

## 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.

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

### BLM 3-5 Chapter 3 Word Puzzle

*Across*

3. classify
4. element
5. atom
8. pure substance
12. solution
13. metalloid
14. filtering
15. non-metals

*Down*

1. mixtures
2. molecule
3. categories
6. mechanical
7. dissolve
8. periodic table
9. bonded
10. compound
11. metal

### BLM 3-6 Chapter 3 Practice Test

1. e) pure substance
2. f) solution
3. a) compound
4. b) element
5. c) matter
6. d) mechanical mixture
7. 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.
8. c) sugar
9. 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.
10. a) tweezers or fingers  
b) evaporation  
c) magnetism
11. 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

1. e) pure substance
2. a) compound
3. c) matter
4. b) element
5. f) solution
6. d) mechanical mixture
7. 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.
8. b) oxygen and hydrogen
9. a) element; Oxygen is an element.  
b) compound; Smoke is made from different elements.
10. a) magnetism  
b) evaporation  
c) pick apart by hand
11. You could filter it with a special filter, or boil the solution and catch the steam.