Examples of Writing/Drawing for Sensemaking

Droughts + Floods, Lesson 1
Notice/Wonder

Collisions, Lesson 1
Initial Model

Everest, Lesson 1
DQB questions

Bath Bombs, Lesson 2
Progress Tracker

What we figured out is that there is no new matter. We know this because the mass/weight didn’t change so the claim - “The gas was formed from a chemical reaction when you add water.” - is right because when we broke the bath bomb into lots of pieces in the bag no mass was added or released because the bag didn’t expand and the weight stayed the same.
Sound Unit, Lesson 5

Planning for an investigation

Lesson 5: Investigation plan & Observations

Part 1: Use the boxes below to record important parts of our plan for today’s investigation.

What is the question we are trying to answer today?
We want to know how high pitch and low pitch vibrations compare?

What kinds of instruments or other sound sources make higher pitch sounds?
Smaller instruments and sound sources make higher sounds.

What kinds of instruments or other sound sources make lower pitch sounds?
Larger instruments and sound sources make lower pitches.

How can we use the stick and motion detector to help us answer our question?
We can resize the stick to make different pitch vibrations. Smaller to make higher pitch and longer for a lower pitch.

Part 2: Use the data table below to record your observations as we try our investigation plan with the stick and the motion detector.

<table>
<thead>
<tr>
<th>Length of stick</th>
<th>Observation #1</th>
<th>Observation #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longer Length (Video 1)</td>
<td>The vibrations are not very far from rest (low amplitude)</td>
<td>There were only 2 vibrations in 2 seconds. (Frequency)</td>
</tr>
<tr>
<td>Medium Length (Video 2)</td>
<td>The vibrations are close to rest position (low amplitude)</td>
<td>There were 4 vibrations in 2 seconds (Higher Frequency)</td>
</tr>
<tr>
<td>Shorter Length (Video 3)</td>
<td>The vibrations are close to rest position (low amplitude)</td>
<td>There were 8.5 vibrations in 2 seconds (Even higher frequency)</td>
</tr>
</tbody>
</table>

Everest Unit, Lesson 8

Small group model with student feedback

Bath Bomb, Lesson 5

Argument

Arguing from Evidence
Our question: What gas(es) could be produced by a bath bomb?

- Your written argument should provide a claim to answer this question.
- You should use all relevant evidence and reasoning (using scientific principles and ideas based on science) to support your claim. Look through your science notebook for facts.
- Your students should create a chart to remind you of what is important to include.

The gases that could be produced by a bath bomb are Oxygen, Nitrogen, Carbon Dioxide, and Carbon Monoxide. A simple way for an experiment is to put a lit match into the bath bomb, gas, setting a match and the remaining flame extinguished. This means that we can eliminate the with oxygen production. Hydrogen, Methane, and Oxygen, because in our atmosphere less than this amount of gases are made from the lab all possible gases in the bath bomb. In our most recent experiment we passed a bottle of the bath bomb gas into an allusion machine and it extinguished the lit candle inside and it was found0.01. This means that the gas produced by a bath bomb is more dense than air because the scientific principle that less dense things rise and more dense things sink, which determines how and where from the list of possible gases that could be produced by a bath bomb. In short the gases that could be produced by a bath bomb are Oxygen, Nitrogen, Carbon Dioxide, or Carbon Monoxide, as the only gases that are remaining on this list of gases that could be produced by a bath bomb based on our data and investigations.

Thermal Energy, Lesson 16

Design ideas

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Page 2