

Maine Foods for Maine Kids

K-8 Curriculum Program

*Developed as a Resource for Gorham School
District's Maine Harvest Lunch Program*



The Maine Harvest Lunch program was developed in 2003 by the following collaborators: the Gorham School Nutrition Program, Cumberland County Soil & Water Conservation District, PROP's Communities Promoting Health Coalition (A Healthy Maine Partnership) & Farm Fresh Connection.

Maine Harvest Lunch

Introduction

Beginning in 2003, the annual Maine Harvest Lunch has taken place in September in Gorham public schools, in grades K-8, featuring a school lunch menu consisting of all locally produced ingredients. On this day, the average distance food travels between field and fork is reduced from 2,500 miles to less than 300 miles. Students learn about the importance of supporting a strong local food system through curriculum delivered by guest speakers prior to the event. The lessons emphasize that by reducing the distance our food travels, we eat food that is fresher, more nutritious, helps to preserve open space, reduces fuel use, and ultimately keep jobs in Maine. Students also participate in a district-wide creative poster contest to illustrate the importance of eating foods grown near their home. Historically, on the day of Maine Harvest Lunch, “Hot lunch purchases (have) increased by 33% and students and teachers raved about the quality of the food,” says Ron Adams, Director of the Gorham School Nutrition Program. Due to the ongoing success of the annual Maine Harvest Lunch, Adams continues to include local produce regularly in his menus. The Maine Harvest Lunch program was developed in 2003 as a collaborative project between the Cumberland County Soil and Water Conservation District (CCSWCD), the Gorham School Nutrition Program, Gorham teachers and parent volunteers, PROP’s Communities Promoting Health Coalition (*a Healthy Maine Partnership*) and Farm Fresh Connection.

The Maine Harvest Lunch program has been extremely successful. In 2006, the First Lady, Karen Baldacci, visited Gorham Middle School to demonstrate her interest and support. In 2007, school districts across the State were encouraged by the Maine Departments of Education and Agriculture to participate in the program by offering local foods for their school lunch on the same day. The Gorham MHL Organizing Committee hopes the program continues to expand to other districts and feels providing education about locally grown foods is a necessary element of the program. Offering locally grown foods in the cafeteria is certainly beneficial to the students for the numerous reasons listed on page 3, but without educating them about the meal they may not realize what they are consuming and why it is so important – just that it tastes outstanding!

This curriculum was compiled in hopes of supporting Maine Harvest Lunch celebrations throughout the State. The lessons are brief and can be delivered in the classroom by teachers or guest presenters. They are intended to be progressive, building a knowledge base for students while they are also accessible and understandable for students meeting these concepts for the first time. Expanding beyond these lessons is strongly encouraged. We welcome feedback, new resources, and questions. Enjoy, and thank you for educating your students about the importance of local foods!

Goals of the Maine Harvest Lunch:

- To educate students and school-community members about the benefits of supporting a local food system
- To cultivate interest amongst youth towards agriculture and other food sources, nutrition and food preparation methods
- To establish relationships between food service directors and local farmers/food producers, serving as a starting point for sourcing and incorporating more local foods into the school nutrition program

- To engage multiple community-based organizations, community and regional leaders, students, teachers, school administrators and parents in a celebration of Maine grown foods
- To increase community support, appreciation and confidence in school nutrition programs

During Your Classroom Presentation...

Begin each Maine Harvest Lunch Lesson by introducing yourself (applicable to guest presenters) and the Program. Include the following information:

- What will be served at the Lunch (all locally grown foods; explain what this means if necessary; mention local farm names to students and describe locations if possible/applicable) and why it's exciting
- Guests that will be at the Lunch (local farmers, news, etc.)
- Date the Lunch will be held. It may be helpful, especially for younger students, to put the date in context by saying, "It will be on Wednesday, Sept. 26, which is not this Wednesday, but one week from this Wednesday."
- Poster contest information (see page 6). Encourage students to include why it's important to eat Maine grown foods on their posters, and tell them what the prize is.
- Benefit of eating local foods (what you share may depend on your lesson)

Note: The content of the suggested resources utilized in the following lessons are not considered to be endorsed by the authors, sponsors or reviewers of this curriculum. Each resource was selected for their value as a springboard for further learning, raising questions and stimulating discussion in the classroom setting. The creators of this curriculum acknowledge and expect that teachers may modify lessons as needed, depending on available resources, the subject that they teach, special needs of their students, and their desire to further explore issues touched upon in these lessons.

Eight Benefits of Eating Food Grown Near Your Home

1. **Freshness** – fruits and vegetables that are grown locally are usually sold within 24 hours after harvesting.
2. **Taste** – foods are grown for taste instead of toughness during shipping (moved from farms to factories and stores).
3. **Safety** – food produced locally in smaller amounts is less at risk for contamination (like meat).
4. **Nutrition** – harvesting takes place when the food is the most ripe and is properly handled so that it holds in all its nutrients.
5. **Community** – buying local food puts money back into the local economy.
6. **Variety** – local farmers often are able to produce different varieties of traditional foods.
7. **Energy conservation** – transporting food from the field to the local farmers market requires less gas.
8. **Regional identity** – buying local promotes regional products and pride in the community.

Materials List by Grade/Lesson

Kindergarten: *Harvest Coloring Book*

Paper
Crayons/markers/colored pencils
Space to record student responses
Locally grown fruits, vegetables, and herbs (optional)

1st Grade: *Stirring the Maine Veggie Soup*

Space to record student responses
Basket of fruits, vegetables, and herbs grown in Maine (try to include different varieties of the same product)

2nd Grade: *Oliver's Vegetables*

Oliver's Vegetables by Vivian French
Various unusual vegetables that were identified in the story, including: carrots, spinach, rhubarb, cabbage, beets, peas, and potatoes
Space to record student responses

3rd Grade: *Apple Dissection*

Knife
Cutting board
Two apples per classroom: Washington grown and local
Napkins or paper towels

4th Grade: *Maine Harvest Lunch Jeopardy*

Titles for game
Potato cards with questions (see attached)
Board to display all cards on
Velcro to affix cards and titles
Scratch & sniff fruit stickers or other small prizes (optional)

5th Grade: *Follow that Apple!*

Student worksheets
Calculators (optional)
Teacher transparency worksheet for overhead projection (optional)

6th Grade: *Plan to Plant!*

Space to record student responses

7 large plastic tubs, about 12" deep

Potting soil filled about ½ way in each tub

7 or more seed packets for various vegetables, or photocopies of front/back of seed packet and baggies with the corresponding seeds. Try to have one real seed packet so students can see it. You may be able to get free seed packets of old seeds at Fedco or Johnny's if you explain they are not needed for germinating, just for teaching purposes.

