

# Parent and Carer Information: Year 5 Science

This guide helps you to track the progress of your year 5 child as they develop through the subject of science. In year 5, children learn the key skills that form the basis of their science education, including studying living things, changes of state and the practical skills of investigations and experiments. Practising these skills at home can be a great way to boost your child's confidence and complement what they learn in the classroom. This guide outlines how you, as parents and carers, can best support your child's year 5 science journey, with an easy-to-follow flowchart of what they will learn and clear goals for you to work on together.

Click on each topic to head to the relevant category on the Twinkl website to find super resources to support your child.

Use of Materials

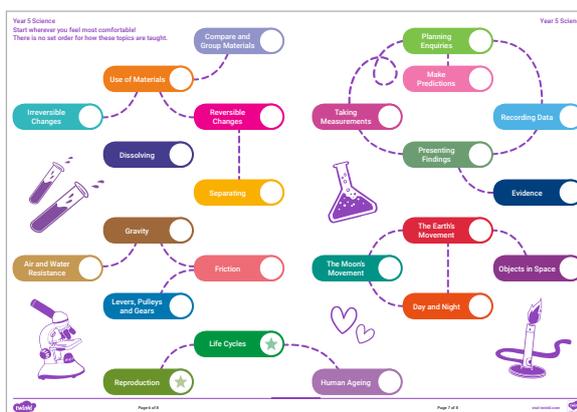
Use of Materials

Alternatively, you can follow the web url [www.twinkl.co.uk/resources/parents](http://www.twinkl.co.uk/resources/parents) to get to the Twinkl Parents Hub.

We have also included handy tick boxes, so you can easily check off when you have covered each topic, and you can keep on track with your child's studies. You can also use the 'traffic light' system to record your child's confidence, and how they feel about the topic you have covered together.

Stick the other pages together to create a display poster for both you and your child to fill in. Complete with handy tick boxes, this chart is ideal for helping to support your child's studies from home.

- I feel unsure about this.
- I feel okay about this.
- I feel confident about this!



We hope you find the information on our website and resources useful. The contents of this resource are for general, informational purposes only. This guide is intended to offer parents general guidance on what subject areas tend to be covered in their child's year group and where they could support their children at home. However, please be aware that every child is different and information can quickly become out of date. There are some subject areas that we have intentionally not covered due to the nature of how they are taught or because a trained professional needs to teach these areas. We try to ensure that the information in our resources is correct but every school teaches the national curriculum in its own way. If you would like further guidance or are unsure in any way, we recommend that you speak to your child's teacher or another suitably qualified professional.

## Compare and Group Materials



Your child can group everyday materials together based on their properties. They can recognise a material's hardness, solubility (whether it lets water through it), transparency (whether it lets light through it), conductivity (whether it allows electricity through it) and response to magnets.

## Use of Materials



Your child can give reasons why a material would be good to use in different situations. For example, they can describe which materials would be good for wrapping ice cream to stop it melting, or which would be best for a warm jacket. They can carry out tests to see which material would be best for different uses.

## Irreversible Changes



Your child can explain that some changes in state are irreversible, meaning they cannot be undone. Some changes result in new materials being created and often these cannot be reversed. They can describe that often changes associated with burning and the use of acid are irreversible. For example, bread being toasted cannot be reversed and when you mix acid with bicarbonate of soda, the reaction cannot be undone.

## Reversible Changes



Your child can explain that some changes in state are reversible, meaning they can be undone. They understand that some dissolving and mixing of solutions can be reversed. They can describe that some changes between solids, liquids and gases can be reversed. For example, melting chocolate turns it from a solid to a liquid but, when cooled, it returns to a solid.

## Dissolving



Your child can recognise that some materials will dissolve into liquids. They know that the resulting mixture is called a solution. They understand that dissolving results in the material becoming a part of the mixture.

## Separating



Your child can describe some different ways of separating a material from a solution. They understand that you can filter or sieve some solutions to recover the material. With other solutions, your child may need to boil and evaporate the solution, leaving behind the material.

## Planning Enquiries



Your child can plan out careful scientific experiments and tests. They understand what variables are and how to control them within an experiment. A variable is something that can be changed in an experiment that may affect the outcome. For example, if you are testing if sunlight helps a plant grow, one variable you can control is the amount of light the plant gets. Another variable would be the amount of water the plant receives.

