

Particle model Vocabulary And Facts Colouring Page

KS4 / GCSE / Year 10 - Physics

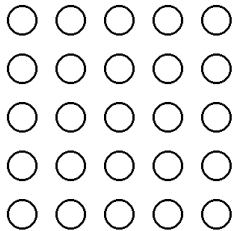
Annotate particle arrangement and motion in three states, energy transfers during state change, and density.

PARTICLE MODEL

Annotate arrangement, motion, energy, density and state changes

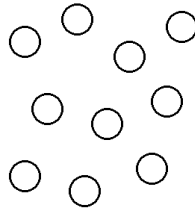
SOLID

close, regular; vibrate



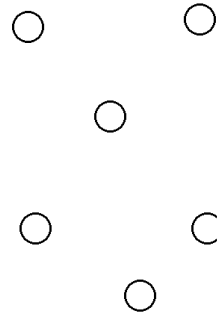
LIQUID

close, irregular; move past



GAS

far apart; rapid random motion



STATE CHANGES AND ENERGY

solid <-> liquid <-> gas

melting and boiling require energy transfer to the substance

condensing and freezing transfer energy from the substance

temperature remains constant during a pure substance's state change

DENSITY = MASS / VOLUME

Particle model Vocabulary And Facts Colouring Page

KS4 / GCSE / Year 10 - Physics

Annotate particle arrangement and motion in three states, energy transfers during state change, and density.

Parent & Teacher Guidance

Curriculum focus

Topic: Particle model. Develop accurate observation, subject vocabulary and evidence-based explanation. Mapped scope: DfE GCSE subject content and key stage 4 curriculum entitlement.

Before you begin

Review the picture together and ask the learner what they already notice about Particle model. Read the activity aloud, explain unfamiliar vocabulary, and agree which details need special attention.

Solo activity

The learner can complete the colouring independently, then use the finished page to explain three details linked to Particle model. Encourage accurate colour choices where they carry meaning, but allow creative choices elsewhere.

Group activity

Give pairs or small groups different areas to inspect. Ask them to agree on evidence before colouring, compare their findings, and present one curriculum fact to the class. Finish with a whole-group check against the guidance below.

Questions to guide discussion

What evidence can you see? Which feature is most important and why? How does one part connect to another? What new fact about Particle model can you explain using the picture?

Answers and checking

Solid particles are close and ordered, vibrating about fixed positions; liquid particles are close and move past one another; gas particles are far apart with rapid random motion. Melting/boiling require energy transfer in; freezing/condensing transfer energy out. Density=mass/volume.

Learning record and next steps

☐ Completed the colouring

☐ Explained key vocabulary

☐ Completed the activity

☐ Used visible evidence

Evidence noticed / vocabulary used

Next step:
