

PS – Grade 2 Science Standards and Benchmarks

Standard 1: Students will understand atmospheric processes and the water cycle

Level 1 (PS-2)

Benchmarks:

- 1.1 Knows that short-term weather conditions (e.g., temperature, rain, snow) can change daily, and weather patterns change over the season
- 1.2 Knows that water can be a liquid or a solid and can be made to change from one form to the other, but the amount of water stays the same

Standard 2: Students will understand Earth's composition and structure

Benchmarks:

- 2.1 Knows that Earth materials consist of solid rocks, soils, liquid water, and the gases of the atmosphere
- 2.2 Knows that rocks come in many different shapes and sizes (e.g., boulders, pebbles, sand)

Standard 3: Students will understand the composition and structure of the universe and the Earth's place in it

Benchmarks:

- 3.1. Knows basic patterns of the Sun and Moon (e.g., the Sun appears every day and the Moon appears sometimes at night and sometimes during the day; the Sun and Moon appear to move from east to west across the sky; the Moon appears to change shape over the course of a month; the Sun's position in the sky changes through the seasons)
- 3.2. Knows that the stars are innumerable, unevenly dispersed, and of unequal brightness

Standard 4: Students will understand the principles of heredity and related concepts

Benchmarks:

- 4.1. Knows that plants and animals closely resemble their parents
- 4.2. Knows that differences exist among individuals of the same kind of plant or animal

PS – Grade 2 Science Standards and Benchmarks

Standard 5: Students will understand the structure and function of cells and organisms

Benchmarks:

- 5.1 Knows the basic needs of plants and animals (e.g., air, water, nutrients, light or food, shelter)
- 5.2 Knows that plants and animals have features that help them live in different environments

Standard 6: Students will understand relationships among organisms and their physical environment

Benchmarks:

- 6.1 Knows that plants and animals need certain resources for energy and growth (e.g., food, water, light, air)
- 6.2 Knows that living things are found almost everywhere in the world and that distinct environments support the life of different types of plants and animals

Standard 7: Students will understand biological evolution and the diversity of life

Benchmarks:

- 7.1 Knows that some kinds of organisms that once lived on Earth have completely disappeared (e.g., dinosaurs, trilobites, mammoths, giant tree ferns, horsetail trees)
- 7.2 Knows that there are similarities and differences in the appearance and behavior of plants and animals

Standard 8: Students will understand the structure and properties of matter

Benchmarks:

- 8.1 Knows that different objects are made up of many different types of materials (e.g., cloth, paper, wood, metal) and have many different observable properties (e.g., color, size, shape, weight)
- 8.2 Knows that things can be done to materials to change some of their properties (e.g., heating, freezing, mixing, cutting, dissolving, bending), but not all materials respond the same way to what is done to them

PS – Grade 2 Science Standards and Benchmarks

Standard 9: Students will understand the sources and properties of energy **Benchmarks:**

- 9.1 Knows that the Sun supplies heat and light to Earth
- 9.2 Knows that heat can be produced in many ways (e.g., burning, rubbing, mixing substances together)
- 9.3 Knows that electricity in circuits can produce light, heat, sound, and magnetic effects
- 9.4 Knows that sound is produced by vibrating objects
- 9.5 Knows that light travels in a straight line until it strikes an object

Standard 10: Students will understand forces and motion **Benchmarks:**

- 10.1 Knows that magnets can be used to make some things move without being touched
- 10.2 Knows that things near the Earth fall to the ground unless something holds them up
- 10.3 Knows that the position of an object can be described by locating it relative to another object or the background
- 10.4 Knows that the position and motion of an object can be changed by pushing or pulling
- 10.5 Knows that things move in many different ways (e.g., straight line, zigzag, vibration, circular motion)

Standard 11: Students will understand the nature of scientific knowledge **Benchmarks:**

- 11.1 Knows that scientific investigations generally work the same way in different places and normally produce results that can be duplicated

PS – Grade 2 Science Standards and Benchmarks

Standard 12: Students will understand the nature of scientific inquiry

Benchmarks:

- 12.1 Knows that learning can come from careful observations and simple experiments
- 12.2 Knows that tools (e.g., thermometers, magnifiers, rulers, balances) can be used to gather information and extend the senses

Standard 13: Students will understand the scientific enterprise

Benchmarks:

- 13.1 Knows that in science it is helpful to work with a team and share findings with others

Science Units in ISKL Melawati

Grade	Earth and Space Sciences	Life Sciences	Physical Sciences	
Prep R & J				SENSES
Prep S		Characteristics and needs of Living Things	Water	
Grade 1	Weather	Organisms	Solids and liquids	
Grade 2	SOILS	Life cycle of the butterfly	Changes	
Grade 3	Land and water	Plant growth		
Grade 4	Earth Structure		Motion and design	
Grade 5	Earth in Space		Electrical Circuits	

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