

Parent Guide



@twinklparents

We're excited to share this activity with you. If you are interested in finding more engaging, fun and interesting activities for you and your children, then check out these links to different areas of the [Twinkl Parents](#) website.

games



crafts



puzzles



experiments



word searches



What is this resource and how do I use it?

As a parent, you can play a key role at home in supporting your child's scientific understanding and curiosity about the world around them. Within this guide, we will provide you with the relevant information to support your child's scientific learning journey throughout key stage 1 in accordance with the national curriculum for England.

What skills does this practise?

Working Scientifically

Parent Guides

Investigating

Further Activity Ideas and Suggestions

For other parent guides about how children learn, check out [this category](#) on our [Parents Hub](#). We also have a huge range of subject guides for [year 1](#) and [year 2](#). Keep up to date with the terminology used in your child's lessons with our [jargon busters](#).

Parents Blog



Twinkl Kids' TV



Homework Help



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Parents Hub

How to Work Scientifically in Key Stage One (Ages 5 - 7)



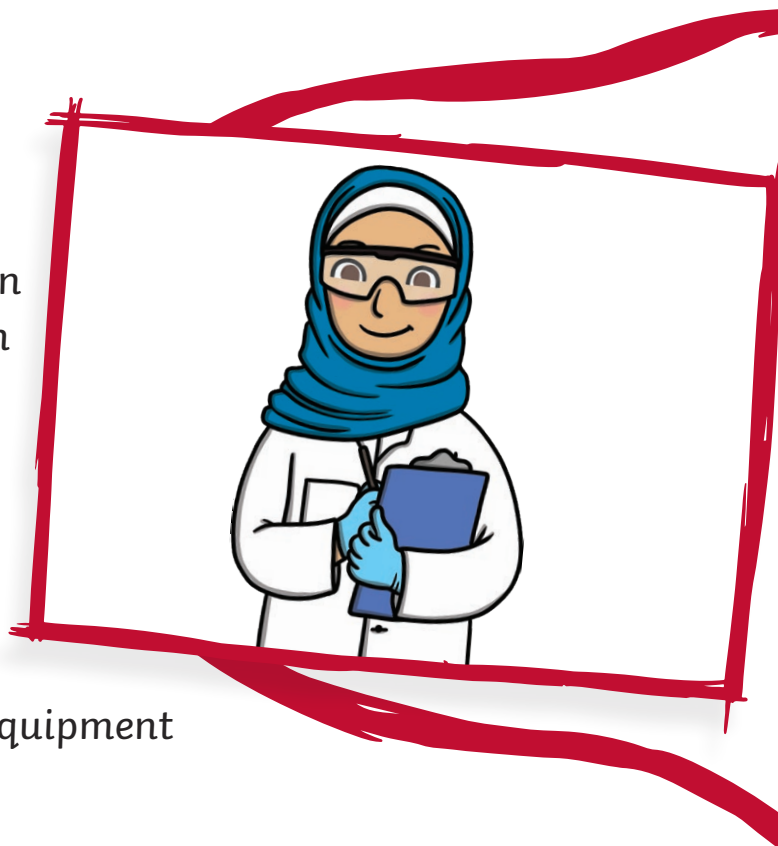
As a parent, you can play a key role at home in supporting your child's scientific understanding and curiosity about the world around them. Within this guide, we will provide you with the relevant information to support your child's scientific learning journey throughout key stage 1 in accordance with the national curriculum for England.

What is working scientifically?

Working scientifically is the process of using scientific inquiry to ask and answer questions, find out information and record data. The objectives within the national curriculum for England include:

- asking simple questions and recognizing that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions

(National Curriculum, accessed March 2024)



Glossary

Here are some keywords that both you and your child may come across within their science journey:

conclusion: A summary of what you learned from an experiment or observation.

data: Information collected during an experiment or observation.

experiment: An investigation which is designed to test an idea or theory.

hypothesis: A proposed explanation for something based on observation or knowledge.

observation: Watching closely and paying attention to details.

results: What you found out from the experiment.

variables: Changeable factors that can affect the outcome of an experiment, e.g. the temperature.

Questions to Ask

While your child explores the world around them, you can encourage them to be curious and inquisitive. During day-to-day activities, or during investigations, you can ask them questions to prompt them, such as:



What do you notice about...?



Why do you think ___ happened?



What do you think will happen if...?



How can we test that?



What did you observe during the experiment?



What is the conclusion?



Do you think it would be different if...?

