

2.3 Prop & Changes of Matter

Activity 4: Characteristic Properties

Use the table of characteristic properties and the descriptions to determine the identity of these mystery metals:

| Property | Aluminum | Iron | Gold | Nickel |
|-------------------------|----------|---------|---------|---------|
| Density | 2.70 | 7.87 | 19.3 | 8.90 |
| Melting Point | 660 °C | 1538 °C | 1064 °C | 1455 °C |
| Thermal conductivity | 237 | 79 | 315 | 91 |
| Electrical conductivity | 62% | 17% | 76% | 22% |
| Magnetism | no | yes | no | yes |

1. Mystery Metal A is not magnetic and is the best conductor of both thermal and electrical energy:

2. Mystery Metal B is the least dense, is not magnetic, and melts the fastest:

3. Mystery Metal C is attracted to a magnet and would be a liquid by 1500 °C:

4. Mystery Metal D has the highest melting point and is the worst conductor of electricity:

Activity 5: Kinds of Changes

1. In a _____ change, you change how a substance looks or feels, but not what it is.
2. In a _____ change, you turn something into an entirely new substance with its own unique properties.

Identify the type of change- Physical or Chemical?

| | | | | | |
|-------------------------|---|---|---------------------------------|---|---|
| 1. Water boiling | P | C | 6. Dissolving Kool Aid in water | P | C |
| 2. Baking a cake | P | C | 7. Bike chain rusting | P | C |
| 3. Lighting a candle | P | C | 8. A firework exploding | P | C |
| 4. Banana turning brown | P | C | 9. Boiling water for tea | P | C |
| 5. Crushing a can | P | C | 10. Digesting food | P | C |

List at least 6 clues that can help you determine if a Chemical Change may have occurred:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.