Student worksheets

Graph paper and pencils (optional, for extension activity)

7th Grade: *The True Cost of Food*

10 pieces of large paper (flip-chart size)

Markers

Tape

The Sierra Club's *True Cost of Food* video (www.truecostoffood.org)

Media player and screen

8th Grade: *Be a Young Agrarian!*

Projector

Screen

Laptop or computer with internet access for 2 online viewings (www.tranquileye.com/clock/ & http://www.mediathatmattersfest.org/mtm_good_food/)

Contact Information & Request for Your Comments!

The *Maine Foods for Maine Kids* Curriculum was a collaborative effort between many partners whose contact information is provided below. Although most lessons have been conducted by those listed, 2007 marks the first year all the lessons were compiled into a comprehensive document. Accordingly, we are seeking your input to improve it!

We would like to extend special thanks to the students from the University of Southern Maine's 2007 Extended Teacher Education Program who taught these lessons in Gorham schools and provided valuable feedback on their content and instruction, and to the following non-profit organizations for their ongoing support during the development of this curriculum program: Cultivating Community, Maine Organic Farmers & Gardeners Association, Maine Eat Local Foods Coalition, Slow Food Portland and various AmeriCorps program participants.

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*Sample: Poster Contest Directions for
Maine Harvest Lunch: Celebrating Maine Grown Foods*



Directions

Design a persuasive poster that illustrates the importance of eating Maine grown foods. Preference will be given to posters that convey why eating locally grown foods is beneficial.

Details

- Any art medium on any size paper
- Include student's name, grade, and teacher's name on back
- A catchy slogan may be included
- Due to Harvest Lunch school coordinator by Monday, Sept. 24th
- All posters will be displayed in the cafeteria at the Maine Harvest Lunch
- One winner per school. Winners will receive a gift certificate to a local food vendor (past prizes have included Smiling Hill Farm & Moulton's Apple Orchard)

Helpful Facts: Reasons Why Buying Maine Grown Foods is Important

- Buying locally puts money back in the Maine economy. If every household in Maine spent \$10 a week on locally grown foods, an additional \$100 million would be put back into the Maine economy!
- With the concern of sprawl throughout southern Maine, this contribution to **farmland preservation** is vital.
- Locally grown food is raised for **taste** rather than durability during transport, so Maine grown food tastes better.
- Fresher foods from local producers translate to **healthy eating** and, ultimately, **better learning**.
- Locally grown food does not have to travel as far, **reducing air pollution and fuel consumption**.
- Introducing students to the importance of buying locally **strengthens the community** by creating connections between the food we eat and where it is grown.
- The average bite of food travels 2,500 miles before you eat it! Food at the Maine Harvest Lunch travels just 300 miles.

What else can you do?

- Encourage your students to participate in the poster contest and purchase the Harvest Lunch on Wed. Sept. 26th
- Purchase your own Harvest Lunch!
- Talk to your students about the Harvest Lunch and discuss the benefits of eating fresh, local food. Discuss local farm stands and farmers' markets – visit www.getrealmaine.com for listings.
- Call Heather Russell at the Middle School with questions or if you'd like to become more involved in future events.

Maine Foods for Maine Kids: *Harvest Coloring Book*

Grade level: Kindergarten

Objectives: Students will

1. Name one reason to eat locally grown foods.
2. Identify 3 foods that are grown in Maine.
3. Illustrate a *Maine Harvest Coloring Book*.

Time: 20-25 minutes

Materials:

Paper

Crayons/markers/colored pencils

Space to record student responses

Locally grown fruits, vegetables, and herbs (optional)

Procedure:

Introduce yourself and the Maine Harvest Lunch program – see the introduction page for some background information.

1. Ask students the following questions: “*Has anyone been to a farm in Maine? Has anyone been to a garden in Maine? Does anyone have a garden at home?*” Students may indicate they have visited these locations by raising their hands. They may also be eager to share a story.
2. Ask students to name foods that are grown in Maine they may have seen at these locations. List Maine-grown foods on the board. When a student names a food which you have brought, show students the item. Wait to pass food items around until the end of class to prevent distractions during the rest of the lesson.
 - Students may offer the names of non-local foods, such as oranges, bananas, etc. This is a great opportunity to talk about climate, how different temperatures dictate growing seasons, and that these affect what can be grown in a certain place.
 - Pass around the items so students may feel and smell them, and ask students to recall names of the items.
3. Ask students, “*Why is it important to eat fruits and vegetables grown in Maine?*” Many will tell you it’s because they are good for you, healthy, provide nutrients, etc. Explain local foods are healthier and taste better than those that traveled from far away. Ask them if they have ever had an apple fresh off a tree versus one that may have been in their home for a long time and ask them if they tasted differently. Discuss transportation and the loss of nutrients during transport from distant places.

4. Tell students they will receive a snack grown in Maine as a part of the celebration and that next year they can look forward to an entire lunch of all Maine grown foods. (As appropriate for your school district)
5. Have student illustrate a Maine Foods Coloring Book. Each page could include an illustration of a Maine-grown fruit or vegetable (or product, such as an apple pie) that was discussed/seen during the lesson, and you might want to include a sentence about it. Examples are provided below. These examples also provide an opportunity to tell students Maine foods also include meats, condiments, etc. – not just fruits and vegetables. Some examples include:

- Blueberry. Blueberry muffins and pancakes are yummy!
- Potato. Many potatoes are grown in Maine every year!
- Apple. Go apple picking with your family in the fall!
- Cheese. Cheese tastes yummy on crackers!
- Maple Syrup. Maple syrup comes from tree sap!

Maine Foods for Maine Kids: *Stirring the Maine Veggie Soup*

Grade level: 1st grade

Objectives: Students will

1. Identify 5 fruits and vegetables grown in Maine.
2. Explain two reasons why it is good to eat Maine grown foods.
3. Sing “Stirring the Maine Veggies Soup.”

Time: 20 - 25 minutes

Materials:

Space to record student responses

Basket of fruits, vegetables, and herbs grown in Maine (try to include different varieties of the same product)

Readiness to “stir the Maine veggie soup.”

Procedure:

Introduce yourself and the Maine Harvest Lunch program – see the introduction page for some background information.

1. On the board make two columns, one titled “*Can Be Grown in Maine*” the other “*Can’t Be Grown in Maine.*” Ask students to brainstorm a list of fruits and vegetables to categorize under these titles. Work with the class to brainstorm for roughly 10 minutes.
2. Once the brainstorm is wrapped up, go through the fruits and vegetables you brought to the class, helping them to identify each one along the way. Students may have a lot of fun seeing different varieties of the same product, such as cherry, grape, yellow, and “normal” tomatoes.
3. The final part of this lesson gets everyone up and moving and also reviews the take home message of what types of fruits and vegetables are grown in Maine. Form a circle with the class. One student starts in the middle of the *Maine Veggie Soup* and loudly announces their choice Maine grown food. The rest of the class sings one verse of the song while making the appropriate motions (see below). Before singing the second verse, the first student joins the circle and a new student enters the middle of the soup. Ask “What Maine fruit or veggie are you?” Then repeat the verse. Depending on the size of the class and how much time you have left, have each student take a turn in the middle of the “soup.”

