

## Year 2 Science assessment, Autumn 1

### Working scientifically:

- (A1) asking simple questions and recognising that they can be answered in different ways
- (A2) observing closely, using simple equipment
- (A3) performing simple tests
- (A4) identifying and classifying
- (A5) using their observations and ideas to suggest answers to questions
- (A6) gathering and recording data to help in answering questions.

### Enquiry type:

*Observing over time*

*Pattern seeking*

*Research using secondary resources*

*Identifying, classifying and grouping*

*Comparative testing*

### Plants:

- \*I can correctly name the parts of a plant and a tree and use the vocabulary roots, stem, petals, fruit, flower, seed, bulb, trunk, branch, leaves and bark. (B2)
  - \*I recognise each part of a plant has a job to do. (B2)
  - \*I can identify and name a range of British trees, plants and flowers. (B1)
  - \*I understand and can explain what a plant needs to grow, be healthy and survive including sunlight, water, soil, air, space and a suitable temperature. (B4)
  - \*I can explain **why** a plant needs water, light, soil, air, space and a suitable temperature. (B4)
  - \*I can plant a seed to observe, describe and explain how it grows into a plant. (B3)
  - \*I can keep a plant diary to record what is happening to a seed/bulb by drawing and writing descriptions using scientific vocabulary. (B3)
  - \*I can use equipment to measure the growth of a plant over time. (B3)
  - \*I can conduct a comparative experiment to investigate what would happen to a seed/bulb without water/light/soil/suitable temperature and record what happens. (B4)
  - \*I can make a prediction using my prior knowledge of how plants grow as well as the word 'because' to explain my prediction.
  - \*I can explain my findings at the end of an experiment over time.
  - \*I can recognise and explain that a plant is alive and how I know. (B4 & F1)
- GD:
- \*I can explain how trees and plants provide oxygen and make links to why this is important to humans. I can explain how trees and plants need carbon dioxide to survive and make links to how humans produce this.
  - \*I can use the terms 'nutrients' and 'minerals' correctly and understand how a plant gets nutrients through it's roots from the soil.
  - \*I can explain the leaves of a plant absorb light to create energy.
  - \*I can be **introduced** to the word 'photosynthesis' and understand it is a plant using sunlight, water and carbon dioxide to make food.
  - \*I can **simply** explain how water travels through a plant.
  - \*I can use my understanding of how plants survive to explain **why** I think a plant has grown in a particular way during a comparative test.

### Animals, including humans:

- \*I understand that humans need air, food and water to survive and be healthy. (C6)
  - \*I can **begin** to use the correct vocabulary for the food groups and name **some** of these; carbohydrates, protein, fruit, vegetables, dairy, fats and sugar. (C7)
  - \*I can work in a group to identify and sort items into the correct food groups. (C7)
  - \*I understand that meat comes from an animal as well as that fruit and vegetables are grown from seeds or bulbs. (C7)
  - \*I understand that it is important to eat food from each food group to keep healthy. (C7)
  - \*I can explain how my body feels when I exercise; I understand that exercise keeps my body healthy and working correctly. (C7)
  - \*I understand what an animal needs to survive including food, water and air. (C6)
  - \*I can name the body parts of an animal from British wildlife and explain how these body parts help the animal to survive including the use of their senses. (C3 & C6)
  - \*I can use the correct vocabulary to sort and group animals (mammals, amphibians, reptiles, fish and birds) whilst explaining **more than one** observable feature of that animal group as well as explaining if they are warm or cold blooded. (C3)
  - \*I understand the meaning of warm blooded and cold blooded; I can explain how an animals body temperature alters. (C3)
  - \*I can explain and compare how each animal group begins life and compare this to a human whilst recognising which animal group a human belongs to. E.g. birds lay eggs but mammals give birth to live young. (C3 & C5)
  - \*I can explain if an animal is a carnivore, omnivore or herbivore using their teeth to help my explanation of how I know. I can use this to recognise which animals would eat other animals and **begin** to use the terms 'predator' and 'prey'. (C2 & F4)
- GD:
- \*I recognise that some people may choose to not eat from all food groups, such as vegetarians or vegans. I can explain how people who choose not to eat from all food groups or who cannot eat from all food groups, ensure they maintain a healthy diet.
  - \*I can think scientifically and use my knowledge of animals to explain what might happen if an animal didn't have a body part or sense.

