

## BLM Answers

### BLM 3-1 Making and Testing Concrete

Students should justify all of their answers with sound reasoning.

14. The best mixture is probably the 1 cement :  
2 sand : 3 stones by volume.

### BLM 3-2 Water Purification

The following are sample answers to questions.

- Water treatment plants make water safe to drink. Some treatment plants make sewage or industrial output safer to put into the waterways.
- Screens remove large solid contaminants.
- Chlorine disinfects the water.
- Alum helps to settle out the solids.
- Mixing makes sure the chemicals are distributed evenly in the mixture.
- Floc is the large particles that form when chemicals are added to the solids.
- Sediments and particles sink to the bottom of the sedimentation basins.

### BLM 3-5 Chapter 3 Word Puzzle

*Across*

- classify
- element
- atom
- pure substance
- solution
- metalloid
- filtering
- non-metals

*Down*

- mixtures
- molecule
- categories
- mechanical
- dissolve
- periodic table
- bonded
- compound
- metal

### BLM 3-6 Chapter 3 Practice Test

- e) pure substance
- f) solution
- a) compound
- b) element
- c) matter
- d) mechanical mixture
- a) mixture; You can see more than one part.  
b) mixture; Dirt is made of different types of particles.  
c) pure substance; Water is only one kind of particle.  
d) mixture; Air has different types of gases.
- c) sugar
- a) solution; At first, only one part was seen, but crystals showed up when some water evaporated.  
b) mechanical mixture; There are two parts you could separate with tweezers.
- a) tweezers or fingers  
b) evaporation  
c) magnetism
- Use a magnet to pick them out. Then rinse them off. Or, you could dissolve the sugar in water and filter the staples out.

### BLM 3-7 Chapter 3 Test

- e) pure substance
- a) compound
- c) matter
- b) element
- f) solution
- d) mechanical mixture
- a) mixture; You can see more than one part.  
b) pure substance (element); There is only one kind of particle.  
c) mixture; There is more than one ingredient.  
d) pure substance (compound); There is only one type of particle.
- b) oxygen and hydrogen
- a) element; Oxygen is an element.  
b) compound; Smoke is made from different elements.
- a) magnetism  
b) evaporation  
c) pick apart by hand
- You could filter it with a special filter, or boil the solution and catch the steam.