



Cornerstones

Love to Investigate



How big is a raindrop?

Year 1 Science • Related ILP: Splendid Skies

Synopsis

Children collect raindrops during a rain shower to see how they vary in size.

Investigation

Working in pairs, children take a piece of construction (sugar) paper outside during a rain shower. They hold the paper out flat and catch raindrops on the paper. Working quickly, they should draw around the raindrops before the water evaporates.

Conclusion

Raindrops vary in size.



30 minutes

Programmes of Study

Working scientifically

- Observe closely using simple equipment.
- Perform simple tests.
- Use observations and ideas to suggest answers to questions.

Seasonal changes

- Observe and describe weather associated with the seasons.

Key vocabulary

Droplet

Rain

Weather

Evaporate

Water

Planning and preparation

Essential knowledge

- Rain is liquid water that falls from clouds in the sky.
- Gaseous water is always present in the atmosphere, largely due to evaporation and plants transpiring.
- Gaseous water rises, cools and condenses to form liquid water.
- As more and more gaseous water condenses, clouds form.
- Eventually the water droplets held in clouds become too heavy and gravity pulls them back to the ground. This movement of liquid water towards Earth is rainfall.

Pre-investigation tasks

1. Make a list of all the different types of weather and put them in groups. Which types do we usually get in summer? Which do we usually get in winter?
2. Listen to sound recordings of different types of rainfall. Encourage children to describe what they can hear, such as the pitter patter of gentle rain, the drumming of a downpour, or the rumbling of thunder.
3. Keep a daily weather record by creating a weather tree. Colour code different weather types, such as yellow for sunny, blue for rainy, or yellow and blue stripes for sunshine and showers. Colour paper leaves to reflect the day's weather and stick them on the tree.

Explaining the investigation

The aim is for the children to catch well-defined and distinct raindrops on their paper. Ask the children to share ideas about how they could answer the investigation question. What could they use? What do they predict?

Describe and demonstrate what the children should do. Ask them how long they think they should catch raindrops for and what might happen if they leave their paper in the rain too long.

Important

Change how long they spend catching drops depending on how heavy the rain shower is.

Differentiation

Simplify	Give the children a raindrop size guide to help them measure using non-standard units.
Challenge	Ask the children to use a ruler to measure the raindrops using standard units.

Scientists... *let's investigate!*

START



Predict

How big are raindrops?
Are raindrops all the same size?
What shape are raindrops?
How many raindrops will you catch?



Method

Write your name and date on your piece of construction paper.

Count how many raindrops you collected. Draw a star next to the biggest and smallest raindrops.



Draw around each raindrop with a pencil before the raindrops evaporate.

You will need:

- Pencil
- Ruler (optional)
- A4 piece of construction (sugar) paper
- A rainy day



Practise holding the paper out as flat as possible.



Quickly take the paper somewhere dry.

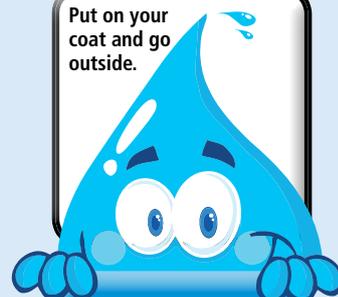


Is your test safe?

Make sure you wear a coat when you work outside in the rain!



Put on your coat and go outside.



Stop before your paper catches too many raindrops!



When told to by your teacher, hold your paper out flat to catch the raindrops.

Summarising learning

Recording

Ask the children to:

- record how many raindrops they caught
- look at their circled raindrops and decide if they are all the same size
- identify their biggest and smallest raindrops
- choose the best method of presenting their findings, using simple scientific language and labelled diagrams.

Concluding and reflecting

Ask the children to use their results to share and discuss what happened during the investigation.

What did they discover about the size of raindrops? Encourage them to reflect on their performance, the accuracy of their initial predictions and any similarities and differences between each person's results.

Questions

1. How did you catch your raindrops?
2. Where did your raindrops go after you caught them?
3. What does this investigation tell us about the size of a raindrop?
4. If you collected raindrops in a thunderstorm, would you get the same-sized drops?
5. Is this the best way to collect a raindrop?
6. What else could you use to collect raindrops?

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