

I'm going to work like a scientist!

Scientists observe, measure and interpret data to test their ideas.



In the lab



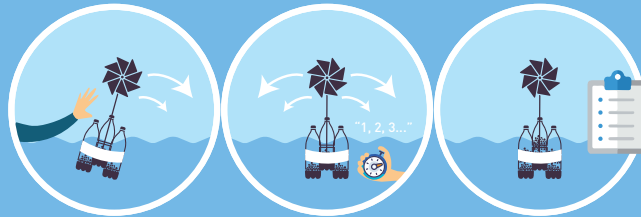
On a boat



Underwater

DO

"I will tip the turbine over the same amount each time, let go and start timing. When it stops wobbling, I'll stop the timer and record my result. I'll repeat this with different amounts of ballast"



REVIEW

Scientists need to ask BIG questions!

- "Do the results support my hypothesis?"
- "Was the test really fair?"
- "Can I explain what happened using the science I already know?"
- "What can I do better next time?"



PLAN

How to experiment like a scientist



???



**Step 1
BIG IDEA!**

HYPOTHESIS
"More ballast makes the platform more stable!"



"I will change the mass of the ballast."

The thing a scientist changes is called the *independent variable*



"I'll measure the stability."

The thing a scientist measures is called the *dependent variable*



How will you make this a fair test?

"Same bottles, same depth of water, same starting position. These are all kept the same to make it a fair test. They're called the **control variables**"



Activities

Match the words to the right explanation

Hypothesis

An experiment

Control Variable

A big idea to be tested

Fair Test

Part of the experiment kept the same

Match the variable in Roisin's experiment to its type

Time

Control

Mass

Dependent

Depth of water in tank

Volume of platform floats

Independent

Starting lean