



DSL Primary School High-Level Plan



Science

Year	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
R	Part of the Body/ Reactions- Investigations		Materials- changing state/ Animals		Ecosystems/Growth/Mini-beasts	
1	Materials What is a material? What are objects made from? How can I describe a material? Which materials float and sink? Which materials are waterproof? Are some materials magnetic?	Building Things Which materials are waterproof? What material could I use to build a wall? To conduct my experiment. Which materials can withstand strong winds? To conduct my experiment. What is a mixture?	Seasons and weather What do we know about the weather? How does the weather change across the seasons? How do trees change across seasons? How can you measure rainfall? What is hibernation? How can we record wind direction?	Sound What are the 5 senses? What is sound? How do we hear? How do we look after our ears? How can we describe the pitch of sound? How can we make and describe sounds?	Plants How do I plant a bean? What type of plants grow in the wild? What is the difference between deciduous and evergreen trees? What are the parts of trees and plants called? What changes occur to a tomato plant? What changes have occurred to my bean plant?	Animal Kingdom What is a living thing? What is the difference between an invertebrate and a vertebrate? Which animal families are vertebrates? Which animal families are invertebrates? What are the differences between mammals and birds? What types of food do living things eat?
2	The Environment Measure the melting of ice in a comparative test and draw a conclusion; Sort items for recycling based on their materials; Suggest ways we can reduce, reuse and recycle; Teach people to use less energy; Identify and classify rainforest animals; Measure and record water in ml. Know 3 facts about endangered animals.	Uses of Everyday Materials Identify uses of different everyday materials and group them; Compare the suitability of different everyday materials; Explain how the shapes of objects made from some materials can be changed; Explain the process of recycling; Know the new process that John McAdam invented and explain how it has impacted life today.	Scientists & Inventors Describe how greenhouses help plants grow healthily; Explain how doctors use science; Describe what is important in order to stay healthy; Give 3 facts about Louis Pasteur's life and explain what he found out about germs; Describe when and how we should wash our hands; Give facts about Charles Macintosh and describe his famous invention; Identify the most suitable fabric for a particular use; Describe what Rachel Carson learnt about ocean habitats and explain her findings on water pollution; Identify whether energy sources are renewable or non-renewable; Describe the invention of wind turbines.	Animals Including Humans Describe how animals change as they grow; Match animals and their babies; Describe how humans change as they grow; Set up a test and collect and interpret results; Describe the basic needs of humans and animals; Ask and answer questions about a pet; Identify healthy and unhealthy food and say how much of them should be eaten; Suggest ways to improve own diet; Give reasons why humans need to exercise; Know how and why to keep own self clean	Plants Label the main parts of plants and trees; Plant seeds and bulbs and suggest how to care for them; Set up a test and make a prediction; Explain the life cycle of plants; Suggest a way we can tell that plants are living things; Explain what plants need to grow well and stay healthy; Record results of a comparative test; Give examples of food crops; Observe and describe the growth of different plants.	Living Things and Their Habitats Compare the differences between things that are living, dead and have never been alive; Map a habitat, identify what it is and suggest which animals live there; Compare microhabitats; Identify minibeasts; Identify the needs of different plants and animals; Identify how an animal is suited to its habitat; Use a food chain to show how animals get their food; Give examples of carnivores, herbivores and omnivores; Order living things in a food chain.
3	Practical skills What is a variable? Why is a method important? How do you draw a scientific diagram? What can we do with the data we collect? How can we communicate our results? How can we record an entire investigation?	Raw and synthetic materials What is a raw material? What is a synthetic material? How are synthetic materials made from raw materials? How is paper made? What is recycling and why is it important? What does it mean to live sustainably?	Sound What is sound? How are different sounds produced? What are frequency and pitch? What do we mean by amplitude of sound? How do scientists design objects that use sound? What are some uses of sound?	Forces What are forces? How can we measure the size of forces? What are contact forces? What are non-contact forces? What factors affect an object's ability to float? What impact do gears, levers and pulleys have on forces?	Plants What conditions could we change to investigate the growth of a plant? What happens to a plant's growth if we change the conditions it is in? What are the parts and functions of a flowering plant? What are the parts of a flowering plant's life cycle? How does a plant transport water?	Ecosystems What is an ecosystem? How do we classify the diets of animals? Why are producers so important? How do we construct a food chain? How do we construct a food web? What can cause disruptions to food webs?

