THE SCHOOL DISTRICT OF PHILADELPHIA

High School Biology , March 30-April 17, 2020

Resource Used: HMH Science Dimensions: Biology **Pages:** 140-179

Topic:
Matter and Energy in Living Systems

What Your Student is Learning:
In Topic 3.3, students use evidence to explain how energy and matter flow through an ecosystem. Students also use various models such as food chains, food webs, and pyramids to represent the flow of energy and matter. They also learn that in an ecosystem, energy is conserved.

In Topic 3.4, students use models to illustrate the flow of matter through biogeochemical cycles and to represent that chemical elements are recombined to form different products. They also construct explanations of how energy drives the cycling of matter within and between systems.

Background and Context:

Students should read the text, discuss the ideas with you or a classmate by phone, text, or email, and answer the questions in a notebook. Click here to access the Matter and Energy in Living Systems Learning Packet.

In High School, students should engage in science each day for 45 minutes or every other day for 90 minutes. Below is a suggestion for how you might want to break up the work, but if you haven't started yet, just start with the first week and go forward from there!

- Week of March 16th: Ecosystems: Stability and Change packet, Section 4.1
- Week of March 23rd: Ecosystems: Stability and Change packet, Section 4.2
- **Week of March 30th: Matter and Energy in Living Systems packet, Section 3.3**
- **Week of April 13: Matter and Energy in Living Systems packet, Section 3.4**

Ways to Support Your Student:

Encourage your students to talk or write about their ideas before, during, and after completing the activities. Tell them not to worry about being wrong or not knowing; science is about revising ideas over time based on new information. Students might call or video chat their classmates to discuss these ideas together as well. They should encourage each other to use evidence from the text to support their ideas.

Additional Resource for Parents:

Answer keys are available for:
Unit 3 Lesson 3 Self-Check, pages 155-157

Unit 3, Lesson 4 Self-Check, pages 169-171

Click here to access the answer keys

Tips for Busy Parents who want to support their childrens' science learning

Online Resources for Students: These web resources provide other ways to engage with content, with short engaging videos, simulations, articles, and questions.

Section 3.3
Energy Flow in Ecosystems (video from award-winning teacher Paul Anderson)
Flow of Energy (CK-12)
Food Chain (CK-12)
Trophic Level (CK-12)

Section 3.4
Biogeochemical Cycling (video from award-winning teacher Paul Anderson)
Water Cycle (CK-12)
Carbon Cycle (CK-12)
Nitrogen Cycle (CK-12)