Lesson two: How does healthy soil relate to food?

“Rocks to Ice Cream” and “Keeping Soil Alive” from GROWING IN THE GARDEN, Iowa State University Extension and Outreach.

Where does most food come from? Students are engaged in a timeline that starts with rocks that break down into soil and ends with ice cream. Then they can make ice cream in zip lock bags. The students discover how to keep soil healthy so it can grow food by building vermi-compost columns. Collect clear plastic liter pop bottles and look for red wiggler worms in teacher supply catalogues or from bait shops. The Master Gardeners at your local extension office may help you to find them.

Content objectives: Discover and describe how most of our food starts with soil and how soil can remain healthy; Explain why the decomposition cycle and healthy soil are important for plants, animals and people.

Life skill objectives: Critical thinking, Learning to learn, Responsibility, Citizenship, Healthy living

Core and STEM concepts and skills:

Science Life science, Earth and space, Physical, Science in personal and social perspectives

Math Number and operations, Algebra, Geometry, Measurement, Data analysis and probability, Problem solving, Connections, Communication, Representation

Language Arts Sequencing, Main idea, Reading, Factual understanding, Inferring, Interpreting, Main idea, Character development, Summarizing, Vocabulary, Asking questions, Listening

Social studies People, places and environments; Production, distribution and consumption

Healthy snack: Ice cream in a bag

Additional and Supporting Resources: Singing in Our Garden (CD), “Dirt Made My Lunch” and “ Decomposition” by the Banana Slug String Band from bananaslugstringband.com
BEFORE THE LESSON

1. Grade 2, Lesson 2:
This document contains all the curriculum items and resources you need for this lesson. All lesson downloads are located on the www.peoplesgarden.wsu.edu Educational Toolkit.


3. Check materials list for complete description of items needed. This lesson includes an optional activity of making a Worm Observation Farm.

4. Assemble necessary ingredients and materials for either "Yummy Ice Cream" made in a plastic bag. Consider topping it with seasonal fresh fruit.

THE LESSON
1. Rocks to Ice Cream and Keeping Soil Alive are meant to be taught over two or more days. There are optional activities to extend the lesson as time allows.

AFTER THE LESSON
Optional activities are included in the lesson plan for making and observing a worm farm.
Also optional is reading and discussing Diary of a Worm by Doreen Cronin in the ‘What is Helping the Soil to be Healthy?’ section. You can find this book at the library or purchase it online. If you cannot find the book, this section offers discussion questions.
LESSON PLANS FOR 2011-12 SCHOOL YEAR    Grade 2

RECIPE

YUMMY ICE CREAM

This recipe is made in one quart-sized zip-closure freezer bag and serves five to eight people using 5 ounce paper cups.

ICE CREAM INGREDIENTS
2 cups of milk (This can be flavored milk purchased in individual bottles. One percent and skim milk do not freeze as quickly)
Equivalent of 2 eggs of pasteurized egg product (such as Egg Beaters® or Better N Eggs®)
1/3 cup sugar (less or none for flavored, pre-sweetened milk)
1/2 teaspoon vanilla

ICE CREAM SUPPLIES
1 quart-sized zip-closure freezer bag (Do not double bag or ice cream won't freeze.)
5-ounce paper cups, one per person
Plastic spoons, one per person
Dry and liquid measuring cups
Measuring spoon
Scissors

ICE CREAM FREEZER SUPPLIES
2 one gallon-sized zip-closure freezer bags
Approx. 2 1/2 pounds crushed ice (7 lb. bag works for three of these recipes)
Approx. 1 pound or 4 handfuls of rock salt (Four lb. box works for four to five of these recipes. Do not use table salt)
Bath towel, kitchen towel, or mittens to hold on to the cold freezer bag
Paper towels for clean-up

INSTRUCTIONS

After the students wash their hands, have one student securely hold open the quart-sized bag while other students take turns adding the ice cream ingredients. After all the ingredients are added, have two students carefully get the air out of the bag and seal the bag shut. Holding the bag at the top and keeping it upright, gently squeeze the bottom of the bag to mix the ingredients.

