

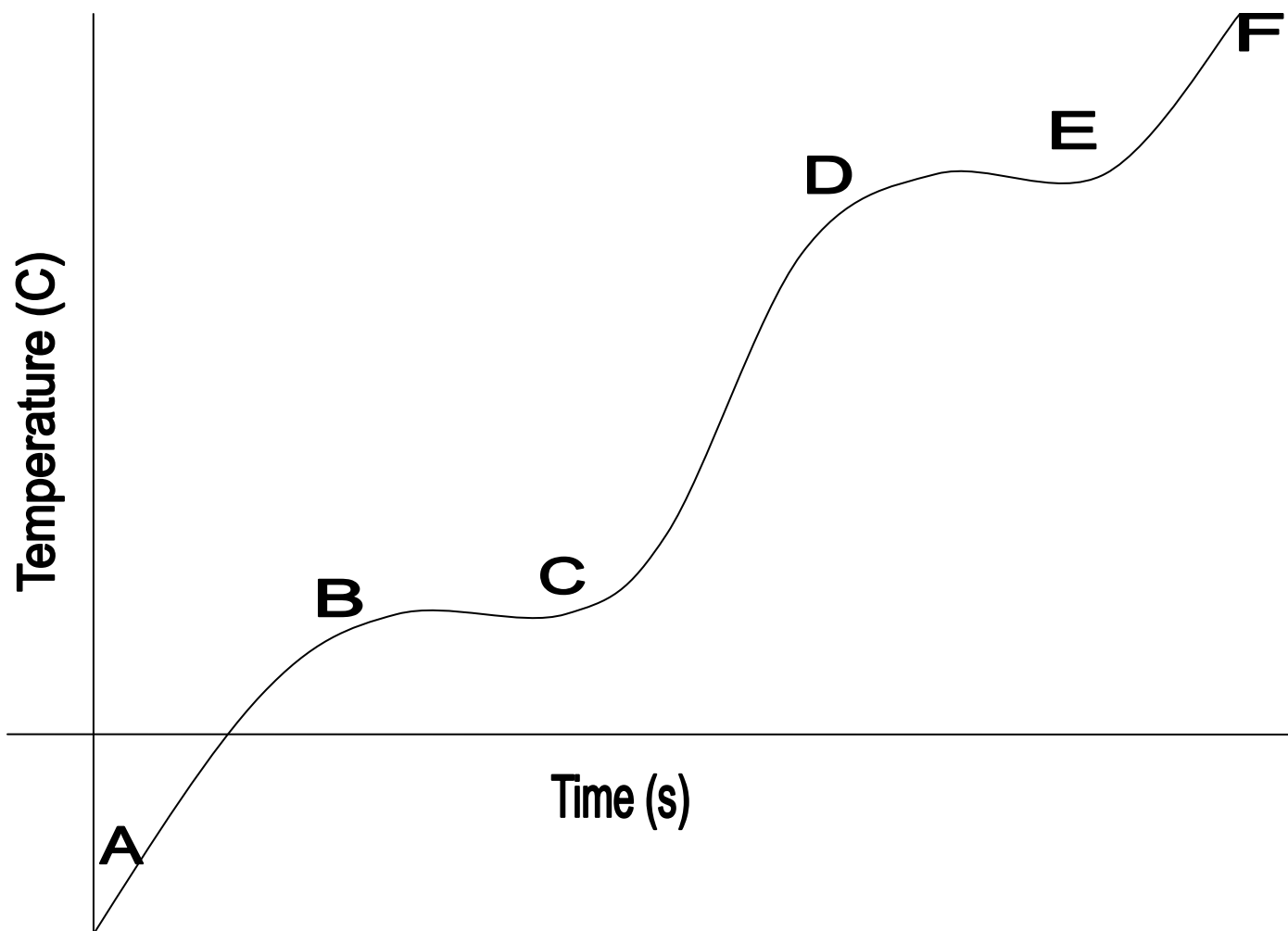
## Representing Phase Changes

### I. Temperature-Time Graphs:

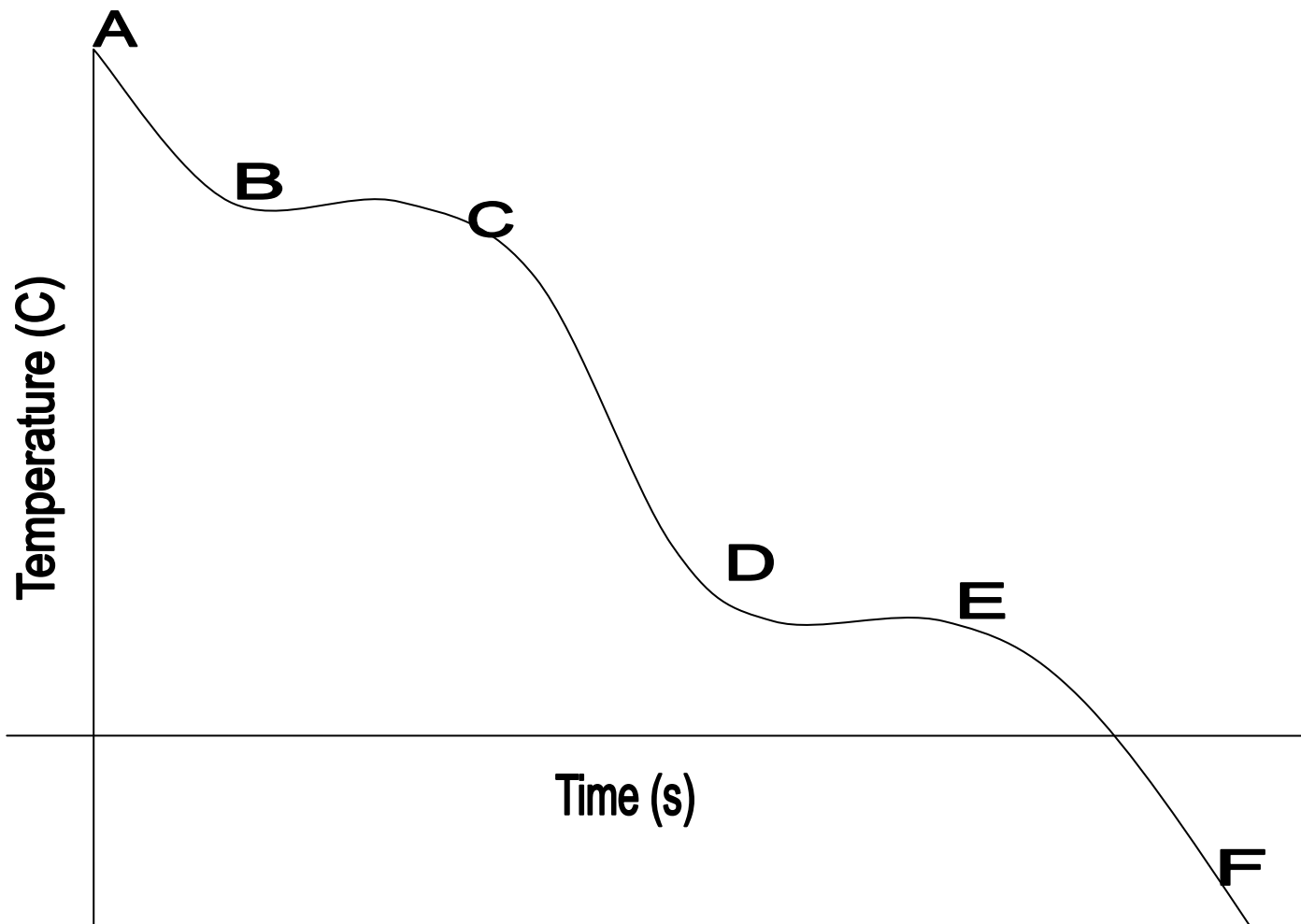
The temperature of a substance as it is steadily heated or cooled is shown in Graphs 1 and 2 below. Show the changes in matter and energy by adding these to each graph:

1. **At** each labeled point (A, B, C...) on the graphs draw an energy bar graph.
2. **Between** each pair of labeled points (A-B, B-C, C-D...),
  - a. Draw an energy flow diagram showing how the energy of the system is changing (is it by working, heating, or radiating? is energy transferred into or out of the system?)
  - b. Identify phase or phases present
  - c. Draw a particle diagram to show the arrangement of particles.
  - d. Identify the observable change that is occurring (ex: temperature change, melting, condensing...)

### 1. Temperature - Time During a State Change



## 2. Temperature - Time During a State Change



**II. Explain the differences and/or similarities between the terms in each set below:**

1. Temperature, Energy, "Heat"
2. Thermal Energy, Phase Energy
3. Melting, Freezing
4. Evaporating, Condensing