Standards:
SI #3: Use appropriate mathematics, tools and techniques to gather data and information.

Handouts:
Science, Technology, and Engineering Knowledge Builders - Day 5 (Quick Lab: Measuring Before and After)

On Board:
1. Take paper from the tray.
2. Get laptop from 9th period class (1-2 Period Only).
3. Get out your Science Vocabulary.
4. Get out your Science Composition books.
5. Do Bell Work on the Smart board.
6. Pencil

Up For Grabs:

Note: **Use 250 mL for beakers due to time of ice melting.**

We might have to have kids come back and check results later in day if the beaker ice is still not melted.

Be sure to draw you targets on the board before class.

May have to ask other teachers for students to come back later if needed.

Materials:

Triple Beam Balance Scales, masking tape (to label beakers if students have to come back) Beakers (250 mL), crushed ice, spoons for stirring, thermometers, very cold water

Procedures:
1. Take attendance.
2. Do Bell Work.
3. Discuss Bell Work.
4. Go over procedure for the day.
5. Go over focus for the day.
6. Start Quick Lab: Measuring Before and After.
7. Review the terms: Precise or Accurate.
8. Do Class Activity: Precise or Accurate.
9. Finish your Quick Lab: Measuring Before and After.
10. Work on finishing homework.

Homework:

Students that scored above a 75 percent on the quiz will do the assignment: “Investigation Review.”

The students that DID NOT score 75 percent on the Open Note Quiz will Read pp. 44-52 in your Fusion books and answers all the questions on pp. 44-52 in their Fusion books. DO NOT DO P. 53 - This will be due on Friday.

Finish Science, Technology, and Engineering Knowledge Builders - Day 5 (Quick Lab: Measuring Before and After). YOU DO NOT HAVE TO DO THE EXTENSION ACTIVITY.

Science, Technology, and Engineering Unit 1 - Lesson 4

Day: 5

Bell Work - Day 5

To Do...

1. Take paper from the tray.
2. Get laptop from 9th period class (1-2 Period Only).
3. Get out your Science Vocabulary.
4. Get out your Science Composition books.
5. Do Bell Work on the Smart board.
6. Pencil

Label This Bell Work: Science, Technology, and Engineering Unit 1 - Lesson 4. Use one box.

Rigby uses a pendulum to study oscillations. He measures the amount of time it takes for the pendulum to complete a full swing. What would be the best way to record the time of the pendulum swing?

Bell Work - Day 5

Label This Bell Work: Science, Technology, and Engineering Unit 1 - Lesson 4. Use one box.

Rigby uses a pendulum to study oscillations. He measures the amount of time it takes for the pendulum to complete a full swing. What would be the best way to record the time of the pendulum swing?

In Seconds

Procedure

Today We will...

1. Take attendance.
2. Do Bell Work.
3. Discuss Bell Work.
4. Go over procedure for the day.
5. Go over focus for the day.
6. Start Quick Lab: Measuring Before and After.
7. Review the terms: Precise or Accurate.
8. Do Class Activity: Precise or Accurate.
9. Finish your Quick Lab: Measuring Before and After.
10. Work on finishing homework.

Focus

- ☐ You will learn that measurements are a way of quantifying observations.
- ☐ You will learn scientists use the International System of Units, prefixes, and scientific notation.
- ☐ You will learn that scientists use various tools to make measurements.
- ☐ You will learn that measurements can be evaluated by their precision and accuracy.

State Standard

SI #3: Use appropriate mathematics, tools and techniques to gather data and information.

Quick Lab: Measuring Before and After

1. Read through the instructions on your Science, Technology, and Engineering Knowledge Builders - Day 5 (Quick Lab: Measuring Before and After)

2. Gather the materials you will need.

3. Do questions # 1-4 on your Quick Lab: Measuring Before and After handout.

4. While waiting for the ice to melt we will move to the next activity and then come back to it at the end of class. You may even have to stop back later in the day depending on how long it takes ice to melt.

5. When you are finished sit back in your seat and wait until we ahve everyone complete. You can work on another assignment or play an approved game on your lap top.

Vocabulary

1. Precision - the exactness of a measurement.

2. Accuracy - a description of how close a measurement is to the true value of the quantity measured.

Class Activity: Precise or Accurate

Purpose: To distinguish between accuracy and precision.

1. Get out your science composition books. Label this activity: Class Activity: Precise or Accurate - Day 5 (Date)

2 Look at the targets on the board and answer the following questions:

A. If the bull's-eye is the true value, which set is more accurate?

B. Which is more precise? Why?

Class Activity: Precise or Accurate

Purpose: To distinguish between accuracy and precision.

1. Get out your science composition books. Label this activity: Class Activity: Precise or Accurate - Day 5 (Date)

2. Draw the two targets on the board in your notes and answer the following questions:

A. If the bull's-eye is the true value, which set is more accurate?

The target in which the darts are closer to the bull's-eye.

B. Which is more precise? Why?

The target in which the darts are in the outer ring and are very close together because the thrower had similar results each time he or she threw the dart.

Class Activity: Precise or Accurate

Purpose: To distinguish between accuracy and precision.

3. So what would we label each target? Label your targets.

See board for the answer.

4. Answer the following question about the targets:

C. Why is it important for your measurements to be both precise and accurate?

Class Activity: Precise or Accurate

Purpose: To distinguish between accuracy and precision.

3. So what would we label each target? Label your targets.

See board for the answer.

4. Answer the following question about the targets:

C. Why is it important for your measurements to be both precise and accurate?

Measurements should closely match the true value, and they should also be consistent.

Quick Lab: Measuring Before and After

5. Do questions # 5-7 on your Quick Lab: Measuring Before and After handout. YOU DO NOT HAVE TO DO THE EXTENSION ACTIVITY. If you have to come back later in the day because your ice is not melted please select two people in your group to stop back and check. Please get a pass from me if you have to come back. We will also need to label your beaker with your name. Please see me for masking tape.

6. If finished clean up all your materials. Dump your water out. Dry off all beakers. Place all materials back in your containers the way you found them.

7. If you finish early you may work on other home work or play an approved game on your laptop.

Homework

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Finish Science, Technology, and Engineering Knowledge Builders - Day 5 (Quick Lab: Measuring Before and After). YOU DO NOT HAVE TO DO THE EXTENSION ACTIVITY.