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Explicit with instructions and restate the directions

EQ: How can the physical properties of an object be determined? How do mass and volume compare?

30 seconds to take out your science notebooks and turn to the next clean page.

20 seconds….

10 seconds….

5 …

4….

3…

2…

1….LLP

Who wants to raise their hand and tell me what we have been talking about in science in the last 3 or 4 days.

Student: states of matter

What larger category does states of matter fall under?

Student: Properties of Matter

In your notebooks title this Mass and Volume and then write the essential question.

Brianna, what are we doing? Brianna repeats the instructions.

3 more seconds and then we are moving on.

Student in the front has no notebook and is singing.

1/3 of the way down, you are going to draw a line.

What is mass?

Student: It is the weight.

Do you agree or disagree? It’s not the weight so tell

It’s the amount of space it takes up.

It’s the weight?

Student that is called on stands up and shares the definition from his notebook from several days ago.

I like the way he used his notebook. Great job using your resource.

So, mass is the amount of matter an object has. Everyone needs to write that down in your notebook.

If mass is the amount of matter an object has, then what do you think the volume is?

The amount of space that matter takes up.

Under the line in your notebook, I want you to write what is the difference between mass and volume.

You don’t need to write the question, but you can write a complete sentence because that will tell me what the question was.

Give me fist to three to show me the amount of time you need to answer the question.

If I am going to measure the mass of something, then I am going to use this handy dandy scale, have you ever used this?

YES

You are going to place an object on one side of the scale and the gram weights on the other. How will I know how many grams to put over there.

Any questions? Even from the ones that are having a conversation?

How can I measure how much space this paperclip box takes up?

Area?

Goosman- you have to measure the …(couldn’t hear)

You guys are thinking way ahead of me right now. We just want to know why we take these measurements?

Student answer: by filling it up with paperclips?

Example: shows how to place block in using width and length, but the question remains I have to work on the depth . Student suggest stacking.

Modeled under the elmo

So if I have to Volume, what am I going to do with these measurements? Student shares that you can multiply.

What strategy did we show? (an array)

Thumbs up if you are good, thumbs down if you don’t understand and thumbs to the side if you are unsure.

In your science notebook, what I would like for you to do, is …

In your notebook I need you to write predictions and then an M and a V for mass and volume, just like I did here.

What I want you to predict, under the column that says M for mass, I would like for you to predict the order of the masses of these boxes from least to greatest.

Allejandro, can you tell me what we are predicting for mass?

How much matter it has?

Lucious- we are predicting how much mass they have from least to greatest.

Yes, but I don’t want you to predict the mass. Coscia jumps in and gives an example using three boxes.

12:52- students begin making predictions

12:57- you are going to have one more minute.

12:58 – tells a student to” finish up because I gave a minute warning and time is up”

several students are sitting and waiting

1:00 the majority of you have predicitions so I am going to go ahead and tell you about. …. (student hand was addressed)

You are going to be divided into four stations – now that you have made predictions about mass and volume, I want to see if you are right.

Before I put anything down, let me set the expectations. I am going through all of the instructions before we do anything.

I am going to place the materials on your desk and you are not to touch them until I give instructions.

Sets box on the table (student immediately picks it up and is scolded by other classmates)

That proves to me that we can’t follow instructions because several people touched the boxes after being told not to.

I am going to give the directions and then have you repeat them.

My front tables will measure the volume of the box. While my front groups are doing this, my back two groups will be finding the mass of the box at the two scales. Asked a student to repeat, she did not. Called on another student to give directions.

Now as far as recording the data, you are going to make a data table. IN one column you put the object, under M for mass you are going to write the mass- what unit will I use? GRAMS! The next column is volume and we will measure in cm.

Thumbs up if you understand the instructions. This means that you won’t have to ask me because you are going to know. Student asks for clarification on the chart.

1:15- Students begin investigation.