### Living things and their habitats:

- \*I can recognise and explain that plants and trees are alive and how I know, using my knowledge of plants/trees breathing and growing. (F1)
- \*I understand that fallen leaves, petals and branches are dead but that the tree remains alive. (F1)
- \*I can recognise that some animals eat other animals and that these animals are alive before they are eaten but dead once they have been caught by predators. I can recognise that parts of these animals may be found such as their skeletons and that these are no longer part of a living being. (F1 & F4)
- \*I can explain **at least one** characteristic of a living thing such as moving, breathing or eating and how these characteristics are no longer present if something is dead. (F1)
- \*I understand and can explain the word 'habitat'.(F2)
- \*I can name animals and plants found in British habitats. (F3)
- \*I can **begin** to understand the term 'micro-habitat' and how it differs from a habitat. (F3)
- \*I can observe, explore and describe a micro-habitat which can be found in the local environment as well as identify what lives there. (F2 & F3)
- \*I can understand why some animals survive better in a micro-habitat and how the conditions can be different than the wider habitat. (F2)
- \*I can recognise some different habitats for British wildlife and can explain how the habitats provide for the basic needs of animals and/or plants that live there. (F2)
- \*I can compare two plants from contrasting habitats and describe **one feature** each plant has to make it suited to it's habitat. (F2)
- \*I understand how plants within a local habitat can help animals that live there including explaining the use for shelter. (F2)
- \*I can recognise that habitats can have different conditions for living and identify the typical conditions of British habitats. (F2)
- \*I can explain how British wildlife survives including how they hunt for food including animals that are herbivores. (F4)
- \*I can explain the features an animal has and how these help it to survive in it's habitat. (C3 & F2)
- \*I can work as a group to create a food chain that has **no more than** three links within the chain and uses arrows pointing in the correct direction. (F4)
- \*I can **begin** to use the terms 'predator' and 'prey' whilst discussing a food chain.(F4)

### GD:

- \*I can explain how I think humans fit into a food chain.
- \*When comparing plants that live in contrasting habitats, I can explain **more than one** way the plant is suited to it's habitat.
- \*I can recognise that the prey within a food chain can have more than one predator.
- \*I can recognise that an animal can be both prey and predator within a food chain.
- \*I understand that plants can make their own food whilst animals cannot.
- \*I can use my learning of habitats and scientific thinking skills to answer a question or problem. E.g. odd one out, true or false.
- \*I can ask my own questions about my observations and learning.

## Year 2 Science assessment, Autumn 2

Working scientifically:

- (A2) observing closely, using simple equipment
- (A3) performing simple tests
- (A6) gathering and recording data to help in answering questions.

### **Enquiry type:**

*Research using secondary resources*  
*Comparative testing*

### **Uses of everyday materials:**

- \*I can identify how a material can be used in different ways for multiple purposes and objects. E.g. Metal can be used for coins, spoons, cars, table legs, cans etc. (D1 & D5)
- \*I can explore and discuss why some materials would be unsuitable for a given purpose. (D5)
- \*I understand and can explain what the terms 'waterproof', 'absorbent', 'opaque' and 'transparent' mean. (D3)
- \*I can work within a group to carry out a simple test to find the strongest material and record the results. (D3 & D5)
- \*I can make a prediction, using my prior knowledge, as to which material would be the most waterproof and explain why I predict this. (D3 & D5)
- \*I can work with a partner to conduct a comparative test to find the most waterproof material for a given purpose. (D5)
- \*I can work with a partner to record the results of the experiment and decide the most suitable material to then make and test a product. (D5)
- \*I can explore how materials can be changed to create a desired shape for a product and can verbally explain what I notice whilst trying to change the shape of materials. (D6)
- \*I understand that new materials are always being invented. (D2 & D5)
- \*I understand who Charles Macintosh is and can explain his invention of a new material. (D2 & D5)

GD:

- \*I can name some different types of wood such as pine, oak or mahogany.
- \*I can **begin** to explain that materials can be in different forms including liquid, gas or solid.
- \*I can decide different ways that materials could be grouped and explain.
- \*I understand the meaning of and can use the word flammable.
- \*I can explain the process Charles Macintosh used to invent a waterproof coat.

## Year 2 Science assessment, Spring 1

Working scientifically:

- (A2) observing closely, using simple equipment
- (A3) performing simple tests
- (A5) using their observations and ideas to suggest answers to questions

### **Enquiry type:**

*Research using secondary resources*

### **Animals, including humans:**

- \*I understand the word 'hygiene' and recognise the different ways I can look after my body and have good hygiene including washing my body, wearing clean clothes, brushing my hair and teeth. (C7)
- \*I can recognise the impact bad hygiene can have on a person's body including what happens if people do not brush and clean their teeth. (C7)
- \*I can recognise that hygiene is also looking after belongings and cleaning where you live as well as objects around you. (C7)
- \*I understand what germs are and how to stay safe from germs. (C7)

GD:

- \*I can recognise and link the connection between foods, such as sugar, and tooth decay as well as not having good mouth hygiene.
- \*I can use appropriate vocabulary when discussing teeth including cavities, plaque and decay.
- \*I can recognise and understand the importance of storing food correctly and having good hygiene when preparing food.
- \*I can recognise that bacteria can be both good and bad.
- \*I understand that bacteria is found everywhere.

