterfly – Turn

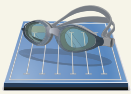
As with breaststroke, butterfly requires both hands to touch the wall simultaneously ('two-hand touch' rule) or else disqualification will take place. Refer to the 'Breaststroke – Turn' (page 17, see Figures 11a, b and c) for more information on how to complete a butterfly turn.

Individual medley

The individual medley consists of a swimmer swimming equal distances in all four swimming strokes. The swimming technique and rules for the individual medley are the same as when the strokes are swum individually. The main difference is in the turning technique when changing strokes.

Turning technique during the individual medley:

- Butterfly
  The butterfly part has to be completed by touching the wall with both hands. Push off the wall in a streamlined position, lying on the back with arms above the head and then continue with backstroke
- Backstroke
  Still on the back, touch the wall with one hand before turning onto the chest and pushing off the wall. Continue with breaststroke (and the underwater pullout if desired)
- Breaststroke
  Touch the wall with both hands and then complete a breaststroke turn. Push off the wall and continue with front crawl swimming
- Front crawl
  The individual medley ends with front crawl and one hand touches the wall at the end.



Activities

You can use any of the activities below to design practices for your team. As you grow in experience, knowledge and confidence you will be able to modify some of these activities and make them more exciting and challenging for swimmers. Pay very close attention to proper technique for each activity.

A Front crawl – Leg kick

This exercise is aimed at improving front crawl leg kick movement, as well as increasing muscle strength. As with all leg exercises, this exercise can be done with or without a kicking board.

How to do the activity

- Push off the wall and glide in streamline position, hands placed on the kicking board
- Start with front crawl leg movement, as described in the 'Stroke-specific skills' section (page 9)
- Ankles should be floppy.

Coaching points

- The movement must come from the hip rather than the knees
- Knees should not be bent. They should be straight and relaxed .

Progression

- Do the exercise without a kicking board so that swimmers can improve the streamline position while practising leg exercises.

B

Front crawl – Breathing

This exercise focuses on learning the correct breathing technique during arm cycle movements.

How to do the activity

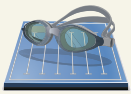
- Push off the wall and glide in streamline position
- Start with front crawl kick and first arm stroke
- Complete three arm strokes and breathe in
- Alternate arm movements, focusing on breathing to the right and left side
- Keep ear and cheek in the water – don't lift the head up
- Make sure that swimmers, when turning the head to the side to breathe, breathe in only, not in and out.

Coaching points

- Focus on correct streamline position
- Only the head, not the whole body, should turn to the side while breathing
- Arm movement during recovery phase: Keep elbow high, hand should move just above the water surface
- During the arm movement and breathing phase maintain or increase leg kick to keep momentum and not sink.

Progression

- You can practise this exercise with the left or right arm only. This is only recommended at a later stage when the swimmer is more familiar with breathing on both sides.



C Front crawl – Catch up

This exercise is aimed at improving right and left arm movement, muscle strength and breathing technique. It is ideal for recapping the essentials in front crawl technique.

How to do the activity

- Push off the wall and glide in streamline position
- Start with front crawl kick and first arm stroke. The other arm stays out ahead in the streamlined position
- Once the one arm reaches the front, the hand briefly touches the other hand ('catches up') before the other arm continues with the arm movement cycle.

Coaching points

- Focus on correct streamline position
- Alternate breathing from left to right side so that both sides are trained equally. Encourage breathing on every third arm stroke
- Arm movement during recovery phase: Keep elbow high, hand should move just above the water surface
- During the arm movement and breathing phase maintain or increase leg kick to keep momentum and not sink.

Progression

- Swimmers can practise this exercise with the left or right arm only
- Swimmers can practise this exercise by breathing with every stroke, every second stroke, every third stroke, and so on.

D

Front crawl – Start

This exercise will help learners implement and practise the correct starting technique for front crawl. You will need a whistle for this exercise.

How to do the activity

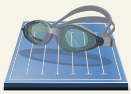
- As the coach, blow a long signal. This tells the swimmer to get onto the back of the starting block
- Then announce 'On your marks', which signals swimmers to move forward to the front of the starting blocks
- 'Get set' signals the swimmers to lower their upper bodies into the starting position
- Blow the brief starting signal telling the swimmers to dive from the starting block into the water in the streamline position
- During a short gliding phase a dolphin kick is allowed so as to increase swimming speed
- After the gliding phase, the swimmer starts with the front crawl leg movement (arms ahead in streamlined position) until the body surfaces the water and then adds the arm movements to start the full stroke.

