Science Learning Packet
Grade 5, Week 3: Ecosystem Restoration

Suggested science learning activities for SPS students during the COVID-19 school closure.

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While Seattle Public Schools endeavors to only post documents optimized for accessibility, due to the nature and complexity of some documents, an accessible version of the document may not be available. In these limited circumstances, the District will provide equally effective alternate access.

Due to the COVID-19 closure, teachers were asked to provide packets of home activities. This is not intended to take the place of regular classroom instruction but will help supplement student learning and provide opportunities for student learning while they are absent from school. Assignments are not required or graded. Because of the unprecedented nature of this health crisis and the District's swift closure, some home activities may not be accessible.

If you have difficulty accessing the material or have any questions, please contact your student's teacher.

SEATTLE PUBLIC SCHOOLS

Elementary Science Learning Activity

Materials to accompany Lessons 5-6

Grade 5

AmplifyScience

Ecosystem Restoration:

Matter and Energy in a Rain Forest

Investigation Packet

Hello Families,

We have been thinking about you and hope you and your family are well and safe during this time. Being at home is different than HAVING to be at home and we wanted to offer you instructional opportunities. If we were at school, we'd be in a 5th grade classroom beginning a study on ecosystems but since we're all at home, you are welcome to join your student in these series of lessons. We all know learning is more fun and more meaningful when we share our ideas and learn from one another.

Amplify Science is the science program that was adopted by our district to use in our classrooms this year.

While Amplify Science lessons are designed to be done in the classroom with peers, there are some activities that students can complete at home with your support. To make it as easy as possible to do these activities at home, I am providing you with the following resources:

- **Lesson Packet.** This optional support will provide step-by-step instructions if you wish to guide your students through the activities. Students use the space provided to draw and/or write their ideas and can also include what other family members contribute. Students can also just use a pencil and paper to record their ideas.
- **Lesson Videos.** The Seattle Public Schools' Science Department created this packet to be used with or without the video. We created a series of videos you can access either on our SPS Webpage **https://tinyurl.com/SciLessons** or through Seattle's Public television programming on SPS TV (local channel 26), social media (Facebook and Instagram: @SeattlePublicSchools, Twitter: @SeaPubSchools), and our SPSTV YouTube channel. KOMONews.com will also host on-demand videos under the tab "Lesson Plan" and broadcast on channel KOMO 4.3. These supplemental learning videos feature short segments supporting a variety of grade levels. All videos will be close captioned on YouTube.
    - **Access to Home Language on YouTube:** YouTube provides closed captioning in many languages if this helpful to your family. Once on the site you will:
        - Click CC (bottom right of video)
        - Click Setting (the gear next to  CC)
        - Click Subtitles/CC
        - Click Auto-translate
        - Choose your language

Should you have the option to use the internet, these are the device requirements.

However, you can complete these lessons WITHOUT electronic devices!

- **Desktops and Laptops** (Windows 7+, Mac OS 10.11+) - *Suggested browsers: Chrome & Safari*
- **Chromebooks** - *Suggested browser: Chrome*
- **iPads that support iOS11.3+** (iPad5+) - *Suggested browser: Safari*

Sincerely,

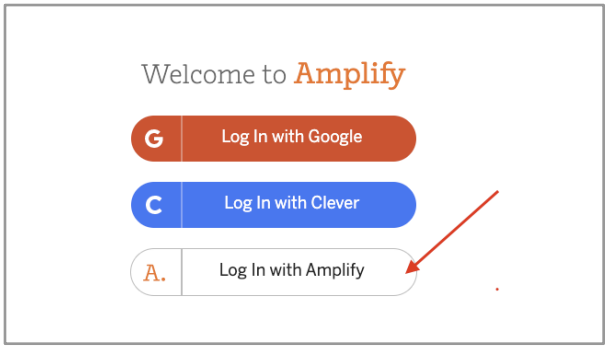
Ms. Benita and Seattle Public Schools Science Department

This packet has content materials for the next two lessons in Chapter 1 of Ecosystem Restoration

Chapter 1 Lesson	Pages cited in Video
1.5	**9-12**
1.6	**13-16**
English/Spanish Glossary	**In the first packet**

If you do have a computer and internet access, here is how to obtain access to the available Amplify online resources

- For the simulation, navigate to https://apps.learning.amplify.com/ecosystemrestoration/#/
- For the book, navigate to https://learning.amplify.com/books/9781943228515/#page=1
- Select "**Log In with Amplify**" button
- Enter teacher-provided **username** and **password** (see below)



Username: s.seattle1@tryamplify.net

Password: **SeattleSci2020**

We will use this **graphic organizer** to organize the new information we've gathered about how animals use food molecules to grow.