Have a different student hold open one of the gallon-sized zip-closure freezer bags while another student adds a couple handfuls or heaping cups full of ice and two handfuls or a little less than a cup of rock salt. Put the bag of ice cream ingredients into the freezer bag. Add another couple of handfuls or heaping cups of ice and two handfuls or a little less than a cup of rock salt. Close the ice cream freezer bag securely. Put the freezer bag into another gallon-sized zip-closure bag and close it. This is the ice cream freezer. Wrap it in a towel so that it is not so cold to handle.

Have the students take turns hand-churning the ice cream by turning the bag over and over in their hands or on a tabletop. The ice cream should harden within 10 minutes. You may want to check it occasionally. After it hardens to the consistency of firm, soft-serve ice cream, pull the bag out of the ice cream freezer, wipe it off, clip off one of the lower corners of the bag, and squeeze the ice cream into the paper cups. (Note that the ice cream ingredients were not touched by anyone’s hands.)

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### CONTENT OBJECTIVES
Discover and describe how much of our food starts with soil
Identify and describe how soil can remain healthy because of decomposition

### LIFE SKILL OBJECTIVES
Critical thinking, Learning to learn, Communication, Citizenship, Leadership

### INDICATORS
Verbally trace how ice cream ingredients start with the soil
Construct, maintain, record observations and explain the purpose of the decomposition cycle

### EVALUATIONS

### SUBJECT STANDARDS
**Science:** Life (organisms and environments, life cycles and characteristics of organisms), Earth (changes in the earth and sky, properties of earth materials), Physical (properties of objects of materials), Science in personal and social perspectives (types of resources)

**Math:** Number and operations, Algebra, Geometry, Measurement, Data analysis and probability, Connections, Communication, Representation

**Language Arts:** Reading, Factual understanding, Sequencing, Inferring, Interpreting, Main idea, Character development, Summarizing, Vocabulary, Asking questions, Speaking, Listening

**Social Studies:** People, places and environments; Production, distribution and consumption

**Art and Music**

### LEARNER TYPES
Linguistic-words, Logical-mathematical, Spatial-visual, Bodily-kinesthetic, Intrapersonal, Interpersonal, Music, Natural

### MATERIALS

#### Day One:
- 3- to 4-inch diameter rock
- Empty ice cream container
- 19 white sheets of paper or heavy card stock (*see the Do section*)
- Colored markers
- Magazines or other sources of pictures (*see the Do section*)
- Yummy Ice Cream recipe (*copy one per student, found at the end of this lesson*)
- Ingredients and Supplies for Yummy Ice Cream (*see recipe found at the end of this lesson*)

*MATERIALS continued on next page*
What is the connection between rocks and ice cream?

Have the students make guesses such as rocky road ice cream, using rock salt to make ice cream, etc.

Of course, rocks are not one of the ingredients that go into ice cream, but they are an important part of how we get that great treat. Let’s find out how ice cream begins with rocks.

TEACHER’S NOTES: The students will be holding up signs or small posters to show the rocks to ice cream sequence found in this section. You may choose to make the signs yourself or have the students make the signs. Use blank sheets of paper or heavy card stock and markers to write the bolded words found in the numbered sequence in this section. Then draw or find a picture in a magazine or on the Internet to illustrate the word. If there are less than 19 students, you may make the extra signs or assign two signs to some of the students that may have easier words to illustrate, such as “water,” “eggs”, or “sugar”. If you have more than 19 students, more than one student could illustrate certain words, such as “water,” “weather,” “plants,” and “decomposition,” because it took many years for rocks to break down into soil.
ROCKS TO ICE CREAM SEQUENCE

I am going to read the sequence about how ice cream comes from rocks. When you hear me emphasize your word, please hold up your sign so that everyone can see it. Continue to hold up your sign throughout the reading of the sequence. Every step is needed to make ice cream.