Stirring the Maine Veggie Soup Lyrics

Stirring the Maine veggie soup (*make stirring motion in front of body*),
Ch-Ch-Ch-Ch (*shake pretend maracas over both shoulders- two counts over each*)

Stirring the Maine veggie soup (*make stirring motion in front of body*),
Shooby-Dooby-Do (*turn around once while raising and lowering hands near head, index fingers pointed up*)

Maine potatoes (*arm extended in front of you to drop item in soup bowl*)

And Maine tomatoes (*extend other arm to drop this in the soup bowl*)

How about you in the Maine veggies soup? (*Everyone points across circle, while person in middle points out a new person*)

NEW STUDENT ENTERS- FORMER STUDENT JOINS CIRCLE

INSTRUCTOR ASKS "WHAT MAINE FRUIT OR VEGGIE ARE YOU?"

STUDENT IN MIDDLE PROCLAIMS A MAINE VEGGIE OR FRUIT

Repeat

Maine Food for Maine Kids: *Oliver's Vegetables*

Grade Level: 2nd grade

Objectives: Students will

1. Listen to the story *Oliver's Vegetables* by Vivian French.
2. Identify unusual vegetables that grow in Maine.
3. Discuss why eating locally grown food is nutritious.

Time: 20-25 minutes

Materials:

Oliver's Vegetables by Vivian French

Various unusual vegetables that were identified in the story, including: carrots, spinach, rhubarb, cabbage, beets, peas, and potatoes.

Space to record student responses

Procedure:

Introduce yourself and the Maine Harvest Lunch program – see the introduction page for some background information.

Part I: Oliver's Vegetables

1. Tell students they will read a book together called *Oliver's Vegetables* and talk about why eating local foods is healthy for them. They will also get to see some unusual vegetables that grow in Maine that they may have never seen before! Ask, "Has anyone ever thought they wouldn't like a food, and when they tasted it discovered it was very good?"
2. Read the story to the students (ask appropriate questions along the way to keep students engaged).
3. Review what happened in the story – what did Oliver learn from his visit to his grandparents' house?
4. List on the board the vegetables Oliver tried (carrots, spinach, rhubarb, cabbage, beets, peas, and potatoes). Take a survey (by show of hands) of how many students have eaten each kind of vegetable.

Part II: Mystery Vegetables

1. Show the class the vegetables, one at a time, and take guesses as to what each one is. If needed, use the list on the board. If you cannot find all of these vegetables to purchase beforehand, purchase some others that are unusual Maine foods. Identify these, and ask students if they have eaten them before.

2. Ask, “Are all the vegetables listed grow in Maine? Where can you buy these vegetables?” (Farmer’s market, a local farm/farmstand, grocery stores that feature local foods). Talk about why it is healthy to eat food that is grown in Maine, close to where you live (nutrients are lost over time – if you get it straight from the farm, it is usually fresher; see page 3 for more reasons).
3. Encourage students to try some of these new vegetables at The Maine Harvest Lunch and at home and to visit a farm nearby to see where their food comes from.

Maine Foods for Maine Kids: *Apple Dissection*

Grade Level: 3rd grade

Objectives: Students will

1. Define locally grown foods.
2. List why local foods are better tasting and more nutritious.
3. Analyze why local foods are more beneficial for local economies and better environmentally.

Time: 20-25 minutes

Materials:

Knife

Cutting board

Two apples per classroom: Washington grown and local

Napkins or paper towels

Travel line graphics (see Curriculum Resources on CD or download at

www.cumberlandswcd.org)

Procedure:

Introduce yourself and the Maine Harvest Lunch program – see the introduction page for some background information.

1. Sketch a rough map of the United States on the board (country only – no states). Have students roughly locate the State of Maine and their town.
2. Ask students what it means for foods to be local. Can they give examples of where local foods might come from? Discuss that bordering states could be more local than some parts of their own state. Share one possible definition of local foods: Food grown about 100 miles away from your town.
3. Draw a circle around the local area. For reference, it is about 100 miles from Portland to Boston, and 100 miles from Portland to Bangor. (Optional: With the class or before the lesson on your own, use the 100-Mile Diet website (www.100milediet.org/map/) to see a map of this area by plugging in your zip code.)
4. Ask students why it is important to eat local foods. Use the list from the curriculum's introduction as a guide. Fill in gaps of knowledge.
5. Tell students that you are going to dissect an apple to learn how nutrition is affected by long travel.
6. Take out an apple and tell the students it is from Washington. Explain to students the process that an apple from Washington State needs to undergo before it can be in Maine

supermarkets. It is recommended to write/draw this process on a piece of poster paper ahead of time to share as a visual. *Visual Aid: pick - transport to storage facility - store until a supermarket places an order - ship to location - unpack and store at central distribution - store at supermarket.* Tell students that non-local apples can take up to *nine months* to go from Washington to Maine. The process is similar with other non-local produce.

7. Explain how apples start to lose nutrients from the moment they are picked from the tree until they are finally eaten. Cut a small sliver of the apple off and ask students if this represents the nutrients lost in an apple from Washington by the time it reaches them. If they say “no” tell them they are right and continue to cut the apple until three-quarters remain and ask again. Then do the same thing for half the apple, then until about 40% of the apple remains. Tell students that they are right – 60% of the nutrients are lost. *If the students reply, “yes,” to the initial question, place doubt in their minds by saying something like “Do you really think the apple only lost that little of its nutrients?” This should be enough to get the majority of students to reassess their answers.*
8. Compare the Washington Apple with a Maine apple that was recently picked. Explain to students the process than apple from Maine needs to undergo before it can be in Maine supermarkets. You may also want to write/draw this process before the presentation to compare to the first scenario. *Visual Aid: Local apple orchard picks – stores - then delivers the apples to a local grocery store in the same or neighboring town.* It only takes *a few days* to get a local apple from the tree to the store. State that only a very small amount of nutrients are lost in the process of harvesting and the short storage of the apple until it eaten.
9. Ask students whether they would rather eat Maine apples or Washington apples. Tell students the good news is Maine apples will be served at Maine Harvest Lunch!

Assembling the Visual Aid Posters

Print the components on following pages and tape together side by side. For best effect when using them during the lesson, have one student hold the far right end, while another slowly unrolls the chain across the front of the room. Have the students holding POSTER 1 remain holding it open while POSTER 2 is revealed so the class can see the visual difference in length.

