Drawing a Food Web for a *[type context here]* Ecosystem

Below is a picture of a *[insert type of ecosystem]* ecosystem. A biologist visited this ecosystem and made observations about many of its living organisms. The biologist wrote these observations in the form of field notes.

Read the field notes on the next page, and use the information to construct a food web diagram of the living things in the *[insert type of ecosystem]* ecosystem.

*[Insert photograph of ecosystem to provide context for students.]*

**Field Notes**

|  |  |  |
| --- | --- | --- |
| **Picture** | **Organism** | **Observations and Notes** |
| *[Insert picture of 1st organism.]* | *[Insert name of 1st organism.]* | 1. *[Insert various pieces of information about this organism; refer to the “Procedure for Creating Parallel Tasks” section of the Specification for Assessment #7 for more information.]* |
| *[Insert picture of 2nd organism.]* | *[Insert name of 2nd organism.]* | 1. *[Insert various pieces of information about this organism.]* |
| *[Insert picture of 3rd organism.]* | *[Insert name of 3rd organism.]* | 1. *[Insert various pieces of information about this organism.]* |
| *[Insert picture of 4th organism.]* | *[Insert name of 4th organism.]* | 1. *[Insert various pieces of information about this organism.]* |
| *[Insert picture of 5th organism.]* | *[Insert name of 5th organism.]* | 1. *[Insert various pieces of information about this organism.]* |
| *[Insert picture of 6th organism.]* | *[Insert name of 6th organism.]* | 1. *[Insert various pieces of information about this organism.]* |
| *[Insert picture of 7th organism.]* | *[Insert name of 7th organism.]* | 1. *[Insert various pieces of information about this organism.]* |
| *[OPTIONAL: Insert picture of 8th organism.]* | *[OPTIONAL: Insert name of 8th organism.]* | 1. *[OPTIONAL: Insert various pieces of information about this organism.]* |

Draw your food web diagram on this page. When drawing your food web, be sure to do each of the following:

* Base your food web **only** on the information included in the field notes.
* Only use the *[seven/eight]* plants and animals **pictured in the field notes** in your food web.
* Include the sun in your food web.
* For each statement in the field notes that describes a flow of energy, **draw an arrow** to represent the direction of the flow of energy in your food web. Then, **label the arrow** with the corresponding number from the field notes. **Arrows that are not labeled with a number from the field notes will not be scored.**
* Do not use the same number from the field notes more than once.

Scoring Plan

Note: Because the scoring plan depends heavily on which organisms are included in the field notes, you will have to add additional rows to the “Depiction of Energy Flow” section to capture all of the energy transfer relationships.

Note: Only score arrows in the student’s food web that are labeled with a number. Ignore arrows that are not numbered. The correct number justifying each arrow is presented in parentheses in the scoring plan.   
  
Only award points for an arrow when it is the **only** arrow between its respective nodes in the food web. For instance, award a point for an arrow labeled *[insert number of example field note]* between *[insert example organism]* and *[insert other example organism]* only if there are no other arrows connecting *[insert example organism]* and *[insert other example organism].*

**Depiction of Energy Flow**

|  |  |  |
| --- | --- | --- |
| Sun to producers | Arrow from the sun pointing to *[insert organism from field notes that receives energy from the sun]*. (*[Insert appropriate number from the field notes.]*) | 1 pt. |
| Producers to consumers | Arrow from *[insert a producer that gives energy to a consumer]* that points to *[insert organism from field notes that receives energy from that producer]*. (*[Insert appropriate number from the field notes.]*) | 1 pt. |
| Consumers to consumers | Arrow from *[insert a first consumer that gives energy to a second consumer]* that points to *[insert a second consumer from field notes that receives energy from the first consumer].* (*[Insert appropriate number from the field notes.]*) | 1 pt. |

**Lack of Errors**

|  |  |
| --- | --- |
| Food web contains four or fewer incorrect arrows.   * An arrow is incorrect if   + it does not depict a transfer of energy indicated by the field notes.   + it is not labeled with the correct number from the field notes.   + the arrow is drawn in the wrong direction (e.g., pointing from a consumer to a producer). | 1 pt. |
| Food web contains two or fewer incorrect arrows.   * A student is awarded this additional point for having fewer errors. | 1 pt. |
| Food web contains exactly 12 correct arrows and no incorrect arrows. | 2 pts. |