ESW Science Curriculum

Lesson Progression Document

EYFS	Lesson	Autumn	Spring	Summer
	Across the term	Term 1 Seasonal Changes – Autumn Term 2 Materials and Properties	Term 3 Forces Seasonal change- Winter Term 4 Life cycles – plants Seasonal change – Spring	Term 5 Animals and habitats Term 6 Healthy Life Seasonal change – summer

	Lesson	Autumn Term 1	Autumn Term 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	1	How can we identify and explore our senses	What changes can we observe in the autumn weather?	What are the similarities and differences between humans and animals?	Are all seeds the same?	Identify and name everyday materials	Identify the changes in the summer season.
	2	What can I hear? What can I smell?	How can we group and classify different leaves from our local area?	How can I group animals based on their appearance and characteristics?	What are the similarities and differences between the basic parts of tree and flowering plants?	Understand the differences between object and materials	How many shades of colour are observed in the local natural environment?
	3	What are the basic parts of the human body?	What are the basic parts of a tree and plant?	How can I sort animals with similarities and differences in to groups?	Which plants can I identify growing in the same environment?	What are the properties of everyday objects?	Explore the environment and make observations and predictions
	4	How has my body changed since I was a baby?	What is the difference between deciduous and evergreen trees ?	How can I group animals based on what they eat?	What is the difference between deciduous and evergreen trees?	I can classify and group objects based on their material properties	Explore different materials for a particular use – bubbles
	5	Why is it important to take care of our bodies?	What trees do we have in our locality? What wildflowers/ tree/ seeds can you find?	What happened to different animals in winter?	Do fruit and vegetables have in common with plants?	Test the properties of materials	Describe the properties of materials – boats
	6	Can you name and describe the features of the human body?	Can we discuss changes from summer season to autumn season?	How can I identify and group animals seen in our local environment?	Design an area in the garden using your knowledge of trees, plants and vegetables	Which material would be best for teddy's umbrella?	Which materials float and sink?

	Lesson	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 2	1	Learn about habitats	Why are objects made of different materials?	What do animals need for survival?	What are the stages of the human life cycle?	What are the difference between things that are living, dead and things that have never been alive?	Learn about habitats
	2	Appreciate that environments are constantly changing	How can objects and materials change shape?	What do humans need for survival?	Explore and explain the life cycle of a frog, over time	Identify and name a variety of plants and animals in a microhabitat. Where can the most woodlouse/worms be found?	Appreciate that environments are constantly changing
	3	Explore the rainforest and its problems	Which materials/fabric would you choose for curtains?	Why is it important to eat the right food?	Do offspring always look like their parents?	Identify and record what lives in different habitats (pond, coastal, woodland)	Explore the rainforest and its problems
	4	Describe life in the ocean	Which material is the most durable?	What does a healthy, balanced diet look like?	What is the life cycle of a chicken?	Plan investigation: What do animals eat to survive in their habitats?	Describe life in the ocean
	5	Discover the Arctic and Antarctic habitat	How can we test to find the best materials for waterproofing?	What impact does exercise have on our bodies?	What is the life cycle of a butterfly?	Understand simple food chains. Research food chains of familiar animals.	Discover the Arctic and Antarctic habitat
	6	Create a model of a habitat	How can we test elasticity/stretchiness?	What is good hygiene?	Recognise the growth in humans	Understand the journey food makes from farm to supermarket	Create a model of a habitat

	Lesson	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	1	Why do humans and animals need a nutritional balanced meal	How can rocks be grouped?	Explore contact and non-contact forces	Compare the effects of different factors on plant growth	Identify the difference between light sources and non-light sources	
	2	What nutrition do humans and animals get from the food they eat	Which rock is the hardest?	Why do things move differently on different surfaces? (Contact force – Friction)	What are the functions of different parts of a flowering plant? What is photosynthesis?	Explore the light that comes from the sun and how to keep safe	
	3	Why do humans and animals have skeletons?	Which rock absorbs the most water?	Do different types of magnets have different strengths?	How is water transported within plants?	Which materials reflect light?	
	4	Why do humans and some animals have muscles?	How much water can different soils retain?	What everyday objects are magnetic? (Classify materials based on magnetic properties)	What is the role of the flower in the life cycle of a flowering plant?	Discover how shadows are formed	
	5	How do muscles work?	How can soil be separated?	Can magnetic forces act at a distance?	What is pollination?	Investigate how shadows change throughout the day	
	6	Assessment Enquiry: Do those with longer legs run/jump the furthest	How can fossils be formed?	Investigate and explain how forces can move objects?	How are seeds dispersed? *(Assessment: Compare the effects of different factors on plant growth)*	How can you change the size of a shadow?	