POSTER #1: *Washington Apple Transport:* Here I go! --- Apples hanging on tree --- Picking --- Transport to storage --- Draw a road on two pieces of paper and connect --- Hanging out in storage --- Off to the supermarket --- Draw a road on two pieces of paper and connect --- Unpacked --- The supermarket --- Grocery cart --- Child eating apple

POSTER #2: *Maine Apple Transport:* Apple picking --- Draw a road on one piece of paper and connect --- Truck --- Draw a road on one piece of paper and connect --- Supermarket --- Child eating apple

Here I go!





Picking



Transport to storage



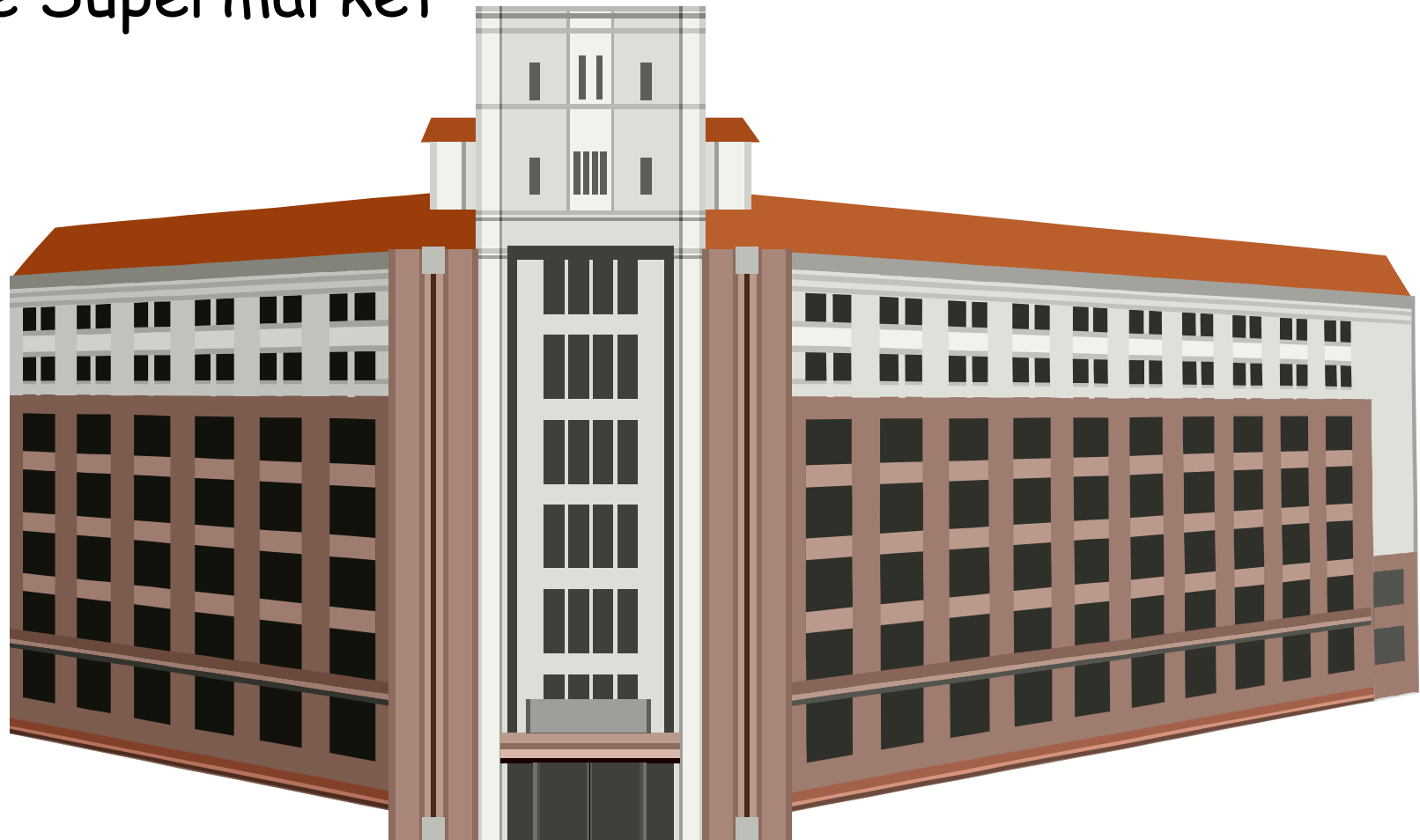
Hanging out in storage



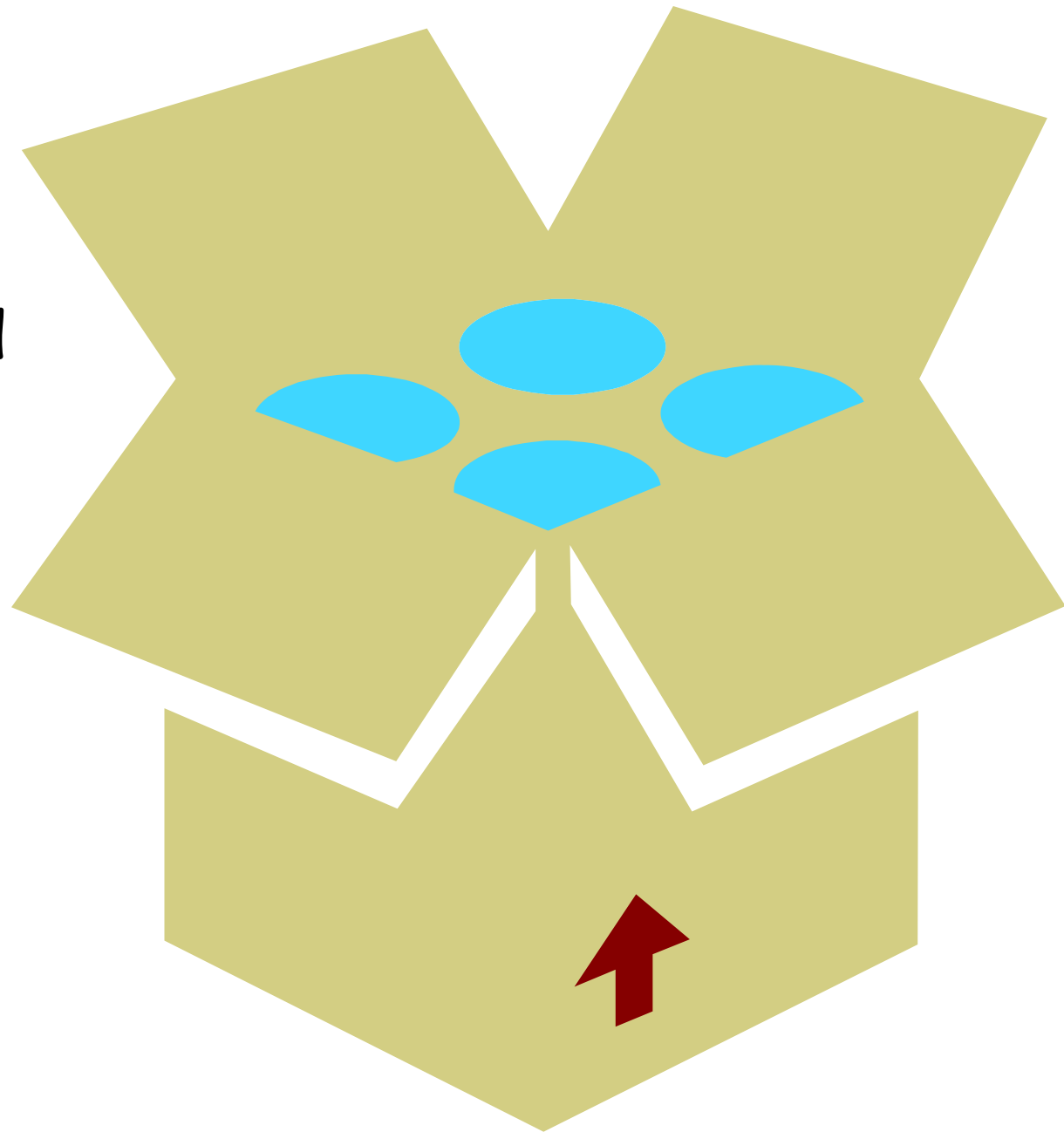