Synthesizing Ideas About How Animals Use Food Molecules

1. Read the question below and think about what you have been investigating and reading.
2. For each source, record important ideas you learned that are related to the question.
3. In the box below the arrow, record a new understanding you have, based on thinking about the ideas together.

Question: How do animals grow?

Source: *Matter Makes It All Up* Ideas:
Source: *Ecosystem Restoration* Simulation Ideas:

New understanding:

Putting it all together, these sentence starters may help in talking your ideas and knitting them together.

Scientific Language for Synthesizing

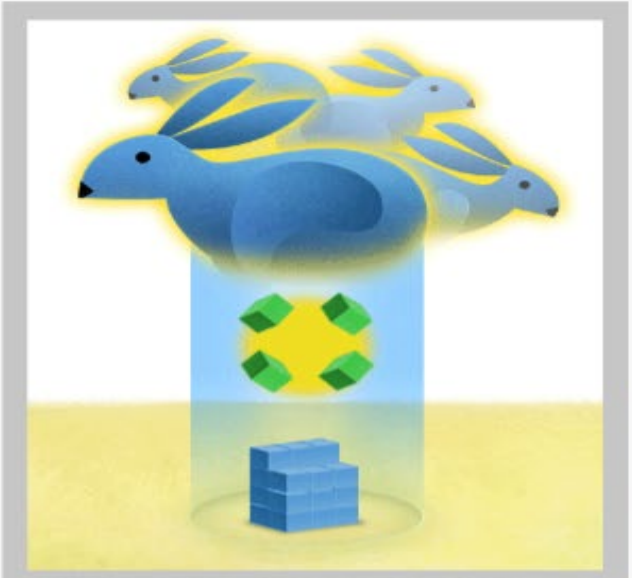
- I learned from_____that_____.
- I found out from_____that_____.
- That's why I think_____.
- After learning_____and reading_____, I now think_____.

Instead of using a simulation to show what happens to the food molecules in an animal's body, this page is provided for you to use the drop-down menus under each image to fill in the spaces. What is happening to the rabbits? You can use the options more than once and you do not have to use all of the options or fill in all of the spaces.

