Science

Year 1	Vocab

Plants and Plant Growth
 	
Reading aloud, observation and activities such as growing plants from seed in varying conditions are useful ways to explore the following topics with children.
 	
• Understand what plants need to grow: sufficient warmth, light and water.
• Recognise basic parts of plants: seeds, roots, stems, branches and leaves.
• Understand that plants make their own food.
• Recognise the importance of flowers and seeds. For example, seeds such as rice, nuts, wheat and corn are food for plants and animals.
• Know that there are two kinds of plants: deciduous and evergreen.
• Become aware of key aspects of farming.
  • How some food comes from farms as crops
  • How famers must take special care to protect their crops from weeds and pests
  • How crops are harvested, kept fresh, packaged and transported for people to buy and consume
	Plant
	Grow
	Seed
	Root
	Stem
	Leaf
	Branch
	Trunk
	Flower
	Warmth
	Light
	Water
	Food
	Crops
	Farm
	Weeds
	Harvest
	Soil

Animals and their needs Through reading aloud, observation and activities, explore with children the common characteristics and needs of animals. • Distinguish between alive, dead and those that have never been alive. • Make the connection that animals, like plants, need food, water and space to live and grow. • Recognise that plants make their own food, but animals obtain food from eating plants or other living things. • Understand that offspring are very much (but not exactly) like their parents. • Understand that most animal babies need to be fed and cared for by their parents; human babies are especially in need of care when young. • Recognise that pets have special needs and must be cared for by their owners. • Describe the importance of exercise, a balanced diet and hygiene for humans **SPECIAL CLASSIFICATIONS OF ANIMALS** • Herbivores: plant-eaters (for example, elephants, cows, deer) • Carnivores: flesh-eaters (for example, lions, tigers) • Omnivores: plant and animal eaters (for example, bears) • Extinct animals (for example: dinosaurs)	**Animals** **Needs** **Pet** Wild/Tame Nest Habitat Care Cat/Kitten Dog/Puppy Sheep/lamb Cow/calf Horse/foal Duck/duckling Chicken/chick Goat/kid Food Water Vet Space Home Omnivore Herbivore Carnivore
The Human Body: The 5 Senses Identify the five senses and associated body parts: • Sight: eyes • Hearing: ears • Smell: nose	**Sight** **Hearing** **Smell** **Taste** **Touch**

Year 2	Vocab
I. LIVING THINGS AND THEIR ENVIRONMENTS **Teachers:** Introduce the idea of interdependence between living things and their environment. A. **HABITATS** • Living things live in environments to which they are particularly suited. • Specific habitats and what lives there, for example: ▪ Forest (for example: oak trees, squirrels, foxes, badgers, snails, mice) ▪ Meadow and plains (for example: wildflowers, grasses, prairie dogs) ▪ Underground (for example: fungi, moles, worms) ▪ Desert (for example: cacti, lizards, scorpions) ▪ Water (for example: fish, oysters, starfish) The food chain: a way of picturing the relationships between living things ▪ Animals: big animals can be eaten by little ones, big animals die and are eaten by little ones. ▪ Plants: nutrients, water, soil, air, sunlight B. **OCEANS AND UNDERSEA LIFE** • Most of the Earth is covered with water. • Locate oceans: Pacific, Atlantic, Indian, Arctic • Oceans are salt water (unlike fresh water rivers and lakes) • Coast, shore, waves, tides (high and low) • Currents, the Gulf Stream • Landscape of the ocean floor: mountain peaks and deep valleys (trenches) • Diversity of ocean life: from organisms too small for the eye to see (plankton), to giant whales • Dangers to ocean life (for example, overfishing, pollution, oil spills) C. **ENVIRONMENTAL CHANGE AND HABITAT DESTRUCTION** • Environments are constantly changing, and this can sometimes pose dangers to specific habitats, for example: • Effects of population and development • Rainforest clearing, pollution, litter	**Habitat** **Food Chain** Woodland, water, desert, underground, omnivore, herbivore, carnivore, extinct **oceans, tides, currents**
II. THE HUMAN BODY: SYSTEMS AND PREVENTING ILLNESS **A. BODY SYSTEMS** **Teachers:** Introduce the idea of body systems, and have children identify basic parts of the following body systems: • Skeletal system: skeleton, bones, skull • Muscular system: muscles • Digestive system: mouth, stomach • Circulatory system: heart and blood • Nervous system: brain and nerves **B. GERMS, DISEASES, AND PREVENTING ILLNESS** • Taking care of your body: exercise, cleanliness, healthy foods, rest • Vaccinations	**Skeletal** **Muscular** **Circulatory** **Digestive** **Nervous** Skeleton, bone, knuckles, x-ray, muscle, heart, blood, food, digestion, saliva, stomach, brain, nerves, senses, illness, health, germ, vaccination
III. MATTER **Teachers:** Introduce children to the idea that everything is made of matter, and that all matter is made up of parts too small to see. • Basic concept of atoms • Names and common examples of three states of matter: ▪ Solid (for example, wood, rocks) ▪ Liquid (for example, water) ▪ Gas (for example, steam)	**Matter** **Changing State** Atom Solid Liquid Gas Water Ice Vapour Air Atoms Molecules

• Taste: tongue • Touch: skin Review the importance of taking care of your body: exercise, cleanliness, healthy foods and rest.	Eyes, ears, nose, mouth, fingertips, skin, head, tongue, loud, quiet, sweet, sour, salty, bitter, Arms, legs, human body, exercise, sleep, healthy, washing, baths, teeth, brushing

Seasons and the weather
 	
The emphasis in Year 1 should be on observation and description; technical explanations of meteorological phenomena should be taken up in later years.
 	