Off to the supermarket



The Supermarket



Unpacked

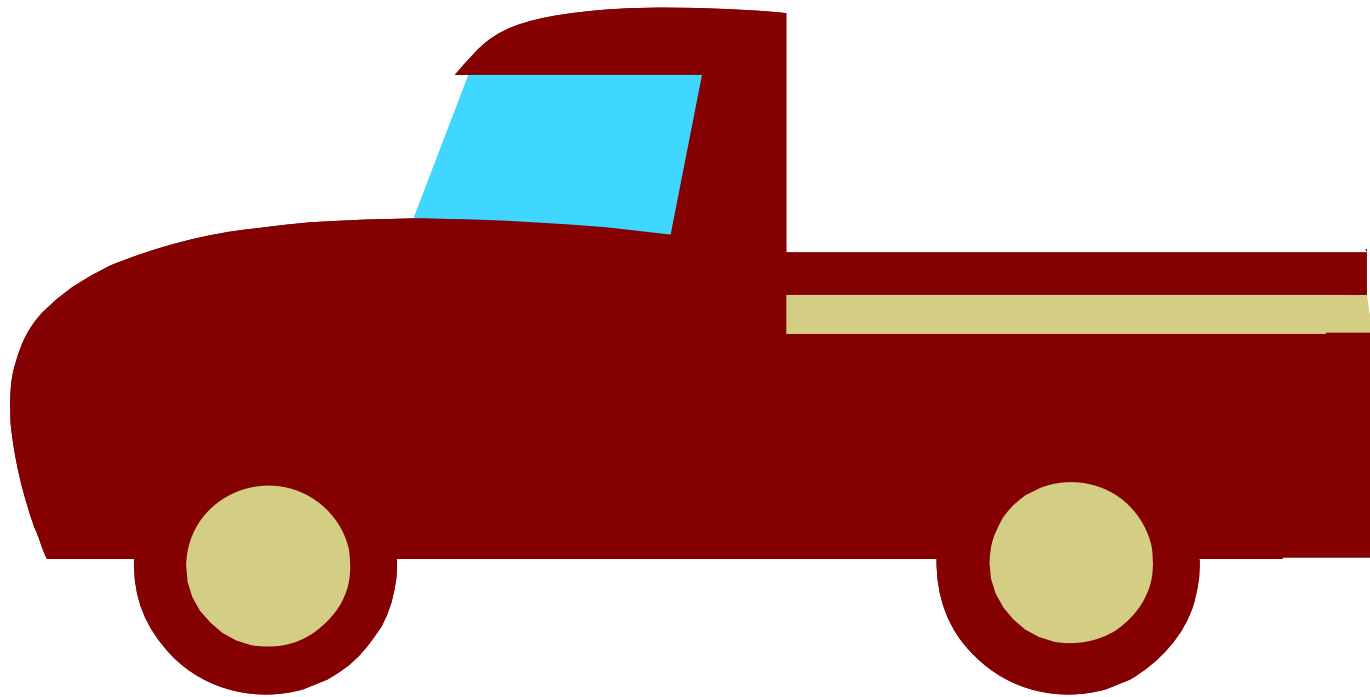




Takes up to **9 months** to get here!







Takes only a few days to get here!



Maine Foods for Maine Kids: *Maine Harvest Lunch Jeopardy*

Grade Level: 4th grade

Objectives: Students will

1. Explain why eating local foods is beneficial.
2. Identify some Maine local foods.
3. Describe the Maine Harvest Lunch program in their town.

Time: 20- 25 minutes

Materials:

Titles for game

Potato cards with questions (see attached)

Board to display all cards on

Velcro to affix cards and titles

Scratch & sniff fruit stickers or other small prizes (optional)

Procedure:

Before class:

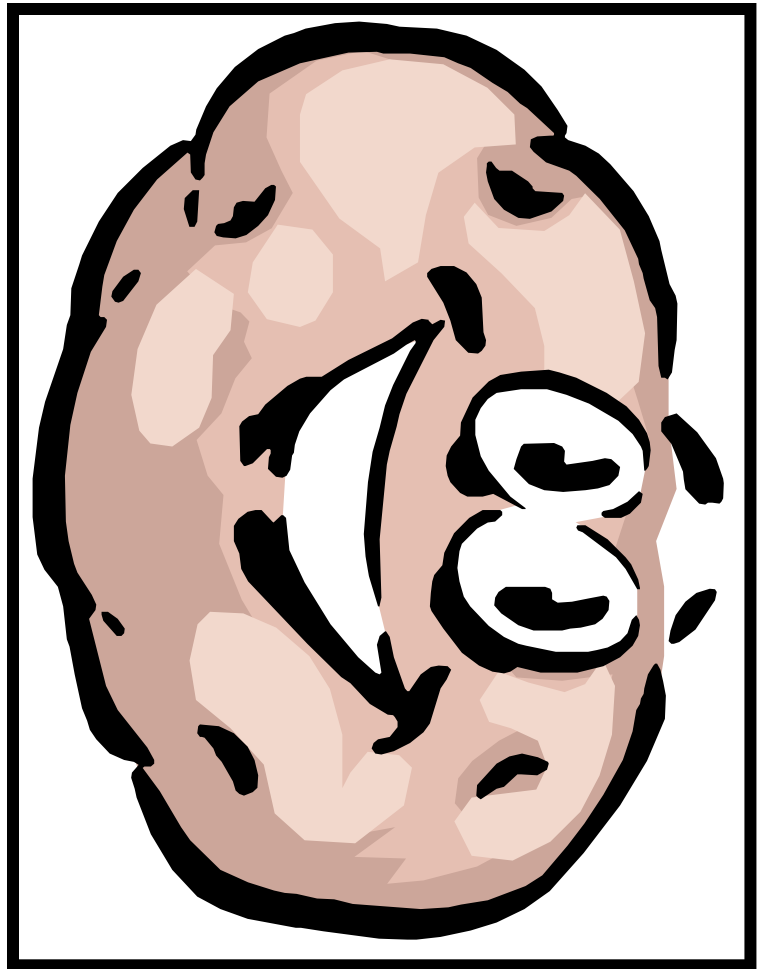
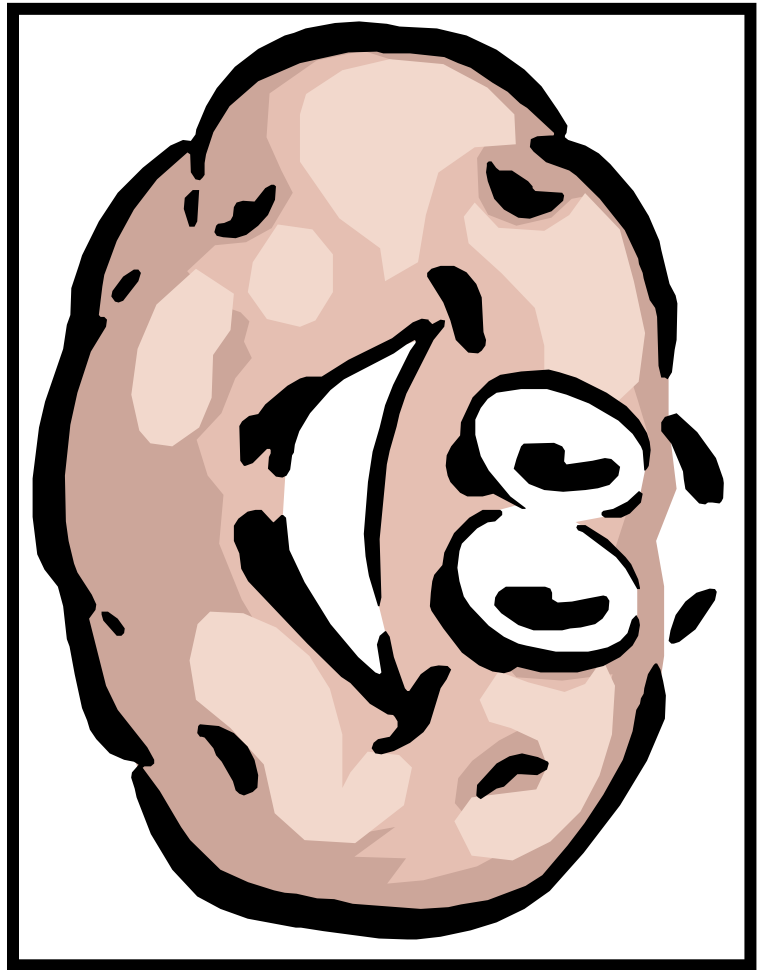
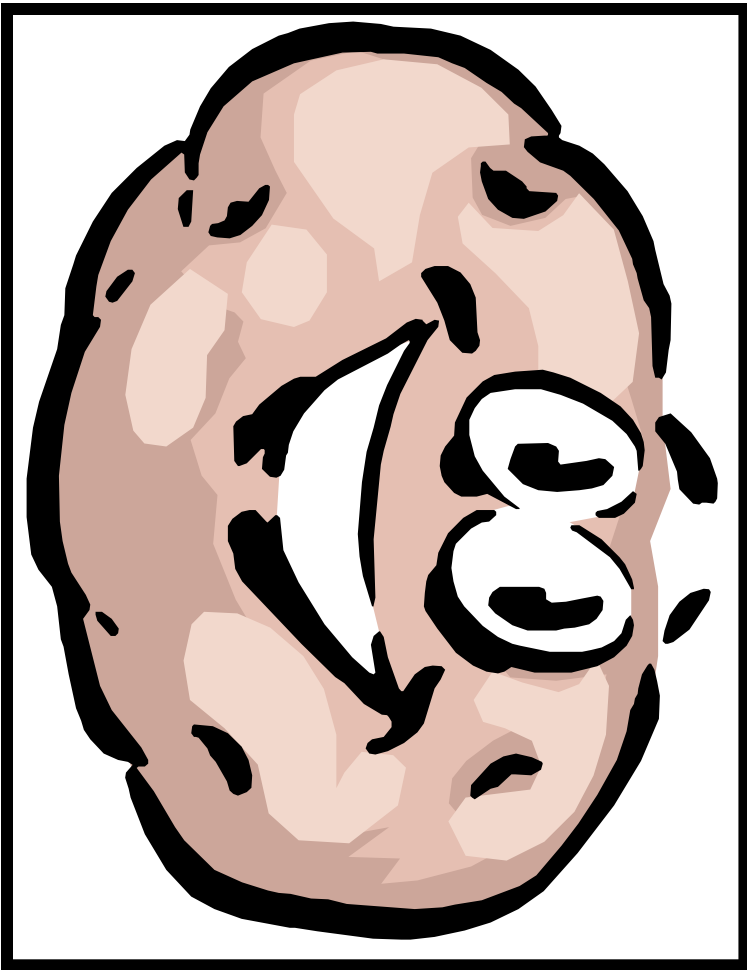
1. Print (preferably on cardstock) and laminate potato cards and titles. Potato cards should be double sided, with questions on one side and corresponding potato pictures on the other side. The level, indicated on the back of the card, should match the picture of the number of potatoes.
2. Arrange and affix cards with Velcro to the board so topics (found with questions on back of card) are underneath the appropriate title and cards run from one potato to five potatoes in their respective category (see below).

