Learning Organiser

Skeletons & Movement

Year 3

Enquiry Question: How can we sort and group animals based on their skeletons?

How does our skeleton, joints and muscles help us move?

What do we know?

- **We know the basic parts of the human body (Y1)**
- **We know why** exercise is important (y2)
- **We know how** to sort a variety of animals into groups based on their properties (Y1)

1. to identify and know the function of the bones in the human body.
2. Identify and name a variety of bones in different animals.
3. to know animals can be with or without a spine
4. To present their findings to answer the question of 'are all skeletons the same?'
5. to identify and name different joints in the body,
6. to know that muscles work in pairs to allow movement

Vocabulary

Skeleton
Skull
Ribcage
Spine
Pelvis
Femur
Exoskeleton
Joint
Hinge joint
Ball and socket joint
Muscle
Biceps
Triceps
Contracting
Relaxing

Big Ideas

Biology

Forever Facts

- **Know that** skeletons provide support and allow movement.
- **Know why** muscles and joints are important for movement.
- **Know how** to report their findings in an expert way about how our skeletons, joints and muscles.

(Working Scientifically- Skill)

Where will it go?

Showcase

So... How does out skeleton, joints and muscles help us to move?

To report and present their findings to the class on how the muscles, joints and skeleton work together to help us move.

Learning Organiser

Forces & Magnets

Year 3

Enquiry Question:

How does the material on the ramp affect the distance a car travels?

What do we know?

We know that there are a variety of everyday materials including metal (Y1)

We know why some materials are more suitable than others for different uses (y2)

We know how to ask and answer simple questions and use our observation skills to do this. (Y1/2)

1. to explore forces to show pushing and pulling

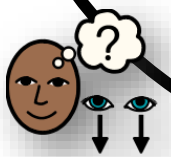
2. friction as a contact force that pushes against a moving object,

3. to plan an experiment to test the affect different surfaces has on moving cars.

4. to conduct the experiment on car ramps

5. To understand how a magnetic force works and how it is different from a magnet.

6. to explore and understand different magnetic and non-magnetic materials.



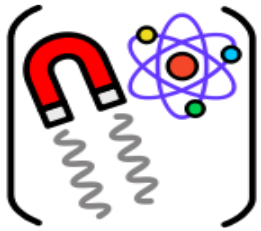
7. to explore that magnets have both a North and South poles & attract and repel.

Vocabulary

Magnet
Metal
Non-metal
Magnetic
Attract
Repel
Iron steel
Aluminium
Force
Friction
Contact force
Data
Prediction

Big Ideas

Physics



Forever Facts

Know that: magnets have a north and a south pole that are opposing

Know why: friction is the force that changes speed

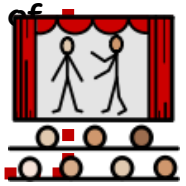
Know how: to use results and observations to find out how friction affects moving vehicles and present their findings.

(Working Scientifically- Skill)

Where will it go?

Showcase

To answer questions and present the findings from exploring different surfaces and observing the affect of friction on moving vehicles.



Learning Organiser

Light

Year 3

Enquiry Question:

How does the distance between the light source and the object affect the size of a shadow?

What do we know?

We know that we have night and day (Y1).

We know why fair tests need some variables to be kept the same and some to change (Y2).

We know how to make predictions based on a question (Y2).

1. To learn about sources of light.
2. To understand the dangers and the benefits of the sun.
3. To understand how we see.
4. To explore the concept of shadows.
5. Explain whether an object is opaque, translucent or transparent.
6. Plan an experiment to investigate how shadows change.
7. Carry out a fair test to explore how the distance from a light source affects the size of a shadow.
8. Evaluate shadow experiment.

Vocabulary

Light source
Reflection
Opaque
Translucent
Transparent
Shadow
Variables

Big Ideas

Physics

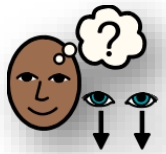
Forever Facts

Know that an object can be opaque, transparent or translucent.

Know why the sun can be damaging to us.

Know how to carry out a fair test to explore why shadows change.

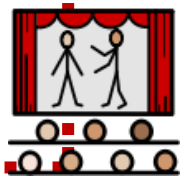
(Working Scientifically- Skill)



Where will it go?

Showcase

Carry out a fair test to explore how the distance from a light source affects the size of a shadow.



Learning Organiser **Nutrition & Diet and Food Waste** Year 3

Enquiry Question: What is a balanced diet and why is it important?

