

SCIENCE: BIOLOGY			
PLANTS	ANIMALS, including HUMANS	ALL LIVING THINGS	EVOLUTION & INHERITENCE
Know how cress grows	Know what can be seen and heard outside the classroom in Autumn/Winter/Spring/Summer Know how a caterpillar turns into a butterfly	Know which birds visit our school regularly in Autumn/Winter/Spring/Summer Classify observed objects into living and non-living Classify observed objects into categories: plants, animals, natural and man-made objects Explain the basic needs of different pets: dog, cat, fish, rabbit	
Know and name a variety of common wild and garden plants. Do now – Name two common wild plants. Name two garden plants.	Know the name of parts of the human body that can be seen. Do Now - Label the parts of the body that can be seen.	Know how a specific habitat provides for the basic needs of things living there (plants and animals) Do Now – Provide picture of habitat and ask why it is suitable.	
Know and name the petals, stem, leaves and root of a plant. Do Now - Label the petals, stem, leaves and roots on a plant.	Know which sense is associated with which part of the body. Do Now - Match the body part to the sense.	Identify and name plants and animals in a range of habitats. Do Now – Provide picture of habitat – can you name 5 animals that would live in this habitat?	
Know and name the roots, branches and leaves of a tree. Do Now - Label the roots, branches and leaves on a tree.	Know the basic stages in a life cycle for animals, (including humans) Do now - Show the life cycle of a frog, giving three stages before being an adult frog	Name some different sources of food for animals. Do now – What sources of food could a/an x eat?	
Know and explain how seeds and bulbs grow into plants Do now – Explain how a tree grows.	Know why exercise, a balanced diet and good hygiene are important for humans. Do now – Give 1 reason why exercise is important for humans. Give 1 reason why a balanced diet is important for humans. Give 1 reason why good hygiene is important for humans.	Know about and explain a simple food chain. Do now – What is a food chain and can you give an example?	
Identify and name trees that are around you. Do now – Name 5 trees you would find in the local area.		Know, name and classify a variety of animals including fish, amphibians, reptiles, birds and mammals. Do Now - Match the animals to the correct terminology.	

Nursery

Reception.

Y1/2 Cycle A

Y1/2 Cycle B

Year 3/4 Cycle A

Year 3/4 Cycle B

Year 5/6 Cycle A

Year 5/6 Cycle B

Know what plants need in order to grow and stay healthy (water, light & suitable temperature) Do now – Name 3 things plants need in order to grow and stay healthy.	Know about the importance of a nutritious, balanced diet. Do Now – Design a balanced meal. Know how nutrients are gained differently by plants and humans. Do now – How is the way that humans get nutrients different to plants? Know about the skeletal and muscular system of a human. Do now – Label 5 bones and 5 muscles in the body.	Know and classify animals by what they eat (carnivore, herbivore and omnivore) Do now – Name an animal that is a carnivore, herbivore, omnivore. Identify things that are living, dead and have never lived. Do now – Give an example of something that is living, dead and has never lived.	
Know the function of different parts of flowering plants and trees. Do Now - Label this diagram of a plant/tree with its functions.	Know the names of the three common joints (ball & socket/hinge/pivot) Do now – Name the three common joints in the human body.	Use and create classification keys to group, identify and name living things. Do now – Match a criteria from a classification key to a living thing. <i>Discover what is in a pond.</i>	
Know how water is transported within plants. Do now – Explain how water is transported in plants.	Identify and name the parts of the human digestive system. Do now – label the parts of the digestive system.	Know how changes to an environment could endanger living things. Do now – Give an example of how a change to the environment could affect a living thing in that environment.	
Know what pollination is. Do now – How does pollen from one plant get moved to another?	Know the functions of the organs in the human digestive system. Do now- match the organ of the digestive system to its function.	Know the life cycle of different living things e.g., mammal, amphibian, insect and bird. Do Now- place correct pictures on life cycle template. One of a human (timeline) one of a butterfly, one of a frog, one of a bird.	

