



## **Float first lesson plan and activities**

### **Children: Junior Primary**

This resource covers water safety educational content based on the *Float first* survival response. Select the content that is best suited for your students – you may want to check out our other resources as well. The lesson can be included in your aquatic education programme in line with the NZC (2007).

#### **Learning outcomes:**

- Recognising the different water environments in Aotearoa New Zealand and potential risks and hazards
- Understanding the buoyancy of different objects in salt and fresh water
- Recognise the importance of the *Float first* survival response
- Identifying the best body positions to try when floating
- Understanding the importance of adult supervision at all times when close to or in the water

#### **Materials required:**

Please refer to the activities section at the end of the lesson plan for information on the materials you will need.

# Introduction

On the 25 July each year it is World Drowning Prevention Day. In schools all over the world people are getting together to learn about how to stay safer in the water. Today we are going to learn about buoyancy – and find out why some items float, and some don't. This will lead us to the topic *Float first*, what it means and why it is an important survival response for everyone.

## Discussion

### Let's start by talking about the different places we find water:

Where do we find water? What are the fun things you and your whānau do in and around the water? e.g. Swimming – pool, beach, river. Fishing – pond, beach, river, lake, boat or on land. Washing myself – bath, shower, Paddling pool

Optional: Use a map of your local area to locate and discuss the local water spaces e.g. river, sea, pond...

### Exploring different water locations

Let's talk about some of the risks or dangers we need to be aware of around water. These are clues that show us it might not be safe to go in. What do we need to be on the look out for when going for a swim at the beach/river/lake/pool?

Responses to cover:

- Depth of the water - the water can be very deep or get deep quickly
- Underwater obstacles - You can't always see what is in the water because of rushes, weeds, muddy water and your feet could get trapped
- Risk of falling in when next to the water if slippery or unstable – this can happen next to the pool, on the rocks or by a lake / river.
- Getting caught in a current - Rivers and lakes can move fast and rips (currents) in the ocean can pull you out to sea.
- Waves can appear suddenly and catch you unaware
- Temperature of the water – on a sunny day we might think the water is warmer than it is when going in. Rivers and lakes are often colder than the beach, especially in the summer.

### Introducing buoyancy – sinking and floating

What do you think these words mean?

Buoyancy is a force that pushes up on objects, and the more surface area the object has for the force to push up on, the greater chance it will float and the more weight it will hold. In addition, more water is displaced when the surface area of an object is large.

Choose from these activities to help the children to understand buoyancy.

**Activity 1** – Floating coins using lids with different surface areas

**Activity 2** – Objects that sink or float!

**Activity 3** - Floating and sinking with salt water

## How do we float?

Find out how many of your class can float and if someone can explain what it means. Watch the Drowning Prevention Auckland eLearning [personal buoyancy video](#). This will provide a good basis for discussion. (Stop the video at 2 mins 20 secs).

Recap questions after watching the video:

- Ask the students to lie down and demonstrate the different floating shapes that can help them to float on their back. Shapes: T, I, X, Y.
- What is the best shape to help us when floating on our back? Why do you think that position helps us to float? Starfish or X shape help to spread the body over a greater surface of water.

## Can everyone float?

Anyone can float but some may take a little longer to learn and will benefit from additional flotation. We saw in the video children using milk bottles to help them float. All people float differently (especially if wearing clothes) and even if the lower body sinks they can still stay afloat and keep their mouth and nose out of the water - tilting head back and using gentle arm movements can help.

Encourage them to try next time they are at the pool. Remembering that they should only enter the pool when a responsible adult is supervising. They can try with milk bottles to start with as well! Check out our learning and resources at the end of the document for details of DPA programmes.

## ***Float first - floating as a survival skill***

Watch the [How to Float first video](#)

[dpanz.org.nz/float-first/#video](https://dpanz.org.nz/float-first/#video)

Floating is an important survival skill that we all need to learn. if we fall into the water at the beach or the river we should *Float first!*

How many of you have played or been for a swim in cold water before? What did it feel like? How did your body respond to the cold?