**Working scientifically:**

- (A1) asking simple questions and recognising that they can be answered in different ways
- (A4) identifying and classifying
- (A5) using their observations and ideas to suggest answers to questions
- (A6) gathering and recording data to help in answering questions.

**Enquiry type:**

*Pattern seeking*

*Research using secondary resources*

*Identifying, classifying and grouping*

**Animals, including humans:**

- \*I understand how germs can spread as well as how to prevent this. (C7)
- \*I recognise how to prevent illness from germs and the importance of cleaning areas of injury or when I am dirty. (C7)
- \*I can understand and correctly order the life cycle of a human recognising and naming the different stages. (C5)
- \*I can explain and compare what a human can do at each stage of the life cycle, describing a human's growth and changes. (C5)
- \*I can measure body parts, comparing measurements whilst recognising similarities and differences between parts of my own body as well as compared to my peers. (C4 & A6)
- \*I can ask questions about the measurements of body parts and how these will change over time. (A1)
- \*I can use and understand the correct vocabulary for carbohydrates, protein, fruit, vegetables, dairy, fats and sugar whilst being able to sort food into the correct group. (C7)
- \*I understand the importance of a healthy balanced diet and the amount that should be eaten from each food group. (C7)
- \*I understand that each food group provides something important for the human body to survive and be healthy; I know that food gives us energy. (C7)
- \*I can design a healthy plate. (C7)
- \*I understand the importance of drinking water. (C6 & C7)
- \*I can explain how my heart feels when I exercise compared to when I rest. (C7)
- \*I understand that my body has organs which need to be looked after by exercising and eating well. I can name *a few* major organs. (C6 & C7)
- \*I can explain that I breathe in oxygen and breathe out carbon dioxide. (C6)
- \*I understand the importance of rest after exercise so that my body can recover. (C7)

**GD:**

- \*I understand that carbohydrates and fats provide energy.
- \*I understand meat, fish and eggs help a human to grow.
- \*I understand fruit and vegetables help to keep a human well.
- \*I can name and identify *at least four major* organs including the heart, lungs, brain, intestine, stomach, kidneys and skin.
- \*I can explain what the job of my heart is using the words oxygen and blood.
- \*I can explain *why* my heart beats quicker when exercising.
- \*I can recognise that my lungs bring oxygen into my blood.
- \*I can explain how exercise can impact my brain.
- \*I can identify and name muscles and the skeleton.
- \*I can explain that my skeleton supports my body.
- \*I can explain that exercise makes my muscles stronger.
- \*I can use my learning to discuss what might happen if a human didn't eat from one of the food groups and how this would affect their body.
- \*I can use my understanding of the human body and reasoning skills to answer a question or problem.

## Year 2 Science assessment, Summer

### Working scientifically:

- (A1) asking simple questions and recognising that they can be answered in different ways
- (A2) observing closely, using simple equipment
- (A3) performing simple tests
- (A4) identifying and classifying
- (A5) using their observations and ideas to suggest answers to questions
- (A6) gathering and recording data to help in answering questions.

### Enquiry type:

*Research using secondary resources  
Identifying, classifying and grouping  
Comparative testing*

### Plants:

- \*I can name plants from different parts of the world. (B1)
- \*I can compare plants from around the world and how they survive in different habitats. (B4)
- \*I can explain the life cycle of a plant including how a plant begins and how it creates more plants. (B3)
- \*I can explain that a plant is a living thing because it can breathe, grow and reproduce. (B4 & F1)

### GD

- \*I can use the term 'germination' when explaining the life cycle of a plant.
- \*I can *begin* to use and understand the term 'pollination'.
- \*I can explain the importance of the flower in the life cycle of a plant.

### Uses of everyday materials:

- \*I can understand the negative impact some materials are having on the environment and why.
- \*I recognise that some objects can be made from different materials and can discuss the suitability of each material for different purposes. E.g. Spoons can be made from metal, plastic or wood. (D1 & D5)
- \*I can experiment with objects and the material they are made from to recognise how the shape can be changed by bending, twisting, squeezing or squashing. (D6)
- \*I can sort and record which materials are able to be bent, twisted, squashed or squeezed. (D6)
- \*I understand that all objects made of the same material may not be able to change shape in the same way. E.g. all objects made from plastic cannot necessarily bend or twist in the same way as one another. (D6)
- \*I can work in a group to plan our own question based around materials as well as plan and conduct our own experiment. (D3 & D5)
- \*I can choose a way I feel is suitable to record the data and results from my own experiment.
- \*I can explain how I know if a material is able to float or sink and when it might be useful to have a material which is able to do either of these. (D3 & D5)
- \*I understand that some materials break down and eventually disappear whereas some materials do not. (D2 & D3)
- \*I understand that all materials have a different timeline for decomposing. (D2 & D3)
- \*I understand the importance of recycling and reusing materials. (D5)
- \*I understand how people are exploring and inventing new materials and ways to combat climate change. (D5)

### GD:

- \*I understand where some materials originate. E.g. Cotton starts as a plant and leather comes from an animal.
- \*I can name examples of natural materials and examples of man-made materials recognising how these are different.
- \*I can recognise that man-made materials are more damaging for the environment than natural materials.
- \*I am able to correctly use and understand the terms 'decompose' and 'biodegradable'.
- \*I can use the word 'pollution' when discussing the way materials are affecting the environment.
- \*I can explain some of the ways that plastic travels to the ocean.
- \*I understand and can explain how micro plastics are created and the dangers they cause.

