

UKCC LEVEL 1 CERTIFICATE

Unit 2

Teaching Aquatics - Techniques

Part 2 – Core Aquatic Skills



**Scottish
Swimming**

Purpose of this unit

To ensure that Level 1 Teachers have a knowledge of:-

1. The core aquatic skills.
2. The swimming strokes.
3. Diving.
4. Teaching methods including the teaching of non-swimmers.



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Core Aquatic Skills

- a) Entry and Exits from the water**
- b) Orientation**
- c) Submerging and Aquatic Breathing**
- d) Floatation (incl. regaining standing)**
- e) Streamlining**
- f) Rotation**
- g) Propulsion**
- h) Sculling**
- i) Treading Water**



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Core Skills and Future Development

Essential to establish sound core skills at an early stage to enhance future development.

e.g. Streamlining – is important for all strokes, dive entries, submerging in surface dive etc.

e.g. Aquatic Breathing – is important for all strokes and other skills such as surface diving and other submerging skills.

The core skills must be taught / done both with and without goggles to ensure swimmers are ‘waterproofed’ – safer in water.

Core skills must be performed to a ‘HIGH’ standard in order to transfer effectively to future activity. E.g. Aquatic Breathing and Front Crawl.



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a) Entry and Exits

Methods of entering and exiting the water safely which underpin an individual's confidence and independence and also allow the smooth and safe flow of class lessons.

Entries and Exits by:-

- Ladder
- Steps / Ramp
- Side of pool



Some need to be taught right at the start of the programme of lessons.



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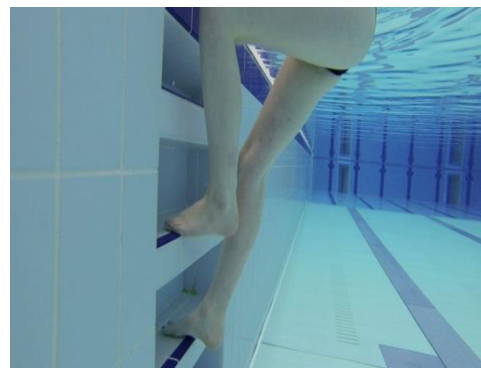
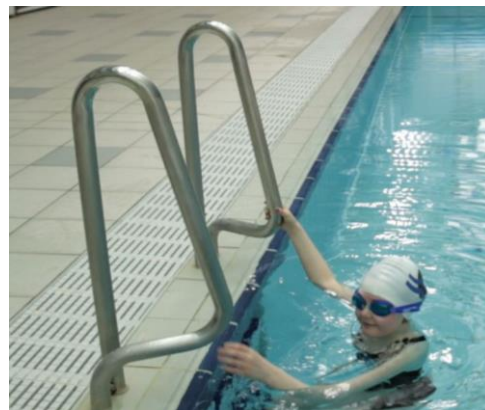
Entry and Exit using Ladders

Useful for:-

- Conventional pools.
- Timid learners.
- Everyone on day 1.

Technique:-

- Back to the water / facing steps.
- Grip both hand rails.
- Down / up steps one at a time.
- Both feet on bottom or side of pool before releasing grip on hand rails.
- Move away from steps.



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Entry and Exit using Steps / Ramp

Useful for:-

- Elderly or very timid.
- Not available in all pools.



Technique:-

- Facing forward.
- Holding edge or rail for stability.
- Slowly one step at a time.



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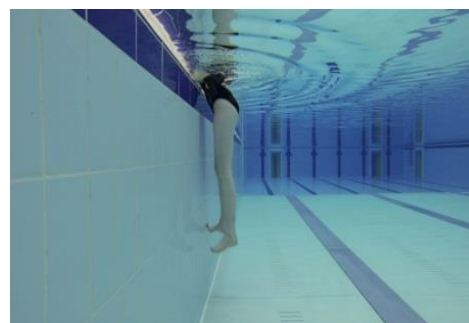
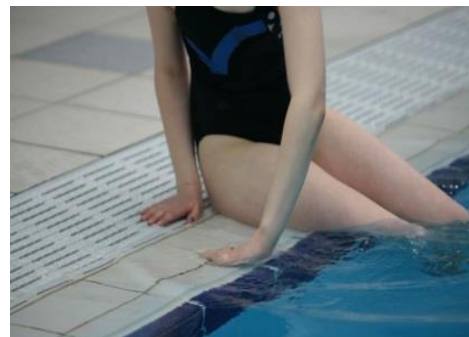
Entry using the Side – Sit and Swivel

Useful for:-

- Class or group entry.
- Progression from having to use steps.

