


Functional Closure Plan for Life Sciences 11


Students have the option to choose one or more activities from the list below:

Option 1: PhET website: Bunny Blitz (Natural Selection Simulation)

Open the simulation at <http://bit.ly/2Z6SU1N>. Select the “Lab” option.

Take a few minutes to explore the simulation. Learn what the different controls do. The  button can be used to reset the simulation to its original settings.

Mission 1

Change the conditions so that you end up with a population of entirely brown rabbits. You can choose the options from the following mutations and environmental factors icon.  You may need to vary when you add a mutation or environmental factor to accomplish the missions. The “proportions” option will show you the percentages of each trait in a population.



1. Once you have accomplished this mission, write directions explaining how to do it.
2. What advantage did rabbits with brown fur have over the white rabbits?

Mission 2

Change the conditions so that you end up with a population of entirely brown rabbits with long teeth.

3. Once you have accomplished this mission, write directions explaining how to do it.
4. What advantage did the rabbits with long teeth have over the rabbits with normal teeth?

Mission 3

Change the conditions so that you end up with a population of entirely floppy-eared rabbits.

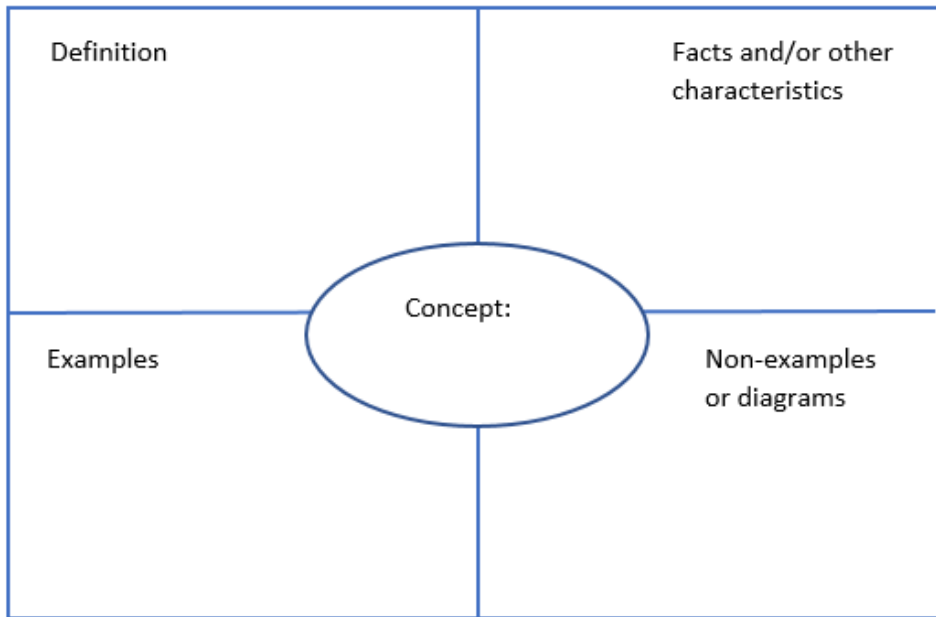
5. Once you have accomplished this mission, write directions explaining how to do it.
6. What advantage did the rabbits with floppy ears have over the rabbits with floppy ears?

Discussion Questions

7. What examples of variation were present in the simulation? What was the cause of this variation?
8. What examples of adaptation were present in the simulation?
9. What selective pressures were added to the simulation?
10. Which traits were selected against/for in this simulation?
11. Are all mutations beneficial? Provide evidence from the simulation to support your answer.

Option 2: Summarize learning from chapters already covered - Frayer model

Students can summarize concepts from any chapter covered this semester using a Frayer model diagram. This could be used for broad concepts or specific terms.



Option 3: Poster assignment - create poster of traditional First People’s uses of plants

Poster must include

- title
- 8-10 plants
- Name of each plant: scientific name, common name, traditional name (if known)
- Use of plant: food, medicine, ceremonial, materials (fibres, structural, etc.)
- Location found: habitat, region
- Picture of plant: sketch or photo (website credit); plant parts of interest labelled
- Optional information to include: traditional harvesting methods, part of plant used (berries, stem, leaves, roots, rhizomes, etc.), season harvested in
- Please provide websites of any online sources used
- Use this rubric to help guide you. The poster can be made in a Word document or by hand.

CATEGORY	4	3	2	1
Required Elements	The poster includes all required elements as well as additional information.	All required elements are included on the poster.	All but 1 of the required elements are included on the poster.	Several required elements were missing.
Labels	All items of importance on the poster are clearly labeled with labels that can be read from at least 3 feet away.	Almost all items of importance on the poster are clearly labeled with labels that can be read from at least 3 feet away.	Many items of importance on the poster are clearly labeled with labels that can be read from at least 3 feet away.	Labels are too small to view OR no important items were labeled.
Graphics - Relevance	All graphics are related to the topic and make it easier to understand. All borrowed graphics have a source citation.	All graphics are related to the topic and most make it easier to understand. Some borrowed graphics have a source citation.	All graphics relate to the topic. One or two borrowed graphics have a source citation.	Graphics do not relate to the topic OR several borrowed graphics do not have a source citation.
Attractiveness	The poster is exceptionally attractive in terms of design, layout, and neatness.	The poster is attractive in terms of design, layout, and neatness.	The poster is acceptably attractive though it may be a bit messy.	The poster is distractingly messy or very poorly designed. It is not attractive.
Grammar	There are no grammatical/mechanical mistakes on the poster.	There are 1-2 grammatical/mechanical mistakes on the poster.	There are 3-4 grammatical/mechanical mistakes on the poster.	There are more than 4 grammatical/mechanical mistakes on the poster

Option 4: Chapter 21 & 22

- Watch Crash Course video The Reproductive Lives of Non-vascular Plants: Alternation of Generations <https://www.youtube.com/watch?v=iWaX97p6y9U>
- Watch Crash Course video Vascular Plants = Winning! <https://www.youtube.com/watch?v=h9oDTMXM7M8>
- Textbook - read chapters 21 and 22 and answer the questions below
 - Section Review pg 451 #1,2; Section Review pg 454 #1,2; Section Review pg 459 #1-3; Section Review pg 470 #1-3; Section Review pg 475 #2,3; Section Review pg 481 #1-3