St Mary Cray Primary Academy – Knowledge Organiser



Science Focus

Animals, including humans

Year 1

Autumn 1

	Tidilia 13	
What? (Key Knowledge)		
Humans		
Human beings	We are called humans We are from the family of animals called mammals	
Basic parts of the human body	Hair, head, ears, eyebrows, nose, ears, mouth, chin, neck, shoulder, chest, elbow, arm, wrist, hand, tummy, knee, leg, ankle, foot, fingers, toes.	
There are 5 basic human senses	 Touch, taste, smell, sight and hearing. We touch using our skin (usually our hands) We taste using our tongues by putting something in our mouth We smell by using our nose We see using our eyes We hear using our ears 	
Animals		
6 types of animal	 Invertebrates (e.g. crab, worm) Fish (e.g. goldfish, cod, shark) Amphibians (e.g. frog, toad) Reptiles (e.g. snake, crocodile) Birds (e.g. robin, chicken, owl) Mammals (e.g. human, dog) 	
Diet	Animals that eat meat are called carnivores (e.g. lion, tiger, bear) Animals that eat plants are called herbivores (e.g. cow, sheep, rabbit) Animals that eat both are called	

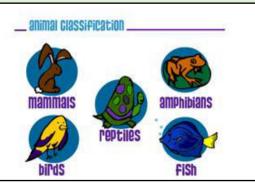
 Statutory r 	equirements
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- Identify and name a variety of common animals that are birds, fish, amphibians, reptiles and mammals
- Identify and name a variety of common animals that are carnivores, herbivores and omnivores.
- Describe and compare the structure of a variety of common animals (birds, fish, amphibians, reptiles and mammals, and including pets).
- Identify, name draw and label the basic parts of the human body and say which parts of the body is associated with each sense.

What? (Key vocab)		
Spelling	Definition	
Invertebrates	Animals with no backbone	
Fish	An animal with gills and fins that lives in water	
Amphibians	An animal which can live on land or in water	
Reptiles	An animal which has dry, scaly skin and lays eggs on land	
Birds	An animal with feathers, wings an a beak that is usually able to fly	
Mammals	An animal that feeds its young with milk from the mother and has skin usually more or less covered with hair	
Pet	A friendly animal trained to live with humans	

Pictures and Diagrams

omnivores (e.g. human, pig, rat)



Possible experiences

- Finding and classifying animals in the school environment
- Looking closely at the features of animals using hand lenses
- Learning songs to recall the main parts of the body
- Loan a class pet and look after it
- Visit form the 'animal person' to introduce less common animals
- Testing senses through taste tests, feely bags, colour blindness test etc

St Mary Cray Primary Academy – Knowledge Organiser



Science Focus	Seasonal Changes	Year 1	Autumn

What? (Key Knowledge)		
Seasons	 What are the 4 seasons What months are in which seasons Create a timeline-Name one big event that happens in each season 	
Seasonal Changes	 What are the signs of Spring Observe the seasonal changes of each season. What are the main changes of each season. 	
Weather	 What is the weather? What types of weather are there? How can we measure temperature? How can we measure the wind? How can we measure rainfall? Predict the clothing we should wear in each season and give reasons. 	
Cloud	 Observe the sky during different seasons and types of weather Name the 3 main types of cloud Predict which clouds will be in the sky by thinking about the season and weather. 	
Predict, observe, Identify and evaluate	 Understand what is meant by these terms. Carry out simple experiments to explore these terms. Revisit these experiments across the year to compare throughout the seasons. 	
Possible experiences		

- Finding and classifying weather changes in the school environment
- Update your weather diary/big book every day, showing the types of weather for that day
- Learning songs to recall the seasons
- · Measuring and observing the weather
- How can you measure the amount of rain in the different seasons
- Simple test How bright is the Sun in different seasons?

• Statutory requirements

- To be able to observe and describe weather associated with the seasons.
- To be able to ask simple questions and recognise that they can be answered in different ways
- To able to identify objects.
- To be able to observe closely, using simple equipment.
- To be able to gather data to answer a question.

What? (Key vocab)	
Spelling	Definition
Summer	The months of June, July and August
Spring	The months of March, April and May.
Autumn	The months of September, October and November.
Winter	The months of December, January and February.
Weather	The weather is how you would describe the conditions outsidethe temperature, if its wet or dry or windy.
Day	Daytime is when the sun has risen.
Night	Night time is after the sun has set.
Cloud	A cloud is made of water drops or ice crystals floating in the sky. There are many kinds of clouds . We will learn about Stratus, Cumulus and Cirrus clouds.
Moon	The moon is a huge round globe

made up of rocks and it orbits the

earth.

