



Life Science: Teacher Tips & Helpful Hints

N.C.S.S: LS.8.1 Understand the hazards caused by agents of diseases that affect living organisms.
LS.8.2 Understand how organisms interact with and respond to the biotic and abiotic factors in their environment.

- The activity is broken up into three different parts:
 - **Part 1: Virus** (LS.8.1.1)
 - **Part 2: Ecosystems** (LS.8.2.1)
 - **Part 3: Food Chains and Food Webs** (LS.8.2.2, LS.8.2.4)

Part 1: Virus

- Students will get their hands messy during this activity.
- The butter needs to be soft to allow students to manipulate it.
- It is ok if the tape doesn't cover the aluminum ball completely.
- Warm water works better for the activity, but colder water will still work.
- Seeds can be stored on the plate if students are not doing all parts of the activity in one day.
- There is a *Virus: Student Activity Sheet* available.

Part 2: Ecosystems

- The soil initially takes about 10 minutes to absorb the 30mL of water.
- The plants will take about 2-5 days to start to sprout.
- For part 1 & part 3, students should sketch and take measurements of their plant for at least 14 days
- There is a *Ecosystems: Student Activity Sheet* available.
- There is a real science literacy connection available: *PFAS in Ecosystems*

Part 3: Food Chains and Food Webs

- Students may take a photo of their food chains and/or food webs and submit them digitally.
- There is a *Food Chains and Food Webs: Student Activity Sheet* available.
- There is a real science literacy connection available: *PFAS in Food Chains and Food Webs*

N.C.S.S Clarifying Objectives

- LS.8.1.1 Construct an explanation to compare the basic characteristics of viruses, bacteria, fungi and parasites relating to the spread, treatment and prevention of disease.
- LS.8.2.1 Carry out investigations to explain how changing biotic and abiotic factors such as food, water, shelter, and space affect populations in an ecosystem.
- LS.8.2.2 Construct an explanation to summarize the relationships among producers, consumers, and decomposers including the positive and negative consequences of such interactions including: coexistence and cooperation, competition (predator/prey), parasitism, and mutualism.
- LS.8.2.4 Use models to explain how the flow of energy within food webs is interconnected with the cycling of matter (water and carbon).