## Make Predictions



Your child can use results from an experiment to predict what might happen in a future experiment. They use what they have found out to think about what may happen in the future. For example, if they find out that paper disintegrates in water, they could predict that cardboard will take longer to fall apart when put in water, as it is thicker.

## Taking Measurements



Your child can take accurate measurements using different scientific equipment. They are able to take repeated measurements if the experiment needs it. For example, if you are testing how effectively a plant grows, you need to measure the height of the plant at repeated points of time.

## Recording Data



Your child can use a variety of different methods for recording data from an experiment. They can create written methods of the experiment, diagrams explaining what happened, keys, tables and graphs. These graphs include scatter graphs, line graphs, bar charts and tables.

## Presenting Findings



Your child can report and present their findings in an experiment or investigation. They can draw conclusions based on what they have seen or found. They can identify if their experiment supports or refutes a statement.

## Evidence



Your child can identify evidence that has been used to support or refute an idea or argument. They can understand how this evidence can be used and describe why it supports or refutes the idea.

## Gravity



Your child can explain that objects will fall to the floor as a result of gravity. They recognise that gravity is a force that is constantly pulling things towards the centre of the Earth. They can use this to explain that when we jump, we come back down.

## Air and Water Resistance



Your child can describe the effects of air and water resistance. They know that air resistance is caused by air pushing against a surface that is travelling through it. This is the same for water resistance, it is caused by the water pushing against a surface travelling through it.

## Friction



Your child can identify the effects of friction. They understand that friction works when two surfaces come into contact with each other. They can explain that friction makes movement more difficult and understand its uses in daily life. They can explain how friction is used in things such as brakes.

## Levers, Pulleys and Gears



Your child can describe how levers, pulleys and gears can change the effect of a force. They understand that with the help of a lever, pulley or gear, a smaller force can have a much larger effect. They can describe how a tool like a spanner creates a lever and helps to make the job easier.

## The Earth's Movement



Your child can describe how the Earth moves through space. They understand that the planets of the Solar System all rotate around the Sun. They can describe the order of the planets in our Solar System and recognise that the planets take different paths around the Sun.

## The Moon's Movement



Your child can describe the difference between the movement of the Moon compared to the movement of Earth. They understand that the Moon rotates around the Earth, rather than around the Sun.

## Objects in Space



Your child can recognise that the planets of the Solar System are basically spherical in shape. Some are more perfect spheres than others, but they are all a basic sphere shape. They identify that the Sun is also a spherical shape, although it is much larger than the other objects in the Solar System.

## Day and Night



Your child can explain that the movement of the Earth causes day and night. They can describe that while the Earth is rotating around the Sun, it is also spinning itself. This spin causes different parts of the Earth to be facing the Sun at different times, causing day and night.

## Life Cycles



Your child can describe the life cycles of a number of different living things. A life cycle describes the different stages that a living thing goes through, from birth through the death. For example, a seed germinates → roots grow → the plant grows into the light and leaves grow → flowers grow → pollination occurs and seeds grow → seeds are dispersed → a new plant grows.

## Reproduction



Your child can describe the different ways that some plants and animals reproduce. They understand that some plants use different methods of seed dispersal (inside fruits, falling seeds, wind dispersal) and some animals lay eggs, while others produce live offspring.

## Human Ageing



Your child can describe how the human body changes as it ages. They understand some of the changes that occur when moving from childhood to adulthood, being able to see how adults are different from children. They can also describe some of the ways the adult body changes with age.

# Above and Beyond

If you really want to go the extra mile, you and your child can review these sections to gain a greater understanding of each topic and push your learning further.

## Function of the Heart



Your child can name the different parts of the heart. They understand the part that the heart plays in moving blood around the body. They recognise that the heart works like a pump and is a vital organ for life.

## ★ Life Cycles



Your child can describe that living things can be sorted into many different categories. They can name some of these categories and the living things that are found within them. For example, mammals = cat, human; vertebrates = fish, snake; invertebrates = snail, squid; insects = beetle, wasp; amphibians = frog, salamander.