1. The soil we have today started many thousands of years ago as ROCKS. Over the years, the rocks were broken down into smaller pieces by several forces of nature.

2. It rained and WATER flowed over the rocks, breaking them apart.

3. Changes in the WEATHER, such as freezing and thawing temperatures, further broke the rocks down into smaller pieces.

4. PLANTS started growing in and around the rocks.

5. Through the process of DECOMPOSITION, or the breakdown of plants and animals over thousands of years, the good rich soil was developed.

6. Eventually, a FARMER owned the land and started his or her farm on it.

7. The farmer planted a PASTURE.

8. The farmer owned a herd of dairy COWS that ate the plants in the pasture.

9. Every day, the farmer got MILK from the cows.

10. The milk was collected in a large tank truck and a TRUCK DRIVER took it to the dairy.

11. The milk was unloaded in the dairy where DAIRY WORKERS mixed the milk with other ingredients.

12. One of the ingredients was EGGS from chickens that ate grain growing from the soil.

13. Another ingredient was SUGAR from sugar beets or sugar cane grown in the soil. Other tasty ingredients may have been added.

14. They mixed and churned the ingredients and voilá, they had tasty ICE CREAM that they put in containers and into the freezer.

15. When an order came in, a TRUCK DRIVER took the ice cream from the dairy to a grocery distribution center warehouse.

16. The WAREHOUSE WORKERS put the ice cream in a large freezer.

17. A grocer ordered several ice cream products from the distribution center so a TRUCK DRIVER delivered them to the grocery store.

18. The GROCER put the ice cream in the freezer cases at the grocery store.

19. Finally you, the CUSTOMER, buys and enjoys the tasty ice cream!

(The student with the empty ice cream container holds it up to show the class.)
**TEACHER'S NOTES:** Prepare to make the “Yummy Ice Cream” recipe found at the end of this lesson. Make copies for the students to follow and to take home. Please read the entire recipe and instructions and prepare ingredients and supplies according to the number of students in your classroom.

How many steps did it take to get ice cream from rocks to you?

19

Have each student read off what is on his/her paper as the rest of the class counts.

How many years do you think it took?

Millions

What would happen if we didn’t have enough soil to grow plants?

We wouldn’t have good things such as ice cream to eat.

You may want to hang the signs or posters on the wall in order forming a timeline. Have the students take another look at the sequence and discuss the approximate number of years, months or days that each step took place.

Distribute copies of the “Yummy Ice Cream” recipe found at the end of this lesson. Have the students look at the recipe for the following discussion. The students will enjoy taking this recipe home and making it with their family and friends.

What is the name of this recipe?

Yummy Ice Cream

Raise your hand if you have made or eaten homemade ice cream.

What two containers did you need to make homemade ice cream?

You probably had one container for the ice cream ingredients and a bigger container for the ice cream freezer.

What are we going to use for the ice cream and freezer containers in this Yummy Ice Cream recipe?

We will be using quart-sized bags for the ice cream ingredients and gallon-sized bags for the freezer. *(Hold up the bags.)*

The words “quart” and “gallon” in this recipe and for the bags are units of measure for something that is liquid.

According to the recipe, how many cups of milk will go into the quart-sized bag?

Two cups

How many cups would fill a quart-sized bag to the top?

A 1-quart bag will hold about 4 cups of liquid, but it would be hard to handle because it would be too full.

How many cups would fill a gallon-sized bag?

A 1-gallon bag will hold about 16 cups, or 4 quarts, of liquid ingredients.

According to the recipe, what are we putting in the gallon-size bag and how much?

The gallon-sized bag will be our churn. It will hold approximately 2½ pounds of crushed ice and 1 pound or several handfuls of rock salt.

The ice cream bag with more than 2 cups of liquid ingredients will be put inside the gallon sized bag. It will be surrounded with lots of ice and rock salt.

Why do we need rock salt to freeze or make ice cream hard?

