

Name \_\_\_\_\_

## Reflecting on Reflection: Mirrors and Shiny Surfaces Unveiled

### Open-Ended Response Answer Key

1. Answers may vary but should include a simple explanation of reflection, such as "reflection is when light bounces off a surface like a ball bouncing off a wall." Everyday examples might include seeing your reflection in a mirror, the reflection of trees in a calm pond, or car headlights reflecting off a road sign.
2. The importance of reflection in road safety cannot be overstated. Reflective materials and signs enhance visibility at night and in adverse weather conditions, reducing the risk of accidents. Reflective road markings guide drivers, while reflective clothing and vests make pedestrians and workers visible to motorists, saving lives.
3. Artists and photographers often use reflective surfaces to create unique effects. For instance, they may use a shiny metal surface to capture distorted reflections, or they might photograph a subject in a mirror to create a sense of depth and complexity. These techniques add depth and intrigue to their work.
4. Reflective materials contribute to energy waste and environmental concerns. Investigate sustainable alternatives, such as using ambient light for visibility or developing eco-friendly reflective materials that minimize environmental impact while ensuring safety on the road.

