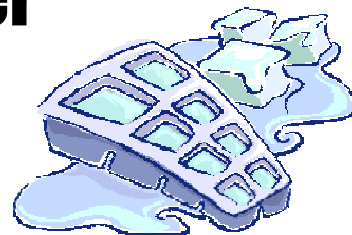


# Phase Changes of Matter



## FORMAT

The test will consist of the following topics:

- phase changes
- states of matter
- energy transfer
- chemical thermodynamics
- review of past tests

You may use your calculator for this test. But, if you want partial credit, you must **show your work**. Attempt every problem and do not leave any blanks.

## VOCABULARY

energy  
entropy  
melting  
calories

enthalpy  
freezing  
joules  
heat

exothermic  
endothermic  
deposition  
viscosity

sublimation  
evaporation  
crystalline  
state function

condensation  
vaporization  
amorphous  
internal energy

## KNOW

- identify energy transfer (exothermic or endothermic)
- phases
- phase changes
- types of solids
- types of energy
- degrees of freedom
- specific heat
- calorimetry
- review

## VIDEOS

- Phases of Matter
- Chemical Thermodynamics
- Calorimetry

# Practice

**DIRECTIONS:** List the phases of matter in order of **MOST** kinetic energy to **LEAST** kinetic energy.

**DIRECTIONS:** List three (3) crystalline solids.

**DIRECTIONS:** List three (3) amorphous solids.

**DIRECTIONS:** Short answer.

How do substances change phases?

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Describe sublimation.

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Which phase of matter is **MOST** common in the universe but **LEAST** common on the earth?

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**DIRECTIONS:** Decide whether the following processes gain or lose energy.

\_\_\_\_\_ combustion

\_\_\_\_\_ freezing water

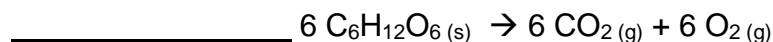
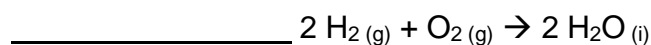
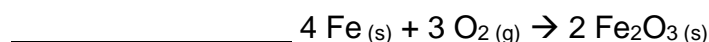
\_\_\_\_\_ melting ice

\_\_\_\_\_ boiling water

\_\_\_\_\_ condensing steam

\_\_\_\_\_ burning a match

**DIRECTIONS:** Determine if the reaction is moving toward less or more entropy. Explain.



**DESCRIBE** the 2<sup>nd</sup> Law of Thermodynamics.

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***"Successful people are simply those with successful habits."  
- Brian Tracy***