The rock salt makes the ice water colder so the ice cream freezes faster. Table salt, the salt that you eat won’t work.
If you are going to double the recipe, you may want to use the next two sets of questions.

**How many people does this recipe serve?**
It will serve five to eight people in 5-ounce (bathroom-sized) cups.

**Will that be enough ice cream for our class?**
(Discuss how many recipes it will take to make enough ice cream for the class.)

**What are the ingredients in the ice cream and how do each of them come from the soil?**
- Milk is produced by cows; cows eat pasture plants and grain; grain grows in the soil.
- Eggs are produced by chickens; chickens eat grain; grain grows in the soil.
- Sugar is manufactured from sugar beets or sugar cane; both grow in the soil.
- Vanilla is extracted from pods that grow on the vanilla plant; the vanilla plant grows on trees in tropical areas; the trees grow in the soil.

Have the students wash their hands and gather in small groups of five to eight where they are going to make the ice cream. While they wash their hands, gather your ingredients and supplies from the cooler or refrigerator. Don’t forget to wash your own hands! Help them make the ice cream and the freezers according to the Yummy Ice Cream recipe. Have the students note what time they started freezing their ice cream mixture. While they are churning or turning the bags, you may want to proceed with the following math activity.

**MAKING PREDICTIONS**
As the students begin to turn their ice cream freezers, have them predict how many minutes it will take for the ice cream to harden. Record their predictions on the board by writing the amount of time and draw ice cream cones instead of chicken scratches to represent the number of students that made the same prediction. You may want to turn the prediction data into a line or bar graph. Talk about variables or things that they did or could do to make the process go faster or slower. Too little rock salt or using table salt instead of rock salt will slow down the freezing process. The rock salt helps take the heat out of the ice cream mixture more rapidly so the ice cream can freeze. Using not enough ice can slow down the process. Using milk with some fat content freezes smoother and faster than using skim milk. Keeping the bag moving will freeze it faster. If you double bag the ice cream mixture, it won’t freeze because the extra bag helps insulate the ice cream mixture from the ice/rock salt mixture.

**OPTIONAL ACTIVITIES**

“DIRT MADE MY LUNCH” by the Banana Slug String Band

Play “Dirt Made My Lunch” by the Banana Slug String Band. If you do not have the CD, you may want to have the students read the lyrics and then proceed with the activity. Discuss the foods described in the song and how each of them came from dirt or soil.

**DIRT MADE MY LUNCH SKIT or PUPPET SHOW**
Divide the class into smaller groups of six to eight students. Have them create short skits or puppet shows to act out the lyrics and the song. They can make their own puppets, costumes or props. You may want to provide construction paper, lunch bags for puppets, or craft supplies, anything to help them with their skit. Encourage them to find creative ways to describe how food starts from the soil. Have them act out their skits or puppet shows along with the song or as someone reads the lyrics. You may want to evaluate them based on evidence that they clearly understand.
TEACHER’S NOTES: This section of the lesson should be done on a separate day or later the same day. Please collect soil from outside, enough for one cup of soil for every four students. Gather the supplies for the Worm Observation Farms, one farm for every four students. If the ground is frozen, Master Gardeners or owners of a local garden store may be able to find some garden soil for you to use.

Put a cup of the soil you collected from outside on one plastic plate for every four students. If possible, give each small group a magnifying glass. If you have a microscope, put some soil on a slide and set up a station so that students can take turns looking at the soil through the microscope at low magnification.

Divide the class into groups of four to look at the soil samples. Ask them to talk about what they see in the soil and be ready to tell the rest of the class. Remind them to look at the Rocks to Ice Cream timeline and see if they can find evidence of how rocks became soil. Talk about what living and nonliving things they can find in the soil. They should be able to find different soil particles that look like tiny rocks, sand, silt or clay; decaying leaves and sticks; worms, tiny insects, slugs, grubs; and so on.

Have the students share their findings with the rest of the class. You may want to list what they found on a board or large sheet of paper. Collect the soil and put it back in the bag or bucket.

