Non-negotiables checklist - Science

Name :

Year 1	Non- Negotiables- I can statements	Au	Sp	Su	Date of attainment
Working Scientifically	Ask simple what, why, how, when, who and which questions..				
	With support, use simple equipment to take measurements and observations. Examples include metre sticks, egg timers and hand lenses.				
	With support, follow instructions to perform simple tests and begin to talk about what they might do or what might happen.				
	Observe objects, materials, living things and changes over time, with support sorting and grouping them based on their features. Carry out observations eg/ seasonal environmental changes, and with support, explain what I think I have found out.				
	With support, gather and record simple data in a range of ways (data tables, diagrams, Venn diagrams).				
Plants	Identify that Plants are living things.				
	Recognise trees that lose their leaves in the autumn are called deciduous trees.				
	Recognise trees that shed old leaves and grow new leaves all year round are called evergreen trees				
	Recognise the basic plant parts include stem, leaf, flower, petal				
	Identify that trees have a woody stem called a trunk.				
Animals inc Humans	Identify animals as living things.				
	Sort and group animals into main groups: fish, birds and mammals				
	Label basic structures of a variety of common animals, including fish, birds and mammals.				
	Identify basic body parts are the head, arms, legs, nose, eyes, ears, mouth, hands and feet.				
	Identify the three senses from hearing, sight, smell, taste and touch.				
Everyday Materials	Identify objects made from everyday materials: wood, plastic, glass, metal, water, rock, brick, paper and fabric.				
	Compare and group materials in a variety of ways, such as based being natural or man-made				
	Identify and distinguish that materials have different properties, such as				

Non-negotiables checklist - Science

Name :

	hard or soft; stretchy or stiff; rough or smooth.				
Seasonal Change	Identify there are four seasons: spring, summer, autumn and winter.				
	Describe types of weather include sunshine, rain, hail, wind, snow, fog, lightning, storm and cloud.				
	Recognise some weather types are more common in certain seasons, such as snow in Winter, sun in Summer.				

Non-negotiables checklist - Science

Name :

Year 2	Non- Negotiables- I can statements	Au	Sp	Su	Date of attainment
Working Scientifically	Ask and answer simple what, why, how, when, who and which questions.				
	Use simple equipment to take measurements and observations. Examples include metre sticks, egg timers and hand lenses.				
	Follow a set of instructions to perform a range of simple tests, making simple predictions				
	Observe objects, materials, living things and changes over time, sorting and grouping them based on their features.				
	Observe objects, materials, living things and changes over time, sorting and grouping them based on their features.				
	Begin to notice patterns in my data and explain what I have done and found out.				
	Use a range of methods (tables, charts, diagrams and Venn diagrams) to gather and record simple data with some independence.				
Plants	Recognise that bulbs and seeds change over time.				
	Describe how plants need water, light and a suitable temperature to grow and stay healthy.				
Animals inc Humans	Name the stages of a human life cycle - baby/toddler/child/teenager/adult/elderly using visual representation.				
	Know that all animals have a life cycle.				
	Explain how animals, including humans, need water, food, air and shelter to survive.				
	Describe a healthy lifestyle- exercise, a balanced diet, good quality sleep and personal hygiene.				
Everyday Materials	Identify a range of everyday materials for particular uses, including wood, metal, plastic, glass, brick, rock, paper and cardboard .				
	Describe how some objects and materials can be changed.				
Living things and their habitat	Compare and group things that are living, dead or have never been alive				
	Describe a range of local habitats in the locality.				

Non-negotiables checklist - Science

Name :

	Identify and name a variety of animals in a range of habitats and microhabitats.				
	Interpret and construct simple food chains.				
	Recognise animals can be grouped based on the foods they eat (herbivore, carnivore, omnivore.				

Non-negotiables checklist - Science

Name :

Year 3	Non- Negotiables- I can statements	Au	Sp	Su	Date of attainment
Working Scientifically	Ask questions about the world around them and explain that they can be answered in different ways.				
	Set up and carry out some simple, comparative and fair tests, making predictions for what might happen.				
	Take measurements in standard units, using a range of simple equipment.				
	Make increasingly careful observations, identifying similarities, differences and changes and making simple connections.				
	Gather and record findings in a variety of ways (diagrams, tables, charts and graphs) with increasing accuracy.				
	Skill Gather and record findings in a variety of ways (diagrams, tables, charts and graphs) with increasing accuracy.				
	Use suitable vocabulary to talk or write about what they have done, what the purpose was and, with help, draw a simple conclusion based on evidence collected, beginning to identify next steps or improvements.				
	Make increasingly careful observations, identifying similarities, differences and changes and making simple connections.				
	Use suitable vocabulary to talk or write about what they have done, what the purpose was and, with help, draw a simple conclusion based on evidence collected, beginning to identify next steps or improvements.				
Plants	Name and describe the functions of the different parts of flowering plants (roots, stem, leaves and flowers).				
	Describe the requirements of plants for life and growth (air, light, water, nutrients and room to grow) and how they vary from plant to plant.				
	Draw and label the life cycle of a flowering plant.				
Animals inc Humans	Compare and contrast the diets of different animals.				
	Describe how humans need the skeleton and muscles for support, protection and movement.				
Rocks	Compare and group rocks based on their appearance, properties or uses.				
	Describe simply how fossils are formed, using words, pictures or a				

Non-negotiables checklist - Science

Name :

	model				
Light	Describe the differences between dark and light and how we need light to be able to see.				
	Group and sort materials as being reflective or non-reflective.				
	Explain why light from the Sun can be dangerous.				
	Explain, using words or diagrams, how shadows are formed when a light source is blocked by an opaque object.				
Forces	Compare how objects move over surfaces made from different materials.				
	Explain that an object will not move unless a push or pull force is applied, describing forces in action and whether the force requires direct contact or whether the force can act at a distance (magnetic force).				
	Investigate, observe and conclude how magnets attract and repel.				
	Label a diagram to demonstrate magnets have north and south poles.				
	Compare and group materials based on their magnetic properties.				

