

Hopton C of E Primary Academy

Science Subject Overviews

EYFS/KS1

Title	<u>Y1 Animals including Humans</u> We will name a variety of common animals including fish, amphibians, reptiles and mammals, name animals which are carnivores, herbivores and omnivores. We will also look at their structure as well as naming, drawing and labeling the basic part of the human body and the senses.
Overview of Unit	In this unit, pupils learn about a variety of common animals and begin to group them into fish, amphibians, reptiles, birds and mammals. They explore and compare the basic structures of animals, including features such as fur, feathers, scales, wings and fins. Pupils learn that animals eat different types of food and identify carnivores, herbivores and omnivores. Children also learn about humans as animals. They identify, name, draw and label the basic parts of the human body and link body parts to the five senses. Throughout the unit, pupils use observation and simple scientific vocabulary to compare, describe and group animals.
Key Vocabulary	<i>See progression document</i>
Key Learning Objectives	- I am learning to identify and name a variety of common animals. - I am learning to group animals into fish, amphibians, reptiles, birds and mammals. - I am learning to describe and compare the features of different animals. - I am learning to identify animals that are carnivores, herbivores and omnivores. - I am learning to describe what different animals eat. - I am learning to identify, name and label the basic parts of the human body. - I am learning to identify which body part is linked to each sense. - I am learning to use my senses to explore and observe the world around me. - I am learning to compare humans with other animals. - I am learning to use scientific vocabulary to describe and group animals. -
Key knowledge	1. Animals can be grouped into fish, amphibians, reptiles, birds and mammals. 2. Different animals have different body structures and features. 3. Animals eat different types of food. 4. Carnivores eat meat, herbivores eat plants and omnivores eat both. 5. Humans have different body parts with different jobs. 6. Humans use their senses to learn about the world around them.
Skills to be covered EYFS	Nursery



	• Notices and explores a variety of animals in familiar environments (pets, farm animals, zoo animals) • Talks about animals they see in stories, pictures and real life • Begins to notice simple differences between animals (big/small, fur/feathers, land/water) • Explores what animals eat in simple terms (e.g. “dog eats food”, “rabbit eats grass”) • Talks about their own body and uses senses in everyday play • Uses senses to explore the world (smelling, touching, listening, looking) Reception • Identifies and names common animals (fish, birds, mammals, reptiles, amphibians in simple terms) • Talks about differences between animals (fur, feathers, scales, wings, legs, fins) • Recognises that animals eat different things (plants, meat, both) • Begins to sort animals into simple groups (carnivore, herbivore, omnivore in simple language) • Names and describes basic parts of the human body • Links senses to body parts (e.g. “I see with my eyes”) • Draws and labels simple diagrams of the human body
Skills to be Covered KS1	Year 1 • Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals • Identify and name a variety of common animals that are carnivores, herbivores and omnivores • Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets) • Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.
Suggested Learning Activities	• Animal explorer hunt around the school grounds • Sorting animals using giant hoops and outdoor games • “Guess the animal” clue and classification challenges • Creating animal fact files and mini posters • Investigating animal coverings using feely bags and images • Role-play animal movement and diet games • Life-size body outline labelling activities • Five senses investigation carousel • Designing a healthy meal plate for different animals • Retrieval quizzes, matching games and vocabulary bingo
End of assessment quiz	<i>Each quiz should also revisit two questions from previous units</i> 1. Name one animal that is a mammal. 2. What is the difference between a carnivore and a herbivore? 3. Name three things animals need to survive. 4. Which sense do you use with your ears? 5. What happens to offspring as they grow? 6. Why are exercise and hygiene important for humans?