Coaching points

- Dive off the starting block as far as possible
- Do not dive too deep into the water
- Do not dive into the water before the starting signal as this can result in disqualification in real competitions
- Keeps hands together and head down.

Progression

- This exercise can be practised during 'mini races' during which not only the correct start, but also the complete front crawl swimming technique (including turns, etc), can be practised and tested. These 'mini races' can be done either for individual races or relays
- Swimmers can start with both feet together on the block and toes curling over the edge
- Swimmers can also do a track start where one leg is behind the other. Swimmers pull back on the block and thrust themselves forward after the starting signal.



E

Front crawl – Tumble turn

This exercise is aimed at familiarising the swimmer with the somersault movement in the water. This skill can be taught against the wall and eventually will develop into the front crawl tumble turn.

1. Somersaults in the water (easy exercise option)

How to do the activity

- Children swim in one lane with a stroke of their choice. The swimming is interrupted by doing a simple somersault in the water. They then carry on swimming before doing another somersault, and so on
- Generally the children should do five to 10 somersaults in each length (25 m pool)
- Keep head on the chest, blow bubbles out from the nose and mouth
- Keep legs tucked together.

2. Somersaults against the wall (moderate exercise option)

How to do the activity

- Children swim half a length of front crawl
- Just before the wall, about one arm's length away, they should do a somersault and try to touch the wall with their feet.

3. Tumble turns (advanced exercise option)

How to do the activity

- Once the children are comfortable with somersaults against the wall, they can start applying the correct tumble turn technique as described previously.

Coaching points

- Make sure children touch the wall with their feet
- Advise children to breath out through the nose and mouth while doing the somersaults

Progression

- Swimmers should be encouraged to do tumble turns every time they swim more than one length of front crawl
- Start with the easy exercise option before moving on to the moderate and more advanced exercise options.

F

Front crawl – 'Mini race'

In this exercise, swimmers get to practise all aspects of front crawl swimming. It is a fun activity that all children enjoy, and can be added to any swimming lesson. You need at least two lanes. If space is limited, children can swim against each other in one lane only.

How to do the activity

Group children in pairs and let them swim against each other (ensure you match them for speed and ability).

Remind them to apply all the rules of front crawl:

- Start: They must not jump into the water before the starting signal
- Swimming technique: Ensure they have the correct streamline body position, high elbow arm technique and sufficient leg movement
- Turn: They must touch the wall with their feet during the tumble turn
- Finish: They must touch the wall with one hand.

Progression

- You can also practise this exercise as a relay. Children then need to be reminded that they can only dive into the water when the person swimming just before them has touched the wall.

A

Backstroke – Leg kick

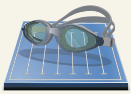
This exercise is aimed at improving backstroke leg kick movement and muscle strength. As with all leg exercises, you can do this exercise with or without a swimming board.

How to do the activity

- Push off the wall and glide in streamline position on back, with hands holding onto a kicking board, either on the chest or above the head
- Start with backstroke kick.

Coaching points

- Ensure that the movement comes from the hip rather than from the knees
- Don't bend the knees. Keep knee joints relaxed, but straight
- Ensure the legs and feet are not too far below the water surface
- Ensure the body is in a streamline position (the movement should not look as if 'sitting' in a chair, but rather as if lying stretched out on a bed)
- Only toes break the surface of the water.



Progression

- Try to do this exercise without a kicking board. It will allow swimmers to improve the streamline position while practising leg exercises
- Keep the hands above the head.

B Backstroke – Catch up

This exercise is aimed at improving right and left arm movement, muscle strength and streamline position. It is ideal for recapping the essentials in backstroke technique.

This exercise is the same as the catch up exercise for front crawl, except that it now needs to be practised on the back for backstroke. Please see details in the 'Front crawl – Catch up' section on page 27 and simply apply arm stroke or leg kick details for backstroke.

Coaching points

- Focus on correct streamline position
- Arm movement during recovery phase: arm should be straight and go past the head as closely as possible, touching the ear
- During the arm movement the swimmer needs to maintain or increase leg kick to keep momentum and not sink.

