

L1-7 Wrap-up Activity. “What Did We Figure Out?”

Description and Rationale

Students need to wrap up the unit. They do this by reviewing their journey through the 7 lessons, revisiting the sequence of activities and ideas they experienced. In small groups, they discuss what they did and what they learned in each lesson. Individually, each student selects 2 “star” lessons. Students post their star stickies on a classroom Natural Selection Journey Line. In an all-class discussion, students present and build on their ideas and experiences.

Students wrap up the lesson by bringing what they learned back to their everyday lives. Where do they think natural selection is happening nowadays?

This discussion can lead to an **optional activity** where students create a poster that tells an **adaptation** story: what could happen to the okapi population over many generations following a dramatic change in the environment? They imagine what existing trait variant(s) might be beneficial given the population’s new circumstances and imagine how this will affect survival, reproduction, and which trait variants are more frequent in future generations.

Students view other’s posters, then discuss what they have learned.

Learning Targets in this Lesson

- Natural selection is an ongoing process – the same process not only explains changes from many, many years ago to nowadays but also changes that will occur from nowadays into the future.

Sequence of Experiences		
1. Introduction	 All class	 3 Minutes
2. Activity 1: “School Bus Activity”	 Small groups	 10-15 Minutes
3. Discussion and Wrap Up	 All class	 15 Minutes
4. Introduce Optional Activity 2	 All class	 3 Minutes
5. Optional Activity 2: Create a “What Happens Next?” Poster	 Small groups	 25 minutes
6. Poster Discussion	 All class	 10 Minutes

Materials

For the class

- Slide deck for this lesson

For each small group of students

- Stickies

For each student

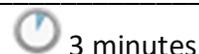
- Notebook pages 17-18

Preparation

- Print out the school bus poster pdf or prepare (on a whiteboard or a couple of attached sheets of chart paper) a natural selection journey line with the stops (lesson numbers) along the way. Students will post their stickies on this journey line.

The Lesson

1. Introduction



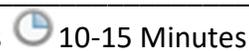
Explain that today's lesson wraps up the unit. The investigation question is,

- *What did we figure out?*

Project the image of the Natural Selection Journey Line.

Students have spent seven lessons on natural selection and have developed a model of natural selection using the 6 Key Steps. Explain that today they will review their journey through the 7 lessons, remembering what stood out for them and what they figured out in each lesson. At the end of the class, they'll share ideas about what they liked, what they did, and what they learned.

2. Activity 1: "School Bus Activity"



To each group, hand out

- 2 stickies per person and other materials to work with (e.g., pencils, markers)

Ask students to turn to page 17 in their notebooks

Review the instructions:

Step 1: With your group, take 5-10 minutes to quickly go over the journey together, (with notebooks open) to remember each lesson:

- What was the question?
- What did we do?
- What did we learn about change over time (natural selection)?

Hint: the ideas are listed on the Classroom Takeaways Chart.

Step 2. Each individual student picks 2 “star lessons.” A star lesson might be an especially engaging or memorable activity or one that helped them understand natural selection more clearly.

Students use a sticky for each star lesson: They draw a star on a sticky and add 3-4 words or a quick drawing to explain why it got a star.

Tell students they will have about 5 minutes for making and posting their stickies.

Step 3. Students post their star sticky notes below the appropriate lesson on the natural selection journey line chart that you have for the class.

Ask students to turn to page 18 in their notebooks and answer the question: *How much did you enjoy the Evolving Minds Unit?*

3. Discussion and Wrap Up



Finally, gather the class in a discussion circle.

The sticky notes on the journey line are a kind of graphic representation. Ask students what this graphic tells the class. If there is a pile of stickies on a particular lesson, ask someone to explain what they liked about, and learned from, the lesson and ask if someone else gave it a star for a different reason. Ask someone else to explain why they think a particular lesson did not get many (or any) stars. NOTE: Take about 5 minutes for this quick review.

Listen for the ideas on the classroom Takeaways Chart.

To wrap up the lesson, bring the discussion back to the students’ everyday lives. Ask:

- *Could the same process of natural selection be happening in the world today?*

Listen for examples from students’ everyday lives.

Listen for these ideas:

- Natural selection is happening now because now I see trait variation all around me

- The environment is always changing
- Because there are trait variants some will be more beneficial than others. Etc.

Here is a last idea that I will add to the “takeaways” chart:

Natural selection is happening today.

Next, **if you intend to have students do the following poster activity**, ask the following question:

- *Do you think that in the future there will be new species – groups of plants or animals that don’t even exist now? How might that happen?*

If possible, keep the Natural Selection School Bus Journey on display for a time to remind students of all that they learned in this unit and to motivate their continued thinking about the process of natural selection.

Optional Poster Activity. “What Happens Next?”

Materials

For the class

- Slide deck for this lesson

For each small group of students

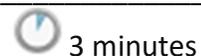
- Legal size or chart paper, pencils, markers, scissors, glue sticks, tape, etc. to create “**What Happens Next?**” posters
- 1 okapi poster handout.

Preparation

- Make sure you have copies of the “nowadays” okapis poster handout to distribute to each small group.
- Gather materials for the *What Happens Next?* posters.
- Review poster activity directions (on the slide).

The Lesson

4. Introduce Optional Activity 2



Explain that they wrapped up the unit in the previous lesson by reviewing what they had learned, but today their task is to use their learning to create posters that show their ideas

about how the “nowadays” animals might evolve in the future if there is a big change in their environment.

The investigation question is,

- [What might happen next?](#)

At the end, students view each other’s posters and consider the idea that the process of natural selection is never-ending.

5. Activity 2: Create a “What Happens Next?” Poster



Small groups



25 Minutes

Explain to the class that in this activity their task is to use their learning to create posters showing their ideas about how populations of animals “nowadays” might change if there is a change in their environment.

To each group of 2 or 3 students, hand out

- A large sheet of paper and other poster-making materials (e.g., pencils, markers, glue sticks, clear tape)
- 1 okapi handout.

Project the slide with the directions for creating the poster and review the steps:

Step 1. Use the okapi “nowadays” population. Imagine one of these things happens:

1. Dangerous predators arrive, for example, hungry lions.
OR
2. A plant disease kills off the fruit trees that the population eats. Melons start to grow on the ground instead. They are good to eat but they have hard shells.

Step 2. Together, students select one of the changes in the environment and circle it.

Step 3. With your group decide:

- Which “nowadays” trait variants might be beneficial in the changed environment

Step 4. Together students decide: What will the individuals in the population look like many generations from now?

Step 5: Each group creates a story or poster using drawings, words, arrows to tell their **adaptation story** step-by-step.

Encourage students to combine their imagination and their understanding of the 6 Key Steps of natural selection. Encourage them to be creative and have fun!

Tell them they will have about 25 minutes for this activity.

6. Poster Discussion



After 25 minutes, explain to students that they will tape their posters up around the classroom. They will have 10 minutes to look at other posters. Ask them to look at least 2 other posters.

After 10 minutes, gather the class in a group.

Ask the class:

- *You have created a poster and thought about a scenario where natural selection could happen in the future. Do you think that natural selection could really happen in the future in the real world?*

If possible, keep the posters on display for a time to remind students of all that they learned in this unit and to motivate their continued thinking about the process of natural selection.