Title	<u>Y2 Animals including Humans</u> We are learning to notice that animals including humans have offspring that grow into adults. We are learning about the basic needs of animals for survival and understand the importance of exercise, healthy food and hygiene.
Overview of Unit	In this unit, pupils learn that animals, including humans, have offspring that grow into adults. They explore simple life cycles and identify how humans change as they grow. Pupils learn about the basic needs of animals for survival, including food, water and air, and begin to understand how humans can stay healthy through exercise, healthy eating and good hygiene habits. Children develop their understanding of healthy lifestyles and explore how daily choices can help keep their bodies healthy. Throughout the unit, pupils use observation, discussion and simple scientific vocabulary to describe growth, survival and health.
Key Vocabulary	<i>See progression document</i>
Key Learning Objectives	- I am learning to identify that animals, including humans, have offspring. - I am learning to describe how offspring grow and change into adults. - I am learning to compare the life cycles of different animals. - I am learning to identify the basic needs of animals for survival. - I am learning to explain why animals need food, water and air. - I am learning to identify healthy and unhealthy food choices. - I am learning to explain why exercise is important for keeping healthy. - I am learning to describe how hygiene helps to keep us healthy. - I am learning to investigate ways humans can stay healthy. - I am learning to use scientific vocabulary to explain growth, survival and health.
Key knowledge	1. Animals, including humans, have offspring that grow into adults. 2. All animals need food, water and air to survive. 3. Humans need exercise to help keep their bodies healthy. 4. Eating healthy foods helps humans grow and stay well. 5. Hygiene helps prevent illness and keeps our bodies clean.
Skills to be covered EYFS	Nursery ● Notices baby animals and talks about animal families. ● Talks about how animals and humans grow and change. ● Understands that living things need food and water. ● Begins to talk about healthy habits such as washing hands. ● Explores movement and active play. Reception ● Recognises that baby animals grow into adults. ● Identifies some things humans need to stay alive and healthy. ● Talks about healthy foods and exercise. ● Understands the importance of washing hands and keeping clean. ● Describes simple changes as humans grow.



Skills to be Covered KS1	Year 2 • Notice that animals, including humans, have offspring which grow into adults • Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) • Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene
Suggested Learning Activities	• Sequencing baby-to-adult life cycle cards • Comparing photographs of humans and animals at different life stages • Healthy lunchbox sorting challenge • Exercise investigation measuring pulse before and after activity • Glitter germ or handwashing investigations • Designing posters about healthy lifestyles • Survival challenge sorting what living things need • Active learning games linked to hygiene and exercise • Mini surveys about healthy habits • Retrieval games, quizzes and partner challenges
End of assessment quiz	<i>Each quiz should also revisit two questions from previous units</i> 7. What is an offspring? 8. What three things do animals need to survive? 9. What happens as humans grow older? 10. Why is exercise important? 11. Name one healthy food choice. 12. How does good hygiene help keep us healthy?

Title	<u>Y2 Living Things</u> We are learning to explore things that are dead and alive. We will look at habitats including microhabitats as well as learning about food chains.
Overview of Unit	In this unit, pupils explore the differences between things that are living, dead and things that have never been alive. They learn that living things live in habitats that provide what they need to survive, including food, water and shelter. Pupils investigate a variety of habitats and microhabitats and identify the plants and animals that live there. Children also learn about simple food chains and explore how animals depend on plants and other animals for food. Throughout the unit, pupils observe, compare, classify and use scientific vocabulary to describe living things and their environments.
Key Vocabulary	<i>See progression document</i>



Key Learning Objectives	- I am learning to identify things that are living, dead and never alive. - I am learning to describe the features of living things. - I am learning to identify different habitats. - I am learning to explain how habitats provide for the needs of living things. - I am learning to explore and identify microhabitats. - I am learning to identify plants and animals in different habitats. - I am learning to describe what animals need to survive. - I am learning to identify sources of food for animals. - I am learning to create and explain simple food chains. - I am learning to use scientific vocabulary to describe habitats and living things.
Key knowledge	1. Some things are living, dead or have never been alive. 2. Living things need food, water and shelter to survive. 3. Habitats provide living things with what they need. 4. Microhabitats are small habitats where minibeasts and plants can live. 5. Animals depend on plants and other animals for food. 6. Food chains show how living things get their food.
Skills to be covered EYFS	Nursery • Explores living things in the environment (plants, animals, minibeasts) • Notices differences between living things and objects (toys vs animals/plants) • Talks about animals and plants they see in familiar places (home, garden, park) • Begins to understand that animals need food and water • Enjoys exploring outdoor areas and noticing where animals live Reception • Recognises that some things are living and some are not • Begins to talk about where animals live (homes/habitats in simple terms) • Identifies familiar animals and plants in different places • Notices that animals need food, water and shelter to survive • Talks about simple food relationships (e.g. "cat eats fish") • Explores local environments and different mini-habitats (logs, bushes, ponds)
Skills to be Covered KS1	• Explore and compare the differences between things that are living, dead, and things that have 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 • Identify and name a variety of plants and animals in their habitats, including microhabitats • 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
Suggested Learning Activities	• Habitat and microhabitat hunts outdoors • Minibeast investigations using magnifiers • Sorting objects into living, dead and never alive relay games • Building simple food chains with picture cards and role play • Creating shoebox or small-world habitats • Matching animals to habitats through team challenges • Outdoor scavenger hunts for living things • Designing posters about protecting habitats • Using classification hoops and sorting games • Retrieval quizzes, bingo and vocabulary matching activities