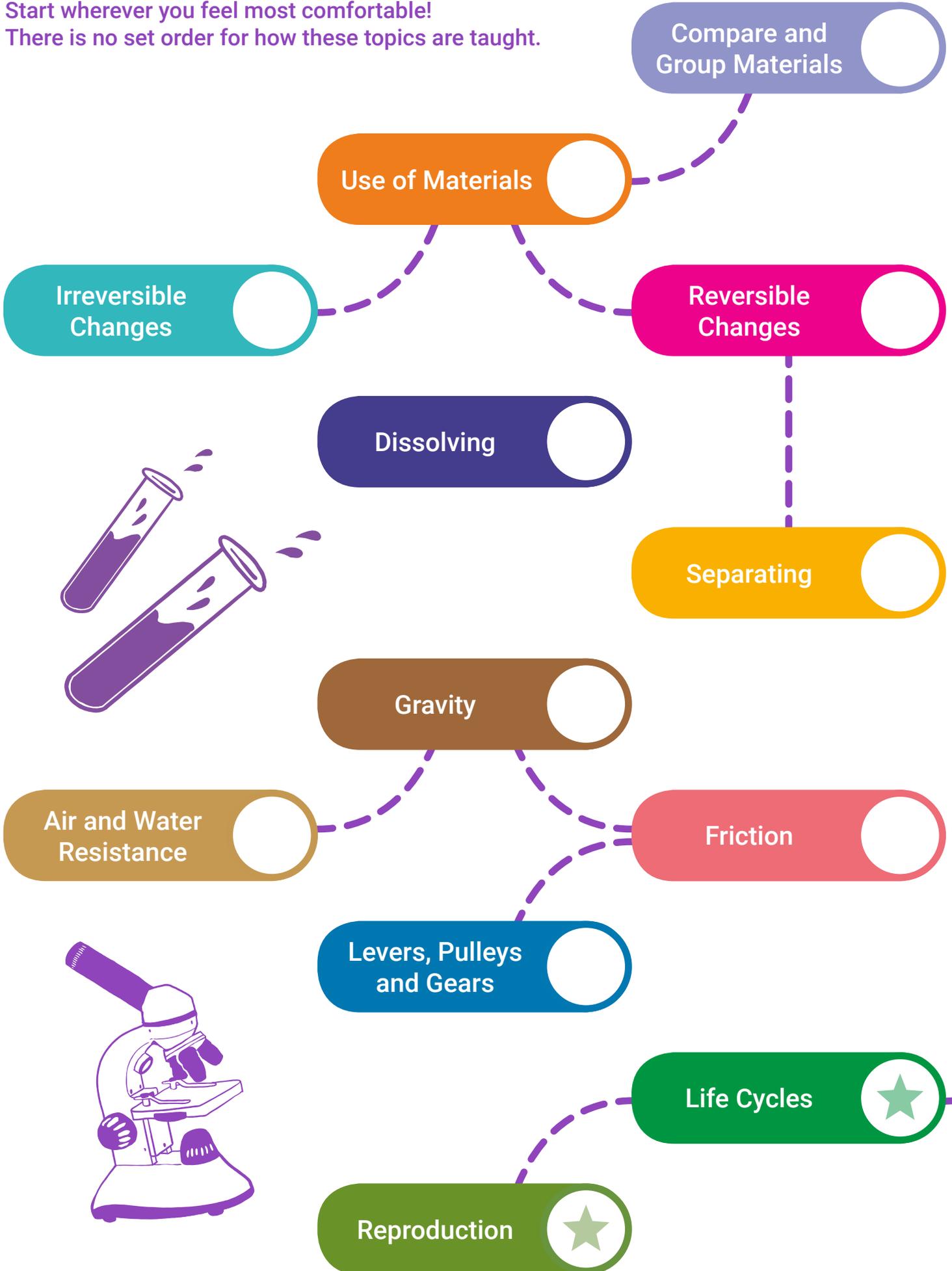
## ★ Reproduction

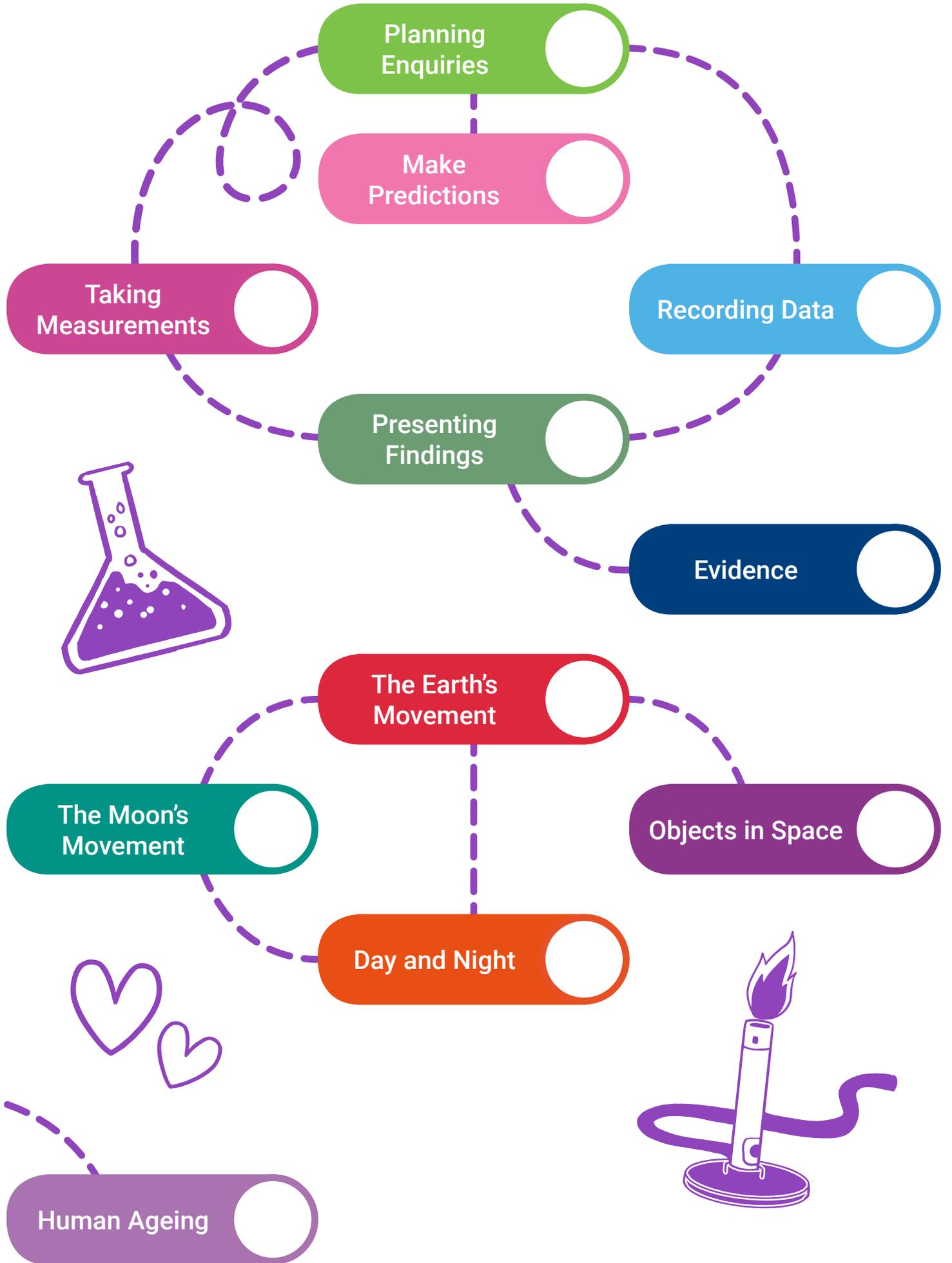


Your child understands that living things change over time. They can see that over a long period of time these changes can lead to evolution. They can describe ways that some animals are different from earlier in their existence.

Start wherever you feel most comfortable!

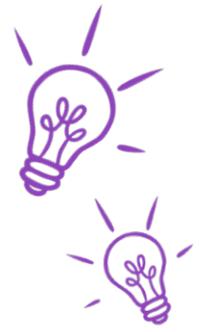
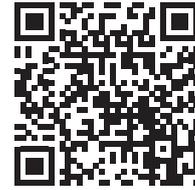
There is no set order for how these topics are taught.





# Explore and Discover More

Unsure of how to use this resource? Simply scan this QR code using your mobile device or tablet to watch a quick video explanation showing you how to use this resource with your child.



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