Know about seed dispersal. Do now – Explain how seed dispersal works by wind, animals and explosion.	Identify and know the different types of human teeth. Do now – Name the 4 different types of human teeth.	Know the differences between different life cycles. Do now – Name 2 differences between the life cycle of a butterfly and a human.	
	Know the functions of different human teeth. Do now - Match the function of the tooth to the name of the tooth.	Know the process of reproduction in plants. Do now – Describe the process of reproduction in a plant.	
	Use and construct food chains to identify producers, predators and prey. Do now - Match a producer, predator and prey to pictures of each.	Know the process of reproduction in animals. Do now – Describe the process of reproduction in a human.	
	Identify and name the main parts of the human circulatory system Do now - labelling.	Create a timeline to indicate stages of growth in humans. Do Now- Order timeline of human development.	Know how the Earth and living things have changed over time. Do now – Name 3 ways the Earth has/humans have changed over time.
	Know the function of the heart, blood vessels and blood Do now – What do the heart, blood vessels and blood do?	Classify living things into broad groups according to observable characteristics and based on similarities and differences. Do now - Grouping pictures of animals based on things you can observe about them.	Know how fossils can be used to find out about the past. Do now – Why are fossils useful?
	Know the impact of diet, exercise, drugs and lifestyle on health. Do now – Give an example of how poor diet/exercise/drugs/lifestyle can impact health.	Know how living things have been classified. Do now – how have these creatures been classified? Label the groups.	Know about reproduction and offspring (recognising that offspring normally vary and are not identical to their parents) Do now – What are offspring? What is variation?
	Know the ways in which nutrients and water are transported in animals, including humans.	Give reasons for classifying plants and animals in a specific way. Do now - See first activity.	Know how animals and plants are adapted to suit their environment.

	Do now – How are water and nutrients transported in humans?		Do now – Name 3 ways a polar bear/cactus is suited to its environment.
	Know who William Harvey was and his contribution to science Do now – Who was William Harvey and what was his contribution to science?	Know who Carl Linnaeus was Do now – Who was Carl Linnaeus?	Link adaptation over time to evolution Do now – What is the process of adaptation over a long period of time called?
			Know about evolution and explain what it is. Do now – What is evolution?

SCIENCE: CHEMISTRY	
EVERYDAY MATERIALS	ROCKS
Know that when water freezes – ice is made. Do now – What happens when water freezes?	
Know that when ice gets warm – it melts. Do now – What happens when ice gets warm?	
Know which materials stretch and bend	
Know what I can do to look after our outside environment	
Know the name of the materials an object is made from. Do Now - Match the objects to the material	
Know about the properties of everyday materials.	

Nursery Reception. Y1/2 Cycle A Y1/2 Cycle B Year 3/4 Cycle A Year 3/4 Cycle B Year 5/6 Cycle A Year 5/6 Cycle B

Do now – Name two properties of metal, glass, wood, plastic.	
Know why glass, wood, plastic, brick or paper might or might not be used for a specific job.	
Do now - What is the difference between metal and glass? plastic and wood? Would this material be suited for x? Why/Why not?	
Know how materials can be changed by squashing, bending, twisting and stretching.	
Do now - Can you name a material you can change by squashing, bending twisting, stretching?	
Know about the lives of important people who have developed useful new materials.	
Do now – Why was Charles Macintosh important? Why was John Dunlop important?	
Know how the same materials can change state.	
Do now - What does changing state mean?	Compare and group rocks based on their appearance and physical properties, giving a reason.
	Do Now - sort pictures of different types into their appropriate groups (metamorphic, sedimentary, igneous)
Know the temperature water boils and freezes.	Know how fossils are formed.
Do now – What temperature does water boil at? What temperature does water freeze at?	Describe how fossils are formed.
Know the terms condensation and evaporation, what they mean and their part in the water cycle	Know how soil is made.
Do Now - Use the diagram to explain the water cycle	Do now – Describe how soil is made.
Compare and group materials based on their properties (e.g., hardness, solubility, transparency, conductivity, electrical & thermal and response to magnets)	Know about and explain the difference between sedimentary, metamorphic and igneous rock.
Do now- Matching definitions.	Do now – sorting activity. What is sedimentary rock? What is metamorphic rock? What is igneous rock?
Know and explain how a material dissolves to form a solution.	
Do now – Explain what happens when you mix salt and water.	
Know and show how to recover a substance from a solution.	

Do now – Explain how you can retrieve salt when it has been dissolved in water.	
Know and demonstrate how some materials can be separated (e.g., through filtering, sieving and evaporating) Do now – Name 3 ways you can separate materials from a solution.	
Know and demonstrate that some changes are reversible, and some are not. Do now – What is a reversible change, and can you give an example?	
Know how some changes result in the formation of a new material and that this is usually irreversible. Do now – What is an irreversible change, and can you give an example?	

