

Lesson overview

Subject:	Life Science
Grade:	6
Topic:	Biological Relationships
Concepts:	Symbiosis, Food webs and relationships
Essential questions:	<ul style="list-style-type: none">• What are producers, consumers and decomposers? (Provide examples)• What are the types of symbiotic relationships? (Provide examples)

Objectives

✓ Students will know:

- Identify the populations of producers, consumers, and decomposers and describe the roles they play in their communities.
- Differentiate between the types of symbiosis and explain examples of each.

✓ Students will understand:

Systems in nature have a careful balance that is maintained by many participants.

✓ Students will be able to do:

Create a written document to show the knowledge of producers, consumers or decomposers
Create a written document to show the knowledge of symbiotic relationships

Range or description of learner needs in your class related to this topic

There are two different parts of this assignment. Students will have to choose one option from two different RAFTS. Students will be able to choose based on personal interest for the first one. The second one they will be able to pick for personal interest and format.

There is a lot of scaffolding in this assignment and the teacher could remove these for students who have a higher understanding of the assignment.

Factors you'll need to consider in developing the RAFT assignment

(related to time, students, space, materials, etc.)

For the RAFT assignment, students will need to do research on the RAFTs they have chosen. Stations will be set up in order to describe the details about each scenario. Students will have 45 minutes to complete each RAFT. In that time they will have to go to the station and learn about the relationship. Next they will have to follow the format to create a written presentation of what they have learned. There will be 6 stations, probably set up at lab tables and there will be multiple copies of the information. It will be suggested for students to hand-write the assignment but computers would also be available for students to type their work.

Also, after students finish, they will jigsaw for each group of RAFT. They will jigsaw for the first piece and share their pieces. Then they will jigsaw again for the second and share their pieces again.

Pre-assessment plans:

I would give students a short multiple choice pre-assessment to see what students know about the topic already. It would ask questions about producers, consumers, decomposers and symbiotic relationships.

Assessment plans :

1. How work will be graded

This assignment would be graded using a rubric. It would not be considered a large or cumulative assignment but still important in understanding.

Students would need to show the relationship between the role and the audience. Students would also need to use key terms such as: producer, consumer, decomposer, mutualistic, parasitic, or commensalism. Students would also be graded for composition and creativity used.

2. Monitoring student work and progress:

First, I would be sure to have a guideline as well as the RAFT layouts. I would be sure to include templates for writing a letter or other compositional things that students may need. I would also be sure to explain each option thoroughly so students could have an easier time making the choice.

While students are working, I would monitor around the class. I would look for students who seem to be struggling to start and have mini meetings to help encourage ideas. I would also allow for students to come up with their own ideas if they are excited about another format or topic.

3. Checking work for accuracy, understanding, and quality:

In this case, students should have sufficient scaffolding for accuracy and quality. Also, through the monitoring, I should be able to tell if students are off target or not.

The understanding part may be harder to monitor. Students may not fully understand the cyclical ideas from food webs and I would want to be sure to monitor for that and to encourage correct ideas. Students may also confuse the symbiotic relationships and I would also monitor for understanding there.

RAFT assignments

Role	Audience	Format	Topic
Plant	Humans	Rant	All I do is give and give!
Fish	Algae	Friendly letter	Thanks for being you!
Fungus	Rotting log	Diagram	The Circle of Life

RAFT assignments

Role	Audience	Format	Topic
Flowers	Honey Bees	Persuasive letter	We go together! (Mutualism)
Desert bird	Cactus	Persuasive letter	You will be fine. I promise! (Commensalism)
Stomach or gut	Tape Worm	Persuasive letter	I think it's time to go! (Parasitism)

Analyzing your RAFT assignments

- 1. How are your RAFT assignments alike in intent and structure? How are they different in intent and structure?**

Each RAFT addresses a type of relationship. There are many different levels of relationships in biological systems and they are important to understand. The second RAFT gives only one option for format but three options for content. Students would be able to pick whichever RAFT interested them the most. While the first RAFT allows for students to pick by interest and by format. This was done to help for students who may dislike writing and want to use more visual formats.

- 2. What do you see as essential feature of or elements in making sure students are successful with RAFTs?**

Since RAFTs focus on writing, I would be sure to scaffold my students as much as possible. Some students get frustrated with the rules of writing and I would want to make sure that they did not give up on the assignment because of writing.

Also, the RAFT has a potential for students to get side-tracked with creative writing so I think it would be essential to keep students on track and focused on the true topic.

- 3. What is the link between preassessment and RAFTs?**

The Pre-assessment will help to determine how much background students will need for this topic. Students may be familiar with the concepts already and have an easier time with the RAFTs or they may be very new concepts. The pre-assessment could also help me to change the options around to make it more interesting for students.

- 4. Think of several ways the teachers might have given direction for competing RAFTs successfully when not all students would complete the same task.**

Teachers should just remind students that there are many ways to get to the same answer and that not one format is correct. If the teacher has been differentiating through the year then students will be more used to the idea of different assignments and it won't be a big surprise to them.