Equipment

To conduct an investigation, you may need equipment. You could have an 'investigation station' in your house for children to conduct their own investigations or make a list and collect the equipment that they need for specific tests. Here are some ideas for equipment which may be useful to have available:



Magnifying Glass

Let your child play detective and use a magnifying glass to observe small details.



Measuring Tape or Ruler

Use this for measuring size and length. For example, you may want to measure an object before or after an investigation. This is also an important skill to learn within the national curriculum for maths.



Thermometer

This is a great tool for scientific enquiries. There are many tests which may require your child to measure the temperature or something before and after an investigation, e.g. melting ice. This is also a great maths skill to learn.



Jars or containers

These are handy for collecting samples.



Weighing Scale

This is important if you need to weigh objects to find out their exact weight.



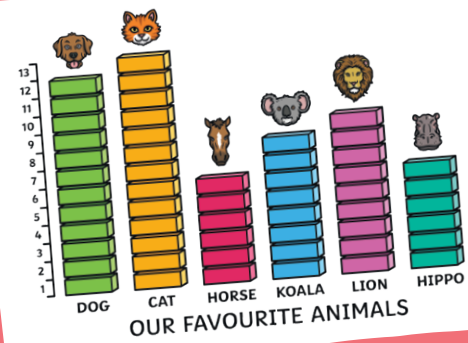
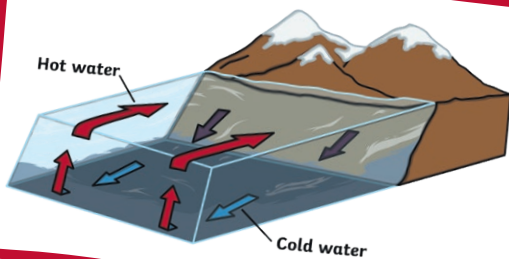
Balancing Scale

It is useful to compare weights using a balancing scale to see which is heavier or lighter.

Ways to Present Data

Drawings or Diagrams

For example, your child might draw a picture of a plant during its different life stages.



Charts or Graphs

In key stage 1, children will encounter different ways of presenting information, such as pictograms and tally charts.

Written Descriptions or Explanations

Children can summarise the results or conclusion of an experiment within a few sentences.



Photographs or Videos

This is a great way to show change. For example, if you are showing how ice melts over a period of time, you could take a photo every minute or take a video.

Structure of an Experiment



An experiment will begin by testing a question or theory. For example, your child may want to know how long it takes for ice to melt at room temperature.

You can guide your child through the following steps to help plan and conduct the experiment:

1. Decide on a question that you want to answer or a theory that you want to test.
2. Make a prediction, e.g. 'I think that it will take... for the ice to melt at room temperature because...'
3. Plan the experiment, deciding what equipment you will need, what the variables will be, how you will test and how you will measure the results.
4. Conduct the experiment and observe closely.
5. Record the data.
6. Analyse the data and draw conclusions.
7. Summarise the results.

Here is an example of a planned investigation:

Snowball Melting

Investigation

You will need:

- 4 snowballs - make sure they're the same size (if you want to be really accurate you can weigh them to make sure they're the same)
- 4 ziplock bags
- 4 bowls
- timer



If you have some snow outside, this is the perfect investigation to find out about how quickly it melts in different conditions. So grab some snowballs and get started! Set up your investigation when you have a day at home. You can be getting on with other activities during the day and come back to observe your snowballs each hour.

Instructions:

1. Put one snowball in each bag and close the zip. Put each bag into a bowl, just in case it leaks.
2. Place each bag in a different location - one in the fridge, one by a radiator, one in the freezer and one in another location of your choice. Write down your predictions on the investigation sheet.
3. Set the time for one hour intervals. Use the investigation sheet to write or draw your observations of each snowball.

Snowball Melting Investigation Sheet

Where I have put my snowballs:

My predictions:

The snowball that will melt the **fastest** will be

The snowball that will melt the **slowest** will be

Fill in your results. Draw or write what your snowball looked like after each hour.

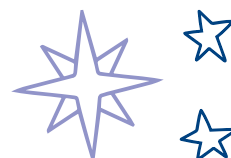
Location of snowball	After 1 hour	After 2 hours	After 3 hours	After 4 hours	After 5 hours	After 6 hours

Which snowball melted the **quickest**?

Which snowball melted the **slowest**?

Conclusion

What affects how quickly something melts?



We hope you find the information on our website and resources useful. As far as possible, the contents of this resource are reflective of current professional research. However, please be aware that every child is different and information can quickly become out of date. The information given here is intended for general guidance purposes only and may not apply to your specific situation.