Food Chains, Food Webs, and Ecosystems

Objective: Students will understand and be able to demonstrate that food webs are made up of various food chains.

Day 1

Students will first write down their favorite food. The whole class will then share their favorites and any students with the same foods will form small groups. The groups will discuss the food and how it became “food;” ie all the steps that came together. For example, if a student chose pizza, they then had to discuss how the dough, sauce, toppings, cheese, etc. were created from the literal ground and up (soil, seed, water, sun, pollination, cultivation to make dough).

Day 2

We will discuss how our rats Cookie, Loki, and Finnegan fit into the food chain. The rats are a great tool because they are both predator and prey. I will ask the students about the rats’ favorite foods and we will discuss how those foods are cultivate (a recap of yesterday). We will then also discuss how in the wild their diets are more varied. When rats live outside and have to find food on their own, they often try to live off what humans throw away, but if a rat doesn’t live near humans, what then do they eat?

For homework, students will research what rats eat in the wild.

Day 3

We will compile a chart on what wild rats eat based on student research. Hopefully they have found a variety of examples that include fruits, vegetables, grains, and proteins. If not, introduce that rats are also predators and will eat small bugs as well as carrion. As a rare treat, we will give the rats a snack of mealworms to show that their diet is varied and they fit into multiple food chains. Then we will revisit the chart and begin to construct a food web to see the overlaps.

Day 4

Although this may be uncomfortable for some, we will discuss how the rats are also a food source for many animals. Their importance in the food web cannot be overlooked and students need to understand that all beings are part of the overall food web. We will discuss what predators consume rats and begin to make a chart.

Day 5

The unit will end with students using the anchor charts we made as a class to create a food web. They must include all the steps of each food chain within their web and they must place a rat somewhere in their web.