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| Lesson Plan no : |
| Date : |  | Subject : | science |
| Class : | 10 | Chapter : | Reflection of light |
| Time : | 45 | Period : |  |

**Overview and Learning Objective**  
Reflection of light is the phenomenon where light bounces back when it strikes a surface.   
  
LO-1: Students will be able to define reflection of light and identify its different types, including specular and diffuse reflection.  
LO-2: Students will be able to explain the laws of reflection using diagrams and real-world examples.  
LO-3: Students will be able to apply their understanding of reflection to solve simple problems involving mirrors and other reflective surfaces.

**Curricular Goals and Curricular competencies**  
CG-1: Students will understand the concept of reflection of light and its various types.   
CG-2: Students will be able to apply the laws of reflection to solve real-world problems.   
  
CC-1: Students will be able to identify and describe the different types of reflection.  
CC-2: Students will be able to use a ray diagram to illustrate the reflection of light.  
CC-3: Students will be able to explain the relationship between the angle of incidence and the angle of reflection.

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| Learning Objective | Curricular competencies | FACTUAL KNOWLEDGE | CONCEPTUAL KNOWLEDGE | PROCEDURAL KNOWLEDGE |
| LO-1 | CC-1 | Light bounces off surfaces. Angle of incidence equals angle of reflection. Mirrors produce images by reflecting light. | Light bounces off surfaces Angle of incidence equals angle of reflection Mirrors reflect light predictably | Identify the incident ray, reflected ray, and normal. Draw a ray diagram to illustrate reflection. Measure the angles of incidence and reflection. |

**Essential question**  
Q-1: How does light interact with different surfaces and what determines whether it is reflected or absorbed?   
Q-2: What are the laws of reflection and how can we use them to predict the path of reflected light?  
Q-3: How do mirrors and other reflective surfaces influence the way we see the world?

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| **Teaching Points** | **Learning Outcomes** | **Sequential Learning Activities** | **Formative Assessment** | **Expected Queries** |
| TP-1: When light strikes a smooth surface, it bounces back at the same angle it hit, creating a reflection. TP-2: Mirrors are smooth surfaces designed to reflect light, creating images that appear to be behind the mirror. TP-3: Different surfaces reflect light differently: smooth surfaces create clear reflections, while rough surfaces scatter light, making objects appear blurry. | LO1, LO2 | Activity-1: Introduce the concept of reflection using a mirror and a flashlight, demonstrating how light bounces off the mirror's surface. Activity-2: Students explore reflection with different objects, like a spoon, a piece of aluminum foil, and a CD, observing how they reflect light differently. Activity-3: Introduce the laws of reflection by tracing the path of a light ray as it reflects off a plane mirror, measuring angles of incidence and reflection. | [formative assessment no 1] If you shine a flashlight onto a smooth, flat mirror, what happens to the light? [formative assessment no 2] What is the difference between regular and diffuse reflection? [formative assessment no 3] Why do you see your reflection in a mirror but not in a piece of paper? | Q-1: What happens to light when it hits a smooth surface? Q-2: How does a mirror reflect light? Q-3: What is the difference between a diffuse and a specular reflection? |
| TP-1: When light strikes a smooth surface, it bounces back at the same angle it hit, creating a reflection. TP-2: Mirrors are smooth surfaces designed to reflect light, creating images that appear to be behind the mirror. TP-3: Different surfaces reflect light differently: smooth surfaces create clear reflections, while rough surfaces scatter light, making objects appear blurry. | LO1, LO2 | Activity-1: Introduce the concept of reflection using a mirror and a flashlight, demonstrating how light bounces off the mirror's surface. Activity-2: Students explore reflection with different objects, like a spoon, a piece of aluminum foil, and a CD, observing how they reflect light differently. Activity-3: Introduce the laws of reflection by tracing the path of a light ray as it reflects off a plane mirror, measuring angles of incidence and reflection. | [formative assessment no 1] If you shine a flashlight onto a smooth, flat mirror, what happens to the light? [formative assessment no 2] What is the difference between regular and diffuse reflection? [formative assessment no 3] Why do you see your reflection in a mirror but not in a piece of paper? | Q-1: What happens to light when it hits a smooth surface? Q-2: How does a mirror reflect light? Q-3: What is the difference between a diffuse and a specular reflection? |

**summarization And Home work :**   
Reflection of light is the bouncing back of light when it hits a surface.   
  
Q-1: What happens to the angle of incidence and the angle of reflection when light bounces off a smooth surface?   
Q-2: Describe how a periscope works using the principles of reflection.   
Q-3: Explain why you see a reflection of yourself in a mirror but not in a piece of white paper.

**Signature of Teacher**