End of assessment quiz	<i>Each quiz should also revisit two questions from previous units</i> 1. What is the difference between something living and something dead? 2. What do living things need to survive? 3. What is a habitat? 4. What is a microhabitat? 5. What does a food chain show? 6. Name one animal and the habitat it lives in.
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Title	<u>Y1 Materials</u> We will learn to tell the difference between an object and it's materials, identify a range of everyday materials, describe properties of them, compare and group them.
Overview of Unit	In this unit, pupils learn to distinguish between an object and the material from which it is made. They identify and name a range of everyday materials including wood, plastic, glass, metal, water and rock. Pupils explore and describe the simple physical properties of materials, such as whether they are hard, soft, rough, smooth, shiny or waterproof. Children compare and group materials based on their properties and begin to explain why certain materials are suitable for different objects. Throughout the unit, pupils use observation, sorting and discussion to develop their scientific vocabulary and understanding of materials in the world around them.
Key Vocabulary	<i>See progression document</i>
Key Learning Objectives	- I am learning to identify and name everyday materials. - I am learning to distinguish between an object and the material it is made from. - I am learning to describe the properties of different materials. - I am learning to compare and group materials based on their properties. - I am learning to investigate which materials are suitable for different purposes.
Key knowledge	1. Objects are made from materials. 2. Different materials have different properties. 3. Everyday materials include wood, plastic, glass, metal, water and rock. 4. Materials can be described using scientific vocabulary. 5. Materials can be grouped by their properties.
Skills to be covered EYFS	Nursery • Explores everyday objects in play (toys, building materials, containers) • Notices that objects are made from different materials (wood, plastic, fabric) • Uses senses to explore materials (touching, feeling, describing textures) • Talks about simple features of objects (hard/soft, big/small, heavy/light) • Sorts objects informally during play (e.g. blocks, soft toys, metal items) • Enjoys construction and messy play using different materials



	Reception - Identifies that objects are made from different materials - Names common materials (wood, plastic, metal, glass, water, rock, fabric) - Describes simple properties of materials (hard, soft, smooth, rough, bendy, shiny) - Sorts objects by material or simple properties - Compares materials (e.g. "wood is harder than fabric") - Talks about why materials are used for certain objects (simple reasoning) - Uses vocabulary to describe and group materials
Skills to be Covered KS1	- Distinguish between an object and the material from which it is made - Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock - Describe the simple physical properties of a variety of everyday materials - Compare and group together a variety of everyday materials on the basis of their simple physical properties.
Suggested Learning Activities	- Material treasure hunt around the classroom or playground - Mystery feely bag investigations - Sorting materials using hoops and relay races - Waterproof material testing challenges - Building towers using different materials - Exploring textures through sensory stations - Matching objects to the materials they are made from - Designing simple objects using chosen materials - Outdoor material collections and classification - Retrieval games and material property bingo
End of assessment quiz	<i>Each quiz should also revisit two questions from previous units</i> - What is the difference between an object and a material? - Name one everyday material. - Which material is usually transparent? - Name two properties of a material. - Why are different materials used for different objects? - Which material would be best for a waterproof coat?