Non-negotiables checklist - Science

Name :

Year 4	Non- Negotiables- I can statements	Au	Sp	Su	Date of attainment
Working Scientifically	Ask relevant scientific questions, independently, about the world around them and begin to identify how they can answer them.				
	Begin to independently plan, set up and carry out a range of comparative and fair tests, making predictions and following a method accurately.				
	Take accurate measurements in standard units, using a range of equipment.				
	Skill Gather, record, classify and present observations and measurements in a variety of ways (pictorial representations, timelines, diagrams, keys, tables, charts and graphs).				
	Gather, record, classify and present observations and measurements in a variety of ways (pictorial representations, timelines, diagrams, keys, tables, charts and graphs).				
	Use scientific vocabulary to report and answer questions about their findings based on evidence collected, draw simple conclusions and identify next steps, improvements and further questions.				
	Use scientific vocabulary to report and answer questions about their findings based on evidence collected, draw simple conclusions and identify next steps, improvements and further questions.				
	Begin to choose which observations to make and for how long and make systematic, careful observations and comparisons, identifying changes and connections.				
	Use scientific vocabulary to report and answer questions about their findings based on evidence collected, draw simple conclusions and identify next steps, improvements and further questions.				
Living Things and Their Habitats	Compare, sort and group living things from a range of environments, in a variety of ways, based on observable features and behaviour.				
	Describe how environments can change due to human and natural influences and the impact this can have on living things.				
Animals inc Humans	Describe the purpose of the digestive system, its main parts and each of their functions.				
	Identify the four different types of teeth in humans and other animals, and describe their functions.				

Non-negotiables checklist - Science

Name :

States of Matter	Group and sort materials into solids, liquids or gases.				
	Observe and explain that some materials change state when they are heated or cooled.				
	Describe the water cycle using words or diagrams				
Sound	Explain how vibrations travel as sound waves travel through air or water to the ear.				
	Differentiate between high and low pitch using musical instruments.				
	Identify that the harder something is hit, the greater the vibrations are, causing louder sound.				
Electricity	Compare common household equipment and appliances that are and are not powered by electricity.				
	Construct operational simple series circuits using a range of components.				
	Construct operational simple series circuits using a range of components and switches for control.				
	Describe materials as electrical conductors or insulators				

Non-negotiables checklist - Science

Name :

Year 5	Non- Negotiables- I can statements	Au	Sp	Su	Date of attainment
Working Scientifically	Plan and carry out a range of enquiries, including writing methods, identifying variables and making predictions based on prior knowledge and understanding.				
	Ask a wide range of relevant scientific questions that broaden their understanding of the world around them and identify how they can answer them.				
	Take increasingly accurate measurements in standard units, using a range of chosen equipment.				
	Within a group, decide which observations to make, when and for how long, and make systematic and careful observations, using them to make comparisons, identify changes, classify and make links between cause and effect.				
	Use relevant scientific vocabulary to report on their findings, answer questions and justify their conclusions based on evidence collected, identify improvements, further questions and predictions.				
	Gather and record data and results of increasing complexity, selecting from a range of methods (scientific diagrams, labels, classification keys, tables, graphs and models).				
Living Things and Their Habitats	Describe the process of human reproduction (one male, one female parent in order to reproduce).				
	Recognise some plants reproduce sexually and others asexually.				
	Label the parts of a flower involved in sexual reproduction in plants (stamen, filament, anther, pollen, carpel, stigma, style, ovary, ovule and sepal).				
	Describe the life process of reproduction in some plants and animals as sexually (one male and one female parent for reproduction) and asexual (One parent for reproduction).				
	Compare the life cycles of animals, including a mammal, an amphibian, an insect and a bird.				
Animals inc Humans	Order the human characteristic stages as they develop towards old age (baby, infant, toddler, child, adolescent, young adult, adult and senior citizen. Puberty is the transition between childhood and adulthood)				
Earth and Space	Describe or model the movement of the Moon relative to Earth.				
	Use the idea of Earth's rotation to explain day and night.				

Non-negotiables checklist - Science

Name :

	Describe the Sun, Earth and Moon as approximately spherical bodies and use this knowledge to order the phases of the Moon and eclipses.				
	Describe or model the movement of the planets in our Solar System, including Earth, relative to the Sun.				
Forces	Explain that objects fall to Earth due to the force of gravity.				
	Demonstrate how simple levers, gears and pulleys assist the movement of objects and begin to describe this using some key vocabulary.				
	Compare and describe, using a range of toys, models and natural objects, the effects of water resistance, air resistance and friction.				
Properties and Changes of Materials	Separate mixtures by filtering, sieving and evaporating.				
	Begin to explain, following observation, that some substances (solutes) will dissolve in liquid (solvents) to form a solution and the solute can be recovered by evaporating off the solvent.				
	Compare and group everyday materials by their properties, including hardness, solubility, transparency, conductivity (electrical and thermal) and magnetism				
	Describe, using evidence from comparative or fair tests, why a material has been chosen for a specific use, including metals, wood and glass.				
	Identify, demonstrate and compare reversible and irreversible changes.				

Non-negotiables checklist - Science

Name :

Non-negotiables checklist - Science

Name :