

## MAPPING GRADE 1 SCIENCE INSTRUCTION

**Concept:** Earth-Moon-Sun Relationships

**PWC Strand:** Earth and Space Science

**PWC Objective: 1.5.1**

The student will investigate and understand basic relationships between the sun and the Earth. Key concepts include:

- the sun is the source of heat and light that warms the land, air, and water **(SOL 1.6a)**
- night and day are caused by the rotation of the Earth **(SOL 1.6b)**

<b>What Students Should Know</b> (Critical Attributes)	<b>What Students Should Be Able To Do</b> (Essential Skills)
<p><b><u>Essential Questions:</u></b></p> <ul style="list-style-type: none"> <li>• What is the source of heat and light for the Earth?</li> <li>• What is the position of Earth in summer and in winter?</li> <li>• What causes night and day?</li> </ul> <p><b><u>Critical Attributes:</u></b></p> <p>1.6a The sun is the source of light for the Earth. The heat from the sun warms the Earth’s land, water, and air. Sunlight striking an object makes that object warmer. The Earth is in just the right place to be warmed by the sun.</p> <p>1.6b The daily change from day to night is caused by the rotation, or turning, of the Earth. At any given time, half of the Earth is in daylight, facing the sun, while the other half is in darkness, facing away from the sun. It takes the Earth about 24 hours to turn completely around (make one complete rotation), so the length of one day is 24 hours.</p> <p>1.6b The sun’s position in the sky allows one to interpret the general time of day. When the sun rises, it looks low in the sky. All morning the sun gets higher and warms the earth. At noon, the sun is high in the sky and it is warmer than in the morning. After noon and into evening, the sun gets lower in the sky. The air starts to cool, and soon it is night.</p> <p>1.6b Day and night follow each other over and over again in a cycle as the Earth continues to turn or rotate.</p>	<ul style="list-style-type: none"> <li>• Infer that sunlight striking an object makes the object warmer.</li> <li>• Conduct simple experiments to show how sunlight changes the temperature of land, air, and water.</li> <li>• Demonstrate and describe the concept of rotation.</li> <li>• Comprehend that day and night are caused by Earth’s rotation.</li> <li>• Infer that temperature and amount of light change with day and night.</li> <li>• Interpret the relationship between the sun’s position in the sky and the general time of day. This includes the sun’s relative position in the morning (East), at noon, and the late afternoon (West).</li> <li>• Model the rotation of the Earth and its physical relationship to the sun.</li> </ul>