What has happened in this photo and why is it a bad thing?

This is a flood.

Animal habitats are destroyed and animals die.

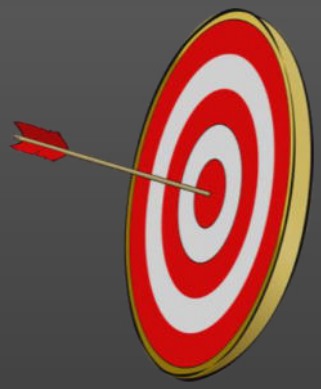
Buildings are damaged.

Cars and other belongings are damaged.

Roads and paths are no longer passable.

This has happened after heavy rainfall and the water has not been able to drain away through the soil fast enough.

Different Types of Soil

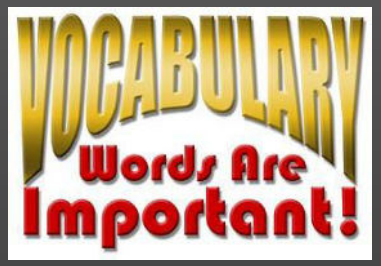


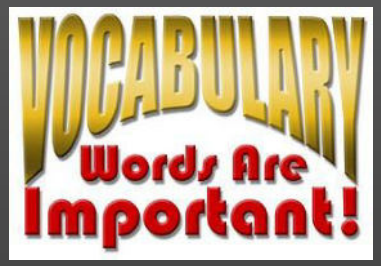
Further develop your understanding of different types of soil.

Describe different types of soil and run an investigation, ensuring a fair test to determine which is the most permeable soil.

Permeable

What does permeable mean?





Permeable means to allow a liquid to flow through it.

Example:

My T-shirt is permeable because when it rained, it let water through and I got soaked.

There are Different Types of Soil

Sandy soil

Clay soil

Gravelly soil

Peat soil

Sandy Soil

Light and dry; lots of air gaps.

Clay Soil

This is very sticky when wet.

Gravelly Soil

Full of small stones.

Peat Soil

Doesn’t contain rock but mostly decomposed plants (humus).

Investigation

ENHANCING PRIMARY SCIENCE

Does water pass through soil at the same rate?

- Aim
- Prediction
- Running Investigation
- Method
- Results
- Conclusion

Aim

The aim of this investigation is to determine which soil is the most permeable.

Prediction (What do you think will happen?)

Why do good scientists make predictions?

A good scientist will always make predictions before an investigation to state what they think will happen.

I think the most permeable soil will be…

Because…

Variables

In all investigations:

The independent variable is……

What I change. The soil type.

The dependent variable is……..

What I measure. Amount of water that flows through the soil.

The control variables are……

What I keep the same to ensure a fair test. Amount of soil, amount of water and same amount of time we allow water to flow through the soil.

Equipment

Soil samples

Sieve

Measuring container to collect water

Timer

Box to place used soil

Method

Pour soil into a sieve.

Place sieve into your measuring container to collect water.

Pour 250ml of water over the soil.

Set your timer going.

Measure the amount of water that has been collected in 3 minutes.

Place soil in provided box and rinse out sieve, empty out measuring container and repeat with other soil samples.

Recording Results

Do you remember why it is important to record your results?

A good scientist will always record their results so other people can see what you have found out.

Results

Soil type	Volume of water passed through in three minutes (cm^3)

Conclusion

Make a judgement on your investigation and your findings. Use the keywords below to describe what you found out and what it means.

Soil types (use the names of the soils used)

Permeable

How have you become a better Scientist today?

Talk to your friends on your table and tell them how this lesson has made you a better scientist.