

Exit Ticket

Lesson 1: What Is Matter?

5/6 Science - Matter and the Particle Model

Name: _____ Date: _____

1. What two things make something matter?

2. Is air matter? Give one piece of evidence from today.

3. Light is not matter. Explain why not.

(Grade 6 / challenge)

Self-check: Today I can explain what matter is.

☐ Yes, on my own ☐ Getting there ☐ I need more help

Exit Ticket

Lesson 2: Properties of Matter

5/6 Science - Matter and the Particle Model

Name: _____ Date: _____

1. Describe a pencil using three physical properties.

2. Match: magnet test, float test, bend test. Which property does each check?

3. Iron filings are mixed with sand. Which property helps you separate them?

(Grade 6 / challenge)

Self-check: Today I can describe matter by its properties.

☐ Yes, on my own ☐ Getting there ☐ I need more help

Activity 2: Property Hunt

Grade 5/6 Science - Matter and the Particle Model

Name: _____ Date: _____

Lesson 2 group activity. Roles: Tester, Recorder, Reporter, Materials Manager. Find TWO classroom objects for each property. Test each one, then record it.

Property	Test	Object we found	Passed? (yes / no)	Quick sketch
magnetic	sticks to the magnet			
see-through	you can see clearly through it			
flexible	bends without breaking			
hard	a fingernail does not scratch it			
rough	bumpy when you rub it			
shiny	reflects light			

Stump the Class: our 3-clue riddle

Pick one object you found. Write 3 property clues. Do not name it!

Clue 1: I am _____

Clue 2: I am _____

Clue 3: I am _____

Answer (keep secret): _____ Riddle we solved: _____

Grade 6 challenge

Two of your finds are mixed together in a box. Which property would you use to separate them? Explain how.

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Lesson 3: Solids, Liquids, and Gases

5/6 Science - Matter and the Particle Model

Name: _____ Date: _____

1. Complete: A solid has a fixed ____ and a fixed ____.

2. Classify: juice, steam, a rock. Write solid, liquid, or gas.

3. Is oobleck a solid or a liquid? Use evidence from today.

(Grade 6 / challenge)

Self-check: Today I can tell solids, liquids, and gases apart.

☐ Yes, on my own ☐ Getting there ☐ I need more help

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Lesson 4: The Particle Model

5/6 Science - Matter and the Particle Model

Name: _____ Date: _____

1. Draw the particles in a solid, a liquid, and a gas (three small boxes).

2. Why did the food colouring spread faster in warm water?

3. Use particles to explain why a gas can be squeezed but a solid cannot.

(Grade 6 / challenge)

Self-check: Today I can explain the particle model.

☐ Yes, on my own ☐ Getting there ☐ I need more help

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Lesson 5: Checkpoint Review 1 - States and Particles

5/6 Science - Matter and the Particle Model

Name: _____ Date: _____

1. Matter is anything that has ____ and takes up ____.

2. Which state has particles packed tight and vibrating in place?

3. Explain why a balloon gets bigger when you blow more air in, using particles.

(Grade 6 / challenge)

Self-check: Today I can explain states of matter using particles.

☐ Yes, on my own ☐ Getting there ☐ I need more help

Exit Ticket

Lesson 6: Heating, Cooling, and Changing State

5/6 Science - Matter and the Particle Model

Name: _____ Date: _____

1. Name each change: ice to water; water to water vapour; water vapour to droplets.

2. What happens to particles when ice melts?

3. Why does the outside of a cold cup get wet? Use particles.

(Grade 6 / challenge)

Self-check: Today I can explain how heating and cooling change the state of matter.

[] Yes, on my own [] Getting there [] I need more help

Exit Ticket

Lesson 7: Physical Changes All Around

5/6 Science - Matter and the Particle Model

Name: _____ Date: _____

1. Physical or chemical? cutting paper, baking a cake, freezing juice, rusting nail.

2. Name one physical change that is reversible and one that is not.

3. Is dissolving sugar in water a physical change? How could you prove it?

(Grade 6 / challenge)

Self-check: Today I can tell physical changes from chemical changes.

☐ Yes, on my own ☐ Getting there ☐ I need more help

Activity 7: Physical or Chemical? Change Sort

Grade 5/6 Science - Matter and the Particle Model

Name: _____ Date: _____

Lesson 7 practice. Is a NEW substance made? Tick physical or chemical, then decide if it can be reversed.

Change	Physical	Chemical	Reversible? (yes/no)	Evidence
Cutting paper				
Freezing juice				
Burning a candle wick				
Melting butter				
Baking a cake				
Dissolving sugar in tea				
A nail rusting				
Breaking a pencil				
Boiling water				
Toast burning				

Signs of a chemical change (circle the ones you saw in the demo):

gas bubbles colour change heat or light a new solid forms smell

Grade 6 challenge: Is dissolving sugar a physical change? Describe a test to prove it.