Progression

- You can practise this exercise with left or right arm only.

C Backstroke – Tumble turn

See the 'Front crawl – Tumble turn' section (page 26) as preparation, and integrate it with the backstroke tumble turn as described in the 'Stroke-specific skills' section.

D

Backstroke – 'Mini race'

How to do the activity

- Group children into pairs, ensuring they are matched for speed and ability, and ask them to swim against each other
- Remind them to follow all the rules of backstroke
- Start: They must not start before the starting signal
- Swimming technique: Ensure that they have the correct streamline body position, enough leg movement and that they swim only on their backs.

Progression

- Turn: Their feet must touch the wall during the tumble turn and they may only stay on their chests for one arm movement
- Finish: They must touch the wall with one hand while on their backs
- You can also practise this exercise as a relay. Children then need to be reminded that they can jump into the water and hold the wall with both hands, with toes on the wall under the water, while the person swimming before them is halfway through the length. They can only start swimming when the other person has touched the wall.

A

Breaststroke – Leg kick

This exercise is aimed at improving breaststroke leg kick movement and muscle strength. As with all leg exercises, you can do this with or without a kicking board.

How to do the activity

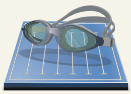
- Push off the wall and glide in streamline position, hands placed on the kicking board
- Start with the breaststroke kick with hands on the kicking board.

Coaching points

- The movement starts slowly during the insweep phase, and then increases during the thrust (final) phase of the leg movement
- Ensure that swimmers glide in a streamlined position between each stroke
- Feet should not come out of the water
- Don't pull knees up too far underneath the body as this increases drag.

Progression

- Try to do this exercise without a kicking board. It will allow swimmers to improve the streamline position while practising leg exercises.



B Breaststroke – Arm stroke and breathing

This exercise focuses on learning correct arm stroke and breathing technique during breaststroke. It involves combining front crawl leg kick with breaststroke arm movements.
This exercise can be difficult so it is best not to practise it for too long.

How to do the activity

- Push off the wall and glide in streamline position
- Start with front crawl kick or butterfly kick (use fins)
- Then complete the breaststroke arm movement, including breathing
- Once head returns back to the water, stay in streamline position and continue with front crawl kick or fly kick
- Then complete another breaststroke arm movement, and so on.

Coaching points

- Arm movement speed should increase from the beginning to the end of this movement
- Ensure swimmers have a correct streamline position, and that arms are fully stretched out to the front between each arm movement
- During the breathing phase, make sure the swimmer maintains or increases front crawl leg kick to keep momentum and not sink
- Use flippers or fins to make this activity easier and more fun.

Progression

- This exercise can also be done using a pull buoy between the upper legs. In this case no front crawl leg movements should be applied and only the arms move.

C Breaststroke – Gliding

This exercise improves leg and arm coordination for breaststroke, making swimmers faster and more efficient in the gliding phase. It is also very useful for recapping the basics of the breaststroke technique.

How to do the activity

- Push off the wall and glide in streamline position
- Complete a breaststroke arm movement with as much force as possible
- Breathe in
- Before the arm enters the recovery phase, perform the breaststroke leg kick with as much force as possible
- Once the leg kick is completed, both arms and legs should be stretched out in complete streamline position, keeping the head down
- Glide
- Before swimming speed decreases, continue with the arm stroke movement, and so on.

Coaching points

- Ensure the streamline position is correct – keeping the head down and arms and feet together
- Ensure timing of arm and leg movements is correct: **'pull, breathe, kick, glide'**
- Swimmers should not slow down too much during the gliding phase. If this happens, encourage swimmers to glide for a shorter period so as not to lose too much swimming speed.

D Breaststroke – Start

Include the underwater pullout to reinforce the correct starting technique when teaching breaststroke. You will need a whistle for this exercise.

How to do the activity

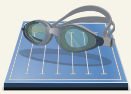
- Starting procedure is the same as for front crawl
- After a short gliding phase, the swimmer completes the underwater pullout (see page 17).

Coaching points

- The swimmer must not dive into the water before the starting signal has been given. This can result in disqualification in real competitions
- Once the signal has been given, the swimmer dives off the starting block as far as possible
- The gliding phase is used during the underwater pullout.

Progression

- See 'Front crawl – Start' (page 25) for details.



