

# Activity S.2

## Water Filter



S.T.E.A.M is an abbreviation for Science Technology Engineering Art and Maths and is an integrated approach to learning that encourages learners to make connections between concepts and thinking which can be applied to solving real world problems.

Whether you are new to STEAM or not, these easy to manage projects all about water will encourage critical thinking skills and scientific processes all while having lots of fun along the way.

### Background Information

There may be microscopic organisms in water that could make us sick. In Cairns we treat our drinking water to make sure it is safe to drink. We call water that hasn't been treated 'raw' water. This water may contain algae, bacteria, viruses, soil and/or pollutants. Filtration is an important step in the water treatment process. In this activity, make your own filter and discover what happens to dirty water as it passes through the filter.

### For this activity you will need:

- Worksheet
- Dirty water
- 2L plastic bottle
- 1 large beaker or jug
- 1 cup clean fine and coarse sand
- 1 cup small pebbles
- 1 coffee filter
- 1 rubber band

### Explore more...

Why do you think the water became clearer?

What are the benefits of filtering water?

Think about any ways your filter design could be improved.

What other steps are there in treating water to make it safe to drink?

### Did you know?

An estimated 88% of global health problems are caused by water contamination.

**REMEMBER** Just because water may appear clean, it doesn't mean it is. Only drink TREATED water, so you don't get sick. Cairns supplies treated drinking water so it's 'on tap' for when you need it. Water is precious, only use what you need.