Biology

Plants

Identify and name a variety or common plants, including garden plants, wild plants and trees and those classed as deciduous and evergreen.

Year 1	Year 2	Greater Depth
- What are the names of some common wild plants? - What are the names of some common garden plants? - What are the names of some common trees? - Which trees are deciduous and which are evergreen? (name)	- What are the similarities and differences between deciduous and evergreen trees? - Think of some ways to categorise plants.	- Suggest a garden design for someone who likes privacy and bright autumn colours.

Identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers.

Year 1	Year 2	Greater Depth
- What are the names of parts of flowering plants? - Describe the structure of each part of a flowering plant.	- Taking a selection of real different flowering plants, what are the structural features? (apply)	- Are roots always at the bottom of a plant? (generalise) - Why do you think that is? (explain concept)

Observe and describe how seeds and bulbs grow into mature plants.

Year 1	Year 2	Greater Depth
- Describe the growth of seeds and bulbs	- What are the similarities and differences in the growth of seeds and bulbs?	- What might a scientist need to keep in mind when recording information about the growth of seeds and bulbs? (propose)

Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

Year 1	Year 2	Greater Depth
- What do plants need to stay healthy? (describe, list)	- How could you try to revive these plants? (apply) (Give pupils a plant that has dried out, one that has been in the fridge and one that has been kept in the dark)	- Devise a way of proving that plants need certain conditions for growth.

Animals and humans

Identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates.

Year 1	Year 2	Greater Depth
- Name some common animals. - Match the animals to the labels: bird, fish, amphibian, reptile, mammal, invertebrate.	- Point out and explain the main differences between birds, fish, amphibians, reptiles, mammals and invertebrates.	- Create a guide to recognising different types of animals.

Identify and name a variety of common animals that are carnivores, omnivores and herbivores.		
Year 1	Year 2	Greater Depth
- Name some common animals. - Label animals as herbivore, carnivore or omnivore.	- Show how carnivores, herbivores and omnivores are similar and different.	- True or false? (prove) Carnivores are not hunted by other carnivores.

Describe and compare the structure of a variety of common animals (birds, fish, amphibians, reptiles, mammals and invertebrates, including pets).		
Year 1	Year 2	Greater Depth
- Name and label the structures of common animals. - Complete tables that compare the structures of common animals.	- Compare and contrast mammals with amphibians.	- What evidence would you show to prove that a reptile could not be confused with a mammal?

Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.		
Year 1	Year 2	Greater Depth
- Label the main parts of the human body. - Illustrate the parts of the body associated with the five senses.	- Explain why the sense of touch may be important to a blind person.	- Suggest some adjustments that could be made around school for a blind or deaf person.

Notice that animals, including humans, have offspring which grow into adults.		
Year 1	Year 2	Greater Depth
- Name the offspring of animals and humans. - Match the offspring to the adult.	- Explain the main differences between animals and humans and their offspring.	- Suggest some ways that an animal's offspring (including humans) are dependent, for some time, on adults.

Investigate and describe the basic needs of animals, including humans for survival (water, food and air).		
Year 1	Year 2	Greater Depth
- List the basic needs of animals, including humans, for survival.	- Compare the types of food that different animals require.	- Explain the concept of humans' need for clean water and why this is not so important for other animals.

Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.		
Year 1	Year 2	Greater Depth
- Describe a healthy diet - Describe a healthy lifestyle - Observe and describe the effect of exercise.	- Categorise food types and explain why each group is important to humans.	- Create a weekly menu and exercise programme for someone your age.

Living things

Explore and compare the differences between things that are living, that are dead and things that have never been alive.		
Year 1	Year 2	Greater Depth
- Observe and list the key features of things that are living, dead and that have never been alive.	- Organise things of your choice into groups: living, dead and never been alive.	- Give evidence to show that a glass bottle has never been alive.

- Describe things as living, dead or never been alive.		

Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants and how they depend on each other.		
Year 1	Year 2	Greater Depth
- Observe animals/ plants in their natural habitat. - Match the animal/ plant to its habitat. - Describe why the animal/ plant is suited to its environment.	- Categorise animals/ plants according to the conditions that they require. - Explain your categories.	- Suggest reasons why a cactus may find it difficult to survive in cold, wet conditions. - Create an ideal environment for woodlice and prove that this is a successful habitat.

Identify and name a variety of plants and animals in their habitats, including micro-habitats.		
Year 1	Year 2	Greater Depth
- Match common animals/ plants to their habitats.	- Explain why a habitat for a particular plant or animal is suitable.	- Design an ideal habitat for a hamster that is kept as a pet. - Create a bottle garden for plants that require warm, dry conditions.

Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.		
Year 1	Year 2	Greater Depth
- What does a (name of animal) like to eat? - Draw a food chain that ends with a sparrow hawk. - Name sources of food.	- Explain the differences in a food chain for a herbivore and a carnivore.	- Always, sometimes, never? Food chains end with a carnivore.

Evolution and inheritance

Identify how humans resemble their parents in many features.		
Year 1	Year 2	Greater Depth
- List the ways that humans may resemble their parents. - Match pictures of parents to their children.	- Present similarities and differences between parents and their children.	- Devise a 'guess who' game to deduce the child of a set of parents.