### Animals, including humans:

- \*I can compare what a cold blooded animal needs to survive with what a warm blooded animal needs. (C1 & C6)
- \*I can explain what happens to the body temperature of an animal group when in different climates depending on if they are warm or cold blooded. (C3)
- \*I can provide examples of animals which are mammals, reptiles, amphibians, birds, fish and molluscs whilst describing the type of skin the animal has, if they have lungs to breathe or gills, the type of offspring belonging to the group, their usual habitat and if they are warm or cold blooded. (C1 & C3)
- \*I can explain which animal groups have similarities as well as identifying their differences. (C3)
- \*I can identify and understand the features of ocean animals and how these features are used for survival as well as what the animals need to survive. (C3 & C6)
- \*I can present the life cycle of an animal and explain the main stages in the life cycle. I can discuss how the way the animal looks changes through the life cycle. (C5)
- \*I can use appropriate scientific vocabulary to name the stages of an animals life cycle. (C5)
- \*I understand that an animal begins the life cycle again once it is an adult. (C5)

### GD:

- \*I can recognise that some animals have skeletons whilst others don't and **begin** to recognise the terms 'vertebrate' and 'invertebrate'.
- \*I can explain key events for each stage of an animals life cycle.
- \*I understand that life cycles can move at different paces of time and living things can have different life spans.

### Living things and their habitats:

- \*I can explain multiple characteristics of a living thing, including growing, eating, moving or reproducing, and use these to explain how I know if something is dead or has never been living. (F1)
  - \*I can sort things into categories of living, dead and never been alive and explain how I know.(F1)
  - \*I can explain how I know that something was once living but no longer is by identifying features. (F1)
  - \*I can identify that some materials come from something that was once living whilst others have never been alive. E.g. Wood comes from something that was once alive whilst metal has never been living. (F1)
  - \*I can make a model animal and explain why it has never been living comparing it to the real version of the animal by listing what the real animal would be able to do and what my model cannot. (F1)
  - \*I can recognise and name **some** of the main habitats found in the world including aquatic, desert, forest, woodland, tundra or grassland. (F2)
  - \*I can understand and explain why animals rely on plants as well as plants rely on animals within their habitats. (F2)
  - \*I understand ocean habitats and can identify the different zones of the ocean whilst describing the characteristics of each zone and how it is suited to certain animals and/or plants. (F2)
  - \*I can identify and name plants and animals that live in each ocean habitat. (F3)
  - \*I can explain the characteristics and features of an animal and/or plant and how it is suited to an ocean habitat. (F2 & C3)
  - \*I can discuss how an animal and/or plant lives and survives in it's habitat including how an animal obtains it's food, if they have the ability to camouflage or if they need oxygen to breathe. (F2 & F4)
  - \*I can learn about and explain the features of a micro-habitat for an ocean animal and how it is suited to the animals needs. (F3)
  - \*I can independently represent a food chain of more than three links using arrows in the correct direction and labelling each part of the chain. (F4)
  - \*I understand that humans are part of a food chain. (F4)
  - \*I can correctly use the terms herbivore, omnivore and carnivore whilst explaining a food chain. (F4)
  - \*I understand that a plant can make it's own food whilst an animal cannot. (F4)
  - \*I understand the vocabulary 'predator' and 'prey' and can use these words to discuss the animals/plants in a food chain. (F4)
- GD: \*I can **begin** to use the term 'adaptations'.
- \*I can question what might happen to an animal or plant if it was placed in a different habitat and recognise the adaptations it might need to make to be able to survive.
  - \*I understand that if the conditions of a habitat were to change, it would affect the plants and in turn the animals that live there and explain what I think would happen.
  - \*I understand the vocabulary 'producer' and 'consumer' whilst being able to identify and label these within a food chain.
  - \*I can explain how energy is passed through a food chain from the beginning to the end.
  - \*I can discuss and predict what could happen if one part of a food chain was to become extinct and the impact this could have on the remaining food chain as well as the habitat.
  - \*I can explain that a plant is the beginning of a food chain because it is able to make it's own food and energy. I can **begin** to recognise that the word 'photosynthesis' describes this process.