Choose One

Choose One

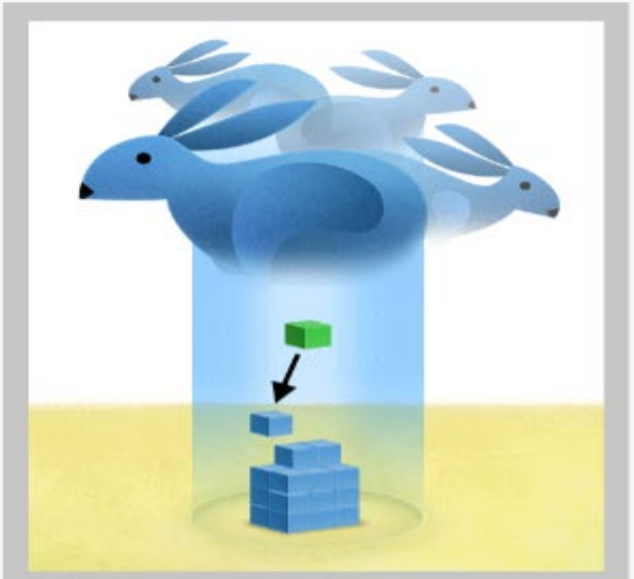
Choose One



Choose One

Choose One

Choose One



Choose One

Choose One

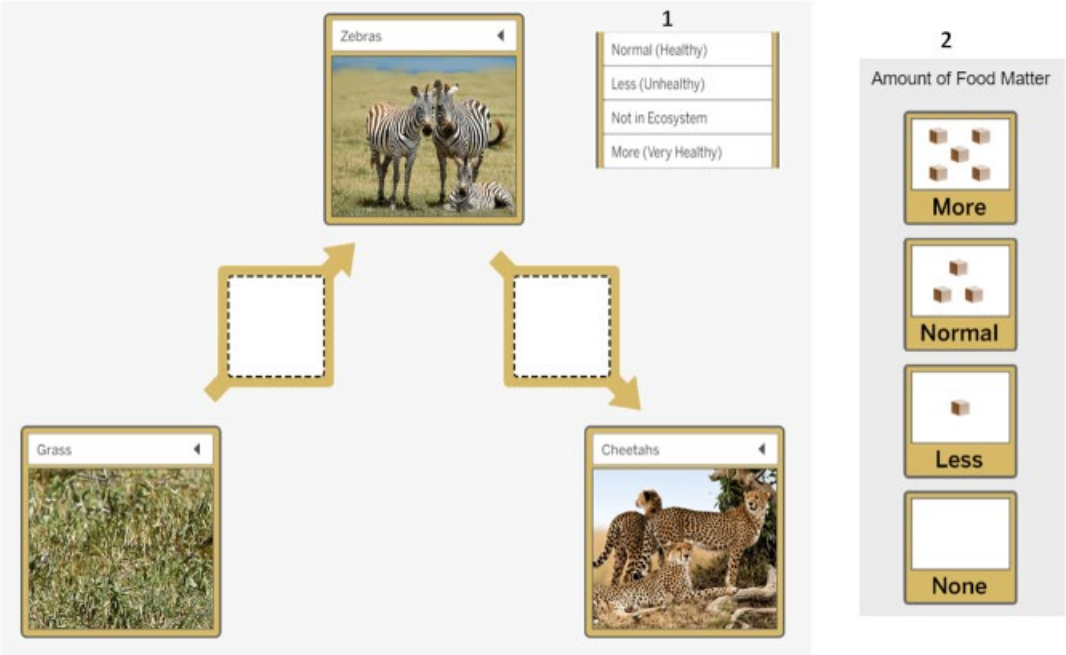
Choose One

What does a family member think of the descriptions? Do they agree with you, why or why not? What would they change or add?

Here's another opportunity to study the role of food in the ecosystem.

1. This is a menu of the different conditions you can choose for the zebras, cheetahs and the grass.
2. You can show what happens to the **amount of food matter** in the ecosystem according to the conditions in the ecosystem

Practice with different ecosystem conditions to determine what would happen to the amount of available food. Then create an environment showing what happens when the cheetahs are healthy. How does having healthy cheetahs in an ecosystem affect the amount of **food matter** available in the ecosystem? You will respond to the questions on the following page.



Healthy Ecosystem Table

Condition for which part of the ecosystem?	Amount of food matter for		
	Grass	Zebras	Cheetahs
Choose One	Choose One	Choose One	Choose One
Choose One	Choose One	Choose One	Choose One
Choose One	Choose One	Choose One	Choose One
Choose One	Choose One	Choose One	Choose One
Choose One	Choose One	Choose One	Choose One

Showing How Matter Moves Through an Ecosystem

Refer to your completed Healthy Ecosystem Table as you answer the questions below. The **goal** is to show matter in the ecosystem when the cheetahs are healthy.

Make a drawing if it helps you explain your thinking. Label your drawing, take a photo of it, and attach it below..

What happens to the grass molecules once they are eaten by the zebra?

What happens to the zebra molecules once they are eaten by the cheetah?

This is another synthesizing moment. As **ecologists** working for Natural Resources Rescue, let's think about how what we have learned applies to the **jaguars** and **sloths** in the rainforest project area.

Reflection: Growing and Thriving in the Rain Forest

1. Read the question below.
2. Write a paragraph that answers the question.
3. Make sure you explain how both the jaguars and the sloths grow and thrive.
4. Include what you know about **molecules** and **energy** in your explanation.

Question: How do the animals in the rain forest ecosystem grow and thrive?

You will read the rest of *Matter Makes It All Up*. As you read about what eats what in different ecosystems, think about where all the **food molecules** for that ecosystem come from. We welcome you to finish the book with a family member, it is OKAY if they are not available, you can read this on your own. If you do have a partner at home, then use this technique to answer the following questions. Space has been provided for you to record your thinking.

Shared Listening

Step 1

Partner A reads the question and shares for one minute while **Partner B listens.**

Step 2

Partner B restates what they heard Partner A say. **Partner A can correct misstatements,** if necessary, but not add any new information.

Step 3

Partners switch roles for the next question. (Partner B will share, and Partner A will listen and then restate Partner B's ideas.)

Page 17: Start with the **algae** and follow the arrows up to the **alligator.** What eats what in this ecosystem?

Start with the algae again, but this time, find a **different way** up to the alligator. What eats what in this ecosystem?

What are some of the **different ways** you got from the algae to the alligator in the food web?

Let's review: Where does the alligator get its **food molecules?**

Thank you for joining me in these lessons. I hope you and your family are well and I look forward to working with you in the next set of lessons.