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Lesson 8: Dissolving and Mixtures

5/6 Science - Matter and the Particle Model

Name: _____ Date: _____

1. Salt "disappears" in water. Where are the salt particles?

2. How could you get the salt back from salt water?

3. Pick a method to separate sand and water, and name the property it uses.

(Grade 6)

Self-check: Today I can explain dissolving and separate a mixture.

[] Yes, on my own [] Getting there [] I need more help

Activity 8: Mixture Lab Record

Grade 5/6 Science - Matter and the Particle Model

Name: _____ Date: _____

Lesson 8 lab. Goggles on. No tasting. Record carefully.

Part A (Grade 5 focus): Does it dissolve?

Stir into water	Prediction	Result: dissolves?	What I saw
Salt			
Sugar			
Sand			
Honey			

Draw salt water zoomed in. Show water particles and salt particles.

Salt water (zoomed in)	Salt paper after drying (what I see)

Part B (Grade 6 focus): Separate the mixture

Mixture	Method (filter, settle, magnet, evaporate)	Property used
Sand and water		
Oil and water		
Iron filings and sand		
Salt and water		

Eulachon grease: fish are heated in water, the oil rises, and it is skimmed and strained. Which two properties does this use?

Exit Ticket

Lesson 9: Checkpoint Review 2 - Connecting the Ideas

5/6 Science - Matter and the Particle Model

Name: _____ Date: _____

1. Draw one arrow from your concept map and explain the link.

2. Which change will your comic show? What happens to the particles?

3. Which unit idea do you still want to practise?

Self-check: Today I can connect the big ideas of the unit.

☐ Yes, on my own ☐ Getting there ☐ I need more help

Exit Ticket

Lesson 10: Show What You Know

5/6 Science - Matter and the Particle Model

Name: _____ Date: _____

1. Is air matter? Answer with particle evidence.

2. What is one thing you are proud of in your comic?

3. What is one new question you have about matter?

(Grade 6 / challenge: explain why)

Self-check: Today I can use the particle model to explain a change.

☐ Yes, on my own ☐ Getting there ☐ I need more help

Activity 10: Particle Model Comic Explainer

Grade 5/6 Science - Matter and the Particle Model

Name: _____ Date: _____

Lesson 10 summative. Choose one change: an ice pop melting, a puddle drying, salt dissolving, fog on a mirror, or eulachon oil rising (Gr 6). Show it in 4 panels. Each panel needs a picture, a zoomed-in particle circle, and a caption.

My change: _____

Panel 1 Caption: _____	Panel 2 Caption: _____
Panel 3 Caption: _____	Panel 4 Caption: _____

Checklist:

- [] I showed particles before and after the change.
- [] I used at least 3 unit words (particle, melt, dissolve, evaporate ...).
- [] I said whether the change is physical and whether it is reversible.

Unit Rubric: Matter and the Particle Model

Grade 5/6 Science - Matter and the Particle Model

Assessed on the Particle Model Comic Explainer, the End of Unit Concepts Check, and lesson evidence. Grade 5 focus on states, changes, and dissolving; Grade 6 also on mixtures and separation. Tied to the BC curricular competencies.

Name: _____ Grade (circle): 5 6

Criteria	Emerging	Developing	Proficient	Extending
Matter and properties	Unsure what matter is.	Defines matter; names some properties.	Explains mass and space; describes matter with several properties.	Uses properties to identify or plan to separate materials.
States and the particle model	Confuses the states.	Names states; particle drawings partly correct.	Draws and explains particles in each state (spacing, movement).	Uses the model to explain new situations (compressing gas, smells).
Changes of state and physical change	Cannot name changes.	Names some changes; explanation is general.	Names all four changes; explains with particles; notes reversibility.	Clearly tells physical from chemical change with evidence.
Dissolving and solutions (Gr 5)	Thinks dissolved matter is gone.	Knows it is still there; limited explanation.	Explains dissolving with particles; separates by evaporation.	Explains solubility of solids, liquids, and gases with examples.
Mixtures and separation (Gr 6)	Cannot suggest a method.	Suggests a method; property unclear.	Matches methods to density or particle size.	Connects methods to real uses, including eulachon oil.
Communicating (comic explainer)	Ideas unclear or missing.	Some panels explain the change.	Clear panels, particle views, and correct vocabulary.	Engaging, accurate, and complete science story.

Teacher comment:

Student I Can Tracker

Grade 5/6 Science - Matter and the Particle Model

Tick a box for each goal: Not yet, Getting there, or Yes. Update it at each Checkpoint Review (Lessons 5 and 9) and at the end.