• Identify the four seasons.
• Be able to describe characteristic local weather patterns during the different seasons.
• Recognise the importance of the sun as a source of light and warmth.
• Understand daily weather changes.
  • Temperature: thermometers are used to measure temperature
  • Clouds: rainfall comes from clouds
  • Rainfall: how the condition of the ground varies with rainfall; rainbows
  • Thunderstorms: lightning, thunder, hail, safety during thunderstorms
  • Snow: snowflakes, blizzards
	Spring Summer Autumn Winter
	Hot Cold Cool Snow Cloud Weather Bloom Deciduous Evergreen Rain Humid Temperature Thermometer Storm, Sky, Wind Thunder Lightening hail

Taking care of the Earth • Identify the importance of conservation: some natural resources are limited, so people must be careful not to use too much of them. For example: logging and subsequent reforestation. • Recognise practical measures for conserving energy and resources. For example: turn off unnecessary lights, tightly turn off taps, etc. • Understand that some materials can be recycled. For example: aluminium, glass and paper. • Become aware that pollution be harmful but, if people are careful, they can help reduce pollution. For example, littering, smog, water pollution.	**Recycling Conservation Forests** Animals, trees, hiking, woods, wood, furniture, houses, chairs, tables, paper, air, fresh, planting, logging, water, tap, waste, recycling centre, cans, glass, plastic, pollution
Materials Children should use correct vocabulary to describe different materials and their properties. Sort materials into groups based on their properties. For example: soft, hard, bendy, ability to float, magnetic or non-magnetic. • Recognise and name a variety of widely used materials. For example: wood, plastic, rock, paper, metal. • Explain why materials are chosen for specific tasks based on their properties. For example: wool for clothing, glass for windows, wood for tables, metal for bridges. • Become aware that some materials are natural and some are man-made.	**Soft Hard Flexible Float Magnetic Non-magnetic Insulate**
Science Biographies • Joseph Banks (botanist) • Jane Goodall (studied chimpanzees) • Wilburn and Orville Wright (made first aeroplane)	

• Water as an example of changing states of matter of a single substance	
IV. PROPERTIES OF MATTER: MEASUREMENT **Teachers:** Have children describe and classify objects according to what they are made of, and according to their physical properties (colour, shape, size, weight, texture, etc.) • Units of measurement: ▪ Length: centimetre, metre ▪ Volume: millilitre, litre • Temperature: degrees Celsius	**Measurement** **Units** Centimetre (cm), metre (m) Length Inch, feet Ruler Volume Pint Litre Temperature Hot, cold thermometer
V. INTRODUCTION TO ELECTRICITY Teachers: Through reading aloud, observation and experiment, explore with children the basic principles of electricity and safety rules. • Static electricity • Basic parts of simple electric circuits (for example, batteries, wire, bulb or buzzer, switch) • Conductive and nonconductive materials • Safety rules for electricity (for example, never put your finger or anything metallic in an electrical outlet, never touch a switch or electrical appliance when your hands are wet or when you're in the bathtub, never put your finger in a lamp socket, etc.)	Circuit Electricity Light bulb Power station Battery Cell Wire Switch Conductor Copper Crocodile clip Safety Experiment
VI. INTRODUCTION TO ASTRONOMY • Sun: source of energy, light, heat • Moon: phases of the moon (full, half, crescent, new) • The eight planets (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune) ▪ Note that, in 2006, Pluto was classified as a dwarf planet. • Stars ▪ Constellations: The Plough ▪ The sun is a star. • Earth and its place in the solar system ▪ The Earth moves around the Sun; the sun does not move ▪ The Earth revolves (spins); one revolution takes one day (24 hours) ▪ Sunrise and sunset ▪ When it is day where you are, it is night for people on the opposite side of the Earth	**Astronomy** **Earth** Solar system Sun Mercury Venus Earth Mars Jupiter Saturn Uranus Neptune Pluto Moon Constellation Capernicus
VII. THE EARTH **A. GEOGRAPHICAL FEATURES OF THE EARTH'S SURFACE** • The shape of the Earth, the horizon • Oceans and continents • North Pole and South Pole, Equator **B. WHAT'S INSIDE THE EARTH** • Inside the Earth ▪ Layers: crust, mantle, core ▪ High temperatures • Volcanoes and geysers • Rocks and minerals ▪ Formation and characteristics of different kinds of rocks: metamorphic, igneous, sedimentary ▪ Important minerals in the Earth (such as quartz, gold, sulphur, coal, diamond, iron ore)	Crust Mantle Core Pole Equator Volcano Lava Geyser Mineral Continent Country County City Town Village
VIII. SCIENCE BIOGRAPHIES • Rosalind Franklin (often-overlooked woman scientist) • Thomas Edison (invented an electric light bulb) • Edward Jenner (found a way to stop smallpox) • Louis Pasteur (made milk safe to drink)	