Responses to cover on how the body responds to cold water:

- It can make us breathe much more quickly which can be dangerous if we are in water
- It can cause us to panic and we are unable to think clearly
- It can affect our muscles which makes it harder to move and swim
- It can make our heart beat much more quickly
- Our skin temperature drops



Why is it important to float before we do anything else? How would you describe the child floating in the picture? Are they able to breathe easily? Are they moving or staying still? Why is it important to float on our back?



Responses to cover:

- Floating allows us to be calm and relaxed
- It helps us to get our breathing under control
- It means we can keep our mouth and nose clear of the water so that we can breathe
- Not everyone can swim but floating requires less energy if we know how to do it.

Once we have recovered from the shock of falling into cold water. It can take around 2 minutes for cold water shock to pass. What do you think we should do next?

Responses to cover:

- Call out or raise your arm to signal for help
- Look for a safe exit to swim to and get out of the water
- Keep floating until help arrives.

Now follow **Activity 4** – Cold hands! This provides an opportunity to experience colder water and see how it feels.

**Remember:**

*Float first* is a survival skill that can be used at any time of the year to help when falling into deep water or if you get into difficulty in the water. For example, to rest if you were to get tired whilst swimming. Plus, it's better to float than attempting to swim against a river current or a surf rip.

If you see someone struggling in the water ask an adult to help and/or call 111. You should never put yourself at risk by entering the water to rescue them.

If you are in trouble yourself *Float first*.

It is important to reinforce with children that it is ok to say you are in trouble.

## Extension - Stay close

This is a key safety message which you may choose to include in your lesson or run a session that focusses solely on supervision. Please contact us if you would like further learning materials to support this message.



### Who can supervise?

- Who are the people that go with you to the beach or pool? Brainstorm all the different people who go – confirm who are the responsible adults that can look after you e.g. Parent, grandparent, uncle, Aunty – identify who these people are.
- Lifeguards and their role: Discuss their role at the beach and that everyone must listen to them. Are they your responsible adult? Highlight that even if there is a lifeguard the children still need a parent/adult to be able to reach, hear and see them.

### Asking permission and understanding the need for supervision

- Brainstorm a list of situations where the children need to ask permission to go somewhere, do something etc.
- Why do we need to ask permission to do these activities, to go to these places? Who do we ask? Why them?
- Brainstorm situations where they need to stay close to an adult e.g. crossing the road. Relate the importance to a water environment.

**Activity 5:** provides an opportunity to create a poster and share with the team at DPA or their friends and family.

## Activities

Choose from the different activities to support the buoyancy and *Float first* learning.

### Activity 1 - Floating coins using lids with different surface areas

**Materials:** Large and small lids, 10c coins, bowl or container, water.

#### Activity:

- Discuss the difference between the two shallow lids – note, one should be wide, e.g. the lid to a container of sour cream, and the other should be small e.g. a water/milk bottle lid.
- Float the small lid in a bowl of water and stack 10c coins on it until it sinks.
- Ask the class to predict whether or not the same number of coins will sink the wider lid.
- Then put the same number of 10c coins on the wider lid. Explain that the greater surface area/wider the lid allows it to continue to float.

### Activity 2 - Testing buoyancy – objects that sink or float!

**Materials:** A variety of objects that will float or sink, a variety of balls of different sizes, a water table/large bucket.

#### Activity:

- Demonstrate floating and sinking and recap on what these words mean
- Prediction - Children select objects – in groups, display objects they think will float/sink.
- Record prediction and discuss possible reasons.
- Test prediction – find out which objects float, which sink.
- Results: Record results - discuss. Why have some floated and some sunk?
- What do you think helped them float/sink?
- How can objects that float help people who are having difficulty in the water?

### Activity 3 - Floating and sinking with salt water

This activity compares floating an egg in salt vs fresh water and provides an opportunity to make the link between sea water and fresh water (rivers, lakes).

Salt water is heavier than fresh (plain, unsalted) water. An egg can help you to prove this.

**Materials:** 2 glasses, 5 teaspoons of salt, 2 raw eggs, water

#### Activity:

- Half fill the first glass with water
- Mix in 5 teaspoons of salt
- Make a prediction – will the egg float or sink?
- Gently place an egg in the salted water What happens to the egg? Does it float or sink?
- Fill the second glass with tap water
- Make a prediction – will the egg float or sink?
- Carefully place an egg in the fresh water. Does it float or sink?

