Science Curriculum

Autumn Term: Biology
Animals Including Humans
Year 2

Prior Knowledge

Things that I know:	Skills I will need:
A variety of common animals including fish, amphibians, reptiles, birds and mammals.	Identifying and classifying.
Animals that are carnivores, herbivores and omnivores.	Asking simple questions and recognising that they can be answered in different ways.
How to describe and compare the structure of a variety of common animals.	Using observations and ideas to suggest answers to questions.

Knowledge Objectives

- 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 of exercise, eating the rights amounts of different types of food, and hygiene.

Year 2: Biology- Animals including Humans
Key Concept: Functions

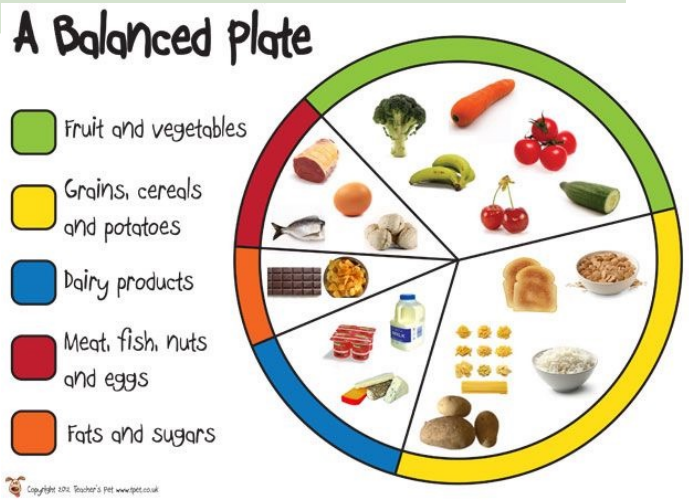
Specific Vocabulary	
healthy	Keeping healthy means doing things that are good for your body – things like eating nutritious foods, exercising, brushing your teeth and getting enough sleep
diet	Eating a balanced diet means choosing foods in the right amounts from each of the food groups.
off-spring	You can refer to a person's children or an animal's young as their off-spring.
exercise	Means to keep your body healthy by running, walking and playing. You will need to feel out of breath if you have exercised properly.
proteins	Protein is a food group which includes meat, eggs, fish, dairy products, nuts and seeds
carbohydrates	Carbohydrates are sugars (such as fructose, glucose, and lactose) and starches, which are found in foods such as starchy vegetables, grains, rice, breads, and cereals.
fats	Fats are found in food such as chocolate, biscuits and fizzy pop.
nutrition	Nutrition is the process by which the body nourishes itself by transforming food into energy and body tissues.
survival	Survive usually means to succeed in keeping alive.
[illegible]	Taking care of our body by being clean and making sure we don't smell

Important Facts to know by the end of the materials topic:

Everyone should have their '5 a day' – this means five portions of fruit and vegetables, to get the right amount of nutrients.
Food Groups

- Protein
- Carbohydrates
- Fats
- Fruit and Vegetables
- Dairy

- Know that animals, including humans, have young animals that look like them
- Know that the babies will grow into adults
- Know what humans need to survive (including food, air and water).
- Know what animals need to survive.
- Know why it is important to exercise.
- Know why it is important to eat the right amounts of food.
- Know why it is important to keep clean and wash regularly.



Prior Knowledge:

A variety of common animals including fish, amphibians, reptiles, birds and mammals.

Animals that are carnivores, herbivores and omnivores.

How to describe and compare the structure of a variety of common animals.

Science Curriculum

Summer Term: Biology
Living things and their habitats
Year 2

Prior Knowledge

Things that I know:	Skills I will need:
A variety of common animals including fish, amphibians, reptiles, birds and mammals.	Sorting and classifying things according to whether they are living, dead or were never alive.
Know that plants and animal grow and live in different places.	Recording their findings in charts.
Know that animals including humans have offspring that grow into adults.	Asking and answering questions based around conditions in different habitats and microhabitats.

Knowledge Objectives

- 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 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.

