Module 1:
Staying Dry and Clean

Lesson 1:
Discovery and Experience

Class Level: Infants	
Strands: 1. Materials 2. Living Things 3. Working Scientifically	**Strand Units:** 1.1 Properties, 1.2 Materials and Change 2.1 Myself

Safety: All material should be safe and found in your classroom or at home. Avoid selecting sharp items.

Background

This lesson introduces students to the general properties of materials that are waterproof and water absorbent. To encourage children's inquiry, it is placed in the context of natural and - man-made material. Students will sort, predict, and investigate the properties of waterproof material. They will also consider that if it is waterproof – it is much easier to clean.

Key Learning

Some materials are waterproof, and others are absorbent. Waterproof material is easy to keep clean.

Resources
- o Man-made materials that are waterproof and water absorbent such as:a jumper, sock, raincoat and wellies raincoat/hat, pillowcase
- o Natural materials that are waterproof and water-absorbent such as leaves, broccoli, wood dried without bark, stone, sand.
- o Water and mud for the demonstration
- o Buckets, water for exploring tables.

SunPilot Resources
- o Lesson 1 powerpoint
- o Written recording template

Key Vocabulary

Encourage students to clap out the syllables in each new word and discuss what sounds they hear in each word. This will help the students to remember the new vocabulary while also developing phonological awareness.

● Waterproof	● Absorbent
● Natural Material	● Repel

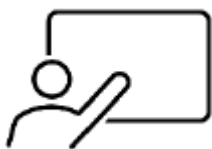| Learning Objectives/Outcomes		
Science	**Literacy**	**Other**
1. Materials 1.1.1 investigate materials for different	**Oral Language**	**Numeracy: Early Mathematical Activities,**

properties; materials that absorb water and those that are waterproof. 1.1.2 know about some everyday uses of common materials 1.1.3 group materials according to certain criteria.

1.2.1 explore the effects of water on a variety of materials 1.2.2 observe and describe materials when they are wet and when they are dry 1.2.3 identify some materials that are waterproof

2. Living Things 2.1 become aware that people have a variety of needs for growth (exercise, food, clothing, shelter)

3. Working Scientifically 3. Observing, predicting, investigating | -express personal opinions, ask and answer questions to get information, develop understanding and to clarify and extend thinking in relation to absorbent/waterproof materials

-make predictions and reflect upon actions, events and processes in relation to waterproof/absorbent materials

-name, describe and categorise objects that are waterproof/absorbent

-use sophisticated oral vocabulary (subject specific) as listed above

Reading

-recognise and manipulate syllables in new vocabulary words | **Data.** sort and classify sets of objects by specific criteria. |

Lesson outline

Introduction: **Discuss staying dry** (demonstration and whole class discussion)

Teacher talks about how we stay dry   **Side 2**
Houses and shelter and ways of protecting yourself against the rain. We use coats to stay dry when we are outside – what is a coat made of (slide 3)? Would your jumper work to keep you dry?

Teacher physically shows raincoat, wellies, jumper, socks.   **Slide 4**

Which would you wear to keep dry in the rain? Explains the word waterproof   **Slide 5**

Clap syllables: wa'ter'proof

- What sounds do you hear in this word? Can you explain what this word means?

- Water runs off Waterproof material (it repels water).

What about the jumper and socks? Place them together – these absorb water.
Explain the word absorbent. Ab'sorb'ent   **Slide 6**

Demonstrate waterproof and absorbent by pouring water onto the waterproof material and the absorbent material. See how it runs off one and does not run off the other.

Discuss keeping clean.   **Slide 7-9**

How do we keep clean? We need to wash ourselves. What if your jumper gets dirty?

You need to wash it. What about your wellies or raincoat? Do you need to put it in the wash or scrub like you do with your hands? Students should realize that waterproof material only needs to be rinsed off.

Demonstrate this by making a sock muddy and a waterproof material (raincoat) muddy, run water across them and have the students observe that the mud comes off with the water on the waterproof material.

Activity 1 - Exploring table: groups of 2 – 4   Slide 10

Students are presented with an assortment of material provided by the teacher. The material should be natural and man-made material – most plant leaves, **especially broccoli repel water**. Dried broken wood will absorb water but wood that has bark on it should not– use your imagination – try cling film, toys, etc.

Step 1. Ask the students to categorise materials based on whether they think they are absorbent or repellent. By placing them into groups – the students are making **predictions** as to what is waterproof and what is not. Have them explain why they made these predictions.

Step 2. Have the students test their predictions by pouring water on each of the materials over the sink or a basin.

Step 3. Have the students re-categorise the materials based on their findings from the testing stage.

Have each group explain what they thought would happen and what did happen. Was anything a surprise? Did they move anything into a different category after they had tested the materials?

Work through the list of absorbent and repellent material as a whole class on the board.

Optional: Let each student fill in the drawing/written word template (provided).

Activity 2 – Outdoor exploration: groups of 2   Slide 11

Step 1. Have students go outside in pairs and using an eye dropper containing water test to see what natural materials will repel or absorb water.

(Note: Teacher can have a jug of water and pairs of students get a dropper of water from the teacher after they tell them what they want to test and what they think will happen.)

The results should be recorded in some way: Teacher could take pictures, students could make drawings, take notes or take pictures – students could tell the teacher what happened and this could be audio recorded or written down before the students try a different material.

Wrap up (Class discussion)
When the students come back inside, they can have a whole class discussion. Teacher shows the photos that were taken outside, and the students can speak to what they did and what they found out – using key vocabulary.

What did we learn today?   **Slide 12**

- Waterproof – water runs off the material
- Absorbent - water soaks into the material
- Waterproof material is EASY to clean
- Absorbent material needs a good wash with soap to remove dirt

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Modification

- The group activity can be done as a whole class, instead of in small groups: using hula hoops on the floor to split the groups of materials. Students can each be given an item and asked to describe it. The class can discuss if it is waterproof or not and then the student can walk over and place their item in the proper category.
- Discussion of results during wrap-up, can be done as a whole class discussion, within smaller groups or as think-pair-share.
- Waterproof and absorbent items can be listed on the board and students can go up to the board and check (vote on) which they think (predict) are water absorbent or waterproof
- Do the exploring table activity outside.
- Use a learning experience approach to the whole group discussion after their outside activity and write out their experiences.

Extension Activities

- Make the materials that were used during the investigation available during free play for further exploration and opportunity to utilise new vocabulary.
- Have the students draw or list out their predictions and results.
- Put the new words on a word wall.

Assessment

- Teacher observation of how the students sort and test the materials.
- Written recording template.
- Traffic light self-assessment (end of lesson).

Resources

Activity 1: Drawing/written word
template

Name: _____

Waterproof	Absorbent
Draw and label waterproof objects.	Draw and label some other absorbent objects.