inquisitive

GRADE 2 · PHYSICAL SCIENCES · FAST PATH

Unit: Structure and Properties of Matter

Lessons in unit: 5 · 17 teaching days · 20–30 min per day · 475 min total · ↳ Time-saving teaching move · ★ Checkpoint

1. What IS This Stuff?

PHENOMENON QUESTION
What's the difference between a solid and a liquid?

OUTCOME
I can explain how to identify a solid from a liquid.

TIME
3 days · 30 min per day
90 min total

DAY 1 · 30 MIN

PREP Set out five source materials, pouring containers and towels; keep them for Days 2–3.

10 MIN — Activity 1

20 MIN — Activity 2

DAY 2 · 30 MIN

PREP Set out a separate receiving container for each material.

15 MIN — Activity 3
↳ Use separate receiving containers so tests do not pause for bucket cleaning.

15 MIN — Activities 4, 5, 6
↳ Complete Activities 4–6 as a class. Record students' explanations for Activities 4 and 6 instead of individual written responses.

DAY 3 · 30 MIN

5 MIN — Activity 7
↳ Complete as a class, or have partners use devices already open to the activity.

20 MIN — Activity 8 ★

5 MIN — Activity 11

2. Sorting Our Stuff

PHENOMENON QUESTION
How can we sort things?

OUTCOME
I can describe objects that I can see and feel by its properties.

TIME
3 days · 30 min per day
90 min total

DAY 4 · 30 MIN

PREP Prepare sets of objects for students to describe.

10 MIN — Activities 1, 2
↳ Describe the candy-making actions while everyone mimes them.

20 MIN — Activity 3
↳ Use prepared items.

DAY 5 · 30 MIN

PREP Keep ice frozen and butter cold until the lamp test; set out the test equipment.

10 MIN — Activity 4
↳ Partners explain the two comparisons; record shared class answers.

20 MIN — Activity 5

DAY 6 · 30 MIN

PREP Return each group's saved objects from Day 4.

5 MIN — Activity 6
↳ Complete as a class.

20 MIN — Activity 7 ★

5 MIN — Activity 10

3. The Best Material for the Job

PHENOMENON QUESTION
Why is paper the best material for origami?

OUTCOME
I can explain why an object is good for a specific task based on its properties.

TIME
4 days · 20–30 min per day
110 min total

DAY 7 · 30 MIN

PREP Cut square paper and put crayons within reach.

15 MIN **Activity 1**
↳ Read the full book, then have partners answer both questions before one class response.

15 MIN **Activity 2**
↳ Add simple dots to the folded ladybug to keep decorating brief.

DAY 8 · 20 MIN

PREP Set out folding samples for groups.

15 MIN **Activity 3**
↳ Groups test every material, then contribute results to one class record.

5 MIN **Activity 4 · Parts 1–2**

DAY 9 · 30 MIN

PREP Prepare material samples, plates and cups marked for equal water amounts.

15 MIN **Activity 4 · Part 3**

15 MIN **Activity 5**

DAY 10 · 30 MIN

PREP Set out shared trays of wood, cloth, sandpaper and sponge.

10 MIN **Activity 6**
↳ Model the fishbowl, then pairs test the other objects and explain their choices aloud.

15 MIN **Activity 7 ★**

5 MIN **Activity 10**

4. Building New Things from Parts

PHENOMENON QUESTION
Can you make a new object from old parts?

OUTCOME
I can show how to take apart an object made of small pieces, then put the pieces back together to make a new object.

TIME
3 days · 20–30 min per day
75 min total

DAY 11 · 30 MIN

PREP Count 20 blocks per pair.

10 MIN **Activities 1, 2**
↳ Discuss both sets of questions after one viewing of the Watts Towers video.

20 MIN **Activity 3**
↳ Photograph both builds instead of drawing them; compare with a neighboring pair.

DAY 12 · 25 MIN

10 MIN **Activity 4**

15 MIN **Activity 5**
↳ Choose a house and a boat to reduce time deciding what to build.

DAY 13 · 20 MIN

PREP Count eight blocks per student.

15 MIN **Activity 6 ★**

5 MIN **Activity 9**

5. Changes From Heating and Cooling

PHENOMENON QUESTION
How does heating and cooling change matter?

OUTCOME
I can explain how heating an object can change its properties.

TIME
4 days · 20–30 min per day
110 min total
Assessment: Anchor Maps and Autogradable Summative Assessments are not included within this pacing guide.

DAY 14 · 20 MIN	DAY 15 · 30 MIN	DAY 16 · 30 MIN	DAY 17 · 30 MIN
PREP Put source samples in freezer-safe containers.	**PREP** Set out the hot plate, pan and heatproof bowl.	5 MIN **Activity 3** Compare the cooled egg and chocolate with their original properties.	**PREP** Keep one ice cube per student frozen until the checkpoint.
SCHEDULE Leave the Activity 2 samples in the freezer overnight before Day 15.	**SCHEDULE** Cool the cooked egg and melted chocolate before Day 16.	15 MIN **Activities 4, 5** ↳ Discuss both activities and record their explanations on one shared chart.	10 MIN **Activity 7** ↳ Model one claim with evidence, then pairs explain more examples for a shared labeled chart.
10 MIN **Activity 1**	15 MIN **Activity 2** Observe the frozen objects and complete the results table and discussion.	10 MIN **Activity 6** ↳ Pairs justify each example aloud while the class completes the interactive together.	15 MIN **Activity 8 ★**
10 MIN **Activity 2** Observe room-temperature objects, record descriptions and place them in the freezer.	15 MIN **Activity 3** Observe the egg and chocolate before and after heating; set them aside to cool. SAFETY: The teacher handles the hot plate and hot food.		5 MIN **Activity 11**