Formative Assessment Worksheet  
Specification #1

Teacher ID:   
School ID:

|  |  |  |
| --- | --- | --- |
| **Target competency:**  special arrow.wmf Student can formulate a scientifically testable question(s) that relates to the context or data provided. | | |
| 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 formulate a scientifically testable question(s) that relates to the context or data provided.

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 #1 when developing this formative assessment.

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

In this exercise, you will **create a** **scientifically testable question** related to *[insert description of the domain to which the research question pertains]*. Use **two** of the following *[insert appropriate number of variables (6–8)]* variables when you create your scientifically testable question:

* *[Type 1st variable.]*
* *[Type 2nd variable.]*
* *[Type 3rd variable.]*
* *[Type 4th variable.]*
* *[Type 5th variable.]*
* *[Type 6th variable.]*
* *[Type 7th variable, if applicable.]*
* *[Type 8th variable, if applicable.]*

1. **Choose two variables from the list above** that you think might have a relationship with one another. Be careful about which two variables you choose. Only pick variables you (or another scientist) could actually **observe or measure scientifically**. Write those two variables in the space below.

1st variable:

2nd variable:

1. For each of the two variables you chose, tell why it is possible to study the variable. To do this, **explain how each variable could be observed or measured**.

Explain how your 1st variable could be observed or measured:

Explain how your 2nd variable could be observed or measured:

1. In the space below, **write a** **scientifically testable question** that relates your two variablesto each other.

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.

**1st Variable**

|  |  |
| --- | --- |
| I selected one of the following for the 1st variable. These are the **more** objectively measurable variables.   * *[Insert 1st* ***more*** *objectively measurable variable.]* * *[Insert 2nd* ***more*** *objectively measurable variable.]* * *[Insert 3rd* ***more*** *objectively measurable variable.]* * *[Insert 4th* ***more*** *objectively measurable variable, if applicable.]* | 🞎 |
| I explained how someone could measure this variable. | 🞎 |

OR

|  |  |
| --- | --- |
| Instead, I selected one of the following for the 1st variable. These are the **less** objectively measurable variables.   * *[Insert 1st less objectively measurable variable.]* * *[Insert 2nd less objectively measurable variable.]* * *[Insert 3rd less objectively measurable variable.]* * *[Insert 4th less objectively measurable variable, if applicable.]* | 🞎 |
| I gave a detailed, specific explanation of how this variable could be objectively measured. | 🞎 |

**2nd Variable**

|  |  |
| --- | --- |
| I selected one of the following for the 2nd variable. These are the **more** objectively measurable variables.   * *[Insert 1st* ***more*** *objectively measurable variable.]* * *[Insert 2nd* ***more*** *objectively measurable variable.]* * *[Insert 3rd* ***more*** *objectively measurable variable.]* * *[Insert 4th* ***more*** *objectively measurable variable, if applicable.]* | 🞎 |
| I explained how someone could measure this variable. | 🞎 |

OR

|  |  |
| --- | --- |
| Instead, I selected one of the following for the 2nd variable. These are the **less** objectively measurable variables.   * *[Insert 1st* ***less*** *objectively measurable variable.]* * *[Insert 2nd* ***less*** *objectively measurable variable.]* * *[Insert 3rd* ***less*** *objectively measurable variable.]* * *[Insert 4th* ***less*** *objectively measurable variable, if applicable.]* | 🞎 |
| I gave a detailed, specific explanation of how this variable could be objectively measured. | 🞎 |

**Question Characteristics**

|  |  |
| --- | --- |
| My scientifically testable question is worded as a question. | 🞎 |
| My scientifically testable question uses the two variables I selected from the list. It includes no other variables. | 🞎 |
| My scientifically testable question suggests that there could be a relationship between the two variables. | 🞎 |