E Breaststroke – Turn

This exercise is aimed at familiarising the swimmer with the 'over or under turn' used in breaststroke swimming and the underwater pullout. During breaststroke the rules require that both hands touch the wall at the same time.

How to do the activity

- Swim breaststroke towards the wall
- Touch the wall with both hands, perform the 'breaststroke turn' and push off the wall
- After a short gliding phase, perform underwater pullout.

Coaching points

- Ensure that swimmers touch the wall with both hands
- Ensure that swimmers push off the wall as hard as possible and use the generated speed for gliding
- Encourage swimmers to do a complete underwater pullout after each turn so as to increase overall swimming speed.

F Breaststroke – 'Mini race'

In this exercise, swimmers get to practise all aspects of breaststroke swimming. It is a fun activity that all children enjoy, and can be added to any swimming lesson.

How to do the activity

Group children in pairs, ensuring they are matched for speed and ability, and ask them to swim against each other

Remind them to follow all the rules of breaststroke:

- Start: Not to dive into the water before the starting signal, ensure head breaks the surface on the arm pull (see page 17 for underwater pullout)
- Swimming technique: Correct streamline position and underwater pullout, correct arm and leg coordination
- Turn: Touch the wall with both hands simultaneously, perform the breaststroke turn and include the underwater pullout
- Finish: Touch the wall with both hands simultaneously.

Progression

- Relay.

A Butterfly – Leg kick

These exercises help to improve the wave-like body movement and the leg kick during butterfly.

1. Large wave-like body motion (easy exercise option)

The following exercise is useful for practising a wave-like body motion.

How to do the activity

- Over the distance of a length, the swimmer is asked to dive down and touch the floor, then push off the floor with their feet and inhale at the water surface, and then dive down to the floor again
- Keep the head down, arms together above the head and feet together
- You can do this exercise in a shallower pool (a children's pool) if available.

2. Medium wave-like body motion (moderate exercise option)

This exercise involves practising the small wave-like body motion.

How to do the activity

- Push off the wall under the water in streamline position
- Move in a wave-like body motion, starting with the hands, followed by arms and shoulders, chest, core and legs
- Ask the children to swim like a dolphin in the water
- The wave-like motion is smaller than the one mentioned above, but still a lot bigger than the one used in butterfly
- Use fins or flippers.

3. Butterfly wave-like body motion (advanced exercise option)

This exercise is most like the body movement used for the butterfly stroke. It focuses on the wave-like body motion and the butterfly leg kick.*

How to do the activity

- Push off the wall in a streamline position, with hands ahead also in a streamlined position
- Begin with the butterfly leg kick, starting from the core down to the legs in a wave-like body movement.

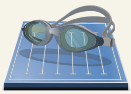
Coaching points

- Ensure that the wave-like movement carries on throughout the whole body
- Keep feet together and let them kick in and out of the water simultaneously.

Progression

- Increase speed of kicks
- Perform a few kicks as normal, then a few kicks deep under the water.

* Children should use fins or flippers to get the technique right, especially when the arms are introduced.



B Butterfly – Arm stroke and breathing

These exercises teach correct arm stroke and breathing technique, and integrate both into the wave-like body movement used for butterfly swimming.

1. Large wave-like body motion (easy exercise option)

The following exercise is aimed at practising a large wave-like body motion and integrates butterfly arm movement and breathing.

How to do the activity

- Over the distance of a length, the swimmer is asked to dive down and touch the floor, and then push off the floor with his feet
- While returning to the water surface, the swimmer completes a full underwater arm stroke (similar to the underwater pullout in breaststroke) so that both hands are at the hips when the swimmer reaches the water surface
- Once the head breaks through the water surface, the swimmer inhales and both arms move across the water surface to the front
- When both hands reach the front and enter the water again, the swimmer returns the head back to the water
- He then dives back down to the floor before pushing himself off the floor again. He then returns to the water surface again
- You can also do this exercise in a shallower pool (children's pool) if available
- Start with fins and progress to no fins.

2. Medium wave-like body motion (moderate exercise option)

This exercise involves a smaller wave-like body motion.

How to do the activity

- Push off the wall in streamline position
- Start with a butterfly arm stroke and lift head to inhale
- Once hands reach the front and arms are in streamline position, dive down about half a metre below the water surface
- Glide back to the water surface by lifting head and pointing hands towards the water surface
- While returning back to the water surface, start with the butterfly underwater arm movement
- Once hands are at the hips and the head has broken the surface, arms continue with the recovery phase above the water while the swimmer lifts head to inhale.

