

## Mix and Flow of Matter

### Topic 3 - Separating Earth's Mixtures Practice Quiz

1. Separation methods are based on ...
  - the attractive forces between particles
  - differences in physical properties of components
  - similarities in physical properties of components
  - similarities in chemical composition of components
2. The 'desert tent' method of separation uses a process that involves evaporation and condensation. This process is called ...
  - distillation
  - desalination
  - dehydration
  - decomposition
3. The process of separating the different products of petroleum is known as fractional distillation. The reason that this method is able to separate the different fractions of the petroleum product is because each substance ...
  - condenses at a different temperature
  - evaporates at a different temperature

condenses at the same temperature

evaporates at the same temperature

4. Most underground mixtures are solid rock. To separate the different minerals from each other a number of steps are needed. To mine gold the following process must occur in the correct order. Which answer represents the correct order?

1. chemicals are then added to dissolve the ore
2. the ore is blasted and then crushed
3. the ore is mixed with water to create a fine suspension
4. the ore is released from the solution when zinc is added

1 2 3 4

3 1 4 2

2 3 1 4

4 2 3 1

5. In the 'sugar production' process different types of sugar are collected at different points during the process. Using sugar cane, the producers was and chop it, then dissolve it. To get the crystals of white sugar ...

the raw brown sugar is bleached

the pale brown crystals are rinsed and dissolved and further refined

the raw brown crystals come out of the centrifuge

the white crystals are collected immediately after the crushed cane is dissolved

**Check your**  
**Answers**

## **Mix and Flow of Matter**

### **Topic 3 - Separating Earth's Mixtures Practice Quiz** **(Answers)**

1. Separation methods are based on ...
  - X **the attractive forces between particles**
  - X **similarities in chemical composition of components**
  - X **similarities in physical properties of components**  
**differences in physical properties of components (Text p. 28) Top of the page, second paragraph**
  
2. The 'desert tent' method of separation uses a process that involves evaporation and condensation. This process is called ...
  - X **distillation**  
**desalination (Text p. 28) Figure 1.16 The desert tent method is similar to distillation, but is called desalination**
  - X **dehydration**
  - X **decomposition**
  
3. The process of separating the different products of petroleum is known as fractional distillation. The reason that this method is able to separate the different fractions of the petroleum product is because each substance ...  
**condenses at a different temperature (Text p. 30) Each substance condenses at a different temperature**

X **evaporates at a different temperature**

X **condenses at the same temperature**

X **evaporates at the same temperature**

4. Most underground mixtures are solid rock. To separate the different minerals from each other a number of steps are needed. To mine gold the following process must occur in the correct order. Which answer represents the correct order?

1. chemicals are then added to dissolve the ore
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4. the ore is released from the solution when zinc is added

X **1 2 3 4**

X **3 1 4 2**

**2 3 1 4 (Text p. 31) This is the correct order as described on this page**

X **4 2 3 1**

5. In the 'sugar production' process different types of sugar are collected at different points during the process. Using sugar cane, the producers was and chop it, then dissolve it. To get the crystals of white sugar ...

X **the raw brown sugar is bleached**

**the pale brown crystals are rinsed and dissolved and further refined (Text p. 36) The diagram on this page shows what happens. It is during the H step that some white crystals come out of the centrifuge and the J step when the rest of the white crystals are refined from the pale brown crystals that are collected in step I**

X **the raw brown crystals come out of the centrifuge**

X **the white crystals are collected immediately after the crushed cane is dissolved**