

## Compost-Ecosystem Unit

### Established Goals:

*Vermont State Standards for 5th grade unit, Thetford Elementary School*

Organisms, Evolution, and Interdependence

7.13

Students understand the characteristics of organisms, see patterns of similarity and differences among living organisms, understand the role of evolution, and recognize the interdependence of all systems that support life.

*Vermont State 5th Grade Science Expectations*

S5-6:34

Students demonstrate their understanding of Energy Flow in an Ecosystem

S5-6:35

Students demonstrate their understanding of Food Webs in an Ecosystem

S5-6:36

Students demonstrate their understanding of Equilibrium in an Ecosystem

S5-6:37

Students demonstrate their understanding of Recycling in an Ecosystem

S5-6:39

Students demonstrate their understanding of Evolution/Natural Selection

### What understandings are desired?

Students understand that energy flows in an ecosystem.

Students understand that organisms eat and are eaten in a food web in an ecosystem.

Students understand that an ecosystem exists in equilibrium and changes to any part of the ecosystem affect the rest.

Students understand that resources are recycled within an ecosystem.

Students understand that changes to an ecosystem result in natural selection and the success or failure of organisms to thrive.

### What essential questions will be considered?

How does energy flow through an ecosystem?

How is energy recycled back into an ecosystem?

How do changing conditions affect organisms in an ecosystem?

### What key knowledge will students acquire as a result of this unit?

*Students will know...*

- ▲ that energy flows from the sun through plants into consumers which sustains life.
- ▲ that organisms are related in food webs where they eat and are eaten.
- ▲ that organisms affect the environment and the environment affects which organisms survive.
- ▲ that the energy in decomposed material supports the growth of microorganisms and organisms.
- ▲ how a compost heap works and what is needed for it to work.

*Students will be able to...*

- ▲ share their knowledge with an audience through a poster, keynote, or oral presentation.
- ▲ determine what recipe to use to feed a compost heap and explain why.

**What evidence will show that students understand?**

- ▲ Keynote or poster or oral presentation about the compost ecosystem – group project
- ▲ End-of-unit test – individual

**Other Evidence:**

- ▲ Daily conversations
- ▲ Exit tickets
- ▲ Work samples