Title	<u>Y2 Materials 1 and 2 (2 units)</u> We are learning to identify and compare the suitability of a variety of materials for particular uses. We are learning how the shapes of solid objects can be changed.
Overview of Unit	In this unit, pupils identify and compare the suitability of a variety of everyday materials for different purposes. They investigate materials such as wood, plastic, metal, glass, rock, paper and cardboard and describe their properties using scientific vocabulary. Pupils explore why certain materials are chosen for particular objects based on their properties. Children also investigate how the shapes of solid objects can be changed through squashing, bending, twisting and stretching. Through practical investigations and



	discussion, pupils develop their ability to compare, test and describe materials and their uses.
Key Vocabulary	<i>See progression document</i>
Key Learning Objectives	- I am learning to compare the properties of different materials. - I am learning to explain why different materials are used for different purposes. - I am learning to investigate which materials are waterproof. - I am learning to identify materials that are absorbent or transparent. - I am learning to choose suitable materials for different objects. - I am learning to test the strength and flexibility of materials. - I am learning to explore how materials can be changed by squashing. - I am learning to investigate how materials can bend, twist and stretch. - I am learning to compare how different materials respond to forces. - I am learning to use evidence from investigations to explain which materials are most suitable.
Key knowledge	1. Different materials are suitable for different purposes. 2. Materials have different properties. 3. Objects are made from materials chosen for a reason. 4. Some materials can change shape by squashing, bending, twisting and stretching. 5. Materials can be compared and grouped based on their properties and uses.
Skills to be covered EYFS	Nursery • Explores everyday objects in play (toys, building materials, containers) • Notices that objects are made from different materials (wood, plastic, fabric) • Uses senses to explore materials (touching, feeling, describing textures) • Talks about simple features of objects (hard/soft, big/small, heavy/light) • Sorts objects informally during play (e.g. blocks, soft toys, metal items) • Enjoys construction and messy play using different materials Reception • Identifies that objects are made from different materials • Names common materials (wood, plastic, metal, glass, water, rock, fabric) • Describes simple properties of materials (hard, soft, smooth, rough, bendy, shiny) • Sorts objects by material or simple properties • Compares materials (e.g. "wood is harder than fabric") • Talks about why materials are used for certain objects (simple reasoning) • Uses vocabulary to describe and group materials
Skills to be Covered KS1	• Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses • Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching



Suggested Learning Activities	• Material treasure hunt around the classroom or outdoor area • Designing and making a waterproof umbrella for a toy • Testing which materials are best for protecting an egg or fragile object • “Mystery bag” investigations using touch to identify materials • Building bridges or towers using different materials • Exploring stretchy, bendy and squashy materials through practical challenges • Carrying out a waterproof investigation using droppers and sprays • Designing a strong bag or container for carrying objects • Sorting materials using giant hoops or outdoor relay games • Material challenge stations linked to bending, twisting, stretching and squashing • Creating simple posters recommending the best material for different jobs • Classifying materials through team games and quizzes
End of assessment quiz	<i>Each quiz should also revisit two questions from previous units</i> 13.

Title	<u>Y1 Plants</u> We are learning to identify a range of common, wild and garden plants, including deciduous and evergreen trees, identify and describe the basic structure of a variety of common flowering plants including trees. We are learning to observe changes across the four seasons.
Overview of Unit	In this unit, pupils learn to identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. They explore the basic structure of flowering plants and trees and learn the names of parts such as roots, stems, leaves and flowers. Children observe plants in their local environment and compare different types of plants and trees. They also begin to notice seasonal changes and observe how plants and trees change throughout the year. Throughout the unit, pupils use observation and scientific vocabulary to identify, compare and describe
Key Vocabulary	<i>See progression document</i>
Key Learning Objectives	- I am learning to identify and name common wild and garden plants. - I am learning to identify and compare deciduous and evergreen trees. - I am learning to identify and label the basic parts of a flowering plant. - I am learning to observe and compare different plants and trees. - I am learning to observe seasonal changes in plants and trees.
Key knowledge	Plants can be identified and grouped in different ways. Wild plants grow naturally and garden plants are grown by people. Trees can be deciduous or evergreen. Flowering plants have different parts including roots, stems, leaves and flowers.