SCIENCE: PHYSICS					
SEASONAL CHANGE	FORCES	LIGHT	ELECTRICITY	SOUND	EARTH AND SPACE
Know the weather patterns in Autumn/Winter/Spring/Summer Know what gives us light in the day-time Know what helps make it light at night-time Know how shadows jump and play Know what a rainbow is Know what a magnet is Know if objects float on water Know how things move on water Know why wheels help move heavy objects					
Name the seasons. Do now – What are the four seasons?	Know about and describe how objects move on different surfaces. Do now – How would an object move differently on a smooth surface compared to a rough surface?	Know that dark is the absence of light. Do now – What is darkness?	Identify and name appliances that require electricity to function. Do now – Name 5 appliances that require electricity to function.	Know how sound travels from a source to our ears. Do now – How does sound travel?	
Know about the weather associated with each season Do now – What is the weather like in Spring/Summer/Autumn/Winter? <i>Make snow angel</i> <i>Dance in the rain</i> <i>Fly a kite</i>	Know how a simple pulley works and is used to lift an object. Do now – How do pulleys work?	Know that light is needed in order to see and it's reflected from a surface Do Now - Draw a diagram to explain how we see Do Now - Draw a diagram to show the journey of light to the eye	Construct a series circuit. Do now – Draw an example of a series circuit	Know how sounds are made, associating some of them with vibrating Do now – How is a sound made?	
Know the months within each season Do now – What months are in Spring/Summer/Autumn/Winter?	Know how some forces require contact and some do not, giving examples. Do now – Name 4 different forces and how they act.	Know and demonstrate how a shadow is formed. Do Now - complete a diagram to show where a shadow is formed (label)	Identify and name the components in a series circuit (including cells, wires, bulbs, switches and buzzers)	Know the correlation between pitch and the features of the object producing a sound. Do now – Why do different objects have different pitches?	

			Do Now – Label the parts of the circuit.		
	Know about and explain how magnets attract and repel. Do now – Describe how a magnet attracts/repels.	Explore shadow size and explain the changes. Do Now - complete a diagram to show which shadow is formed bigger/smaller (label)	Know the function of a switch. Do now – What does a switch do?	Know the correlation between the volume of a sound and the strength of the vibrations that produced it. Do now – What is the link between the volume of a sound and vibrations?	
	Predict whether magnets will attract or repel and give a reason. Do Now - Identify which combination of poles would attract/repel.	Know the danger of direct sunlight and describe how to keep protected Do now – Explain 2 dangers of direct light and how to protect yourself from these.	Know the difference between a conductor and an insulator; giving examples of each. Do now – What is a conductor, and can you give an example? What is an insulator, and can you give an example?	Know what happens to a sound as it travels away from its source. Do now – What happens to a sound as it travels away from its source?	
	Know what gravity is and its impact on our lives. Do now – What is gravity and how does it impact on our lives?	Know how light travels. Do now – How does light travel?	Compare and give reasons for why components work and do not work in a circuit. Do now – What happens when you remove/add a switch/bulb/battery to a circuit.		Know about and explain the movement of the Earth and other planets relative to the Sun. Do now – Name the 8 planets. Do now – How does the Earth move around the Sun?
	Identify and know the effect of air and water resistance. Do now – What is air resistance? What is water resistance?	Know and demonstrate how we see objects. Do now – How do we see objects?	Draw circuit diagrams using correct symbols. Do now - Symbol activity.		Know about and explain the movement of the Moon relative to the Earth.

Nursery Reception. Y1/2 Cycle A Y1/2 Cycle B Year 3/4 Cycle A Year 3/4 Cycle B Year 5/6 Cycle A Year 5/6 Cycle B

					Do now – How long does it take for the Moon to orbit the Earth?
	Identify and know the effect of friction. Do now – How does friction slow things down?	Know why shadows have the same shape as the object that casts them. Do now – Why do shadows have the same shape as the object that casts them?	Know how the number and voltage of cells in a circuit links to the brightness of a lamp or the volume of a buzzer. Do now – What is the effect of voltage on a circuit?		Know and demonstrate how night and day are created. Do Now- draw a diagram to show how night and day are formed.
	Explain how levers, pulleys and gears allow a smaller force to have a greater effect. Do now – What is a lever? What is a pulley? What are gears?	Know how simple optical instruments work e.g., periscope, telescope, binoculars, mirror, magnifying glass etc. Do now – How does a x work?			Describe the Sun, Earth and Moon (using the term spherical) Do now – What does spherical mean?