What is food waste and how can we reduce it?

What do we know?

We know that animals can be herbivore, carnivore or omnivore (y1)

We know: that it is important for humans to eat the right amounts of different types of food (y2)

We know how: to explain and talk about what they have found out (Y1/2)

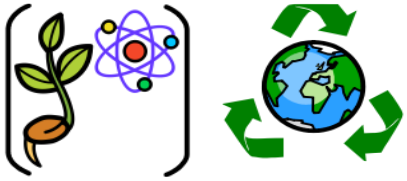
1. To know the five different food groups.
2. To know what a balanced diet is.
3. To compare different diets.
4. To understand animal diets.
5. To know what food waste is and how to reduce food
6. Create a Collective worship to demonstrate their learning to the whole school

Vocabulary

Carbohydrates
Proteins
Dairy
Diet
Nutrition
Pescatarian
Vegetarian
Vegan
Food waste
Recycle
Edible
Inedible
Landfill

Big Ideas

Biology & Sustainability



Forever Facts

Know that: there are 5 different food groups and name them.

Know why: a balanced diet is important for health

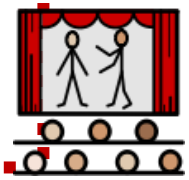
Know how: to be able to report on why reducing food waste is important for sustainability.

(Working Scientifically- Skill)

Where will it go?

Showcase

To present a persuasive argument for a balanced diet, specific diet or how to reduce food waste.



Learning Organiser

Plants and Biodiversity

Year 3

Enquiry Question: Does the number of seeds within one plant pot affect the growth of the plants? What is biodiversity and how can we increase it?

What do we know?

- **We know what** the basic structure of a flowering plant is.
- **We know why** seeds and bulbs grow.
- **We know how** to observe plant growth.

1. To know the different parts of a plant and their function.
2. To complete a plant dissection.
3. Plan an experiment to test whether the number of seeds in one plant pot affects the growth of the plants.
4. Carry out plant growth experiment.
5. Explore stem and water transportation.
6. Understand and explore germination.
7. To know about the reproductive parts in flowering plants.
8. To understand pollination.
9. To understand pollination and what seed dispersal is and how it occurs in different ways.
10. Understand what biodiversity is and how it can affect the range of plants and animals.
11. Explore how we can increase biodiversity in our local area.
12. Study the findings of our plant growth experiment

Vocabulary

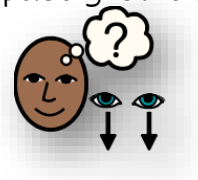
Biology
Dissection
Water
Transportation
Germination
Reproductive
Organs
Pollination
Dispersal
Biodiversity
Rewilding
Endangered
Extinct

Big Ideas

Biology & Biodiversity

Forever Facts

- **Know that** each part of a plant has a specific function and explain.
- **Know why** biodiversity is so important.
- **Know how** plants grow and what can impact growth.
- **(Working Scientifically- Skill)**

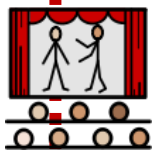


Where will it go?

Showcase

Present the findings from the plant growth experiment.

Create a plan of school field to explain how biodiversity can be improved at SMUPS.



Learning Organiser

Rocks, Fossils & Soils

Year 3

Enquiry Questions:

How can we identify and sort rocks based on their properties? How are fossils formed? Which soil absorbs the most water?

What do we know?

We know that plants need soil to survive (Y1/2).

We know why rocks can be used in our lives.

We know how to perform simple tests (Y2).

1. To identify and group rocks.
2. To test rocks.
3. Conduct a local rock study.
4. To explore fossils.
5. To understand the process of fossil formation.
6. To explore the different types of soil.
7. To know about the importance of soil.
8. To plan a comparative test to explore to explore the absorbency of soil.
9. To carry out a comparative test to explore to explore the absorbency of soil.
10. Evaluate the experiment.

Vocabulary

Crystals
Grains
Layers
Brittle
Sediment
Skeleton
Fossilisation
Organic
Matter
Nutrients
Deforestation
Absorb

Big Ideas

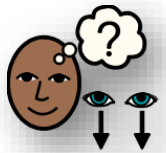
Chemistry

Forever Facts

Know that rocks can be sorted based on their properties.

Know why fossils take so long to form.

Know how to conduct a test to compare soil absorbency. **(Working Scientifically- Skill)**



Where will it go?

Showcase

Conduct a local rock study to identify and sort rocks.

Carry out a comparative test to explore to explore the absorbency of soil.