

① Complete the text.

There are three states of matter: liquid, solid and gas. Water's normal state is (1) _____. In this state it has a (2) _____ volume but an (3) _____ shape. If water gets warmer, it starts to (4) _____.

This means it turns into a (5) _____ and it can be (6) _____ so its volume decreases. If the temperature goes below 0 °C, water freezes and its state changes to (7) _____. In this form its volume is (8) _____.

② Choose the correct words to complete the sentences.

- a. In solids, particles *vibrate* / *can't move*.
- b. In *liquids* / *gases* particles move randomly.
- c. When matter is heated, particles move *faster* / *slower*.
- d. Fermentation and combustion are *reversible* / *irreversible* processes.
- e. When atoms join together, they are called *particles* / *molecules*.
- f. A mixture of two or more elements is called *an alloy* / *a heterogenous mixture*.

③ Complete the table.

| property | force | definition |
|---------------|-----------|-----------------------------------|
| <i>volume</i> | <i>x</i> | how much space matter occupies |
| <i>x</i> | magnetism | _____ |
| _____ | _____ | the scratch resistance of a solid |
| solubility | <i>x</i> | _____ |
| <i>x</i> | gravity | _____ |
| _____ | _____ | ability to transfer heat |
| _____ | _____ | ability to float |
| density | <i>x</i> | _____ |

④ Circle the odd one out.

- | | | | |
|-----------------|------------|-------------|----------------|
| a. hardness | solubility | evaporation | mass |
| b. magnetism | friction | gravity | mass |
| c. light | buoyancy | sound | thermal energy |
| d. fossil fuels | biomass | wind | water |
| e. pulley | engine | lever | inclined plane |

⑤ Write one material which:

- acts as a conductor: _____
- acts as an insulator: _____
- lets light through: _____
- doesn't let light through: _____

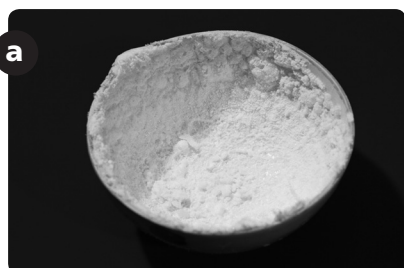
⑥ Complete the sentences.

- Snow is white because _____.
- Rainbows are caused by _____.
- When light hits an object, the object _____.
- Sound can't travel through a vacuum because _____.
- Thermal energy is energy that flows from _____.

⑦ Choose the words to complete the sentences.

- Density / Solubility* is the ability of a substance to dissolve in another substance.
- We use a *filter / sieve* to separate solids of different sizes.
- Friction / Gravity* is the force that exists when two objects rub against each other.
- Iron / Steel* is one of the most common alloys.

⑧ Label the methods of separating mixtures.



9 Answer the questions.

a. What is the main advantage of renewable energy sources?

b. Name two disadvantages of renewable energy sources.

c. Name two fossil fuels and say why they are bad for the environment.

d. Why is radioactivity bad for humans?

10 All of these sentences are false. Correct them.

a. Objects that contain more negative charges than positive have a positive charge.

b. Objects with opposite charges repel each other.

c. A moving electrical charge is known as static electricity.

d. Balloons sticking to your hair is an example of electrical current.

11 Look at the magnets. Do they attract or repel each other? Draw arrows.

a



b

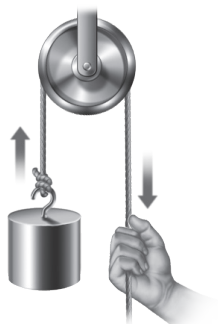


c

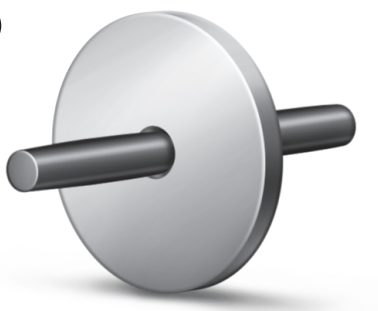


12 Label the machines.

a



b



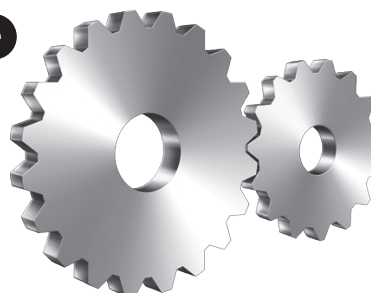
c



d



e



13 Answer the questions.

a. Name two machines which need batteries.

b. Name two machines which need energy from people.

c. Name two machines which need electricity.

d. Name three machines that you use at home.

e. Name three inventions which changed the world.

f. Look at your answer for Question e. Which area of our lives did the inventions improve?
