

Grade 4	Lesson: 1-8 The Web of Life	Reference to English
Standard(s): 1.OA.1	Domain:	
Content Objective(s):	Language Objective(s):	
Describe some of the interactions between animals and plants of a given environment.		
Essential Understanding:	Academic Vocabulary for Word Wall: Listen: 食草动物, 食肉动物和杂食动物。生命网。生态系统 Read: Write: Speak: 食草动物, 食肉动物和杂食动物	
Materials: <input type="checkbox"/> "My Environments Book" <input type="checkbox"/> Plant and Animal Name Tags <input type="checkbox"/> String or Yarn	Additional Lesson Vocabulary: Sentence Frames:	
Lesson: The Web of Life	Instructional Time:	

Opening: (10 minutes)

T: Let's plan a dinner party for the Utah plants and animals we have been studying. 我们为学过的犹他植物和动物计划一个宴会。

T: Let's plan the menu. I wonder what they like to eat. I need to make a shopping list. 我们做一个菜单。我想知道它们喜欢吃什么。我要做一个购物单。

T: We've invited plants, herbivores, carnivores, and omnivores. What do they eat? What should I put on my shopping list? 我们邀请植物，食草动物，食肉动物和杂食动物。它们吃什么？我要在购物单上写什么？

- ☐ Plants – make their own food using sunlight, need water and nutrients 植物-用阳光、水和营养，自己做食物。
- ☐ Herbivores – animals who eat plants (vegetation) 食草动物-吃植物的动物（植被）
- ☐ Carnivores – animals who eat meat (other animals) 食肉动物-吃肉的动物（其他的动物）
- ☐ Omnivores – animals who eat plants and meat 杂食动物-吃植物和肉的动物
- ☐ Record these definitions in their “My Environments Book.” 把这些特点记录在《我的环境书》里。

Introduction to New Material (Direct Instruction): (7 minutes)

The Web of Life: 生命之网

T: Everything in an environment depends on other things in that environment in order to live. We are all connected. Let's learn how...任何生命都要依赖其环境中的其他物种生存。我们都有联系。让我们来学习是怎样...

- ☐ Gather students into a circle. 把学生围成一个圈。
- ☐ Pass out the Plant and Animal Name Tags. Have students identify what plant or animal they are, use the code to determine their eating habits, and read the information on the card to understand how they need the other items in their environment to live. 分发动物和植物的名签。让学生识别是什么动物或是植物。用编码决定它们的饮食习惯，读卡上的信息，明白它们为什么需要其他的项目才能在各自的环境中生存。

Guided Practice: (10 minutes)

- ☐ Explain that all things depend on sunlight, air, and water to live. All students/organisms are connected to these elements. Place these nametags in the center of the circle. 解释所有的生物都需要阳光，空气和水。所有的学生/生物体都和这些元素联系。把这些名签放到这个圈的中心。
- ☐ The activity can begin with any student. Give one end of the ball of string to a student. Ask them to look around the circle and find another student that either depends on or can be connected to them. Help them tell what the connection is, then they will toss the ball to that student or the teacher can pass it to them. 这个活动可以从任何一个学生开始。给一个学生线球的一端，叫他们在这个圈里找到依赖或是和他有联系的另一个学生。帮助他们说出是什么联系，然后让他们把球丢给那个学生或是老师可以传给他们。
- ☐ This student holds on to a point on the string and continues the connection or influence by identifying another student. 这个学生握住线的一点然后继续找到下一个有联系或是影响的学生。
- ☐ Continue passing the ball of string around until all the students are connected at least once. You will have built a connective web between all the students. 继续传递线球直到所有的学生都至少相连了一次。你会在学生间建立一个联系网。
- ☐ (Note: You may want to refer to the Food Web for the Oakbrush Environment as an example. 注：你可以用橡树丛环境的食物网做例子)
- ☐ Step into the center of the web. Pick a single string and pluck it. Who felt the vibrations of the string? (all do) 站在网中间，选一个单独的线拉拽着。谁会感到牵动？（所有）

T: What if one thing was taken out of the habitat? For example, all the mosquitoes die from pesticides or a dead tree is removed. Ask students to pick one organism in the system that seems less important than the others, and have him drop his string. 当去掉栖息地的其中之一种会怎样？例如，所有的蚊子都死于杀虫剂或是一棵死树被去除。让学生选一个在生态系统中看似不太重要的，然后让他放下他的绳子。

- ☐ Ask if anyone else was connected to that organism, and have them drop their string. After one or more have dropped out, ask the students again to identify an organism that seems less important and repeat the procedure. If anyone was connected to any of those students, they drop their string. 问其他的人是否还和那个生物有联系，让他们发放下自己的线。在一个或多个学生放下他们的线后，再次问学生这个问题，重复刚才的活动。
- ☐ Continue until everyone has either dropped their string or they were not connected in a way that they were affected. 继续直到所有人放下了线或是他们不会和影响的生物有联系。

Independent Practice: (6 minutes)

Discuss the following: 讨论

T: What happens when we remove a link in the ecosystem? (Organisms that depend on it are affected.) 如果我们移除生态中的一条链接会怎么样？（依赖它的生物体会受影响）

T: Were the changes more significant when the system was composed of many parts or when it had fewer parts? (fewer, because they happen quickly) 哪种会是重大的改变，是系统有更多组成部分还是更少的？（更少的，因为...）

□ Discuss the web of life. What happens when one part of the web is lost? (Many others are lost or affected.)
T: What are other ways the web of life could be disturbed? (Human impact, draining wetlands, clearing trees, disease, drought, etc.)

讨论生命网。当一部分消失后会怎么样？（很多其他的会消失或是受到影响）

Closing: (4 minutes)

Have the students record the experience and what was learned in their “My Environments Book.”让学生在《我的环境书》里记录他们的经历和所学的东西。

Assessment:

REVIEW – NOT FOR PUBLICATION
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