Year 2: Biology- Living things and their habitats
Key Concept- Life Cycles

Specific Vocabulary	
habitat	A habitat is a place that an animal lives. It provides the animal with food, water and shelter.
Never been alive	An object that has never done the life processes.
Living	To be alive
Dead	To stop being alive
Food chain	A food chain describes how different organisms eat each other, starting out with a plant and ending with an animal. For example, you could write the food chain for a lion like this: grass ---> zebra ---> lion
species	A group of animals, plants or other living things that all share common characteristics and that are all classified as alike in some manner.
microhabitats	Microhabitats are the small-scale physical requirements of a particular

Prior Knowledge:

A variety of common animals including fish, amphibians, reptiles, birds and mammals.

Know that plants and animal grow and live in different places.

Know that animals including humans have offspring that grow into adults.

Important Facts to know by the end of the materials topic:

- know how a specific habitat provides for the basic needs of things living there
- identify and name plants and animals in a range of habitats
- match living things to their habitat
- know how animals find their food
- name some different sources of food for animals
- I can compare the differences between things that are living, dead and have never been alive.

Microhabitat	Habitat	Animal and their habitat
• individual trees • under a stone • a pile of logs • short grass	• desert • meadow • woodland • grassland • forest • seashore • ocean	• Scorpion- desert • Whale-ocean • Sloth-rainforest • zebra-grassland • Microhabitat • Caterpillar- leaf • Spider- web • Woodlice- under a stone

Science Curriculum

Spring Term: Chemistry
Everyday Materials
Year 2

Prior Knowledge

Things that I know:	Skills I will need:
The difference between an object and the material from which it is made.	Comparing materials found indifferent familiar areas.
A range of different materials such as wood, plastic, glass and metal.	Observing, identifying and classifying the uses of different materials.
Some properties of a variety of different materials.	Recording observations.

Knowledge Objectives

- 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.

Year 2: Chemistry- Materials
Key Concept- Materials

Specific Vocabulary	
suitable	Right for a particular purpose
squashing	Squashing is pushing things closely together.
bending	Bending is changing the shape and direction of something.
twisting	To twist something you move one part clockwise and the other part anticlockwise.

Prior Knowledge:

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

A range of different materials such as wood, plastic, glass and metal.

Some properties of a variety of different materials.

Important Facts to know by the end of the materials topic:

- Know why some materials are more suitable than others for specific uses
- Know that some materials can be squashed,, stretched, twisted or bent according to need
- Know why certain materials are suitable for many different uses
- Wood is used to make buildings and furniture and for making fires and heating
- Most of the paper or cardboard we use came from trees
- Many churches have special coloured glass often used to make religious pictures
- Plastics are used to make many of the things we use in everyday life. They are used for toys, bicycle helmets, mobile phones, window frames and many other common

Science Curriculum

Spring Term: Biology
Plants
Year 2

Prior Knowledge

Things that I know:	Skills I will need:
How to identify and name a variety of common, wild and garden plants.	Observation and recording with accuracy of the growth of plants.
Know the different between deciduous and evergreen trees.	To set up a comparative test to show that plants need light and water to stay healthy.
How to identify and describe the basis structure of a common flowering plant and different trees.	Observe plants at different stages of growth.

Knowledge Objectives

- Observe and describe how seeds and bulbs grow into mature plants.
- Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

Year 2: Biology – Plants
Key Concept: Growth

Specific Vocabulary	
temperature	The degree or intensity of heat present in a substance or object.
seeds	The part of a seed plant which can grow into a new plant.
bulb	Bulbs are underground masses of food storage from which plants grow.
habitat	The place where a plant or animal (mostly) lives. There are different kinds of habitats, such as grassland, forest, river, sea and desert.
oxygen	Oxygen is used by animals and plants in the respiration (breathing) process.

Prior Knowledge:

How to identify and name a variety of common, wild and garden plants.

Know the different between deciduous and evergreen trees.

How to identify and describe the basis structure of a common flowering plant and different trees.

Important Facts to know by the end of the materials topic:

- Know that plants need water, light and a suitable temperature to grow and stay healthy
- Know how seeds and bulbs grow into mature plants
- Trees and shrubs take in water and carbon dioxide and give out oxygen
- Trees can live for a very long time and have many roots compared to a flowering plant. The oldest known tree is over 5000 years old
- The trunk is the main body of the tree. The trunk is covered with bark which protects it from damage.