

## Grade 4 Science Standards and Benchmarks

### Level II 3-5

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

- 2.1 Knows how features on the Earth's surface are constantly changed by a combination of slow and rapid processes (e.g., weathering, erosion, transport, and deposition of sediment caused by waves, wind, water, and ice; landslides, volcanic eruptions, earthquakes, drought)

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

- 10.4 Knows that an object's motion can be described by tracing and measuring its position over time
- 10.5 Knows that when a force is applied to an object, the object either speeds up, slows down, or goes in a different direction
- 10.6 Knows the relationship between the strength of a force and its effect on an object (e.g., the greater the force, the greater the change in motion; the more massive the object, the smaller the effect of a given force)

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

- 11.1 Knows that although the same scientific investigation may give slightly different results when it is carried out by different persons, or at different times or places, the general evidence collected from the investigation should be replicable by others
- 11.2 Knows that good scientific explanations are based on evidence (observations) and scientific knowledge
- 11.3 Knows that scientists make the results of their investigations public; they describe the investigations in ways that enable others to repeat the investigations
- 11.4 Knows that scientists review and ask questions about the results of other scientists' work

## **Grade 4 Science Standards and Benchmarks**

### **Standard 12: Students will understand the nature of scientific inquiry**

- 12.2 Knows that scientists use different kinds of investigations (e.g., naturalistic observation of things or events, data collection, controlled experiments), depending on the questions they are trying to answer
- 12.3 Plans and conducts simple investigations (e.g., formulates a testable question, makes systematic observations, develops logical conclusions)
- 12.4 Uses appropriate tools and simple equipment (e.g., thermometers, magnifiers, microscopes, calculators, graduated cylinders) to gather scientific data and extend the senses
- 12.5 Knows that different people may interpret the same set of observations differently

### **Standard 13: Students will understand the scientific enterprise**

- 13.1 Knows that people of all ages, backgrounds, and groups have made contributions to science and technology throughout history
- 13.2 Knows that although people using scientific inquiry have learned much about the objects, events, and phenomena in nature, science is an ongoing process and will never be finished
- 13.3 Knows that scientists and engineers often work in teams to accomplish a task

## Grade 4 Science Standards and Benchmarks

Science Units in ISKL Melawati

<b>Grade</b>	<b>Earth and Space Sciences</b>	<b>Life Sciences</b>	<b>Physical Sciences</b>	
Prep R & J				<b>SENSES</b>
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	