



## Elicitation Questions

### Facet Cluster 2.2: Changes in which the substance stays the same

#### Elicitation Questions

1. Describe the differences between the three main states of matter. (solid, liquid, and gas)
  
  
  
  
  
  
  
  
  
  
2. Ethanol ( $\text{CH}_3\text{CH}_2\text{OH}$ ), an important ingredient in bio-fuels, is a liquid at room temperature of  $25^\circ\text{C}$  ( $77^\circ\text{F}$ ) and turns into a gas at  $78.3^\circ\text{C}$  ( $172^\circ\text{F}$ ). Carbon dioxide ( $\text{CO}_2$ ) is a gas at room temperature.
  - a. Why does ethanol change into a gas at a higher temperature than  $\text{CO}_2$ ?
  
  
  
  
  
  
  
  
  
  
  - b. What happens at the molecular level when ethanol boils?
  
  
  
  
  
  
  
  
  
  
3. Salt dissolves in water and creates a solution that conducts electricity. Sugar dissolves in water and creates a solution that cannot conduct electricity. Provide an explanation for why this is.