You can’t see them, but soil experts tell us that there are billions of tiny organisms such as bacteria and fungi in a single teaspoon of soil. You were looking at many teaspoons of soil! We are going to make Worm Observation Farms to see how all the items found in soil work together to make soil and keep it healthy so that plants can grow.

WORM OBSERVATION FARM

1. Cut off the top of a 2-liter pop bottle.
2. Put a 1 inch layer of small rocks in the bottom of the bottle.
3. Add 1- to 2-inch layers in the order listed; as you add each layer, spray each layer gently with water to moisten.
   - Newspaper torn into long, thin strips
   - Garden soil
   - Shredded newspaper strips
   - Vegetable scraps (Fruit scraps may attract tiny fruit flies.)
   - Repeat the above steps until the bottle is three-fourths full.
4. Add ten to fifteen red wiggler worms.*
5. Put plastic wrap over the top of the bottle, secure it with a rubber band, and poke ventilation holes into it.
6. Wrap black construction paper around the bottle and secure it with a rubber band to keep it dark for the worms.
7. Keep in a cool to moderately warm location, out of the sun.
8. Add vegetable scraps every 3 to 7 days. Bury them in the bedding or place them on top and add more moist newspaper strips.
9. Keep the contents moist, but not soggy.

*Because they eat near the surface, red worms, also known as red wigglers, red hybrids, fish worms, manure worms, and English red worms, are better choices for this activity than night crawlers or other earthworms. Redworms are available through some garden catalogs and you may find them at bait shops.

**Observation Record Form**

Distribute plain sheets of white paper. Have each student write Worm Observation Farm across the top of wide side of the page. Underneath the title, have them write their names. Fold the paper vertically into three columns. At the top of the first column, write “Week 1” and today’s date. At the top of the second column, write “Week 4.” At the top of the third column, write “Week 8.” Have the students draw a picture of their worm farm in Column One and label the layers. Collect the observation record forms for later distribution in Weeks 4 and 8.

**Optional Activities**

These activities can be incorporated into lessons when you check the worm observation farms for several weeks.

**What is decomposition?**

Play “Decomposition” or “Dirt Made My Lunch” by the Banana Slug String Band. You may want to copy or project the words on a transparency for everyone to follow along. In “Decomposition,” there are three group sections that you could teach to your students. Divide the class into three groups and follow the instructions in the lyrics. Play the song again with the students participating.

**What is the circle described in the song?**

The circle of decay or decomposition is where plants and animals decay to make good soil for growing more plants and feeding animals. When those plants die and the animals leave droppings, the process starts all over again.

**Why are the words “munch, munch, munch” in the song about decomposition?**

Worms, snails, slugs and bugs “munch” or eat dead plants, leaves and twigs, and animal droppings to get them to decompose. That’s why these munching organisms are called decomposers.

**What is “munching” or decomposing the plant materials in our Worm Observation Farms?**

Worms are munching on the leaves, newspapers, and so on.

**What does the word “decomposition” mean?**

Breakdown or decay; plants and animals breakdown and decay to provide nutrients to the soil. We are watching the decomposition process or cycle in our Worm Observation Farms.

**What plant parts and animal resources “get down” into the soil?**

Leaves, flowers and stems die and fall or “get down” into the soil. Droppings from animals “get down” into the soil. Plants and animals provide organic matter that keeps soil healthy.

**How did our plant materials such as lettuce leaves and newspapers “get down” into the soil?**

We put them in the bottles. When people make compost, they put the plants into the pile to decompose.

**What happens in the “breakdown” of plants and animals?**

 Decomposers such as worms, snails, slugs and other organisms break them down by eating them. Water and air also help to breakdown the plants and animals into smaller soil particles.
The decomposition cycle is also called the “Nutrient Cycle.” We eat nutrients like vitamins, minerals, carbohydrates, protein, and so on to keep us healthy.

What is the decomposition or nutrient cycle keeping healthy?

The soil

Why is it important to keep the soil healthy?