St Mary Cray Primary Academy - Knowledge Organiser



Science Focus Plants Year 1

What? (Key Knowledge)	
Leaf	The leaf makes food for the plant by photosynthesis.
Stem	The stem supports the leaves and is also part of the plant's transport system.
Buds	Buds are undeveloped shoots.
Flower	Some buds produce flowers. These are shoots specialised for reproduction.
Roots	Roots anchor the plant to whatever material it is growing on or in. They also absorb water and other chemicals that the plant needs in order to live healthily and grow normally.
Trees	Ash, birch, beech, rowan, common lime, oak, sweet chestnut, horse chestnut, apple, willow, sycamore, fir, pine, holly, etc
Wild flowers	Daisy, dandelion, clover, shepherd's purse, thistle, and nettle.
Garden flowers	Rose, carnation, crocus, daffodil, bluebells, etc

Possible experiences

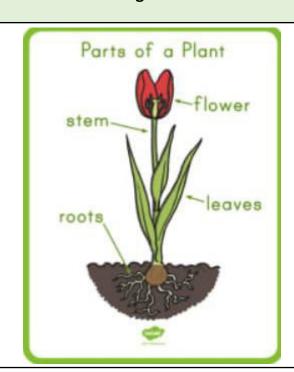
- Grow your own sunflowers observe the seeds and predict what they may be and if they are living or non-living. Seeds could then be planted in Spring and children could make observations each week by drawing what they see. Challenge misconceptions that all living things have to move around. Watch how plants move to face the sun.
- Grow edible plants Children may think that vegetables are not part of the plant kingdom.
 Observe the vegetable plants and identify which part of the plant we eat – leaves, stem, root.
 Radishes are quick to grow and a great favourite of Peter Rabbit. Lettuce, carrots, beans or peas are also all great fun to grow with children.

Statutory requirements

- Identify and name a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen
- Identify and describe the basic structure of a variety of common plants including roots, stem/trunk, leaves and flowers.

What? (Key vocab)	
Spelling	Definition
Deciduous	A tree or shrub that sheds its leaves annually, usually in autumn.
Evergreen	A plant that retains green leaves throughout the year.
Pollen	A fine powder produced by flowers. It fertilizes other flowers of the same species so that they produce seeds.
Seed dispersal	The movement, spread or transport of seeds away from the parent plant.
Blossom	The flowers that appear on a tree before the fruit.

Diagrams



St Mary Cray Primary Academy – Knowledge Organiser



Science Focus

Everyday materials

Year 1

Summer 2

What? (Key Knowledge)		
Materials	 Materials are all the 'stuff' that objects are made from. We create objects by treating and shaping materials in different ways. 	
Properties	 All materials have characteristics that we associate with them. These are their properties. Properties of materials can be changed through heating, cooling and other methods. 	
We can use our 5 senses to explore materials	 Our 5 senses are: touch, taste, smell, sight and hearing. We touch using our skin (usually our hands) We taste using our tongues by putting something in our mouth We smell by using our nose We see using our eyes We hear using our ears 	

 Statutory requirement 	ıts
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- Distinguish between an object and the material from which it is made.
- Identify and name a variety of everyday materials, including wood, plastic, glass, 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 physical properties.

What? (Key vocab)	
Spelling	Definition
Material	The matter from which a thing is or can be made. Examples include: wood, plastic, glass, metal, water, rock, brick, fabric, sand, paper, flour, butter, milk, soil
Property	An attribute, quality or characteristic of something. Examples include: hard/soft, stretchy/not stretchy, shiny/dull, rough/smooth, bendy/not bendy, transparent/not transparent, sticky/not sticky
Texture	The feel, appearance, or consistency of a surface or a substance. Examples include: smooth, rough, sharp, abrasive
State	The physical condition of something. Examples include: solid, liquid, gas

Natural Materials Man-Made Materials sand organic oil concrete glass nulon



Pictures and Diagrams



Possible experiences

- Finding and classifying objects around the classroom according to the material from which they are made
- Feely bags of different textures to explore
- Sorting objects according to property
- Observing changes in materials through heating and cooling (freezing water to make ice, melting chocolate, 'Will it melt?' experiments)
- Observing changes through cooking (baking biscuits, making ice cream)
- Simple tests (making the best umbrella, Humpty Dumpty crash mats)