

Nova's States of Matter Investigation

Learning objective: To identify and describe the properties of solids, liquids, and gases, and understand how they change state.

Nova the Owl is observing different materials in her forest classroom. Read the descriptions of the particles below and sort them into the correct state of matter category (Solid, Liquid, or Gas). Then, use the word bank to fill in the blanks for how these materials change.

Word bank: melting · evaporation · freezing · condensation · particles · fixed · flow

1. 1. Particles are packed tightly together in a fixed shape. Which state of matter is this? (1 mark)

2. 2. Particles can move past each other and take the shape of their container. Which state of matter is this? (1 mark)

3. 3. Particles move quickly in all directions and fill all available space. Which state of matter is this? (1 mark)

4. 4. Complete the sentence: When a liquid turns into a solid, the process is called _____. (1 mark)

5. 5. Explain why a solid cannot be poured like a liquid, using the word 'particles' in your answer. (2 marks)

Draw: Draw three boxes. In the first box, draw small circles packed tightly in a grid to show a solid. In the second, draw the circles slightly apart to show a liquid. In the third, draw the circles far apart and spread out to show a gas.



Extension challenge: Nova found a puddle on a sunny morning. By the afternoon, the puddle had disappeared. Write a short paragraph explaining the scientific process that caused the puddle to vanish, mentioning the role of the sun.