



Save The Water

Subject: Science and maths Context: Water conservation / Efficiency	Year Group: Year 2	Date:
Knowledge, Skills and Understanding: Fractions are used and accurate measurements taken for volume and capacity. Addition and subtraction (from 1000) used to work out the different results. A simple table is constructed to record result. Scientific enquiry is demonstrated using simple questions and equipment.		
Learning Objectives (Choose from): <ul style="list-style-type: none">• Asking simple questions and recognising that they can be answered in different ways.• Observing closely, using simple equipment.• Performing simple tests.• Using their observations and ideas to suggest answers to questions.• Gathering and recording data to help in answering questions.		
Lesson Overview: This activity investigates water conservation. Water is poured down the gutters and collected to see how much is left.	Resources: <ul style="list-style-type: none">• Moti-Lab reservoir• Moti-Lab board• Moti-Lab gutters• plastic measuring jugs• Whiteboard Markers Key Vocabulary: bigger, smaller, taller, shorter, longer, further, plastic, glass, metal, paper, heavy, light, full, empty, half, quarter, longer, shorter, faster, slower, less, more, splash, flow, leak, spill.	
Activity: <ul style="list-style-type: none">• Get the children to set up a run using all the gutters and switch.• Choose a litre measuring jug and fill it with 1l of water and pour it down the gutters and collect the water at the end of the run (ensure each time that an accurate measurement of 1000 ml is used).• Explore, observe and record the behaviour of the water as it flows down the gutters, observe and record the amount collected.• Compare it to the amount poured originally, is it more, less or the same?• Work out how much water has been lost (500ml or half etc).• Observe and explore how the position of the gutters affects the water loss, splashing and leaking.• Can the children spot “holes” in their system and fix them?• Repeat the test to show how much less / more water they have saved by changing the system.• Record the results of each experiment in a table.		
Extension:		



- When repeating the experiment can the children work out the difference in ml of water saved from the previous experiment? (e.g. 1st experiment 500ml saved, second experiment 600ml saved, the system improved by 100ml).
- Once the gutter system is in place, keep it the same (fair test) and use a different container for pouring. Are the results similar? i.e. If half was lost from a cup is about half lost from a watering can?

Conclusion / Plenary:

- Shallow gutter positions slow down the water.
- Water is lost due to splashing and leakage.
- The switch produces a lot of leakage.
- Lining the gutters up reduces leakage.

Cross Curricular Links (Choose from):

Maths

Number and place value

- Use the language of: equal to, more than, less than (fewer), most, least.

Fractions

- Recognise, find and name a half as one of two equal parts of an object, shape or quantity.
- Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.

Measurement

- Compare, describe and solve practical problems for:
 - Capacity and volume [for example, full/empty, more than, less than, half, half full, quarter].
- Measure and begin to record the following:
 - Capacity and volume.
- Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening].

English

- Describe the experiment in chronological order.
- State observations in speech and writing.
- List the number and lengths of gutters.

Challenge Questions (Choose from):

How long does it take for a container full of water to run down the gutters?

How long do you think it will take for half a container to run down the same gutters?

Were you correct?, can you guess how long it would take for a quarter of a container of water to run down?



Complementary Activities

- Use a range of texts to find out why it is important to save water.
- Talk about efficiency of other systems e.g. a car (miles per litre of fuel).
- Talk about energy efficiency and why it is important to save electricity / heat etc.

Useful Links

- <https://www.youtube.com/watch?v=UuHPtgX71L0> - save the water Moti-Lab
- <http://everylastdrop.co.uk/> - water saving in the house animation
- <https://www.youtube.com/watch?v=rI0YiZjTqpw> - water saving animation
- <https://wateruseitwisely.com/kids/> - water saving website

