Formative Assessment Worksheet  
Specification #5

Teacher ID:   
School ID:

|  |  |  |
| --- | --- | --- |
| **Target competency:**  special arrow.wmf Student can carry out a plan for scientific investigations of various types. | | |
| Anticipated student misconceptions relevant to this target competency: | | |
|  | **Learning Progression Leading to the Target Competency** (List Building Blocks in Reverse Chronological Order) | **Type of Knowledge** |
| 5. |  |  |
| 4. |  |  |
| 3. |  |  |
| 2. |  |  |
| 1. |  |  |

Copy/paste **Building Block 1** into this box:

In two to four sentences, describe what you will do with your students to help them achieve this building block.

→

State how you will assess this building block. In other words, what will you ask your students to do to establish whether they have achieved this building block? Identify the assessment format you will use.

→

Copy/paste **Building Block 2** into this box:

In two to four sentences, describe what you will do with your students to help them achieve this building block.

→

State how you will assess this building block. In other words, what will you ask your students to do to establish whether they have achieved this building block? Identify the assessment format you will use.

→

Copy/paste **Building Block 3** into this box:

In two to four sentences, describe what you will do with your students to help them achieve this building block.

→

State how you will assess this building block. In other words, what will you ask your students to do to establish whether they have achieved this building block? Identify the assessment format you will use.

→

Copy/paste **Building Block 4** into this box:

In two to four sentences, describe what you will do with your students to help them achieve this building block.

→

State how you will assess this building block. In other words, what will you ask your students to do to establish whether they have achieved this building block? Identify the assessment format you will use.

→

Copy/paste **Building Block 5** into this box:

In two to four sentences, describe what you will do with your students to help them achieve this building block.

→

State how you will assess this building block. In other words, what will you ask your students to do to establish whether they have achieved this building block? Identify the assessment format you will use.

→

**Target Competency:**

Student can carry out a plan for scientific investigations of various types.

In two to four sentences, describe what you will do with your students to help them achieve this target competency, assuming they have achieved the above building blocks.

→

NOTE: **Do not state how you will assess this target competency in this box.** The design of the assessment is established by the specification. Use the following pages of the worksheet to describe what you will do to assess this target competency. Refer to the guidelines in the “**Procedure for Creating Parallel Tasks**” section in Specification #5 when developing this formative assessment.

**Student Instructions**

Today, you will measure *[insert objects and property (i.e., mass, length, fluid volume) of those objects to be measured]*. The safety procedures for this activity are

* + Stay at your own laboratory station for the entire activity.
  + Do not do anything that might hurt you, another student, or the laboratory equipment.

**Materials**

* + *[Insert measurement device to be used.]*
  + *[Insert objects to be measured.]*
  + blank paper
  + pen or pencil

You will use a *[insert measurement device to be used]* to make your *[insert property to be measured]* measurements. Then, you will record your measurements in a data table. Follow the instructions below:

1. Create a data table on a blank sheet of paper. Your data table should include two columns, one labeled “*[insert appropriate label for the objects to be measured]*” and the other labeled “*[insert property to be measured (i.e., mass, length, fluid volume)]*.”
2. Place one of the *[insert objects to be measured]* on your *[insert measurement device to be used]*. Use the *[insert measurement device to be used]* to measure the *[insert property to be measured]* of the *[insert objects to be measured]*. Record the *[insert property to be measured]* in your data table in the units indicated on the scale to the proper precision. **Do not convert units.**
3. Repeat *Step 2* for each of the other two *[insert objects to be measured]*.

When you are finished, sit quietly until your teacher collects your materials.

**Student Answer Sheet Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Student Formative Assessment Checklist

This checklist can be used by students for self-assessment or by you to provide feedback. The checklist is based on the specification and reworded to suit seventh-grade reading level. Please feel free to reword for your students.

**Directions:** Use this checklist to evaluate your work. Read each section below and put a check in the box (🗹) next to each statement that accurately describes your work.

**Presentation of Data**

|  |  |
| --- | --- |
| I recorded the data in a table. | 🞎 |
| My table includes a label for *[insert objects to be measured]*. | 🞎 |
| I identified each of the three *[insert objects to be measured]* in my table. | 🞎 |
| My table includes a label for *[insert property to be measured]*. | 🞎 |
| I recorded three measurements, one for each *[insert objects to be measured]*, in my table. | 🞎 |
| I labeled the three measurements in my table with “*[insert appropriate label for unit of measurement (e.g., grams, liters)].*” | 🞎 |

**Precision of Measurements**

|  |  |
| --- | --- |
| I reported all three measurements to the same decimal place. | 🞎 |
| I reported all three measurements to the nearest *[insert 1/10th of smallest scale division]*. | 🞎 |

**Accuracy of Measurements**

|  |  |
| --- | --- |
| My measurement for each *[insert objects to be measured]* is within *[insert 4 times the value of smallest scale division]* of their actual values. | 🞎 |
| My measurement for each *[insert objects to be measured]* is within *[insert 2 times the value of smallest scale division]* of their actual values—I earn even more points if my measurement is highly accurate. | 🞎 |