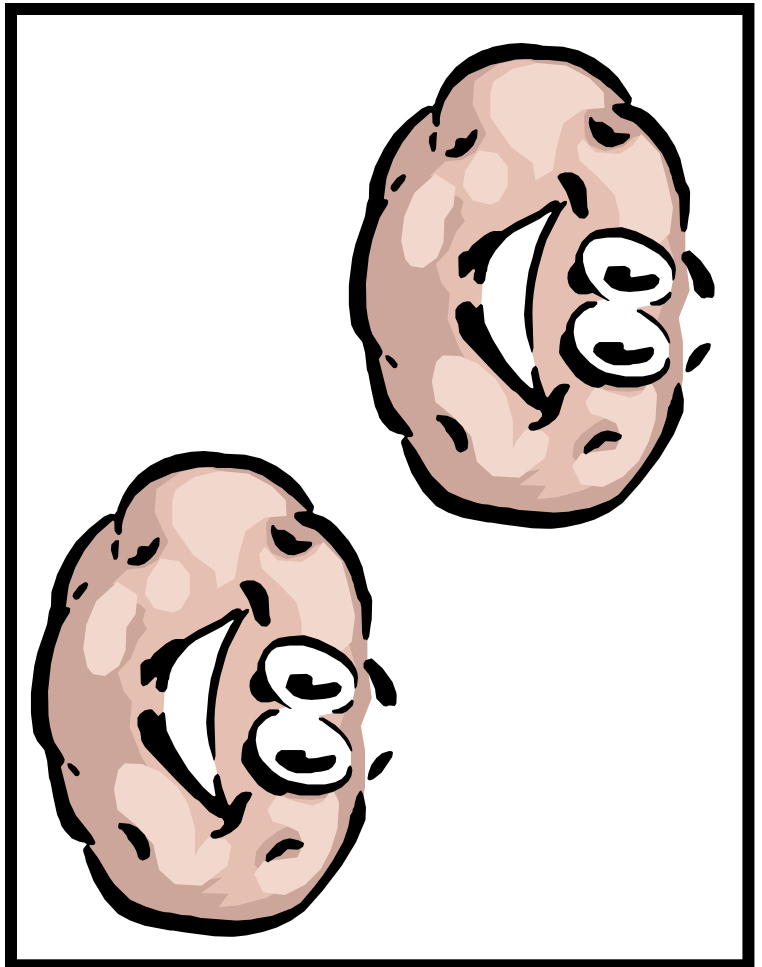
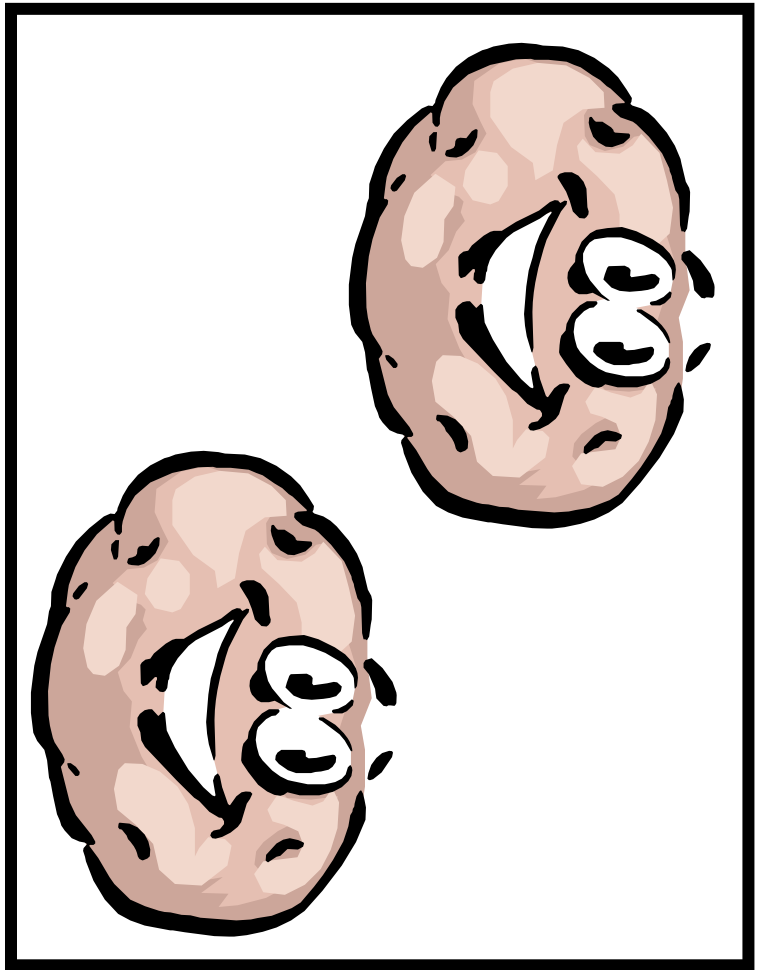
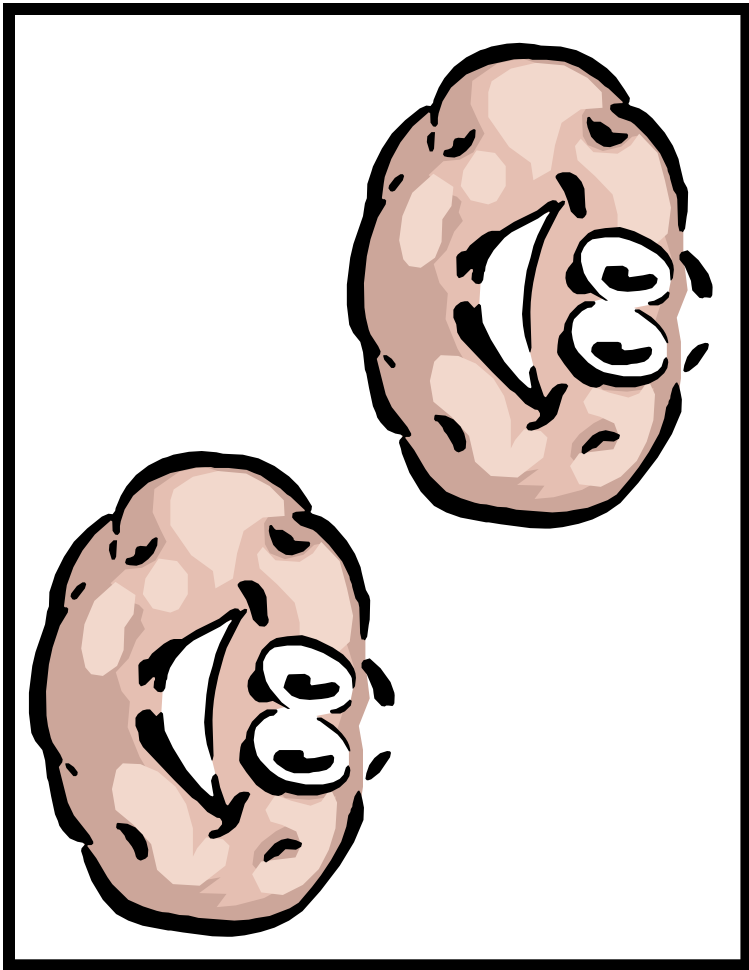


