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| **TASK PROBLEM:**   1. Develop a model that shows how a pure substance, gallium, undergoes a phase change. 2. Construct an explanation for how the increase in thermal energy caused the phase change. |

Below is a picture of a pure metal disk made of the element, gallium. The disk was placed into a beaker where the water has been heated to a temperature of 40°C.

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| You will also watch a video to see the phase change take place.  In addition, here is some information to help with your model and explanation:   * Room temperature: 25°C * Melting point of gallium: 30°C * Boiling Point of Water 100°C |  |

**Your model will:**

* Show gallium as individual particles
* Identify gallium’s state of matter BEFORE and AFTER the phase change
* Show water and glass beaker as part of the system
* Demonstrate spacing between the particles and particle motion of gallium in two different states
* Show energy transfer between two objects

**Your explanation will:**

* Explain how the transfer of energy between two objects caused a phase change
* Explain differences between water and gallium caused by an increase in thermal energy