This gives an outline of an experiment to test how **waterproof** different materials are. It may involve a considerable amount of water, so we recommend doing it when the weather is warm if you can!

The finer details of how exactly the experiment is carried out are up to the children! They will need to discuss and agree on things like:

- How they will carry out their method, making sure it is consistent each time and they are able to observe what happens to the water. For example, will they put the test materials on the ground, or hold them up so they can see water coming through underneath?
- The amounts of water they will use to test each material will they add one spoonful at a time? Will they try a teaspoon, then a cup, then a bucket? Will they tip the water on all in one go or gradually?

Resources needed for each group

 Three items of clothing to test, made of 3 different materials (one of which is waterproof) – for example, a raincoat, a cotton shirt and a wool cardigan. Ideally, they should all be of a similar size.

NB these will get very wet, so make sure they are not needed soon after the lesson!

- Various containers of different sizes, e.g. a teaspoon, a tablespoon, a cup, a bowl, a watering can or bucket (if you are feeling brave!)
- Access to a tap and an outdoor test space
- Recording sheets (below)





Mr Holiday has decided to go camping in a place called Puddlebottom Fields, which is well known for being very rainy.

Mr Holiday needs your help to work out what he should take with him to wear that will keep him dry.



Task

You are going to test 3 different possible items of clothing that Mr Holiday could wear in the rain. He wants to know how waterproof each one is.



We will test:

Α	 made of
Α	 made of
Α	 made of

Method Take the items of clothing onto the playground. Try pouring different amounts of water onto them. Record your observations in the table on the next sheet. Before you get started, think: Now will you make this a fair test?
For each material, we will:
This is how we will add water:
Prediction What do you think will happen?



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Don't Get Wet!



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Observations		
Material Material		
Clothing item 2000 Material		

Write a letter to Mr Holiday explaining your findings.

Dear Mr Holiday,			
We recommend that you wear			
made of on your holiday.			
Our tests showed that			
Whatever you do, don't wear			
made of			
Have a wonderful camping trip!			
From			
[