Technique:-

- Sit on side.
- Put both hands on poolside to one side of the body.
- Swivel to face the poolside.
- Gentle lower into water.



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Exit using the Poolside

Useful for:-

- Class or group exit.
- Progression from having to use steps.



Technique:-

- Both hands flat in poolside.
- Push off bottom of pool and push up on arms.
- Lean over poolside.
- Bring one knee / leg up onto poolside.
- Bring other leg up / stand up.



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Entry using the Side – Jumping in

Useful for:-

- Entries once more confident.
- Control of body shape.

Technique:-

- Toes gripping edge of pool.
- Jump up and out.
- Head up / eyes looking forward.
- Body straight.
- Toes enter first.
- Bend knees when feet touch the bottom.



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Variations of Jumps

Useful for:-

- Control of body shape.
- Body awareness and balance.

Technique:-

- As before but variations in flight (star and tuck).
- Head up in all jumps.
- Body back to straight with legs together for entry.



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Entry and Exit Key Points

- **Organise for safety and ability** – depth (minimum 0.9m / chest depth), space, numbers.
- **Jumps require organisation for safety** – space to jump into / what to do next / route back to poolside.
- **Teach the skills** e.g. direction to face on ladders, grip, what do they do at the bottom once in the water?
- **Entries and exits**, like other skills, require practices and teaching points.



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Entries and Exits

Task

What pieces of equipment could you use to help encourage your pupils with entries and exits and make your lessons:-

- Fun
- Progressive



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b) Orientation

Awareness of body position in the water and ability to manoeuvre the body through changing shapes and directions.

- Starts from day 1 as learners become familiar with the water environment.
- Includes orientation of swimmer in the pool / water environment i.e. awareness of depth , pressure, area, buoyancy.
- Also includes swimmer's awareness of their orientation as they change position / turn / move through the water / regain standing etc.



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Orientation - Key Points

- Start with awareness of the properties of water, artificial aids, depths, water surface, pool area, points of safety etc.
- Activities for initial orientation could include walking, jumping, running, hopping, skipping,— these also can involve changing direction and speed etc.
- Can be done with / without armbands (other buoyancy aids).
- Orientation develops as the swimmer progresses through the other core aquatic skills i.e. there is a significant overlap amongst the different core aquatic skills



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Regaining Standing from Prone

- Essential skill to ensure pupils feel at ease.
- Can be practiced with support (partner or floats or one hand on rail initially).
- Needs to be done near side initially until confident.



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Regaining Standing from Prone

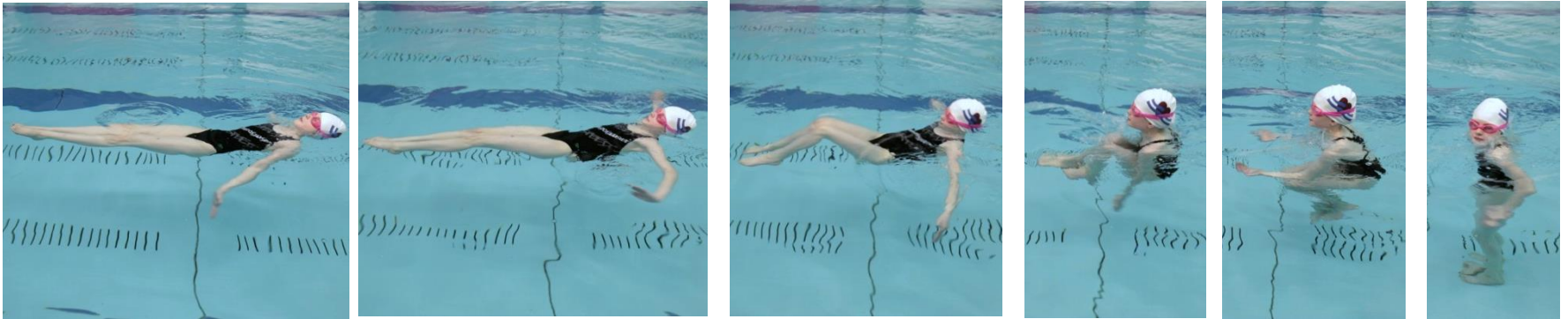
- Press down with hands and lift head.
- Tuck legs up and bring knees forwards.
- Body moves to tucked and vertical.
- Stretch feet down to pool floor.



