Formulating a Scientifically Testable Question

Related to *[type context here]*

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 on the previous page** 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.

Scoring Plan

**1st Variable**

|  |  |
| --- | --- |
| Selected variable is one of 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.]* | 1 pt. |
| Selected variable is one of the **more** objectively measurable variables, ***and*** one could quantify or categorize the variable given the student’s explanation. | 2 pts. |

OR

|  |  |
| --- | --- |
| Selected variable is one of the **less** objectively measurable variables, but student describes a specific process to quantify observations of the variable that clearly is both objective and appropriate.   * *[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.]* | 3 pts. |

**2nd Variable**

|  |  |
| --- | --- |
| Selected variable is one of the **more** objectively measurable variables. | 1 pt. |
| Selected variable is one of the **more** objectively measurable variables, ***and*** one could quantify or categorize the variable given the student’s explanation. | 2 pts. |

OR

|  |  |
| --- | --- |
| Selected variable is one of the **less** objectively measurable variables, but student describes a specific process to quantify observations of the variable that clearly is both objective and appropriate. | 3 pts. |

**Question Characteristics**

|  |  |
| --- | --- |
| Statement is phrased as a question. | 1 pt. |
| Statement references the two variables that the student previously listed and no others. | 1 pt. |
| Statement implies a relationship (causal or correlational) between the two listed variables. | 1 pt. |