

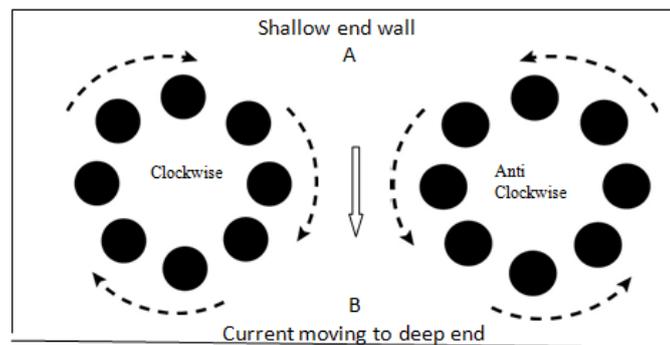


Many children learn to swim in a swimming pool where the water is still and constant, i.e. the same depth and temperature, free from hazards and pollution. However, there is extensive evidence to show that a lot of people get into trouble in the currents often found in natural water especially at the beach but also in rivers.

The purpose of this guide is to explore ways teachers can introduce the concept of currents in a swimming pool and start the transfer of learning from the pool to natural water. This practical learning should be supported by classroom work that complements and builds an understanding of the power, potential hazards, and recognition of these natural forces.

Many students have experienced a whirlpool or swimming between two rows of students making rough water. This teacher guide will use and then build on these experiences. Instead of having one whirlpool, divide the class into two and create two whirlpools travelling in opposite directions. Care must be taken when allocating the direction of travel as we do not want the resulting current to flow into the shallow end wall. The current should be directed towards the deep end of the pool, see diagram 1 below.

*Diagram 1:
Making a
rip current*

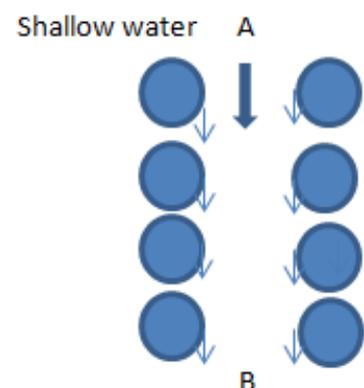


Students can have hands on the shoulders of those in front and run to get the water moving. The experiential activity is stated before the activity begins to ensure prompt action. On the command "stop" the students stand still, float (head or feet first), turn and walk or swim against the current. Questions can be asked regarding the feel of the power of the water and the effect it has on the activity.

Volunteers can be asked to swim from A to B and back again while the whirlpool is picking up speed. They experience swimming with a current and against it. If the two whirlpools are about 1.5 m apart a very small rip current can be created. Floating objects can be placed at A and they can be seen to travel beyond B. When students float on the stop command most continue to move around with the water, and a few could be taken into slightly deeper water.

The whole class can experience swimming with and against a current if they make two lines facing each other standing on adjacent lane markings. Instead of making the waves across to their partner they all push water up to the deep end in a synchronised movement

(shown by the arrows), a current will be formed. Students can peel off and swim up (A) and back (B) against the current. Nonparticipants could time some students to show the differences in speed when swimming with and against the flow.



*Diagram 2:
Making a current*

Students could investigate the number of interventions at beaches by surf lifeguards. Many people get into trouble in a rip current so it is essential that this is covered in aquatic lessons. The pool could be set up as shown, with 4 cones (C) on poolside. Two of the cones are at the beach i.e. at the shallow end and the upper

two cones indicate the end of the waves and the start of the head of the rip. Divide the class into thirds and have some making waves adjacent to both sides of the pool. The others are going to float on their back (to stop panic setting in) with one hand raised and kick hard.

Why is it best for these swimmers to travel headfirst into deep water? They will travel up the pool and as they get nearer the deep water cones they kick less hard and slow down as they are approaching the head of the rip. Once that area is reached they can turn and swim parallel to the beach and when they reach the waves come back to the beach. However, if anyone crosses the cones on the beach they are forced to repeat the exercise as they have been caught by the feeder current and taken back into the rip.

Rip currents can flow at various speeds, but some have been measured at over 4m per second. Not even our Olympic swimmers can swim that fast and so could not swim against a rip. This learning should be reinforced in the classroom with pictures and diagrams of the mechanics of a rip current.

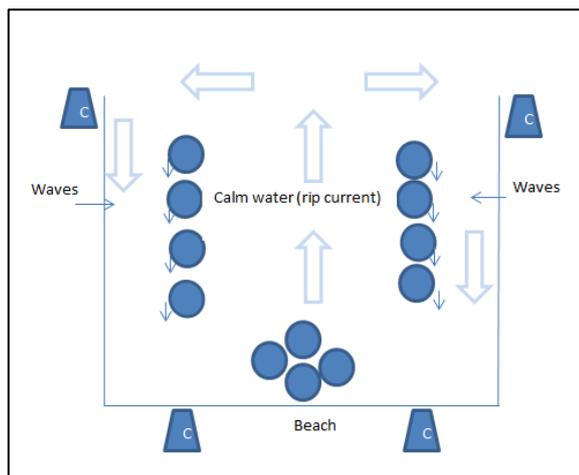


Diagram 3: Simulation escaping from a rip

River currents can change with location, seasons, and the weather.

However, the hazards in rivers are very different from those at beaches. This knowledge is important for those living by rivers. A person who is being swept downstream by a current, needs to be able to understand the dynamics of this hazard. To increase the chance of survival that person should be travelling feet first, to protect their head and have good vision of where they are going as there may be an escape route.

To simulate the slowing down of being swept away in a strong river current, students can be guided to scull feet first in a streamlined position, then encouraged to break that streamlining to slow down, (so they sit in the water) with their feet still leading. They can then be encouraged to use their feet to slow themselves down more while they still scull, (kicking or cycling their legs will achieve this).

This may halt any forward feet first movement down the pool. However, as they would still be travelling at a speed in the river, they need to change their arm action to slow themselves down more. In the still water this will make them travel backwards headfirst (big simultaneous arm cycles backwards). The students can then demonstrate the techniques used to travel down a river current after falling in when they swim in a current made by their peers, see diagram 2 over page.

Practice identifying an eddy to exit into and roll over onto front and powerfully stroke forward to cross the eddy line into slack water.



Diagram 4: "Go-kart" position - check river safety resources

Other resources that may help with exploring currents in the classroom include:

- Rip Currents learning and teacher guide
- USLA and NOAA Rip Current PSA
<http://www.youtube.com/watch?v=ytyLMkV2iu0&awid=7199628462731960223-1008>
- How to survive beach rip currents. Dr Rob Brander. (5.04 mins, Australian)
<http://www.youtube.com/watch?v=8EpDCRBmCP8>
- Be River Safe – DVD on loan from Water Safety New Zealand or
<https://www.youtube.com/watch?v=LOQu48fkJ8M>
- [Water Safety NZ Be River Safe resources](#)

To download a rip poster go to <https://www.surflifesaving.org.nz/>