	Lesson	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 4	1	What is electricity? How can I keep myself safe?	What is the digestive system?	What are the 3 states of matter?	Explore and research different habitats	Identify how sound is made. Sort musical instruments based on own criteria	Describe ecosystems and how they are affected by changes in the seasons
	2	How is electricity transported?	What happens when you digest food?	How do the particles behave in the 3 states of matter?	What lives in our local coastal/hedge row/grassland habitats?	How does sound travel to the ear?	Understand human impact on the environment through deforestation
	3	What are the basic parts of a circuit?	What are the functions of different teeth?	Investigate the melting points of matter	How are animals classified?	How can we be protected from loud sound? (Sound insulation)	Explore air pollution
	4	What will happen to the lamp if there is a break in the circuit?	What can protect and damage teeth?	Investigate freezing and boiling points of matter	How are classification keys used?	Explore patterns when exploring volume	Understand water pollution
	5	What materials are electrical conductors and which are insulators	Can we find out what animals eat from their teeth?	What is evaporation?	How are classification keys used?	Find patterns when exploring pitch	Explore methods that can be used to conserve water
	6	Assessment Task: Identify problems in circuits	What do owls eat? Exploring food webs and chains	What is condensation ? *(Explore and explain the water cycle)*	What are the adaptations within species?	What happens to sound over a distance?	Understand that humans can have a positive impact on nature

	Lesson	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5	1	Who was Isaac Newton?	What is in our solar system? What are the planets?	What are the different life processes of reproduction in some plants?	How to recover solute from a solution	What are the different properties of everyday materials?	Identify the key stages of a mammal's life cycle
	2	What is gravity?	Where is the sun in our solar system?	How do the life cycles in mammals differ?	Recognise and describe reversible changes	Investigate the effects of thermal conductors and thermal insulators	Explore the gestation periods of mammals
	3	How does gravity and friction work?	How do the Earth and Moon move in space?	How do the life cycles of insects and amphibians differ?	Observe chemical changes. How do we know new materials are made?	Explore hardness of different materials	Learn about foetal development
	4	What are the effects of air resistance and water resistance?	How can you explain how we get day and night?	What are the similarities and differences between birds and reptiles life cycles?	What causes objects to rust?	Which materials are soluble in water?	Investigate the hand span of different aged children
	5	How do levers work?	How would you describe the characteristics of a newly discovered planet?	Are there any patterns between gestation periods of different animals?	Investigate burning reactions	Investigate the solubility of materials	Learn about the changes experienced in puberty
	6	How do pulleys/gears make a job easier?	Assessment Enquiry: Measuring craters on the moon	Report and present your own findings as a zoologist/naturalist	Investigate chemical reactions	How can mixtures be separated?	Describe the changes humans may experience during old age

	Lesson	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 6	1	How to identify different classes of vertebrates and invertebrates ?	What are the scientific symbols for each component?	What is the function of the human circulatory system?	How does light travel?	Understand how offspring vary and are not identical to their parents	
	2	How can we classify micro-organisms?	What is voltage?	How do nutrients get transported?	Explore reflection	Learn about animal and plant adaptations	
	3	What are the different kingdoms of life? What is mould?	What if I add more than one battery to the circuit?	How does diet, exercise and tobacco impact on our body?	Investigate: How can reflection help you see things?	Explore the theory of evolution by natural selection	
	4	Who is Carl Linnaeus and how has he contributed to science?	How do I identify and solve problems in circuits?	Investigate pulse rate and resting pulse rate	Investigate: How do shadows change?	Understand that adaptation may lead to evolution	
	5	What living organisms can we classify in soil/compost?	What happens if I add more than one bulb/motor/buzzer in a series circuit?	Are there patterns in pulse rates of different groups of people?	Investigate: Do shadows have the same shape and size as the objects that cast them?	Explore what we can learn from fossils, focusing on human evolution	
	6	Assessment: How would you classify using branching databases to place a newly discovered creature?	Which materials are conductors/insulators of electricity? *(Design a doorbell/security alarm/light for a purpose)*	Explore predictions and conclusive patterns of different groups of people	Explore light phenomena	Understand the difference between natural selection and artificial breeding	

Biology	Chemistry	Physics