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Regaining Standing from Supine

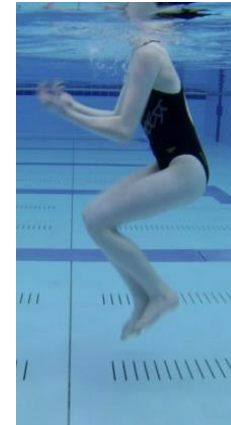
- Generally found to be more difficult than from prone position.
- Practice near side / teacher until competent.



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Regaining Standing from Supine

- Arms wide, press down and sweep forward.
- Head forward, chin to chest.
- Knees bend up towards body.
- Body moves to tucked and vertical.
- Stretch feet down to pool floor.



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Orientation

Task

In groups look at the 'games booklet' or 'activity cards' and identify activities that would encourage different aspects of orientation.



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c) Submerging and Aquatic Breathing

Developing confidence in the water and a feeling of being at ease with the water around the face / the head under the water / breathing being limited etc.

- Introduce in the first lesson.
- Include in all early lessons.
- Use progressive practices to develop (see textbook).
- Should be done in shallow water and later in deep water.
- Eventually requires to be applied to the specific stroke e.g. breathing in front crawl.



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Teaching Submerging and Aquatic Breathing

- **Progressions need to deal with:-**
 - Getting used to water over the face / head – blowing the water away.
 - Getting used to the mouth close to the water / getting used to blowing out along the water / in the water.
 - Getting used to the whole face / head in the water.
 - Getting the water squeezed out of the eyes.
 - Blowing out underwater.
 - Bobbing in / out of water timing the exhale / inhale.
 - Being able to do it continuously.



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Teaching Submerging and Aquatic Breathing cont.

- The mouth being in the water and blowing bubbles.
- Then nose in / eyes in etc.



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Submerging and Aquatic Breathing cont.

- The whole face / head being in the water
- Blowing out / blowing bubbles
- Face / mouth out of water/ inhaling



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Submerging and Aquatic Breathing

Practices involving aquatic breathing must continue to challenge and be combined with other elements of the core skills e.g. floatation, rotation etc.



FUN with a purpose



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Submerging and Aquatic Breathing

- Key Points

- Build confidence in submerging: mouth, face, whole head etc. Then add
- Blowing out through the mouth underwater
 - Slowly long trail of bubbles (trickle) / quickly ... big blast of bubbles (explosive).
- Blowing out through the nose underwater as this contributes to 'blocking the nose off' so that they do not get water up the nose.
 - 'Humming' - to block off the nose.



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Bobbing

- Totally submerge (feet on bottom in shallow end).
- Blow out – long stream of bubbles.
- Raise head so that mouth is clear – breathe in.
- To get water out of eyes - squeeze eyes shut and open again – do not rub eyes.
- Submerge again.



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A final test

Repetitive bobbing:-

- Bobbing should be a relaxed, continuous, controlled and non-stressful activity – (15 bobs / for about a minute) until that level of competence is reached they are not ready to progress.
- N.B. no stops, no rubbing eyes, supplying adequate oxygen etc.



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Submerging and Aquatic Breathing

Task

- a) Using the 'Songs Booklet' find 3 songs that you could use to build confidence in submerging and aquatic breathing for your young beginners.
- b) If your group were adults how could you achieve the same objective?



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d) Floatation

Floatation – developing confidence in the support of the water and understanding of personal buoyancy. (It also includes an awareness of balance in the water.)

