1. An element: Aluminum foil, copper wire, iron pan, sulfur, carbon in the form of graphite (pencil lead), amorphous carbon (soot), or diamond
2. A compound: Sugar (sucrose), salt (sodium chloride), baking soda (sodium bicarbonate)
3. A solid: A rock, a ball, a paper clip, a coin
4. A liquid: Water, juice, vegetable oil, vinegar, coffee, soda
5. A gas: A balloon filled with air or helium, a baggie of air
6. A metal: A can (aluminum), aluminum foil, a coin (zinc and copper), silverware (stainless steel), wire (copper), ring (gold, silver, copper)
7. A nonmetal: Graphite from a pencil (carbon), plastic, sulfur, helium in a balloon, vegetable oil
8. A heterogeneous mixture: Bag of mixed candies, chocolate chip cookie, soda with ice, sandwich, rock collection
9. A homogeneous mixture: Air, non-carbonated soft drink, coffee, steel, sugar in water
10. An acid: Vinegar (dilute acetic acid), solid citric acid, lemon juice
11. A base: Baking soda, soap, dishwashing liquid, laundry detergent
12. Result of a physical change: Melted ice, shredded paper, frozen ice cream, crushed candies
13. Result of a chemical change: Baked cookies or cake, ashes, candies popping or fizzy when exposed to moisture
14. A substance with a density greater than 1 g/ml: Anything that sinks in water, such as a metal coin, a glass marble, or a rock
15. A substance with a density less than 1 g/ml: Oil, ice, wood
16. A mixture that can be separated by filtration: Fruit cocktail in syrup, coffee grounds and water, sand and water
17. A mole (not the animal): 18 g of water, 58.5 g of salt, 55.8 g of iron
18. A polymer: Any plastic, hair, fur, polyester or nylon fabric
19. An ionic compound: Salt (sodium chloride), baking soda (sodium bicarbonate), washing soda (sodium carbonate)
20. A covalent compound: Water, vegetable oil, starch