Science Enquiry Organisers: Year 2, Cycle 1

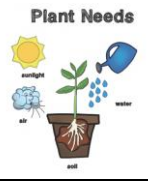
Autumn 1 Science - plants

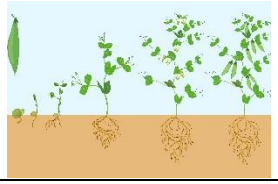
Knowledge *I know…*	Skills *I can…*	Links back to *I remember…*
• The names of some of the plants in our school grounds (including flowers and trees). • A plant is a living thing that moves, respires, grows, reproduces etc. • Plants need water, light and a suitable temperature to grow and stay healthy. • Seeds and bulbs grow into plants. • Pictograms and block diagrams can be used to present data clearly. • Pictograms and block diagrams help to answers questions about totalling and comparing.	• I can identify and name some of the plants in our school grounds (including flowers and trees) • I can present results using a pictogram and/or block diagram charts with help (plants in school grounds) • I can explain what makes a plant a living things • I can talk about what a plants need to grow and stay health • I can plant a seed and/or bulb • I can observe and describe changes over time (bean diary) • Ask questions in a group • Plan simply what to do, in a group • Predict the outcome of an investigation in a group • Use a table to display results (headings given by teacher).	• A plant is made up of a root, stem/trunk, leaves and flowers • A tree is a plan • Labelling the parts of plants • Planting a sunflower

Vocabulary:

Bulb: a plant bud that begins to grow underground
Seed: the small parts produced by plants from which new plants grow
Observe: to look closely
Plant: a living thing which include flowers, trees and vegetables
Pictogram: a chart that uses pictures to represent data
Predict: make a guess about what might happen

Images:





Autumn 2 Science - materials

Knowledge *I know…*	Skills *I can…*	Links back to *I remember…*
• Most materials have never been alive • Materials are what objects are made from e.g. fabric, wood, metal • Materials have properties which make them suitable for different purposes • Some materials are right for a purpose because of their properties e.g. a kettle is made of metal because it conducts heat and is waterproof • Flexible materials can bend or compress easily without cracking • Strong materials are able to resist heavy impacts and absorb and energy without breaking	• Identify everyday materials including wood, metal, plastic, glass, brick, rock, paper and cardboard • Describe the properties of materials • Compare the suitability of everyday materials for particular uses • Find out <u>how</u> the shapes of solids objects made from some materials can be changed by squashing, bending, twisting and stretching • Ask questions using scientific language • Plan simple what to do and what observations/ measurements to take • Recognise some hazards • Predict the outcome of an investigation • Talk about what I have found out and how I found it out	• Explaining what makes a plant a living thing • Identifying everyday materials including wood, metal, plastic, glass, brick, rock • Describing the properties of materials • Sorting materials

Vocabulary:

Absorbent: soaks up water
Flexible: can be folded easily
Material: what objects are made from
Observe: to look closely
Opaque: can't be seen through
Predict: make a guess about what might happen
Properties: what a material is like and how it behaves (soft, stretchy)
Suitability: having the properties which are right for a specific purpose
Stretchy: can be pulled to make it longer or wider without breaking
Transparent: can be seen through
Waterproof: it keeps water out. It keeps things dry

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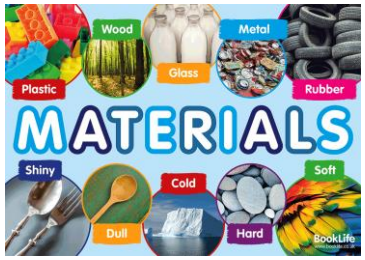

Spring 1 Science – humans

Knowledge *I know...*

- Animals, including humans, are living
- That animals, including humans, have offspring which grow into adults
- Animals, including humans need water, food and air to survive.
- To stay healthy humans need exercise
- To stay healthy humans need the right amounts of different types of food
- How and why I should keep myself clean

Skills *I can...*

- Draw on a pictogram to show results (favourite healthy food)
- Describe how animals inc humans change as they grow
- Match animals and their babies
- Ask and answer questions about a pet
- Find out about and describe the basic needs of animals, including humans, for survival
- Identify healthy and unhealthy food and say how much of them I should eat
- Give reasons why humans need to exercise
- Gather information and answer a question
- Look closely and record what I see

Links back to *I remember...*

- Human beings have different body parts
- There are 5 senses
- Our sense of touch is linked to our hands/skin
- Our sense of taste is linked to our mouth/tongue/throat
- Our sense of hearing is linked to our ears
- Our sense of smell is linked to our nose
- Our sense of sight is linked to our eyes
- A pictogram is a picture representation of data
- Investigating which material would be best for a flag/bunting/bag