- **Introduce in first / early lesson**
 - Possibly with buoyancy aids / support to start with.
 - Requires elements of submerging and aquatic breathing to master prone floating without aids.
- **Should be part of all early lessons**
- **Ensure an understanding of personal buoyancy is developed**

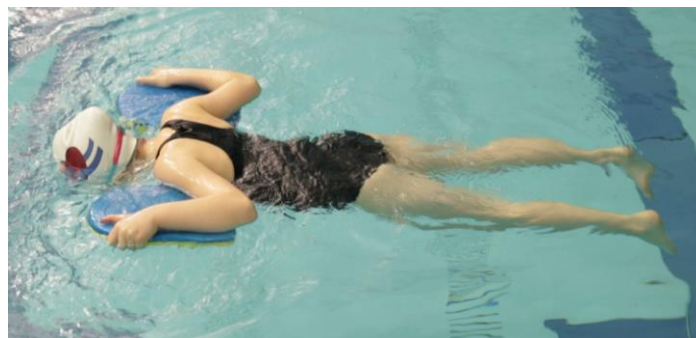


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Floatation - Key Points

Front / prone float

- Breathe in, put face in water.
- Feet off bottom.
- Adjust head position to help raise feet to achieve flat position.
- Lie still.



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Prone Floatation

- Stretch arms and legs either:-
 - Together into pencil shape.
 - Wide into star shape.
- Then try making a sequence of shapes.



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Supine Float

Back / supine float

- Breathe in.
- Put head back / ears in water.
- Look up / nose pointing towards the ceiling.
- Feet off bottom.
- Adjust head position (further back) to help raise feet.



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Supine Float cont.

- Progressive practices reducing support.
- Then sequences of shapes.



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Supine Float cont.

Control of breathing:-

- The air in the lungs is needed to enhance buoyancy.
- Breathe out a little then breathe in.
- Do not breath out 'fully' unless wanting to sink.



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Supine Float cont.

- **Additional adjustments for poor floaters –** arms back / legs bent to redistribute body weight.



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Mushroom float

- General test of floating ability.
- Take a big breath.
- Tuck head in.
- Draw knees up to chest.
- Hold onto knees.
- Tight tuck shape.



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Mushroom Float

Teaching about importance of air in the lungs for buoyancy.

- Take up mushroom position.
- Breathe out fast.
- What happens?



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Floatation

Task

You have a class who are confident without aids. What tasks could you set them to become more confident and relaxed when floating. The class will be working in pairs.



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e) Streamlining

Streamlining is the alignment of the body to reduce resistance i.e. a long, narrow, tapered shape.

- Encourage a streamlined body position from the start.
- Ensure key points re. streamlining are adhered to in all tasks / strokes / skills.
- Should be included (in different guises) in all lessons.

QUALITY OF STREAMLINING IS VITAL.



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Streamlining Key Points (for glide position)

- Head in line with the body / in a neutral position.
- Eyes looking down and slightly forward at the pool floor.
- Arms are extended with the upper arms pressed against the ears.



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Streamlining cont.

- Hands are one on top of the other.
- Legs are together: knees together, feet together and toes pointed.
- Abdominal muscles and buttocks clenched / tightened.
- Stretch to maximum length throughout the body – long thin pointed at both ends.



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Streamlining

- Start with basic body position / alignment - usually through floating practices / pencil float.
- Awareness of head position to achieve as close to flat / horizontal as possible.
- Develop awareness of body shape / muscle tension involved in holding the shape.
- Then develop streamlining with travelling e.g. push and glide (it will take time to teach the push off from the wall).



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Streamlining

Task

You are working with a timid group of adults, what 3 progressive practices could you use to help them build confidence and achieve good streamlining?



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f) Rotation

The ability to turn / rotate in different directions / around different axes of the body, with control, while maintaining spacial awareness and balance.

- Once confident in the skills of floating and submerging / breath control have been established then introduce rotation.
- Be aware of body shape when rotating.



