

Rocks & Soils Workshop

Primary School Curriculum References SESE Geography & SESE Science

The primary focus of this workshop is on the SESE Geography Strand Unit of Rocks and Soils. Through a series of hands on practical activities, children will have the opportunity not only to explore the content of this strand unit and related elements of the SESE Science Curriculum, but also to practise and develop geographical and scientific skills.

CONTENT

SESE Geography Curriculum (pg 80)

Strand: Natural Environments
Strand Unit: Rocks & Soils
Class Level: 5th & 6th Class

Strand unit Rocks and soil

The child should be enabled to

Rocks

- collect and identify some common rocks in the locality
- identify and explore the use of stone in building and other human activities, especially in the locality
- develop simple understanding of the structure of the Earth, using terms such as core, mantle, crust, plates of the crust, lava flow, volcano, earthquake
- learn about the characteristics of some common rock types and where they may be found in Ireland and in other parts of the world

become aware of major rock groups (i.e. igneous, sedimentary and metamorphic) and some common rock types (e.g. granite, limestone, marble)

Soils

- collect and examine soil samples and their constituents
- compare soil samples from different parts of the locality
compare constituent parts, colour, water retention
- learn of the relationship of plants and farming to soil types
- be familiar with some ways of changing and/or improving soil structure.

SESE Geography Curriculum (pg 48)

Class Level: 3rd & 4th Class

Strand unit Rocks and soils

The child should be enabled to

- observe, collect and examine different soil samples in the immediate and other environments
- sort and group constituent materials in samples
rocks, pebbles, sand, plant material

Integration

Science: Materials

- compare and contrast materials, focusing on certain criteria

colour, texture, use, strength, hardness, size and weight

- begin to explore influence of soils and rocks on animal and plant life

physical conditions, soil, water and food supply influencing range of plants and animals.

Lifetime Lab Rocks & Soils Workshop – Primary School Curriculum References

SESE Science Curriculum (pg 88)

Strand:

Strand Unit:

Class Level:

Materials

Properties & Characteristics of Materials

5th & 6th Class

Strand unit Properties and characteristics of materials

The child should be enabled to

- recognise that materials can be in solid, liquid or gas form
- identify and investigate a widening range of common materials in the immediate environment

water, air, rock, fabric, paper, metal, wood, plastic, food

- explore the origins of these materials
identify natural and manufactured materials understand how some of these materials are processed or made

- group materials according to their properties and/or composition

properties (e.g. flexibility, transparency, magnetism, conductivity, insulation, strength, shape, perishable or non-perishable foods, solubility)

composition (e.g. foods containing proteins, carbohydrates and/or fats; soil containing clay, silt, sand and/or gravel)

- identify how materials are used

relate the properties of the material to its use examine how shape affects the strength of structures

design and make a bridge that takes account of flexibility, form, stability and strength

SESE Science Curriculum (pg 66)

Class Level:

3rd & 4th Class

Strand unit Properties and characteristics of materials

The child should be enabled to

- identify and investigate a range of common materials in the immediate environment

water, air, rock, fabrics, paper, metal, wood, plastic, food

- recognise that materials can be solid, liquid or gaseous

- describe and compare materials, noting the differences in colour, shape and texture

- distinguish between raw and manufactured materials

- group materials according to their properties

flexibility, transparency, magnetism, conductivity or insulation properties, strength, shape, ability to muffle sounds, perishable and non-perishable, solubility

- investigate how materials may be used in construction

homes and other buildings, furniture, models, structures, everyday appliances.

Lifetime Lab Rocks & Soils Workshop – Primary School Curriculum References

SESE Science Curriculum (pg 86)

Strand: Energy and Forces
Strand Unit: Magnetism and electricity
Class Level: 5th & 6th Class

Strand unit Magnetism and electricity

The child should be enabled to

- learn that magnets can push or pull magnetic materials
- investigate how magnets may be made
 - stroking a piece of iron or steel with a magnet*
 - passing electricity through a coil around a piece of iron or steel (electromagnet)*
- explore the use of magnets to lift and hold objects
 - how magnets can be used in cranes, door catches*
 - how magnets may be used to sort materials*
- learn about electrical energy
- investigate current electricity by constructing simple circuits
 - use wire, bulbs, motors and batteries*
 - use more than one bulb in a circuit*
 - use more than one battery in a circuit*
 - experiment with simple switches*
 - design and make set of traffic lights using a simple circuit and switch*
- become aware of how some common electrical appliances work
- become aware of and understand the dangers of electricity
 - dangers of mains electricity in the home and at work*
 - the importance of fuses and circuit breakers for safety.*

SESE Science Curriculum (pg 64)

Strand: Energy and Forces
Strand Unit: Magnetism and electricity
Class Level: 3rd & 4th Class

Strand unit Magnetism and electricity

The child should be enabled to

- learn that magnets can push or pull magnetic materials
- explore how magnets have poles and investigate how these poles attract and repel each other
- explore the relationship between magnets and compasses
- examine and classify objects and materials as magnetic and non-magnetic
- investigate that magnets attract certain materials through other materials
 - magnets attracting materials through water, glass, plastic*
- explore the effects of static electricity
 - plastic ruler, comb, glass rod*
- observe the effects of static electricity on everyday things in the environment
 - use of lightning conductor on buildings*
 - use of earthing strips for cars*
- learn about electrical energy
- investigate current electricity by constructing simple circuits
 - use wire, bulbs and batteries*
 - experiment with simple switches*
 - design and make a marine warning system (e.g. buoy with light or buzzer, lighthouse)*
- examine and group materials as conductors (those that conduct electricity) and insulators (those that do not allow electricity to pass through)
- become aware of the dangers of electricity.

SKILLS

SESE Geography Curriculum – 5th & 6th Classes

Skills and concepts development

A sense of place and space

- A sense of place
- A sense of space

Maps, globes and graphical skills

- Using pictures, maps and models
- Maps and globes

Geographical investigation skills

- Questioning
- Observing
- Predicting
- Investigating and experimenting
- Estimating and measuring
- Analysing
- Recording and communicating
- Evaluating

SESE Science Curriculum – 5th & 6th Classes

Skills development

Working scientifically

- Questioning
- Observing
- Predicting
- Investigating and experimenting
- Estimating and measuring
- Analysing
- *Sorting and classifying*
- *Recognising patterns*
- *Interpreting*
- Recording and communicating

Designing and making

- Exploring
- Planning
- Making
- Evaluating