PRIMARY SCIENCE
Education Consultancy

Science Enquiry: Supporting the Curriculum

Year	3	Topic	Plants

Curriculum objectives

Curriculum objectives

1. Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.
2. Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow), and how they vary from plant to plant.
3. Investigate the way in which water is transported within plants.
4. Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

Classifying

- Classify flowers based on the children's own criteria. (This does not meet the curriculum objectives for this topic, but it is a good opening activity to assess prior knowledge.)

Observing over time

- Observe celery (with roots and leaves) in coloured water.
- Observe white carnations (freshly cut) in coloured water.
- Gather seeds and photographic evidence of blossoms/flowers and berries on a particular trail throughout the year.

Pattern seeking

- Investigate what happens when conditions are changed e.g. more/less light/water, change in temperature, nutrients (Baby Bio vs other brands).

Comparative/Fair testing

- Not relevant

PRIMARY SCIENCE
Education Consultancy

Science Enquiry: Supporting the Curriculum

Researching

- Research the functions of the parts of flowering plants.
- Research different methods of seed dispersal.
- Research different methods of pollination.

PRIMARY SCIENCE
Education Consultancy

Science Enquiry: Supporting the Curriculum

Year	3	Topic	Animals, including humans

Curriculum objectives

1. Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.
2. Identify that humans and some other animals have skeletons and muscles for support, protection and movement.

Classifying

- Based on the children's own criteria:
  - classify food items (leading to sorting by nutrients)
  - classify animals (leading to sorting by whether or not they have skeletons).

Observing over time

- Not relevant

Pattern seeking

- Children generate questions for investigation into objective 1 such as:
  - Do 'healthy' drinks have less sugar?
  - Does brown bread have more fibre?
- Children generate questions for investigation into objective 2 such as:
  - Do people with long arms throw further?
  - Can people with short legs jump higher?
  - Can people with longer legs run faster?
  - Can people with bigger hands catch a ball more easily?

Comparative/Fair testing

- Not relevant

PRIMARY SCIENCE
Education Consultancy

Science Enquiry: Supporting the Curriculum

Researching

- Look at food packaging to identify the amount of nutrients in different food items.
- Research which types of food contain which nutrients.
- Generate questions to research about the human skeleton.

PRIMARY SCIENCE
Education Consultancy

Science Enquiry: Supporting the Curriculum

Year	3	Topic	Rocks

Curriculum objectives

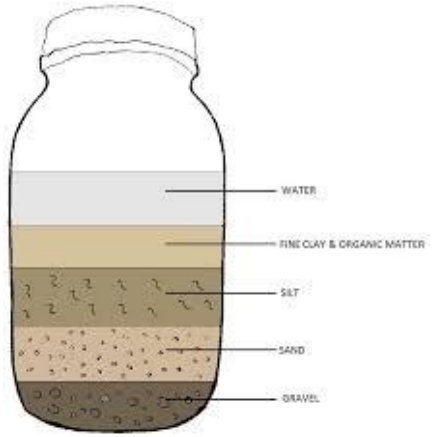
1. Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.
2. Describe in simple terms how fossils are formed when things that have lived are trapped within rock.
3. Recognise that soils are made from rocks and organic matter.

Classifying

- Based on the children's own criteria, classify rocks. (At the beginning of the topic, this will most likely focus on appearance, leading to physical properties at the end of the unit.)
- Look at different soils and discuss how they are similar/different.

Observing over time

- Observe how soil separates into different layers in water – see diagram.



PRIMARY SCIENCE
Education Consultancy

Science Enquiry: Supporting the Curriculum

Pattern seeking
• Not relevant
Comparative/Fair testing
• Test the hardness of different rocks. • Test what happens when rocks are put in water. • Test how quickly water runs through different types of soil.
Researching
• Research how fossils are formed.

PRIMARY SCIENCE
Education Consultancy

Science Enquiry: Supporting the Curriculum

Year	3	Topic	Light

Curriculum objectives

1. Recognise that they need light in order to see things and that dark is the absence of light.
2. Notice that light is reflected from surfaces.
3. Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.
4. Recognise that shadows are formed when the light from a light source is blocked by a solid object.
5. Find patterns in the way that the size of shadows change.

Classifying

- Based on the children's own criteria:
  - classify light sources (leading to man-made/natural)
  - classify materials (leading to reflective/non-reflective, transparent/translucent/opaque).

Observing over time

- Not relevant (NB Do not look at how shadows in the playground change throughout the day.)

Pattern seeking

- Not relevant

Comparative/Fair testing

- Test materials for reflectiveness.
- Test materials for transparency.
- Investigate shadows (size of shadows, shape of shadows).

PRIMARY SCIENCE
Education Consultancy

Science Enquiry: Supporting the Curriculum

Researching
• Not relevant

PRIMARY SCIENCE
Education Consultancy

Science Enquiry: Supporting the Curriculum

Year	3	Topic	Forces and magnets

Curriculum objectives

1. Compare how things move on different surfaces.
2. Notice that some forces need contact between two objects, but magnetic forces can act at a distance.
3. Observe how magnets attract or repel each other and attract some materials and not others.
4. Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet and identify some magnetic materials.
5. Describe magnets as having two poles.
6. Predict whether two magnets will attract or repel each other, depending on which poles are facing.

Classifying

- Based on the children's own criteria:
  - sort materials (leading towards metal/non-metal and magnetic/not magnetic)
  - sort toys (leading to what makes them move e.g. push/pull).

Observing over time

- Not relevant

Pattern seeking

- Not relevant

Comparative/Fair testing

- Test how objects move on different surfaces e.g. cars, spinning tops, wind-up/clockwork toys.
- Test the strength of different magnets.

PRIMARY SCIENCE
Education Consultancy

Science Enquiry: Supporting the Curriculum

Researching
• Find out how magnets are used in everyday life.