

Name \_\_\_\_\_

## Sublimation and Deposition: The Magical Phase Changes

### Short Answer Key

1. Sublimation is the phase change where a substance goes directly from a solid to a gas without passing through the liquid state. An example not mentioned in the passage is the gradual sublimation of camphor in a closed container.
2. Deposition is the phase change where a substance goes directly from a gas to a solid without passing through the liquid state. It can be observed in everyday life when frost forms on cold surfaces, such as windows, leaves, or grass.
3. Sublimation is crucial in industries like food and pharmaceuticals because it can be used to freeze-dry or dehydrate products, preserving their quality and extending shelf life.
4. Frost forms through deposition when the temperature drops below freezing, and the air is humid enough for water vapor to transition directly into ice crystals on a surface.
5. Sublimation and deposition play roles in the water cycle by transferring water between the solid, liquid, and gas phases. Sublimation adds water vapor to the atmosphere, while deposition removes water from it, contributing to weather patterns and precipitation.