					How do plants adapt to different conditions?	
4	Phases of Matter What are the properties of solids, liquids and gases? How do particles behave inside of solids, liquids and gases? What happens when you heat or cool each state of matter? What are changes of state and why do they take place? How can we measure the melting points and boiling points of a substance? Which substances do not fit into one state of matter?	Rock Cycle How is igneous rock formed? How is sedimentary rock formed? How is metamorphic rock formed? How can we identify and classify different types of rocks? How do the rocks on our Earth's surface change? What are the steps in the rock cycle?	Light What is light and where does it come from? What is reflection and how can we use it? What is refraction and how can we use it? How do we see light? Where do different colours come from? What are some uses of light?	Space What are solar and lunar eclipses? What is the solar system? How do the planets in the solar system differ? What are stars and star constellations? What is the universe and what is it made from? What do astronomers do?	Adaptations What is the difference between an ecosystem and an environment? What is an adaptation? How are organisms adapted to hot environments? How are organisms adapted to cold environments? What adaptations do nocturnal animals have? How are organisms adapted to live underwater?	Human Anatomy What are organs and why do we need them? What are the major bones in the human body? How does human anatomy compare to other animals? Are all teeth the same? How is oxygen transported around our bodies? How do humans digest food?
5	Separating Mixtures What makes something pure? What makes something a mixture? What is a formulation? How can we separate mixtures into pure substances? What steps could we take to separate river water? How well can you separate river water into separate substances?	Physical and Chemical Changes What happens during a state change? What is a physical change and how can we identify them? What is a chemical change and how can we identify them? How do physical and chemical changes compare? What can we do to investigate chemical reactions? What happens when we place metals into acid?	Magnetism What are non-contact forces? What are magnets? How does a compass work? How can we see a magnetic field? How can we tell if a material is magnetic or not? What are some uses of magnetic materials?	Electrical Circuits What is static electricity? What are the parts of an electrical circuit? How can we build basic circuits? What are electrical insulators and conductors? What happens in a circuit when we change the components? How can we create a circuit to build a buzzer game?	Humans and Animals Over Time What is the theory of evolution? How do fossils provide evidence for evolution? How have different animal kingdoms developed over time? Which types of organisms have lived over each era of time? What impact have homo sapiens had on the organisms over time? What is the likely impact of humans on organisms in the future?	Reproductive Cycles Why do plants have flowers? How do you clone a potato? How does the life cycle of an insect compare to an amphibian? Are the life cycles of all mammals the same? Why do birds lay eggs? How do lifecycles compare across the animal kingdom?
6	Chemical Reactions How do particles in solids, liquids and gases behave? What do the particles in pure substances and mixtures look like? What happens to particles during dissolving? How can mixtures be separated? How can we tell when a chemical reaction has taken place? What happens to particles during burning?	Sustainability What are everyday materials made from? Why is recycling important? What is a life cycle assessment? What impact do gas emissions have on the earth? What is global warming? What is climate change?	Heat What happens when you heat particles? Why does heat cause expansion in a substance? What is thermal equilibrium? How is heat transferred between particles? What are thermal conductors and insulators? How can we prevent heat from getting to an ice cube?	Energy What are energy stores? What is energy transformation? What is efficiency and how can it be calculated? What is power and how does it apply to electrical appliances? How do we relate speed, distance and time? How can we calculate kinetic energy?	Cells What is the difference between animals and plants? What are the main organ systems of the body? What are organ systems, organs, tissues and cells? What are animal cells? What are plant cells? What are specialized cells?	Diet and Lifestyle What are the key parts of a healthy diet? Why do people with different lifestyles need different diets? What effect does exercise have on the muscles? What happens to the circulatory system during exercise? What are medicinal drugs? What is nicotine and alcohol?