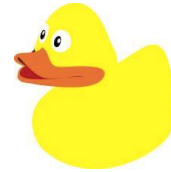


## Making Waves – Student Activity

Ordinary waves are created when a column of water is moved up and down.

### Materials

- An empty student tray, laboratory tray, large basin or sink.
- Water
- A blocked filter funnel.
- A small floating object e.g. bath duck.
- Newspaper if not using wet area.



### Method

1. Lay down newspaper to collect any splashes, if directed to.
2. Fill the container with water, almost to the top.
3. Place the blocked filter funnel into the water (upside down) and push it up and down to create waves. This needs to be done near to the surface and slowly.
4. Observe and note down what happens.

***The moving raised surface of water is called a “wave front”.***

5. Place the floating object (e.g. bath duck) half way along the container.
6. Gently raise and lower the blocked filter funnel to create waves again.
7. Observe and note down what happens to the floating object.

### Observations

What did you observe when the surface of the water was disturbed? \_\_\_\_\_  
\_\_\_\_\_

In which direction was the movement? \_\_\_\_\_

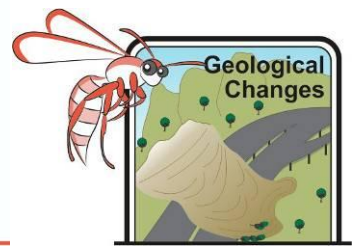
Sketch the shape and movement of the waves below.

Diagram of waves

Scale 1:

**HINT** if your sketch is one fifth of the size of the real object, the scale is 1:5. Similarly if your sketch is one tenth of the real object then the scale is 1:10

Describe how the floating object moved when the wave passed through the water. \_\_\_\_\_  
\_\_\_\_\_



## Making Waves – Student Activity

Draw what would happen to the ducks as a wave front passed through them from left to right.



1.

2.

3.

4.

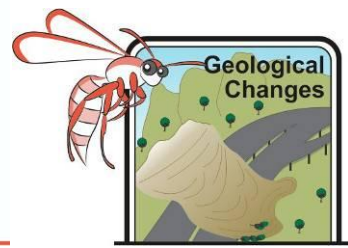
5.

6.

**Waves only become tsunami if they reach shallowing water and start to build up.**

**Tsunami waves are not the same as tidal waves.**

**Vocabulary** Column of water, wave, wave front and tsunami



## Making Waves – Student Activity

### Extension or Homework

This can also be carried out in a swimming pool using floating empty cool drink bottles. Waves could be generated by students (or their families) jumping into one end of the pool.

**Pool safety rules must be strictly followed. Adults must be informed before proceeding!**



Which safety rules must you follow when in a pool area?

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Place a line of bath ducks or something else that floats across the water and send out a wave. Describe what happened to them.

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Repeat with the ducks (or other) in a line leading away from the initial water disturbance. Describe what happened.

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### Extension - Plunge a penguin in a pool

What shape would the wave fronts generated by the plunging penguin be?

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Diagram

Could a plunging penguin in a swimming pool cause a tsunami? Explain your answer.

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