

What is Matter?

Standard: 2-PS1-1 Describe and sort objects by the properties you can observe

Matter is anything that takes up space. We can describe matter by its properties: color, texture, hardness, and flexibility. Look at each object from your Mystery Bag. Circle the word that fits.

Object	Color	Texture	Hardness	Flexibility
rock		rough / smooth	hard / soft	bends / does not bend
sponge		rough / smooth	hard / soft	bends / does not bend
rubber band		rough / smooth	hard / soft	bends / does not bend
spoon		rough / smooth	hard / soft	bends / does not bend

Texture Test

Touch 8 materials. Write them in order from roughest to smoothest.

1 rough	2	3	4	5	6	7	8 smooth

Sort by Two Properties

Write each object in the box where it belongs: rock, sponge, cotton ball, spoon, crayon, wooden block.

	Hard	Soft
Smooth		
Rough		

1. Pick two objects. Tell one way they are the same and one way they are different.

2. I think the roughest material was _____ because _____.

Describing Properties

Standard: 2-PS1-1 Describe and compare materials by their properties

Part A: Does It Absorb?

Put 5 drops of water on each material. Wait 10 seconds. Write your prediction first, then the result.

Material	Prediction: absorbs or does not absorb?	Result: absorbs or does not absorb?
paper towel		
foil		
cotton ball		
plastic bag		
cloth		
coin		

Part B: Sort It Two Ways

Sort the same six materials two different ways. First sort by absorbs. Then sort by hard or soft.

Sort 1: Absorbs	Sort 1: Does not absorb	Sort 2: Hard	Sort 2: Soft

Part C: Use Your Data

1. Was one of your predictions wrong? Which one?

2. Which material would make a good raincoat? A good _____ needs to be _____ because _____.

3. Use two property words to describe the sponge.

Heating & Cooling Changes

Standard: 2-PS1-4 Heating and cooling can change matter: melting, freezing, and dissolving

Part A: Ice Cube Race

Predict the order the ice cubes will melt (1 = first). Then write what really happened.

Spot	My prediction (1–4)	Result (1–4)
sunny window		
kitchen counter		
refrigerator		
inside a towel		

Part B: Melt and Freeze

Write solid, soft, or liquid for each material.

Material	After heating	After cooling
butter		
chocolate chips		
ice cube		
crayon		

Part C: Show the Change

Draw an ice cube and a puddle. Draw an arrow labeled heat from the ice to the puddle. Draw an arrow labeled cold from the puddle back to the ice.

1. Which spot won the melting race? Why?
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2. Stir a spoon of sugar into warm water. What happens to the sugar? (This is called dissolving.)
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3. I think heat changes matter because _____.
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Reversible & Irreversible Changes

Standard: 2-PS1-4 Some changes can be undone and some cannot

A reversible change can be undone. An irreversible change makes something new, and you cannot get the old thing back. Test each change. Circle R for reversible or I for irreversible, then tell why.

Change	R or I?	Why?
1. melt an ice cube	R I	
2. crumple paper	R I	
3. cut paper in half	R I	
4. mash a banana	R I	
5. mix baking soda and vinegar	R I	
6. cook an egg	R I	
7. squash play dough	R I	

Before and After

Draw the egg before cooking and after cooking.

Before (raw)	After (cooked)

8. Heat melted the ice and heat cooked the egg. Why could one go back but not the other?

9. Write a rule a friend could use to tell if a change is irreversible.

Weeks 1–4: Vocabulary and Big Ideas

Standard: 2-PS1-1, 2-PS1-4 Words scientists use to describe and change matter

Word Bank

matter property texture flexible absorb melt freeze solid liquid irreversible

Match It

Read each clue. Write the word from the word bank that matches.

