

Junior Kindergarten

Science in the Primary Years Programme (PYP) in Kindergarten encourages young learners to explore and make sense of their surroundings through practical, hands-on activities developing an understanding of basic scientific concepts. This approach nurtures their curiosity, encourages them to ask questions, and helps them think like young scientists as they explore the natural world around them through the transdisciplinary themes.

Science is divided into three strands which are taught progressively.

- ☐ **Living Things:** Students will study plants, animals, and people—everything that is alive. They will explore how living things grow and change, how they live together, and how they help one another. Students will investigate patterns in nature, such as how trees lose their leaves and how animals find food. They will also learn how living things can adapt to the places where they live. By learning about the world around them, students will begin to understand how to care for nature and all living things on Earth
- ☐ **Earth and Space:** Students will explore planet Earth and its place in space, learning that Earth is our home and part of a group of planets that orbit the Sun. They will discover that Earth has land, water, air, and a variety of environments such as forests, oceans, and deserts. Students will investigate how Earth changes through different seasons and weather, and how people, animals, and plants live in different places and adapt to those environments. They will also begin to understand the importance of caring for our planet.
- ☐ **Physical and Chemical Science:** Students will explore the materials and objects around them, learning what things are made of and how they can change. They will investigate how materials look, feel, and behave e.g. how water can turn into ice or steam. Students will experiment with mixing, building, and changing materials to see what happens. Through hands-on activities, they will begin to understand how people use different materials to make useful things, and how these choices can affect the world around us.

LIVING THINGS

All about Me

Central Idea

People's relationships can have an impact on our social, emotional and spiritual wellbeing

I can identify and name the different parts of my body

I understand that people can look the same and different e.g. same or different eye, hair or skin colour

I understand that I am growing and am beginning to describe the changes to my body e.g. growing taller, losing teeth

I can sequence changes in my body from birth
I am beginning to ask questions and make suggestions about growing older
I am beginning to understand that living things have basic needs in order to stay healthy and survive
I can make observations and comparisons of growing older e.g. comparisons of height
I am beginning to collect, organise and present data in a chart about myself e.g. bar graph to represent the number of children with blue eyes

EARTH AND SPACE	
Journeys	
Central Idea	Journeys can lead to change and new opportunities
I can name different ways people travel e.g. car, boat, plane, train	
I can explore how things move on land, in water, and in the air	
I can test how different toys move on different surfaces e.g. carpet, sand, mud	
I understand that the weather might affect a journey e.g. driving in the snow, sailing in a storm	
I am beginning to sort journeys into land, air and water transport	
I can compare clothes or items needed for different weather e.g. boots for the rain, sunglasses for the beach	
I understand that landscapes may change when we travel to different places e.g. mountains, beach, desert	
I understand how animals or plants are different in other parts of the world e.g. giraffes in Africa	
I can describe how vehicles move e.g. fast, slow, rolling, floating	
I can explore how materials help us on wet journeys e.g. rubber boots or raincoats	

PHYSICAL AND CHEMICAL SCIENCE
Let's Build!

Central Idea	How the properties of construction materials and climate influence the design of buildings and structures
I can identify, name and sort materials into groups e.g. wood, metal, glass and plastic	
I can compare materials and say which one is best for building	
I can build a model of a house using different materials e.g. construction toys, junk modelling	
I am beginning to compare materials and say which one is best for building	
I know that there are different types of buildings in different parts of the world e.g. igloos in cold places	
I am beginning to use words to describe materials e.g. hard, soft, rough, smooth, waterproof, flexible	
I can talk about how houses are different in hot and cold places	
I am beginning to explain how weather affects how buildings are made	
I can talk about the building I made and explain why I chose certain materials	
I can measure how tall or wide my building is using non-standard units e.g. unifix cubes	
I am beginning to explain why one structure might be stronger than another	

LIVING THINGS/ EARTH AND SPACE	
Animal characteristics	
Central Idea	Animals have developed different characteristics in different environments
I can name common farm and wild animals	
I can identify and name some common sea creatures e.g. dolphins, sharks, whales	
I can identify and name some common insects e.g. butterfly, bee, ladybird	
I understand that animals grow and change as they become older	
I can correctly match some animals to their young	
I can sort animals into categories according to their characteristics e.g. animals that can fly, swim or hop	

I can name some different animal markings e.g. stripes, spots, patches, bands, rings

I am beginning to understand that animals have different markings for reasons

I am beginning to understand that animals live in certain places based on what they look like e.g. polar bear have fur to keep them warm

I am beginning to classify some animals by their characteristics e.g. a fish has scales, lives in the water and lays eggs

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