

Science—Essential Learning Outcomes 2015–2016

Science Primary	Science 1	Science 2	Science 3
ESSENTIAL LEARNING OUTCOMES AND PERFORMANCE INDICATORS			
EARTH AND SPACE SCIENCE: EXPLORE SAND AND WATER Outcome 1: Students will explore sand and water.	EARTH AND SPACE SCIENCE: DAILY AND SEASONAL CHANGES Outcome 1: Students will investigate the effects that daily and seasonal changes have on the environment and living things.	EARTH AND SPACE SCIENCE: AIR AND WATER IN THE ENVIRONMENT Outcome 1: Students will investigate air and water in the environment.	EARTH AND SPACE SCIENCE: EXPLORING SOILS Outcome 1: Students will investigate the properties of soil and its effect on living things.
Indicators: <ul style="list-style-type: none"> ask simple questions about sand and water (CT, CI, COM, TF, CZ) self-select materials, such as shovels and sieves, to investigate sand and water (CT, CI, PCD) make and share observations about sand and water (CT, CI, COM, TF) determine the floating and sinking of various objects, using predictions and observations (CT, CI, COM) 	Indicators: <ul style="list-style-type: none"> ask questions about daily and seasonal changes (CT, CI, COM, TF, CZ) observe and describe daily changes in weather conditions, including their effects on the environment and on living things (CT, CI, COM, TF, CZ) observe and describe the results of changes in the seasons, including their effects on the environment and on living things (CT, CI, COM, TF, CZ) describe how humans and other living things prepare for seasonal changes (CT, CI, COM, PCD, CZ) 	Indicators: <ul style="list-style-type: none"> ask questions about air and water in the environment (CT, CI, COM, TF, CZ) observe evaporation and condensation in the environment (CT, CI, COM, TF) explain how air moves, giving examples (CT, CI, COM) use equipment properly to collect data about air and water (CT, CI, COM, TF) 	Indicators: <ul style="list-style-type: none"> ask questions about the properties of soil (CT, CI, COM, TF, CZ) observe and describe the composition of a variety of soil samples, sand, loam, clay, and gravel (CT, CI, COM, TF) observe and describe how living things affect and are affected by soil (CT, CI, COM, TF) describe and respond to ways in which soil is important to living things and the environment (CT, CI, COM, PCD, CZ)
LIFE SCIENCE: EXPLORE LIVING THINGS Outcome 2: Students will explore different living things.	LIFE SCIENCE: NEEDS AND CHARACTERISTICS OF LIVING THINGS Outcome 2: Students will investigate needs and characteristics of different living things, including humans.	LIFE SCIENCE: ANIMAL GROWTH AND CHANGES Outcome 2: Students will compare, in detail, stages in the life cycle of animals.	LIFE SCIENCE: PLANT GROWTH AND CHANGES Outcome 2: Students are expected to explore and investigate plant growth and changes in various conditions.
Indicators: <ul style="list-style-type: none"> ask simple questions about different living things (CT, CI, COM, TF, CZ) observe and describe living things in familiar places (e.g., outside) (CT, CI, COM, TF) use equipment properly to investigate living things found in the community (CT, CI, COM) record and share observations of a plant and/or animal over time (CT, CI, COM, TF) 	Indicators: <ul style="list-style-type: none"> ask questions about the needs of living things (CT, CI, COM, PCD, CZ) investigate different living things to determine their characteristics (CT, CI, COM, CZ) compare, through explorations, the needs of different living things (CT, CI, COM, PCD, CZ) recognize and explain that humans and other living things depend on their environment (CT, CI, COM, PCD, CZ) 	Indicators: <ul style="list-style-type: none"> ask questions about animal growth (CT, CI, COM, TF, CZ) make observations and record data about the life cycle and growth of animals, such as a mealworm, chick, and/or butterfly (CT, CI, COM, TF) identify and describe similarities and differences between life cycles of familiar animals (CT, CI, COM, TF) describe features of natural and human-made environments that support the health and growth of some familiar animals (CT, CI, COM, PCD, CZ) 	Indicators: <ul style="list-style-type: none"> ask questions about plant growth (CT, CI, COM, TF, CZ) make observations and record data about the life cycle and growth of a plant (CT, CI, COM, TF) observe and describe how living things affect and are affected by plants (CT, CI, COM, TF) describe how various conditions impact plant growth through a fair test (CT, CI, COM) describe and respond to ways in which plants are important to living things and the environment (CT, CI, COM, PCD, CZ)