It grows the plants that animals, including people, eat and make into all kinds of things such as houses, this paper, your clothes, and so on.

**Reminder:** Remember to take out the Observation Forms and draw and date a second picture or description of what the Worm Observation Farms are doing.

What is helping the soil to be healthy?

Form a circle in your reading area to read and discuss *Diary of a Worm* by Doreen Cronin.

A Greek philosopher who lived more than 2,000 years ago said, “Earthworms are the intestines of the earth.” What did he mean by that?

We eat food grown on the earth, and it passes through our intestines. Earthworms eat the earth. The earth passes through the earthworms’ long intestine-like tube until it is deposited in their droppings or poop. These are called “castings” and they provide nutrients to the soil to make it healthy.

To find out more about worms, we are going to read *Diary of a Worm* by Doreen Cronin. It is written like a diary with daily entries of fun things the worm has done or learned. Let’s make a list of worm facts on the board as you read them.

Send the book around the circle so students can take turns reading the diary entries. As the book is passed, ask the class to give you a worm fact that you can record on the board. Number the facts as you write them. You may want to discuss some of the facts. Examples include: worms eat and decompose newspapers – as you are learning in your worm farms; worms come out on the sidewalk when it rains because the soil is filled with water and no oxygen.

Let’s explore some more facts about worms.

Nightcrawlers make burrows or tunnels that can go 8 feet or more below the surface of the soil. *(With a tape measure, measure 8 feet up to see how far down a nightcrawler can go).*

Each worm has about a thousand tiny bristles on its body that help it move.

**How many bristles would ten/one hundred/one thousand worms have all together?**

*(Write on the board: 10 worms x 1,000 bristles = 10,000/ten thousand bristles 100 worms x 1,000 = 100,000/one hundred thousand bristles 1,000 worms x 1,000 bristles = 1,000,000/one million bristles)*

Earthworms can move a stone fifty times their own weight. That is like you moving a 1-ton pickup truck! *(You may want to see if they know what a full-size pickup truck looks like by checking your parking lot or identifying families in your class that have a pickup truck and can describe it.)*
One acre of soil (the size of a football field) may hold between 50,000 and one million earthworms. (Write those numbers on the board and ask the students to give you some numbers between 50,000 and one million to show how many earthworms might be in an acre of soil. Explain that farm fields are several acres such as forty, eighty, one hundred and more.)

**How many more facts can we add to our worm fact list on the board?**
Four

**How many facts did you learn about worms?**
(Have the students count aloud the number of tallies or chicken scratches on the board. Write the total number of facts the class learned about worms.)

**Do all these facts tell you anything about the importance of worms?**
Yes.
**What do they tell us?**
That worms are important to the soil, plants and animals…including us.

**What are we making in our worm farm?**
The red wiggler worms are helping to decompose the paper, vegetable scrap and soil layers to make compost. Compost is an essential part of healthy soil

**What did we use to make the compost that will make our soil healthy?**
Newspaper strips, soil, vegetable scraps and worms

**What were the decomposers that we added?**
Red wiggler worms

**How did they turn the layers of the worm farm into rich compost?**
They ate it, and their castings became compost.

**REMINDER:** Remember to take out the Observation Forms and draw and date a third picture or description of what the Worm Observation Farms are doing.

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- Nightcrawlers make burrows or tunnels that can go 8 feet or more below the surface of the soil.
- Each worm has about a thousand tiny bristles on its body that help it move.
- Earthworms can move a stone fifty times their own weight. That is like you moving a one-ton pickup truck!
- One acre of soil (the size of a football field) may hold between 50,000 and one million earthworms.
REFERENCE AND RESOURCES

REFERENCE

RESOURCES
Banana Slug String Band, bananaslugstringband.com
Iowa Agricultural Awareness Coalition, www.agaware.org Links to Iowa commodity organizations
Yummy Ice Cream

This recipe is made in one quart-sized zip-closure freezer bag and serves five to eight people using 5 ounce paper cups.

