

2-PS1-3 Matter and Its Interactions

Students who demonstrate understanding can:

- 2-PS1-3. Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.** [Clarification Statement: Examples of pieces could include blocks, building bricks, or other assorted small objects.]

The performance expectation above was developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices

Constructing Explanations and Designing Solutions

Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.

- Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena.

Disciplinary Core Ideas

PS1.A: Structure and Properties of Matter

- Different properties are suited to different purposes.
- A great variety of objects can be built up from a small set of pieces.

Crosscutting Concepts

Energy and Matter

- Objects may break into smaller pieces and be put together into larger pieces, or change shapes.

Observable features of the student performance by the end of the grade:

1	Articulating the explanation of phenomena		
	a	Students articulate a statement that relates the given phenomenon to a scientific idea, including that an object made of a small set of pieces can be disassembled and made into a new object.	
	b	Students use evidence and reasoning to construct an evidence-based account of the phenomenon.	
2	Evidence		
	a	Students describe* evidence from observations (firsthand or from media), including:	
		i.	The characteristics (e.g., size, shape, arrangement of parts) of the original object.
		ii.	That the original object was disassembled into pieces.
		iii.	That the pieces were reassembled into a new object or objects.
iv.	The characteristics (e.g., size, shape, arrangement of parts) of the new object or objects.		
3	Reasoning		
	a	Students use reasoning to connect the evidence to support an explanation. Students describe* a chain of reasoning that includes:	
		i.	The original object was disassembled into its pieces and is reassembled into a new object or objects.
		ii.	Many different objects can be built from the same set of pieces.
iii.	Compared to the original object, the new object or objects can have different characteristics, even though they were made of the same set of pieces.		