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ESSENTIAL LEARNING OUTCOMES AND PERFORMANCE INDICATORS			
PHYSICAL SCIENCE: CHEMISTRY Outcome 3: Students will explore materials.	PHYSICAL SCIENCE: MATERIALS AND THEIR PROPERTIES Outcome 3: Students will explore materials and their properties.	PHYSICAL SCIENCE: CHEMISTRY—LIQUIDS AND SOLIDS Outcome 3: Students will investigate the properties and interactions of familiar liquids and solids.	PHYSICAL SCIENCE: MATERIALS AND STRUCTURES Outcome 3: Students will construct a structure safely to meet certain established criteria.
Indicators: <ul style="list-style-type: none"> ask simple questions about various student-selected materials (CT, CI, COM, TF, CZ) follow a simple procedure to determine how a substance may change (CT, CI, COM) observe and describe the characteristics of a collection of materials (CT, CI, COM, TF) 	Indicators: <ul style="list-style-type: none"> ask questions about materials and their properties (CT, CI, COM, TF, CZ) determine the properties of self-selected substances (CT, CI, COM, PCD) compare the properties, with observations, of various substances (CT, CI, COM, CZ) 	Indicators: <ul style="list-style-type: none"> ask questions about the properties and interactions of familiar liquids and solids (CT, CI, COM, TF, CZ) observe and describe the properties of familiar liquids and solids (CT, CI, COM, TF) create solutions made from simple substances (CT, CI, COM) record information from investigations that use solutions made from simple substances, such as salt and sugar (CT, CI, COM, TF) 	Indicators: <ul style="list-style-type: none"> ask questions about materials and structures (CT, CI, COM, TF, CZ) observe and describe various structures both natural and built (CT, CI, COM, TF CZ) build a structure thinking about shape, strength, stability, and/or balance (CT, CI, COM, CZ, PCD) test the strength of the structure (CT, CI, COM, CZ, PCD)
PHYSICAL SCIENCE: EXPLORE OBJECTS Outcome 4: Students will explore objects.	PHYSICAL SCIENCE: CONSTRUCTING OBJECTS Outcome 4: Students will construct objects that might be used from chosen materials and living things.	PHYSICAL SCIENCE: MOTION Outcome 4: Students will investigate the positions of objects relative to other objects in terms of patterns of movement.	PHYSICAL SCIENCE: INVISIBLE FORCES Outcome 4: Students will conduct explorations about invisible forces, using magnets.
Indicators: <ul style="list-style-type: none"> ask simple questions about the various ways objects move (CT, CI, COM, TF, CZ) observe, describe, and determine how objects move by doing guided investigations (such as using ramps, rollers, and sliders) (CT, CI, COM, TF) 	Indicators: <ul style="list-style-type: none"> ask questions about how to construct objects (CT, CI, COM, TF, CZ) choose materials to construct an object (CT, CI, COM, PCD) compare objects and the materials used to construct them (CT, CI, COM) demonstrate how tools can be used to solve a problem (CT, CI, COM, CZ, PCD, TF) 	Indicators: <ul style="list-style-type: none"> ask questions about the movement of objects (CT, CI, COM, TF, CZ) make and record observations and inferences about the movement of various objects (CT, CI, COM, TF) describe how objects move as a result of a variety of factors (CT, CI, COM) report on the motion of constructed objects (CT, CI, COM, TF) design a fair test on the motion of constructed objects (CI, CT, COM) 	Indicators: <ul style="list-style-type: none"> ask questions about invisible forces (CT, CI, COM, TF, CZ) investigate and describe materials and their magnetic properties (CT, CI, COM) make and test predictions, and record observations about materials that can be magnetized or attracted by magnets (CT, CI, COM, TF) use magnets to construct a functioning or working product that can be used for a purpose (e.g., toy, game, decoration, jewellery) (CT, CI, COM, CZ, PCD, TF)