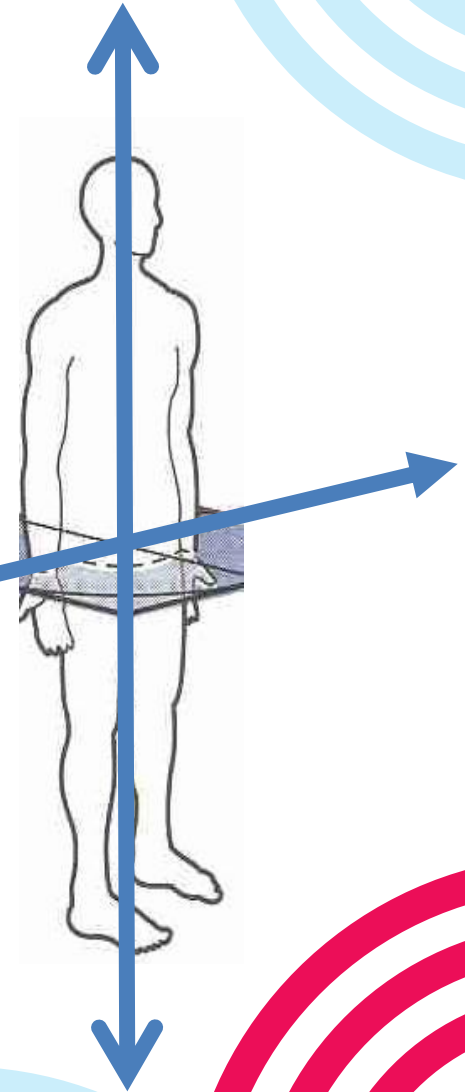
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Rotation

- Takes place round an axis.
- An axis is like an imaginary pole / skewer through the body.
- Swimming mainly uses 2 axes:-
 - Longitudinal axis
 - Horizontal axis

Longitudinal axis
Runs from head
to feet

Horizontal axis
Runs from side to
side



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Types of Rotation

- Around a **Longitudinal axis:**
 - Rolling into the arm action of front crawl and backstroke.
 - Rolling into the arm pull and turning the head to breathe in front crawl.
 - Rolling from front to back and vice versa e.g. log roll.
 - Rotating back on to the front after a tumble turn or rotating onto the front prior to a back crawl turn.
 - Turning on the spot while treading water.



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Continued

- Around an **Horizontal axis:**
 - Somersaults (forwards and backwards)
 - Tumble turns
 - Head first surface dive
 - Breathing in butterfly
 - Diving



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Forward Somersault



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Backward Somersault



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Rotation - Key Points

- Use of body shape to facilitate rotation / stop rotation.
- Use of body parts / limbs to initiate rotation (e.g. head / hands).



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Rotation

Task

Your class are working on rotation. List 6 teaching points that you could use to help your pupils achieve:-

- Back somersault
- Head first surface dive
- Log roll



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g) Propulsion

The ability to apply force (using arms / hands and legs / feet) in order to move the body through the water:-

- Should be introduced from the start and in every lesson.
- Initially can be with artificial aids or without.



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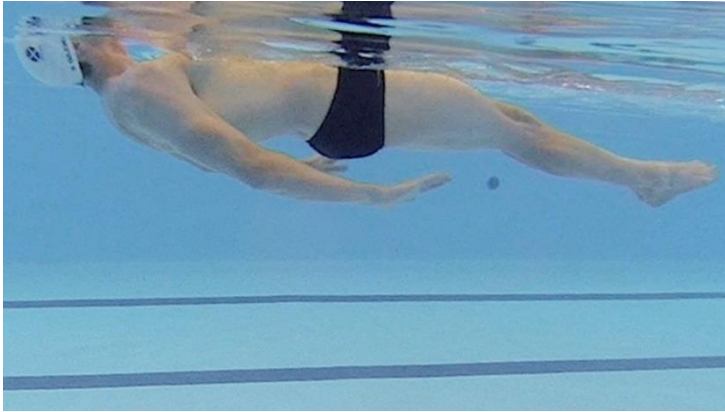
Propulsion Key Points

- **Different ways of applying force**
 - Newton's 3rd Law of Motion - paddle / pull push action.
 - Bernoulli's principle - propeller / sculling action.
- **Propulsion and stroke movements**
 - Simultaneous and alternating.
 - Crawl kicks, dolphin kick, breast stroke kick, arm pulls / sweeps / sculling action.



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Cont.