3. Butterfly wave-like body motion (advanced exercise option)

In this exercise, the body movement is similar to the one used for butterfly and focuses on the wave-like body motion, including arm movement and breathing.

How to do the activity

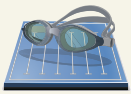
- Push off the wall in a streamline position
- Start with a butterfly arm stroke and lift head to inhale
- Once the hands reach the front, and arms are in streamline position, dive into water just below the water surface
- The body follows this wave-like body motion with the legs completing the 'wave' at the end
- During this phase, the arms continue with the underwater movement
- Once the leg kick is completed, the head starts to lift and hands point towards the water surface before the next arm stroke begins. The swimmer inhales before allowing the whole body to follow the wave-like movement.

Coaching points

- Ensure that the wave-like body motion is complete and includes hands, arms, shoulders, chest, core and legs
- Ensure that arms move simultaneously above the water surface and that feet are held together during the leg kick.

Progression

- By adding a second slightly softer kick, the butterfly swimming stroke is complete. If the wave-like exercises are practised correctly there is no need to practise the second leg kick as this will happen naturally.



Butterfly – Start

This exercise helps learners implement and practise the correct starting technique for butterfly swimming. You will need a whistle for this exercise.

How to do the activity

- The starting procedure is the same as for front crawl (page 25)
- After a short gliding phase, begin with a few short and strong butterfly kicks to increase swimming speed. The number of kicks should not be less than three. The swimmer then begins to swim butterfly as the head breaks the surface of the water.

Coaching points

- Ensure swimmers do not dive in the water before the starting signal as this can lead to disqualification in real competitions
- Ensure that swimmers dive off the starting block as far as possible
- They must not dive into water that is too shallow, or too deep
- Keep hands and feet together, and the head down.

Progression

- This exercise can be practised during 'mini races' during which not only the correct start, but also the complete butterfly swimming technique (including turns etc), can be practised and tested. These 'mini races' can be done either for individual races or relays
- Swimmers can start with both feet together on the block and toes curling over the edge
- Swimmers can also do a track start where one leg is behind the other. Swimmers pull back on the block and thrust themselves forward after the starting signal.

D Butterfly – Turn

This exercise is aimed at familiarising the swimmer with the 'over or under turn' used in butterfly swimming. During butterfly, the rules require that both hands touch the wall simultaneously ('two-hand touch' rule).

How to do the activity

- The turning phase is similar to that of the breaststroke turn (page 17)
- After a short gliding phase, perform dolphin leg kicks underwater to increase swimming speed before swimming butterfly.

Coaching points

- Ensure that swimmers touch the wall with both hands
- Ensure swimmers push off the wall as hard as possible
- They must perform underwater dolphin kicks after the turn so as to increase swimming speed.

E Butterfly – 'Mini race'

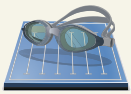
In this exercise, swimmers get to practise all aspects of butterfly swimming. It is a fun activity that all children enjoy, and can be added to any swimming lesson.

How to do the activity

- Group children into pairs, ensuring they are matched for speed and ability, and ask them to swim against each other
- Remind them to follow all the rules of butterfly
- Start: They must not dive into the water before the starting signal
- Swimming technique: They must have the correct streamline body position and wave-like motion
- Turn: They must touch the wall with both hands simultaneously and include a few kicks under the water afterwards
- Finish: They must finish correctly by touching the wall with both hands simultaneously.

Progression

- You can also practise this exercise as a relay. Children then need to be reminded that they can only dive into the water when the person swimming just before them has touched the wall.



Individual medley

Once the swimmers are familiar with all four swimming strokes, and the rules of each, you can practise the individual medley. This also adds variety to swimming lessons. Try the following:

- Practise leg kicks in the individual medley sequence
- Practise swimming every length in a different stroke according to the individual medley sequence
- Practise individual medley race following the correct order (butterfly, backstroke, breaststroke and front crawl). Ensure that the children practise all four strokes rather than swimming the same stroke over and over again.

