

Lesson 6

Water Detectives

Prep
Science



Duration:
40 minutes



Lesson Focus:

Investigating how different materials interact with water.



Resources

- Lesson Story YouTube: Water Detectives from (Banjo Education Support YouTube Channel.)
- Small samples of safe materials selected for testing
- Droppers/spoons and small measured amounts of water
- Trays/towels
- Student Water Detectives worksheet
- Pencils

Resource Purpose

The story creates the investigation question. Students then make predictions, test materials consistently and record what they observe.

Success Criteria

- I can make a prediction.
- I can test materials safely.
- I can observe and record what happens.
- I can compare my results.

Learning Intention

We are learning to investigate what happens when different materials come into contact with water.

Key Vocabulary

water • absorb • waterproof • material • prediction • test • observe • result • compare • evidence

40-Minute Lesson Sequence

Time	Lesson Stage	Teacher Actions	Student Actions
0–5 min	Engage / Hook	Show a small piece of fabric and a plastic item. Ask: What do you predict will happen if the same amount of water is placed on each?	Observe, predict and share existing ideas.
5–13 min	Lesson Story	Play/watch Water Detectives. Pause before outcomes are revealed and collect student predictions.	Watch, listen, respond to prompts and make predictions.
13–18 min	Explicit Teaching	Model a simple fair comparison: same-sized samples where possible, same amount of water and same observation time. Introduce absorb and waterproof/non-absorbent in age-appropriate language.	Identify the key scientific idea and practise vocabulary.
18–28 min	Hands-On Activity	In groups, students test selected materials with small equal amounts of water and observe whether water soaks in, stays on the surface or changes the material.	Investigate collaboratively and use observations as evidence.
28–35 min	Worksheet Task	Students record predictions and results for the tested materials using drawings, ticks or short labels, then identify one comparison.	Record the most important evidence from the activity.
35–38 min	Analyse & Discuss	Create a class result chart. Ask what pattern students notice across materials.	Share findings, compare ideas and justify responses.
38–39 min	I Wonder...	Which material would be best for keeping something dry? What evidence supports your idea?	Develop or discuss a scientific question.
39–40 min	Exit Ticket	Name one material and tell what happened when water touched it.	Give one individual evidence-based response.



Explicit Teaching

Scientific Idea: Different materials interact with water in different ways. Testing and comparing results gives us evidence about their properties.

Board Model:



Student Investigation

Story → hands-on activity → worksheet evidence. Students first encounter the scientific idea through the lesson story, then apply it with real objects/materials, and finally record only the key evidence needed to show their understanding.

Investigation Prompt:
What does our evidence tell us?



Teacher Questioning

- What do you notice?
- What evidence supports your idea?
- What is the same? What is different?
- Which science word describes this?
- How do you know?
- What happened when you tested it?



Expected Big Idea

Different materials interact with water in different ways. Testing and comparing results gives us evidence about their properties.



Curriculum Links – Prep (AC v9)

AC9SFU03	Recognise that objects can be composed of different materials and describe their observable properties.
AC9SFH01	Explore how people use observations and questions to learn about the natural world.
AC9SFI01	Pose questions and make predictions based on experiences.
AC9SFI02	Engage in explorations safely and make observations using the senses.
AC9SFI03	Represent observations using provided structures and identify patterns with guidance.
AC9SFI04	Compare observations with predictions.
AC9SFI05	Share questions, predictions, observations and ideas with others.



LESSON 6 – WATER DETECTIVES

Let's Compare!

Predict, observe and compare what happens when different materials come into contact with water.



Material	1. Predict Will it soak up water?	2. Observe What happened when it got wet?	3. Compare Did it absorb water?	4. How did it feel? Circle how it felt after it was in water.
 Cardboard	 Yes  No	  	 Yes  No	 Soft  Soggy  Still hard
 Fabric	 Yes  No	  	 Yes  No	 Soft  Soggy  Still hard
 Foil	 Yes  No	  	 Yes  No	 Soft  Soggy  Still hard
 Sponge	 Yes  No	  	 Yes  No	 Soft  Soggy  Still hard
 Plastic	 Yes  No	  	 Yes  No	 Soft  Soggy  Still hard
 Wood	 Yes  No	  	 Yes  No	 Soft  Soggy  Still hard

What do the pictures mean?



= Wet



= Soaked / Soggy



= No change



= I think YES



= I think NO



= Soft



= Soggy



= Still hard