



Education Resources

Curriculum and Quality Improvement Service

Early Years

Science in the Playroom

Organiser : Planet Earth

Sub-Divider: Biodiversity and Interdependence

Outcome: I have helped to grow plants and can name their basic parts. I can talk about how they grow and what I need to look after them. **SCN 0-03**

Knowledge, Understanding and skills

I can....

- follow pictorial/verbal instructions to plant seeds indoors and outdoors
- help to look after plants and living things
- recognise/name some familiar plants

I know..

- the lack of water, soil, light or weather can affect the growth of plants

Inquiry and investigative skills

- Observe, investigate, undertake practical tasks, present their findings, analyse their results
- Children develop respect for living things



Role of the adult

Questioning

- What happens if we change one aspect e.g. amount of water, light, etc.?
- How will we measure what happens?
- How will we record what happens?

Vocabulary

- Plant, seeds, growing, growth, stem, root, flower, water, light, temperature.

Further opportunities:

- Grow your own vegetables, herbs, fruit

Organiser : Planet Earth

Sub-Divider: Biodiversity and Interdependence

Outcome: I have helped to grow plants and can name their basic parts. I can talk about how they grow and what I need to look after them. **SCN 0-3a**

Knowledge, Understanding and skills

I can....

- recognise that plants are living things
- follow instructions to plant seeds indoors and out
- help to look after plants
- observe changes in plants

I know.....

- that the lack of water, soil, light or weather can affect the growth of plants

Skills

- Observe, investigate, undertake practical tasks, present their findings, analyse their results, provide explanations for their choice



Role of the adult:

Questioning:

- What do plants need to grow?
- What do you think will happen if.....?
- How much?

Vocabulary:

- Soil, light, water, plants, seeds, growth, measure, plant pots, weather, stem, leaf, root

Further opportunities:

- Grow your own vegetables and herbs

Organiser(s): Planet Earth

Sub-Divider: Energy Sources and Sustainability

Outcome: I have experienced, used and described a wide range of toys and common appliances. I can say “what makes it go” and say what they do when they work. **SCN 0-04a**

Knowledge, Understanding and skills

Torches

I can....

- explore how torches work and describe what happens

I know....

- some torches need batteries to make them work.
- the torch needs to be switched on.
- the size of the beam from the torch depends on how far away it is from the background and the amount of light and dark in the room



Skills

- Observe, investigate, undertake practical tasks, present their findings, analyse their results, provide explanations for their choice

Questioning:

- What happens when.....?
- Why do you think happens?
- What happens if the room is light?

Vocabulary:

- Torches, light, battery power, switch, size, bigger/smaller

Further opportunities:

- Different types of torches with and without batteries

Cars

I can.....

- explore how hot wheel cars move and how fast they can go
- demonstrate ways of making things move

I know.....

- the power from the friction makes the car go

Vocabulary

- Friction, speed, fast/slow, gradient

Further opportunities

- Different types of cars and gradients

Skills:

- Observe, investigate, undertake practical tasks, present their findings, analyse their results, provide explanations for their choice



Organiser : Planet Earth

Sub-Divider: Processes of the planet

Outcome: By investigating how water can change from one form to another, I can relate my findings to everyday experiences **SCN 0-05a**

Knowledge, Understanding and skills

I can

- recognise and discuss changes in water – when it melts

I know

- Temperature affects the state of water

Inquiry and investigative skills

- Observe, investigate, undertake practical tasks, present their findings, analyse their results

Role of the adult

Questioning

- What happens to the water over time?
- How will we record what happens?

Vocabulary

- Melting, freezing, changes, colour, cold, temperature

Further opportunities:

- Melting snow indoors and outdoors and record the differences
- Freezing objects within ice and record what happens
- Investigate the speed at which ice melts large cubes/small cubes



Organiser: Forces, Electricity and Waves

Sub-Divider: Forces

Outcome: Through everyday experiences and play with a variety of toys and other objects, I can recognise simple types of forces and describe their effects. **SCN 0-07a**

Knowledge, Understanding and skills:

I can.....

- say if an object is moving fast or slow
- recognise which surface allows an object to travel faster/slower
- describe if an object is hard or soft

I know

- that the gradient of the slope will have an effect on the movement of the object

Inquiry and investigative skills

- Plan and design scientific investigations, Carry out practical activities, Analyse, interpret and evaluate, Present scientific findings



Role of the Adult

Questioning

- What happens if we change the size of the ball?
- What happens if we change the angle of the slope?
- What happens if we change the surface of the track?

Vocabulary

- Slope, gradient, fast, slow, heights, size, speed, angle, surface, movement

Further opportunities

- Outside play with different guttering and objects
- Planks of wood at different heights and materials
- Different materials e.g. carpeting, material, plastic etc.
- Resources to measure the distance travelled and timers

Organiser(s): Forces, Electricity and Waves

Sub-Divider: Forces

Outcome: Through everyday experiences and play with a variety of toys and other objects, I can recognise simple types of forces and describe their effects. **SCN 0-07a**

Knowledge, Understanding and skills

I can.....

- say if an object sticks or not
- identify objects that are magnetic
- talk about the properties of magnets – attract/repel

I know:.....

- magnets stick to metal

Skills:

- Observe, investigate, undertake practical tasks, present their findings, analyse their results



Role of the adult:

Questioning:

- What is it made of?
- Does wood/plastic, etc stick to magnets?
- How does metal feel?

Vocabulary:

- Magnets, magnetism. metal, plastic, attract, repel, stick

Further opportunities:

- Environment hunt using magnets
- Different types of magnets
- Using magnetic letters, fishing game with magnets, trains etc.