How to run a swimming session

Level: Beginners

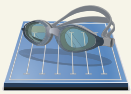
Phase	Description and principles	Length
Warm-up	• Diving for an object	5 - 10 minutes
Skills development	• 4 x 1 length front crawl kick – use fins and board • 4 x 1 length catch up • 4 x 1 length backstroke kick – use fins • 4 x 1 length backstroke extended catch up – use fins	20 - 25 minutes
'Fun and play' time	• Practise front crawl and backstroke turns	10 minutes
'Mini race' time	• Relay where each swimmer swims one length in a stroke of their choice	10 minutes
Warm-down	• Open legs diving	5 minutes
		Total 50 - 60 minutes
Make sure the correct technique is implemented. Swimmers should also be rewarded with fun and play time afterwards.		

Level: Intermediate

Phase	Description and principles	Length
Warm-up	• Two lengths, balancing a kicking board on their heads in the stroke of their own choice	5 - 10 minutes
Skills development	• 4 x 1 length breaststroke kick • 4 x 1 length breaststroke focusing on correct arm movement • 2 x 1 length front crawl kick or backstroke kick • 2 x 1 length front crawl catch up or backstroke catch up	20 - 25 minutes
'Fun and play' time	• Practise turns in front crawl, backstroke and breaststroke	10 minutes
'Mini race' time	• Relay where each swimmer swims 2 x 1 lengths in a stroke of their choice or • Mini race in swimming stroke of their choice	10 minutes
Warm-down	• Open legs diving	5 minutes
		Total 50 - 60 minutes

Level: Advanced

Phase	Description and principles	Length
Warm-up	• Stretches • 2 lengths of cross swimming	5 - 10 minutes
Skills development	• 2 x 1 length butterfly kick – use fins • 2 x 1 length butterfly arm movement and breathing – use fins • 2 x 1 length front crawl • 2 x 1 backstroke • 2 x 1 length breaststroke	20 - 25 minutes
'Fun and play' time	• Practise turns in front crawl, backstroke and breaststroke	10 minutes
'Mini race' time	• Relay where each swimmer swims 2 x 1 length in a stroke of their choice or • Mini race in swimming stroke of their choice	10 minutes
Warm-down	• 2 lengths in a stroke of swimmer's choice, intensity: nice and easy • Stretches	5 minutes
		Total 50 - 60 minutes



The Warm-down

A good way to wrap up the session is a light warm-down, which includes reinforcing key skills and aspects of the session. Part of the warm-down involves stretches, while the rest is a review of the skills that have been learnt. You can also give homework so learners can practise on their own. This can consist of developing one of the skills you've taught them that day. (For more on the warm down, please see the General coaching manual).

Putting it together

To put the practice session together we gave a number of examples of drills and activities that you could choose from. These are guidelines only and you should feel free to adapt the drills and create new ones depending on your swimmers.

Evaluation

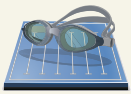
One of the most important things you will naturally learn to do while coaching is evaluate your swimmers. For you to be a successful coach, it is important that you constantly notice which of the swimmers is battling with certain skills so that you can address problems early.

The checklist below is a summary of some of the key coaching points that were explained in detail in the skills and activities sections earlier. We recommend that you pay very close attention to all those skill descriptions, and use this checklist as a quick evaluation for individual swimmers.

Checklist

Name	Learning cues	Yes	No
Pushing off the wall	• Is the swimmer's body completely under water before he pushes off the wall? • Has the swimmer pushed off the wall as hard as possible so as to generate speed?		
Streamline position on front	• Are the arms (including fingers, hands and elbows) and legs (feet and knees) completely straight? • Is the body kept in a horizontal line? • Is the head down?		