Clue	Word
1. Anything that takes up space	
2. How something feels when you touch it	
3. Able to bend without breaking	
4. To soak up water, like a sponge	
5. To change from a solid to a liquid	
6. To change from a liquid to a solid	
7. Keeps its own shape, like an ice cube	
8. A change you cannot undo	

Fill in the Blank

9. Color, hardness and texture are each a _____ of matter.

10. Water that flows and takes the shape of its cup is a _____.

Explain It

11. Ice melts into water, and water freezes back into ice. Is this change reversible? Explain how you know.

Weeks 1–4: My Reflection

Standard: 2-PS1-1, 2-PS1-4 Think about what you learned about matter

Read each sentence. Put a check in the box if you can do it.

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Week 1: I can sort objects by color, texture, hardness, or flexibility.

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Week 2: I can describe a material and sort the same objects two ways.

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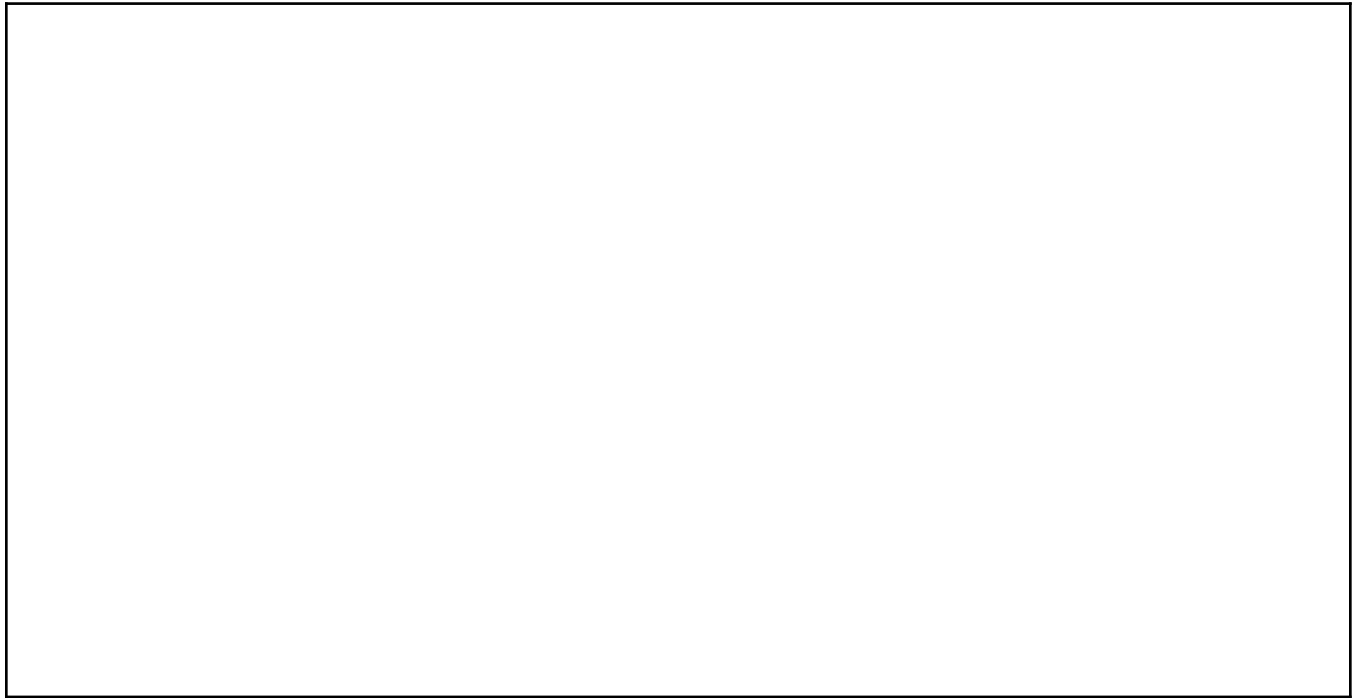
Week 3: I can tell how heating and cooling change ice, butter, or chocolate.

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Week 4: I can tell if a change is reversible or irreversible.

My Favorite Thing I Learned

Draw the investigation you liked best. Label your drawing.



Write about your drawing. What did you learn?