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Continued

- **Curved pathways of arm pulls:-**
 - longer propulsive phase.
 - still water.
- **Bent arm pulls:-**
 - more muscle groups.
 - shorter levers.
- **Changing pitch of hands.**
- **Simultaneous and alternate arm actions.**
- **Recovery over / through water.**
- **Kicks with different foot positions (plantar flexed and dorsi flexed)/ alternate and simultaneous kicks.**



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Continued

Task

When in a series of 10 lessons with a new group of non-swimmers would you start on propulsion? How would you start one stroke or multi stroke prone or supine etc?



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h) Sculling

The movement of hands to generate propulsion in a 'propeller type' action (as opposed to a pulling 'paddle type' action). [Bernoulli's principle]:-

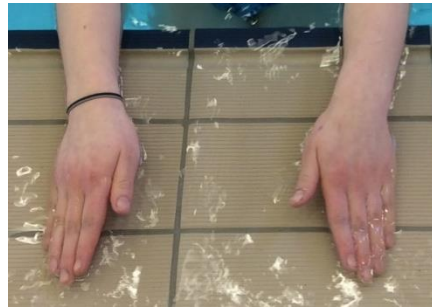
- Sculling is closely associated with 'FEEL' of the water due to the subtle changes in the pitch of the hands. Good 'feel' for the water is fundamental to swimming well / easily.
- The basic movement of sculling features in most manoeuvring skills that beginners learn and should be encouraged from the start (e.g. regaining standing, balance, travelling etc.).
- Sculling should also be taught specifically in its own right later on in the core aquatic skills.
- Sculling is a 'side to side' movement of the hand (as opposed to the pulling back movement)



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Sculling Key Points

- Hands moving in a curved / figure of eight pathway.
- Hands changing pitch as they sweep inwards and outwards (thumb slightly down sweeping out / little finger slightly down sweeping in – hand at approximately 30 - 35°).

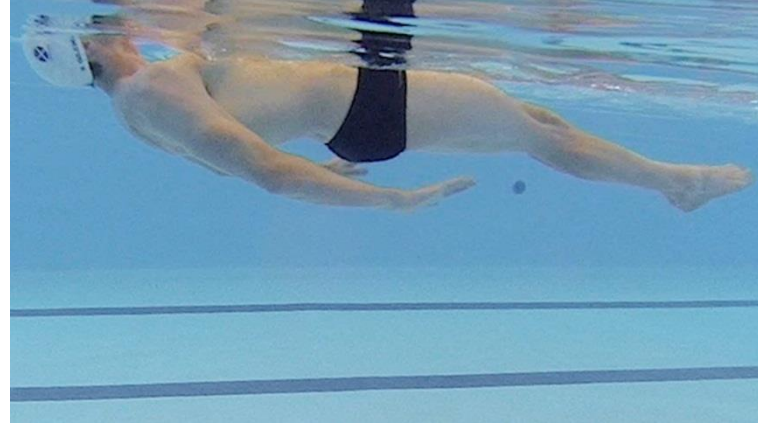


- Constant movement of the hands and constant application of pressure on water.
- The position of hand (i.e. flexion / extension of wrist) and position of the arms determines whether the sculling is supportive or propulsive and its direction.



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Cont.



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Sculling

Task

Practice demonstrating the sculling action for:-

- Flat / support scull (stationary)
- Standard scull (head first travel when lying on the back with the hands by the hips)
- Reverse scull (feet first travel when lying on the back with the hands by the hips)



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i) Treading Water

Treading water is the ability to remain upright in the water with the head clear using sculling of the hands and kicking of the legs for support:-

- Should be introduced in shoulder depth water.
- Needs to be introduced before learners move on to swimming in deep water (for safety).



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Treading Water - Key Points

- Can be performed with breast stroke / scissors / flutter (crawl type) or eggbeater leg kick.
- Eggbeater is the most efficient kick.
- The hands, with the arms slightly to the sides and in front, perform flat scull to support the body.
- The legs, vertically below the body, should be kicking continuously.
- At a basic level treading water requires keeping the head clear while exerting the minimum of effort.



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Cont.



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Treading Water

Task

- a) When in your sequence of covering the Core Aquatic Skills would you introduce Treading Water?
- b) Provide a progressive sequence of 4 or 5 practices to introduce and develop Treading Water.



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Core Aquatic Skills - General

Read Text Chapter 2.2.4 on all Core Aquatic Skills / Practices.

Re-read all Power-Points on Core Aquatic Skills.



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