Chemistry

Materials

Distinguish between an object and the material from which it is made.

Year 1	Year 2	Greater Depth
- Match an object to its original material - Name the object and its original material	- Explain how a bottle is made from sand - Choose some objects and explain how they were made from their original material.	- True or false? Some fleece jackets start as plastic bottles?

Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.

Year 1	Year 2	Greater Depth
- Observe and name everyday materials - Arrange objects made of the same materials and label the materials.	- Group objects based on the materials they are made from. Explain your groupings.	- Investigate which objects started off as a plant.

Describe the simple physical properties of a variety of everyday materials

Year 1	Year 2	Greater Depth
- Observe and name the properties of everyday materials. - Complete tables that describe the properties of materials.	- Explain why the properties of materials are useful for deciding which materials to use for an object. Give examples.	- Design an item of clothing to keep the wearer dry.

Compare and group together a variety of everyday materials on the basis of their simple physical properties.

Year 1	Year 2	Greater Depth
- Place materials into groups under the headings given to you. - Describe the different properties of materials.	- Decide how best to group materials on the basis of their properties. Explain your reasons for your groups. - Compare and contrast the different properties of materials.	- Create a guess the material game based on the properties of materials.

Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

Year 1	Year 2	Greater Depth
- Observe and describe changes to the shape of solid objects when they are squashed, bent, twisted or stretched.	- Experiment with changing the shape of solid objects. Organise and summarise your findings.	- Always, sometimes, never? The shape of wood can be changed through squashing, bending, stretching or twisting.

Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick/rock and paper/cardboard for particular uses

Year 1	Year 2	Greater Depth
- List different uses for everyday materials. - List reasons for the suitability of materials for particular uses.	- Compare and contrast the properties of materials and use this to explain why certain materials are used for particular purposes.	- Paper is unsuitable for a model boat. Do you agree or disagree? (reason, justify)

		- Devise other hypotheses like this and test them.

Physics

Forces

Notice and describe how things move, using simple comparisons such as faster and slower.

Year 1	Year 2	Greater Depth
- What happens to objects when they are pushed? - What happens to objects when they are pulled?	- Experiment with pushing objects gently and hard. Record and explain what happens. - Experiment with a slope and record how this changes the speed at which an object rolls.	- Devise ways to slow down a toy car rolling down a slope. - True or false? The surface on which a toy car rolls affects its speed.

Compare how different things move.

Year 1	Year 2	Greater Depth
- Observe and describe the movement of a range of things including things that move with magnets.	- Compare the movement of remote control cars and a helicopter drone. Explain the differences in movement.	- Do heavy and light things move differently? Is there a pattern?

Light

Observe and name a variety of sources of light, including electric lights, flames and the Sun, explaining that we see things because light travels from them to our eyes.

Year 1	Year 2	Greater Depth
- Name a variety of sources of light. - Illustrate how light travels from light sources to our eyes.	- Experiment with ways to block light from reaching our eyes. - Point out how this demonstrates that light travels from a source to our eyes.	- True or false? The brighter the source of light, the easier it is to see.

Sound

Observe and name a variety of sources of sound, noticing that we hear with our ears.

Year 1	Year 2	Greater Depth
- Name a variety of sources of sound. - Recognise a variety of sounds. - Observe how we hear sounds with our ears. - Illustrate that ears allow us to hear sounds.	- Categorise sounds. - Compare and contrast sounds based on your own criteria.	- Suggest ways to protect our ears from loud sounds.

Electricity

Identify common appliances that run on electricity.

Year 1	Year 2	Greater Depth
- Observe and name some sources of electricity (mains, battery). - List common appliances that run on electricity.	- Categorise electrical appliances. Explain the reasons for your categories. - Compare and contrast some appliances in each of your categories.	- Always, sometimes or never? Electrical appliances need batteries or mains electricity to power them.

Construct a simple series electrical circuit.		
Year 1	Year 2	Greater Depth
- Follow instructions to construct an electrical circuit. - Describe the circuit, naming each component.	- Modify a circuit to add more components. - Experiment with and categorise the effect that adding more components has.	- Diagnose and repair a broken circuit. (solve non-routine problems)

Earth and Space

Observe the apparent movement of the Sun during the day.		
Year 1	Year 2	Greater Depth
- Name times of the day. - Observe and describe the Sun's position in the sky at different times of the school day.	- Show how you might know roughly what day it is by looking at the position of the Sun.	- Think of a way to prove that it is lunchtime using the Sun.

Observe changes across the four seasons		
Year 1	Year 2	Greater Depth
- Name the four seasons - Notice and name the key features of each season.	- Organise images or objects from each season into categories. Explain your categories.	- Always, sometimes or never? It is warm and dry during summer.

Observe and describe weather associated with the seasons and how day length varies.		
Year 1	Year 2	Greater Depth
- Observe and record the weather over four seasons. - Describe the weather in a named season. - Describe how day length varies in each season.	- Compare and contrast weather and day length across the four seasons. - Identify patterns in day length across the four seasons.	- Plan some activities that would be suited to each season.