Vocabulary:

Body: the physical structures including bones, flesh and organs of a person or animal.
Human: a man, women or child
Pictogram: a pictorial representation of data on a chart, graph, or computer
Offspring: a person's children or an animal's young
Exercise: being active
Healthy: keeping your body 'working at its best'
Survive: to remain alive
Grow: increasing in size or changing physically

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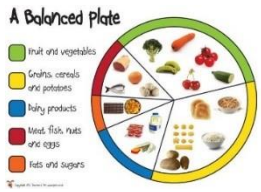

Spring 2 Science – animals

Knowledge *I know...*

- That living things – move, reproduce, grow, breathe (respire), excrete, gets nutrients
- Dead things were once alive (and no longer do the above).
- Some things have never been alive
- Most UK animals live in habitats to which they are suited
- That UK animals and plants depend on each other
- How UK animals obtain their food

Skills *I can...*

- Compare differences between living, dead and never been alive
- Describe how different UK habitats provide basic needs for UK animals
- Use a simple food chain
- Identify and classify different UK animals
- Group and classify in different ways

Links back to *I remember...*

- What a fish, bird, reptile, mammal and amphibian is
- What a herbivore, carnivore, omnivore eats
- Labelling the parts of common animals
- The life-cycle of a chick

Vocabulary:

Dead: Dead things were once alive and no longer move, reproduce, grow, breath (respire), excrete, get nutrients
Excretion: getting rid of waste from the body
Food chain: a series of organisms each dependent on the next as a source of food
Habitat: where an organism lives
Nutrients: a substance that provides nourishment
Reproduce: making a new generation – animals have babies, new plants grow from seeds
Respire: using oxygen to turn food into energy

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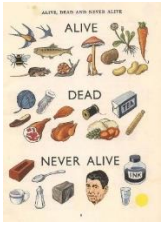

Summer 1 Science – animals

Knowledge *I know…*

- Most animals live in habitats to which they are suited
- Animals and plants depend on each other
- How animals obtain their food
- The food chain for at least one animal
- What a micro-habitat is and which animals may live there

Skills *I can…*

- Describe how different habitats provide basic needs for animals around the world
- Use a simple food chai
- Identify and name different sources of foo
- Identify and classify different animals from around the world
- Group and classify in different ways
- Identify and name a variety of animals in micro-habitats
- Use scientific vocabulary
- Use different sources of information answer questions

Links back to *I remember…*

- How to compare differences between living, dead and never been alive
- Some UK habitats and the animals that live in these
- How UK animals obtain their food

Vocabulary:

Consumer: living thing that feeds on an animals or plant for energy
Food chain: a series of organisms each dependent on the next as a source of food
Habitat: where an organism lives
Micro-habitat: a habitat that is small
Predator: an animal that naturally preys on others
Prey: an animal that is hunted and killed by another for food
Producer: living things that creates energy

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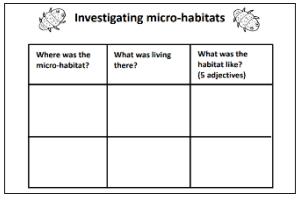


Summer 2 Science – materials and plants

Knowledge *I know…*

- The names of materials
- The properties of materials e.g. fabric, metal, wood
- That materials are suitable or unsuitable for particular purposes
- That some materials are used for more than one thing e.g. metal used for can, spoon
- That different materials are used for the same thing e.g. a spoon (can be wooden, metal or plastic).
- The life-cycle of a plant (link to poetry)
- That plants need water, light and a suitable temperature to grow

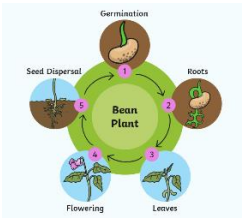
Skills *I can…*

- Name, describe and give some examples of different materials
- Compare the suitability of a variety of everyday materials
- Choose a suitable material for a purpose e.g. a boat
- Talk about how a particular materials is suitable for its purpose
- Ask questions
- Plan simply what to do, what observations or measurements to take
- Predict the outcome of an investigation
- Use simple equipment to gather data
- Use pictograms to display results, draw bar charts with help
- I can describe how a bulb/seed grows into a plant
- I can explain what plants need to grow

Links back to *I remember…*

- Objects are made from materials
- Investigating a suitable material for a product
- Planting bulbs
- The names of some plants

Vocabulary:

Bulb: a plant bud that begins to grow underground
Life-cycle: the different stages of **life** for a living thing
Material: what something is made of
Observe: to look closely
Plant: a living thing which include flowers, trees and vegetables
Pictogram: a chart that uses pictures to represent data
Predict: make a guess about what might happen

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