

Name: _____

Worksheet: Classifying Matter

Classify each of the materials below. In the center column, state whether the material is a **pure substance** or a **mixture**.

- If the material is a pure substance, further classify it as either an **element** or **compound** in the right column.
- If the material is a mixture, further classify it as **homogeneous** or **heterogeneous** in the right column. Write the entire word in each space to earn full credit.

Material	Pure Substance	→ Element or Compound
	Mixture	→ Solution(Homogeneous) or Mechanical mixture (Heterogeneous)
Laundry detergent (contains white and blue crystals)		
sugar + pure water ($C_{12}H_{22}O_{11} + H_2O$)		
iron filings (Fe)		
limestone ($CaCO_3$)		
orange juice (water and pulp)		
Pacific Ocean (Water and Salt)		
air		
aluminum (Al)		
magnesium (Mg)		
acetylene (C_2H_2)		
tap water in a glass		
pure water (H_2O)		
soil		
chromium (Cr)		
baking soda ($NaHCO_3$)		
salt + pure water ($NaCl + H_2O$)		
benzene (C_6H_6)		
muddy water		
brass (Cu mixed with Zn)		
Pizza		

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Classify the following statements as heterogeneous mixture, a suspension, a colloid or a solution (homogeneous mixture).

1. Spicy salad dressing
2. Soda pop
3. Fertilizer that is spread on the lawn.
4. Paint for the walls
5. A compost pile in the backyard for the garden
6. A gold necklace (gold and copper)
7. Laundry detergent (contains white and blue crystals)
8. Pizza
9. Cough syrup that must be shaken before it is ingested.
10. Freshly squeezed orange juice
11. Blueberry muffin
12. Benzene (C_6H_6)
13. Nail polish remover (C_3H_6O)
14. A muddy pond
15. A mixture of rocks, grass and metal