Name	Learning cues	Yes	No
Gliding on front	• Is the body kept in a horizontal line? • Does the swimmer keep arms and legs still during the gliding phase? • Is the head down?		
Front crawl – Arm movement	• Is there a proper pulling and pushing phase to generate swimming speed? • During the recovery phase: Is the elbow pulled out of the water first and kept high while the hand moves just above the water to the front?		
Front crawl – Leg movement	• The leg movement is supposed to come from the hip rather than the knee joint. Is the knee kept straight during the downward movement? • Is the foot relatively close to the top of the water?		
Front crawl – Breathing	• Breathing should not happen by rotating the upper body. Is it only the head, followed by the shoulder, which turns to the side for breathing? • Does the swimmer breathe on every third stroke?		
Front crawl – Tumble turn	• Is the swimmer close enough to the wall and can she touch the wall with her feet? • Do swimmers breathe out through their nose during a tumble turn? (This prevents water getting into the nose)		
Backstroke – Arm movement	• Is there a proper push and pulling phase to generate swimming speed? • During the recovery phase: Is the arm kept straight and does it enter the water above the head (arm passing or touching the ear before entering the water pinky finger first?)		
Backstroke – Leg movement	• The leg movement is supposed to come from the hip rather than the knee joint. Is the knee kept straight during the downward movement? • Is the knee relatively straight and do the feet only just break the surface?		
Backstroke – Tumble turn	• Is the swimmer not too far from the wall when turning onto the chest? • Is the swimmer only doing one front crawl arm pull before doing the tumble turn?		
Breaststroke – Arm movement	• Does the arm movement speed increase during the pulling phases? (This will greatly increase swimming speed) • Are the arms fully stretched out into streamline position with the head down? (This reduces drag)		



Name	Learning cues	Yes	No
Breaststroke – Breathing	• Do swimmers stick to breathing once for each arm movement cycle? (The rules for breaststroke swimming do not allow for the head to stay either underneath or above the water for more than one arm stroke movement)		
Breaststroke – Arm and leg coordination	• Are arms and legs stretched out at the same time, ie gliding between each stroke?		
Breaststroke – Turn	• Does the swimmer push off the wall under water? (This reduces drag)		
Breaststroke – Underwater pullout	• Are arms resting at the hips to glide and use speed generated through the arm stroke? • Does the head break through the water surface halfway through the second arm stroke? • Is the swimmer streamlined during push off?		
Butterfly – Arm movement	• Does this movement start off slowly and increase in speed throughout the underwater arm movement cycle? (This will assist in increasing swimming speed and will prepare for the recovery phase) • Do hands enter the water surface together and as far in the front as possible?		
Butterfly – Breathing	• Does the head only lift out the water for a short period of time? (If it stays too long above water, it will affect the important arm recovery phase)		
Butterfly – leg movement	• Are the legs an 'extension' of the whole body during the wave-like movement? • Are feet held together during the butterfly kick?		
Individual medley	• Is the swimmer able to combine all four strokes in the correct sequence for individual medley?		
Starts	• Is the swimmer able to demonstrate the correct stroke-specific starting techniques for all four swimming strokes?		
Turns	• Is the swimmer able to demonstrate the correct stroke-specific turning techniques for all four swimming strokes, as well as individual medley?		
Finish	• Is the swimmer able to demonstrate the correct stroke-specific finish for all four swimming strokes?		

Appendix: Rules, positions and equipment

Rules of swimming

Disqualification

A 'false start': This happens when swimmers enter the water before the starting signal. If swimmers have one false start in a particular race they will be disqualified.

Not touching the wall: During each turn and finish the wall has to be touched with either hand or foot. In butterfly and breaststroke the wall must be touched with both hands.

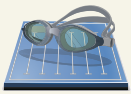
Moving between lanes: During a race the swimmer is not allowed to move between lanes (eg from lane 2 to lane 3).

Changing strokes: Swimmers have to swim the stroke specific to a race (eg they cannot swim breaststroke in a backstroke event). This does not apply to freestyle or medley events. In freestyle events swimmers can swim any stroke but can't change strokes while swimming. For the individual medley event the swimming order is butterfly, backstroke, breastroke and freestyle.

Stroke-specific rules in swimming

Make sure the following stroke-specific rules are followed so that swimmers don't get disqualified.

- **Freestyle or Front crawl**
  During a freestyle event, the swimmer can choose any swimming style. Most swimmers decide to swim the front crawl as this is the fastest of all four swimming strokes, but they will not be disqualified if they swim a different stroke (as long as they don't change strokes at any time during the race)
- **Backstroke**
  The swimmer is required to swim on his back and is only allowed to turn onto his chest just before the backstroke tumble turn. Once on his chest, he is allowed to do one arm stroke only, but without kicking. The race must be started and finished on the back and the swimmer must make sure they surface the water on the back
- **Breaststroke**
  During breaststroke both arms have to move simultaneously (eg one arm is not allowed to move faster or slower than the other). The same applies to the leg movement. No butterfly kick is allowed during breaststroke, except at the turn where one butterfly kick can be done during the underwater pull-out. During the turn and finish, swimmers are required to touch the wall with both hands at the same time. The underwater pullout is optional in breaststroke but must be performed correctly if the swimmer chooses to do it. If breaststroke is performed incorrectly the swimmer might be disqualified
- **Butterfly**
  During butterfly both arms have to move simultaneously (eg one arm is not allowed to move faster or slower than the other) and enter the water at the front. Legs have to move in and out of the water simultaneously – no front crawl kick is allowed. During the turn and finish the swimmer is required to touch the wall with both hands at the same time.