Name: _____ Date: _____

Lesson	I can ...	Not yet	Getting there	Yes
Lesson 1	I can explain that matter has mass and takes up space.			
Lesson 2	I can describe matter using physical properties.			
Lesson 3	I can tell solids, liquids, and gases apart.			
Lesson 4	I can explain and draw the particle model.			
Lesson 5	I can review what I know and name what to practise.			
Lesson 6	I can explain melting, freezing, evaporation, and condensation.			
Lesson 7	I can tell physical changes from chemical changes.			
Lesson 8	I can explain dissolving and separate a mixture.			
Lesson 9	I can connect the big ideas of the unit.			
Lesson 10	I can use the particle model to explain a change.			

One thing I am proud of:

One thing I want to work on next:

Teacher Observation Checklist

Grade 5/6 Science - Matter and the Particle Model

Formative, anecdotal evidence across the unit. Code each box: E = emerging, D = developing, P = proficient, X = extending. Use it to form Checkpoint Review groups.

Class: _____ Dates: TBD

Student	Defines matter	Uses properties	Particle model	Changes of state	Dissolving / mixtures	Uses safe lab habits

Anecdotal notes:

End of Unit Concepts Check

Grade 5/6 Science - Matter and the Particle Model

Name: _____ Grade (circle): 5 6

Grade 5: complete Parts A and B. Grade 6: complete Parts A, B, and C. About 15 to 20 minutes. Questions may be read aloud on request.

Part A: Multiple choice (circle one)

1. Which of these is NOT matter?

- a. air b. water c. light d. sand

2. Which state has a fixed shape and a fixed volume?

- a. solid b. liquid c. gas d. all of them

3. When a liquid is heated, its particles ...

- a. stop moving b. move faster c. get smaller d. disappear

4. Water vapour turning into droplets on a cold mirror is ...

- a. melting b. freezing c. evaporation d. condensation

5. Which is a chemical change?

- a. melting ice b. cutting paper c. baking a cake d. dissolving salt

6. When salt dissolves in water, the salt particles ...

- a. are destroyed b. spread out among the water particles c. turn into water d. sink and stay in a pile

Part B: Short answer

7. Draw the particles in a solid, a liquid, and a gas. Label each.

8. Is air matter? Give one piece of evidence.

9. Explain what happens to particles when ice melts. Is this change reversible?

10. How could you get salt back from salt water? Name the process.

Part C: Grade 6 (mixtures and separation)

11. Choose a method to separate sand from water. Name the property it uses.

12. Oil and water are mixed. How could you separate them, and why does it work?

13. Eulachon grease is made by heating fish in water until the oil rises, then skimming and straining it. Which properties are used?

End of Unit Concepts Check - ANSWER KEY

Grade 5/6 Science - Matter and the Particle Model

Grade 5: complete Parts A and B. Grade 6: complete Parts A, B, and C. About 15 to 20 minutes. Questions may be read aloud on request.

Part A: Multiple choice (circle one)

1. Which of these is NOT matter?

- a. air b. water c. light d. sand

Answer: c

2. Which state has a fixed shape and a fixed volume?

- a. solid b. liquid c. gas d. all of them

Answer: a

3. When a liquid is heated, its particles ...

- a. stop moving b. move faster c. get smaller d. disappear

Answer: b

4. Water vapour turning into droplets on a cold mirror is ...

- a. melting b. freezing c. evaporation d. condensation

Answer: d

5. Which is a chemical change?

- a. melting ice b. cutting paper c. baking a cake d. dissolving salt

Answer: c

6. When salt dissolves in water, the salt particles ...

- a. are destroyed b. spread out among the water particles c. turn into water d. sink and stay in a pile

Answer: b

Part B: Short answer

7. Draw the particles in a solid, a liquid, and a gas. Label each.

Solid: tightly packed, ordered, vibrating. Liquid: close but random, sliding. Gas: far apart, moving fast in all directions.

8. Is air matter? Give one piece of evidence.

Yes. It has mass (inflated balloon is heavier) and takes up space (paper towel stays dry in the upside-down cup).

9. Explain what happens to particles when ice melts. Is this change reversible?

Heat makes the particles move faster; they break out of fixed positions and slide past each other. Yes, it is reversible (freeze it again).

10. How could you get salt back from salt water? Name the process.

Let the water evaporate (heat or leave it in the sun); salt crystals are left behind. Evaporation / crystallization.

Part C: Grade 6 (mixtures and separation)

11. Choose a method to separate sand from water. Name the property it uses.

Filter it (particle size), or let it settle and pour off the water (density).

12. Oil and water are mixed. How could you separate them, and why does it work?

Let it settle; oil floats on top because it is less dense. Skim or pour off the oil.

13. Eulachon grease is made by heating fish in water until the oil rises, then skimming and straining it. Which properties are used?

Density (oil rises and is skimmed) and particle size (straining removes solid bits).

Scoring guide: Part A 1 mark each (6). Part B 2 marks each (8). Part C 2 marks each (6). Grade 5 out of 14; Grade 6 out of 20. Use with the unit rubric, not as a sole grade.