Ice Cream Ingredients
2 cups of milk (This can be flavored milk purchased in individual bottles. One percent and skim milk do not freeze as quickly.)
Equivalent of 2 eggs of pasteurized egg product (such as Egg Beaters™ or Better 'N Eggs™)
1/2 cup sugar (less or none for flavored, pre-sweetened milk)
1/2 teaspoon vanilla

Ice Cream Supplies
1 quart-sized zip-closure freezer bag (Do not double bag or ice cream won’t freeze.)
5-ounce paper cups, one per person
Plastic spoons, one per person
Dry and liquid measuring cups
Measuring spoon
Scissors

Ice Cream Freezer Supplies
2 one gallon-sized zip-closure freezer bags
Approx. 2 1/2 pounds crushed ice (7 lb. bag works for three of these recipes)
Approx. 1 pound or 4 handfuls of rock salt (Four lb. box works for four to five of these recipes. Do not use table salt)
Bath towel, kitchen towel, or mittens to hold on to the cold freezer bag
Paper towels for clean-up

Instructions
After the students wash their hands, have one student securely hold open the quart-sized bag while other students take turns adding the ice cream ingredients. After all the ingredients are added, have two students carefully get the air out of the bag and seal the bag shut. Holding the bag at the top and keeping it upright, gently squeeze the bottom of the bag to mix the ingredients.

Have a different student hold open one of the gallon-sized zip-closure freezer bags while another student adds a couple handfuls or heaping cups full of ice and two handfuls or a little less than a cup of rock salt. Put the bag of ice cream ingredients into the freezer bag. Add another couple of handfuls or heaping cups of ice and two handfuls or a little less than a cup of rock salt. Close the ice cream freezer bag securely. Put the freezer bag into another gallon-sized zip-closure bag and close it. This is the ice cream freezer. Wrap it in a towel so that it is not so cold to handle.

Have the students take turns hand-churning the ice cream by turning the bag over and over in their hands or on a tabletop. The ice cream should harden within 10 minutes. You may want to check it occasionally. After it hardens to the consistency of firm, soft-serve ice cream, pull the bag out of the ice cream freezer, wipe it off, clip off one of the lower corners of the bag, and squeeze the ice cream into the paper cups. (Note that the ice cream ingredients were not touched by anyone’s hands.)

Enjoy!

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**Dirt Made My Lunch**

By the Banana Slug String Band © 2002

**CHORUS**

Dirt made my lunch,
Dirt made my lunch,
Thank you Dirt, thanks a bunch,
For my salad, my sandwich
My milk and my munch 'cause
Dirt, you made my lunch.

Dirt is a word that we often use,
When we're talkin' about the earth beneath our shoes.
It's a place where plants can sink their toes;
In a little while a garden grows.

*Chorus …*

A farmer's plow will tickle the ground,
You know the earth has laughed when wheat is found.
The grain is taken and flour is ground,
For making a sandwich to munch on down.

*Chorus …*

A stubby green beard grows upon the land,
Out of the soil the grass will stand.
But under hoof it must bow,
For making milk by way of a cow.

*Chorus …*
DECOMPOSITION

Words and music by the Banana Slug String Band© 2002

Is there waste? Well, I don’t know.
’Cause one thing dies
to let another grow.
This circle we see most every day.
The name that we call it…decay.

CHORUS
Well come on all you people,
gather round,
Break down and listen to…
decomposition.

Group 1 (comes in and goes out saying):
Munch,
Munch,
Munch…

Group 2 (comes in and goes out saying):
Decomposition,
Decomposition,
Decomposition…

Group 3 (comes in and goes out saying):
Get Down,
Break Down,
Get Down,
Break Down

There are many kinds of bugs,
Worms and snails and banana slugs,
They are useful for me and you,
They help to make the soil renew.
CHORUS...

Decomposition is a useful game,
A tree drops its leaves
but they don’t stay the same.
A bug chews them and spits them back out,
Making the soil for a new tree to sprout.
CHORUS...