Rules in competitive swimming

How a race is started

Front crawl, breaststroke and butterfly races all begin from the starting block as follows:

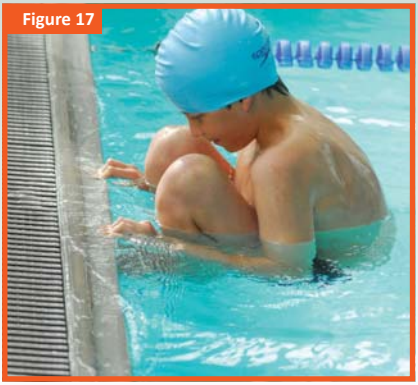
- **Step 1:** The starting referee blows a long signal. Swimmers get onto the back of the starting block
- **Step 2:** The starting referee announces 'Set your marks'. Swimmers move forward to the front of the starting block and lower their upper bodies into a starting position (Figure 16)
- **Step 3**: At the starting signal, the swimmers jump off the starting block and dive into the water.

Backstroke is the only stroke that starts with swimmers in the water as follows:

- **Step 1:** The starting referee blows a long signal. Swimmers jump into the water and face the starting block
- **Step 2:** When the referee announces 'Set your marks', swimmers hold onto the starting block (or wall) with both hands and arms straight, and place their feet against the wall so the toes are just underneath the water surface. When the referee says 'Get set', swimmers pull up towards the starting blocks (Figure 17). Swimmers' knees should be pulled up against their chests and feet should be shoulder-width apart
- **Step 3:** At the starting signal, swimmers push themselves off the wall while swiftly moving the arms to a stretched position above their heads.

Figure 16

Figure 17



Swimming strokes and distances

International competitions are performed both in a 50 m pool (also known as an Olympic pool), and in a 25 m pool, which is also the more common pool size. As an Olympic sport, swimming offers five different events that can be performed at different distances.

	Stroke	Front crawl	Backstroke	Breaststroke	Butterfly	Individual medley (IM)
Distance	Sprint	50 m	50 m	50 m	50 m	-
	Sprint	100 m	100 m	100 m	100 m	100 m
	Middle distance	200 m	200 m	200 m	200 m	200 m
	Middle distance	400 m				400 m
	Long distance	800 m				
	Long distance	1 500 m				

Front crawl, also referred to as freestyle, is the fastest of all four strokes. From a technical point of view, front crawl and backstroke are the easiest, followed by breaststroke, and butterfly is considered the most difficult – it should only be applied with children who are comfortable with the other strokes. Individual medley is a combination of all four strokes performed one after the other in a specific order: 1) butterfly, 2) backstroke, 3) breaststroke and 4) front crawl.

Relays

There are also two types of relays for teams of four swimmers: Front crawl and the individual medley

It is important to note that, in an individual medley relay, the swimming order changes to:
1) backstroke, 2) breaststroke, 3) butterfly and 4) front crawl.

	Front crawl	Individual medley
Distance	4 x 50 m	4 x 50 m
	4 x 100 m	4 x 100 m
	4 x 200 m	4 x 200 m

Tools and equipment

The equipment and tools essential for a swimming lesson are marked with an asterisk.

For a child

- Swimming kit*
- Towel*
- Goggles (to protect eyes from chlorine and to see clearly under the water)
- Swimming cap*.

For a swimming lesson

- Swimming pool*
- Swimming board
- Pull buoy
- Flippers.

Figure 18

Discovery has endeavoured to ensure that all the information contained in this manual is accurate and based on credible clinical and scientific research. Discovery cannot however, be held responsible for any injury, loss or damages that may result from reliance on the information, and by utilising the information you specifically waive any claim you may have against Discovery in this regard. You are advised that each individual has their own unique clinical make-up and while the lesson plans were designed with all individuals in mind, some may respond differently to others. You are therefore advised to take due caution when participating in any of the activities recommended.

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