	Plants and trees change during different seasons.
Skills to be covered EYFS	Nursery • Explores plants in the outdoor environment (grass, flowers, trees) • Notices differences between natural objects (leaves, flowers, sticks) • Talks about what they can see when looking at plants • Uses senses to explore plants (touching leaves, smelling flowers) • Begins to notice that plants grow in different places (garden, park) • Enjoys planting seeds and watching them grow in simple activities Reception • Identifies and names common plants in the environment (flowers, trees, shrubs) • Recognises and names simple parts of plants (leaf, flower, stem, root) • Observes and describes how plants look different (size, colour, shape) • Begins to recognise deciduous trees (lose leaves) and evergreen trees (keep leaves) • Talks about how plants grow from seeds and need water and light • Draws and labels simple plant diagrams using basic vocabulary
Skills to be Covered KS1	• Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees • Identify and describe the basic structure of a variety of common flowering plants, including trees
Suggested Learning Activities	• Seasonal plant and tree walks around the school grounds • Leaf and bark rubbings using natural materials • Planting seeds and observing growth • Sorting plants into wild and garden plants • Identifying deciduous and evergreen trees outdoors • Creating labelled diagrams of plants and trees • Nature scavenger hunts linked to plant parts • Comparing leaves and flowers using magnifiers • Retrieval games and plant bingo
End of assessment quiz	<i>Each quiz should also revisit two questions from previous units</i> 1. What is the difference between a wild plant and a garden plant? 2. What is a deciduous tree? 3. Name two parts of a flowering plant. 4. Which part of the plant grows underground? 5. Name one change that happens to trees in autumn. 6. Name one thing plants need to grow

Title	<u>Y2 Plants</u> We are learning to observe how seeds and bulbs grow into mature plants and find out and describe what plants need to stay healthy.
Overview of Unit	In this unit, pupils learn how seeds and bulbs grow into mature plants. They observe and describe changes over time as plants grow and investigate what plants need to



	stay healthy. Pupils explore the importance of water, light and suitable temperatures for plant growth and begin to understand that living things have basic needs. Children develop their observational skills by planting seeds and bulbs, recording changes and comparing how plants grow in different conditions. Throughout the unit, pupils use scientific vocabulary to describe growth and investigate what helps plants stay healthy
Key Vocabulary	<i>See progression document</i>
Key Learning Objectives	- I am learning to observe how seeds and bulbs grow into plants. - I am learning to identify what plants need to grow and stay healthy. - I am learning to investigate how water and light affect plant growth. - I am learning to observe and record changes in growing plants. - I am learning to compare healthy and unhealthy plants using scientific vocabulary.
Key knowledge	1. Seeds and bulbs grow into mature plants. 2. Plants need water, light and a suitable temperature to grow and stay healthy. 3. Different plants grow at different rates. 4. Plants change as they grow. 5. Observations can be used to describe plant growth over time.
Skills to be covered EYFS	Nursery • Explores plants in the outdoor environment (grass, flowers, trees) • Notices differences between natural objects (leaves, flowers, sticks) • Talks about what they can see when looking at plants • Uses senses to explore plants (touching leaves, smelling flowers) • Begins to notice that plants grow in different places (garden, park) • Enjoys planting seeds and watching them grow in simple activities Reception • Identifies and names common plants in the environment (flowers, trees, shrubs) • Recognises and names simple parts of plants (leaf, flower, stem, root) • Observes and describes how plants look different (size, colour, shape) • Begins to recognise deciduous trees (lose leaves) and evergreen trees (keep leaves) • Talks about how plants grow from seeds and need water and light • Draws and labels simple plant diagrams using basic vocabulary
Skills to be Covered KS1	• Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees • Identify and describe the basic structure of a variety of common flowering plants, including trees
Suggested Learning Activities	• Planting seeds and bulbs and observing growth over time • Keeping simple plant growth diaries • Investigating what happens when plants do not get water or light



	• Comparing healthy and unhealthy plants • Measuring and recording plant growth • Exploring seeds and bulbs using magnifiers • Creating labelled diagrams of growing plants • Outdoor plant hunts and seasonal observations • Retrieval games and plant vocabulary bingo
End of assessment quiz	<i>Each quiz should also revisit two questions from previous units</i> 1. What grows into a mature plant? 2. Name two things plants need to stay healthy. 3. What might happen if a plant does not get water? 4. Which part of the plant grows first from a seed? 5. What changes happen as a plant grows? 6. Why is light important for plants?