



4th Grade Constructing Explanations

Who? In pairs or small groups.

How long? 25 minutes.

What does each pair or group need? A smartphone or iPad for taking videos and photos, or blank sheet of paper and a pencil.

What to do? Come up with ideas about what is going on in the exhibit by making observations and using those observations to support your ideas.

What counts as evidence? We gather evidence by asking questions, trying things out, and making observations. To decide if you can use your observations as evidence, try repeating your experiment and see if the same thing happens again, have more than one person make the observation and discuss whether you noticed the same thing, or try out another question that relates to your original question!

Pick an exhibit from the following suggestions. If the exhibit you want to use is busy, come back to it later or pick another one from the list.

HEAT & MOTION Heat Currents Hot Gas Circling Wave Umbrellas Magnetic Cannon	SOUND Crash and Burn Whispering Dishes Make Music Together Make Waves (large spring; access on 2nd floor balcony)	DIG DEEPER Keep This Bridge from Sagging Pile It High Wire It Up Visible Forces
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With your partner or group, explore the exhibit. Try things out and see what happens.

Do some careful noticing. As you are trying things out, talk with your partner about what you observe. Are you noticing the same thing? If so, try it again, and see what happens.

Next, decide on two things that you observed that are important to understanding this exhibit.

Discuss your ideas. What do you think is going on? This is not about getting “the right answer.” Talk through your ideas based on your own observations. Come up with two different explanations.



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Which of your observations could be used as evidence? Repeat the experiment and see if the same thing happens again, have more than one person make the observation and discuss whether you noticed the same thing, or try out another question that relates to your original question.

After spending time exploring the exhibit, prepare a way to share your observations and experience with others:

Record your observations with a smartphone or iPad.

Decide who will video and who will talk. In your video, include these four things:

- Introduce the exhibit. Share what you tried and what you noticed.
- Share your explanation for what is happening.
- Show one observation you made that can be used as evidence.
- Share one question that you could not answer or a new question that you would like to try at this exhibit.

OR

Record your observations by writing.

On a blank piece of paper, record the following:

- What did you try? What did you notice?
- Write your own explanation about what is happening at this exhibit.
- Write down one observation you made that can be used as evidence.
- Write down one question that you could not answer or a new question that you would like to try at this exhibit.