**Discussion:** Salt water is denser than fresh water because of the salt content. There is more matter in an amount of salt water than there is in a similar amount of fresh water. The egg floats in the salt water, but not in the tap water because the egg is less dense than the salt water and denser than the fresh water.

**Results:** Children make a visual record of their experiment using drawings or photographs.

## Activity 4 - Cold hands!

This activity supports the section on *Float first* and cold water immersion. It looks at how the body responds to colder water by asking children to participate in a practical experiment. This activity can be run with a group of students, each working in pairs or small groups or as a teacher-led activity with individuals nominated to participate. \*DO NOT do this activity when alone. Participants MUST have adult supervision for this activity.

**Materials:** 2 x bowls/ice cream containers per group (ice optional), thermometers, stopwatch, towels/paper towels, pen/colouring crayons and paper to record the findings. They will need to be able to lay their hands flat in the bowls and be submerged in the water.

### Setup:

- Half fill one container with warm water and the other container with cold water. Use ice to lower the temperature – Note for children under age 10: we do not recommend the water used in this activity is below 15°C. Time in water is up to 2 minutes.
- Ask the children to draw their left and right hands on two sheets of paper and label one sheet 'Before' and the other, 'After'.
- Ask the children to label the left hand as cold and the right one as warm on both sheets.
- Before they start this experiment ask them to describe the colour of each hand, and of the fingernails. On the 'Before' sheet of paper ask them to either colour each hand or just write the colour of the skin inside the hand shape.

### Instructions for the activity:

- The children now take turns placing each hand in a container of water (warm and cold). Ask them to first place the right hand in the container with warm water and to keep their hand very still. Ask them to describe what it feels like.
- Now ask them to put their left hand into the container of cold water (while keeping the other hand in the warm water) and ask them to describe what it felt like when they first put their hand in the cold water.
- Remind them to keep their hand very still and encourage them to keep describing what they are feeling over the duration of the experiment.
- After approximately 2 minutes, maybe less, ask the children to wriggle their fingers while still in the water. Ask them to describe what feels different when you wriggle your fingers?
- Remove hands from both bowls of water and note down the colour of each hand. Is the colour the same, or different from before the experiment? Record colour on 'After' sheet.

**Discussion:** Discuss as a class what they discovered.

- What did it feel like when your hand first entered the different bowls of water?
- Was the temperature as warm/cold as you had expected?
- As your hand was in the water for longer what did you notice happening to your hand?
- What did you record about the colour of your hands and fingernails when you took them out of the water? Was there a difference to how they looked before you started?
- How do they think it would feel if their whole body was in very cold water?
- Did your hands feel warmer or colder with the movement?
- How do they think the cold water might affect their swimming ability?

**Teachers note on moving in cold water.** When the body is still, the same water is in contact with the skin. Gradually the body will heat up that boundary layer of water and you will feel warmer. When you move, new water is constantly in contact with your body and this has not been warmed up so you will feel colder.

### Activity 5 - Posters

Create an awareness poster about something they have learnt today. Children can focus on any aspect of the learning and may choose; floating and sinking, how to float, *Float first*, risks and dangers in different water locations, or supervision.

Pass it on – encourage everyone to share their poster with friends and family. If they are a member of any groups or clubs they could take the poster along to talk about.

Please feel free to share with DPA as well – we would love to see what you have been up to!

## ***Drowning prevention learning and resources***

### **Professional Learning Development in schools**

We offer PLD within the education sector, to assist schools in developing aquatic education programmes, in line with the NZC (2007) expectations. We can support your teachers to deliver quality aquatics education with in-class and in-pool teaching and resources. Your school does not need to have a pool to provide an aquatics programme. Email: Lynley Stewart, [lynley.stewart@dpanz.org.nz](mailto:lynley.stewart@dpanz.org.nz).

### **DPA Lifejacket hubs (Auckland and Waikato )**

If any students need to borrow a lifejacket they can find their closest [DPA Lifejacket Hub](#). DPA also loan lifejackets to school and community groups.

### **FREE Online Water Safety Modules**

We have a free e-learning platform for all ages to learn more about how to stay safe around water. It covers a range of water-based activities. Check out our [eLearning platform](#)

### **SPLASH Holiday Programme**

Check out our one day [school holiday programme](#) for 8-11 year olds!