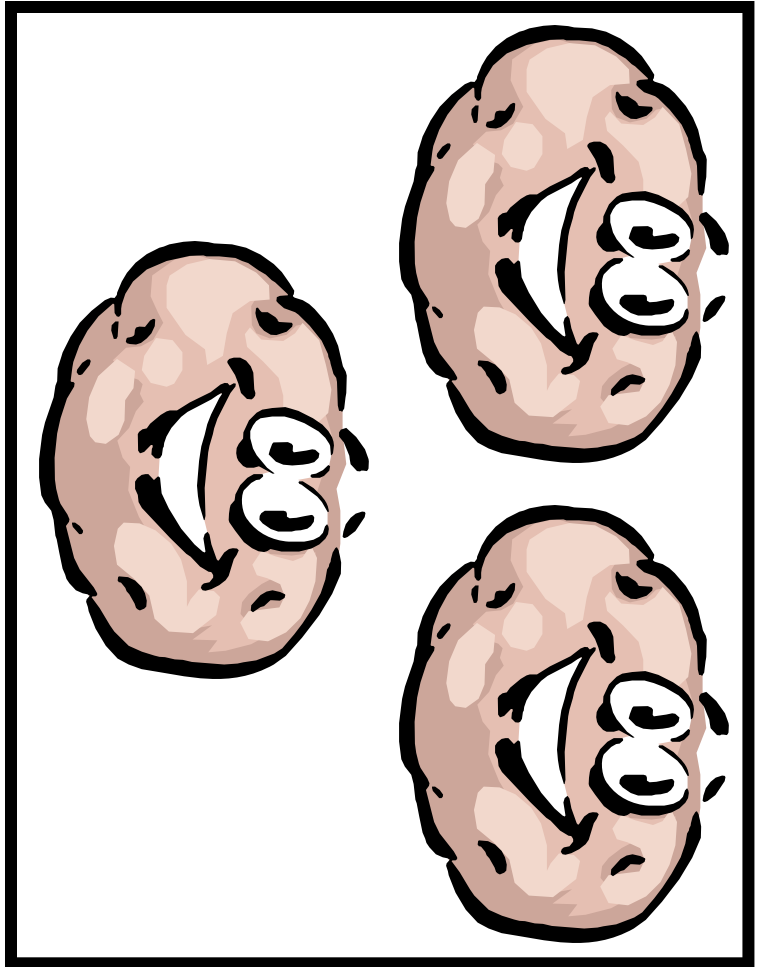
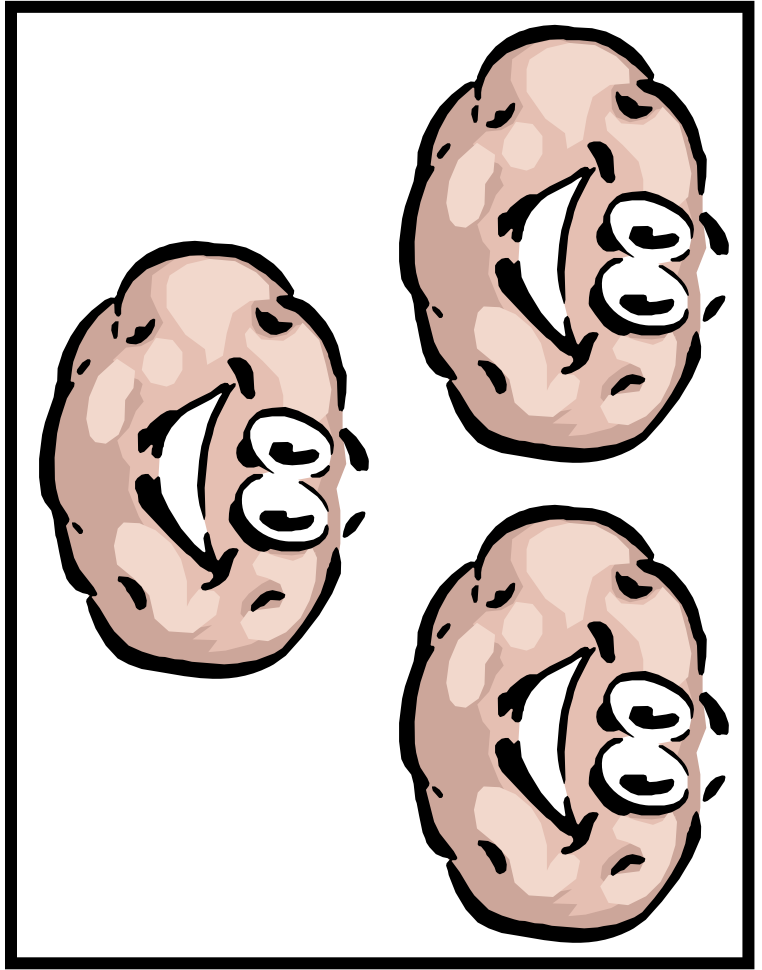
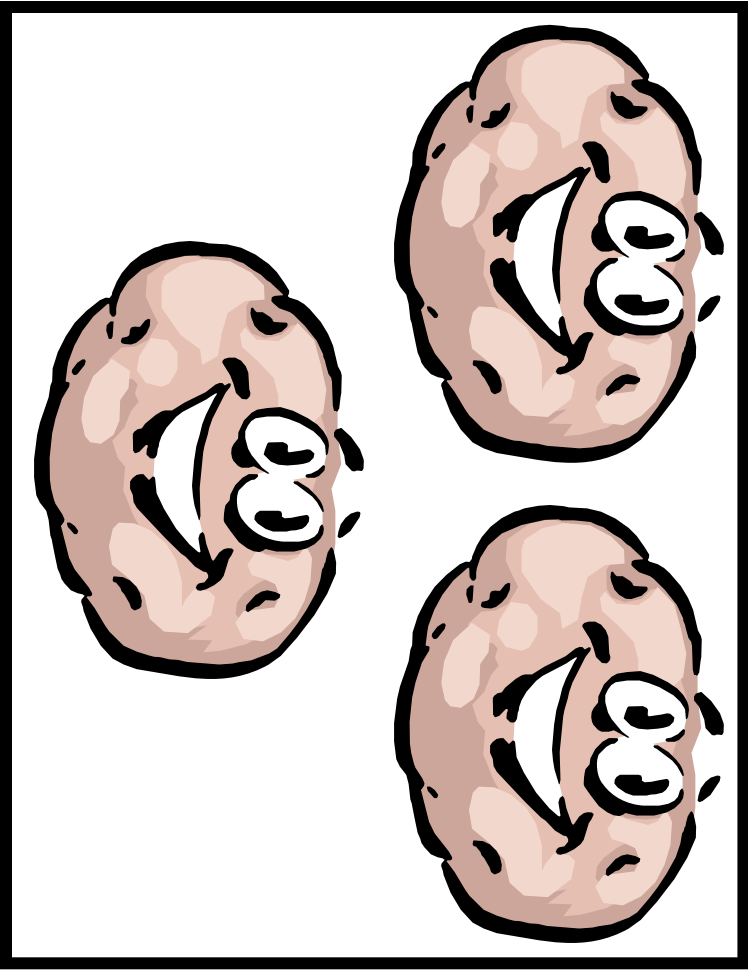
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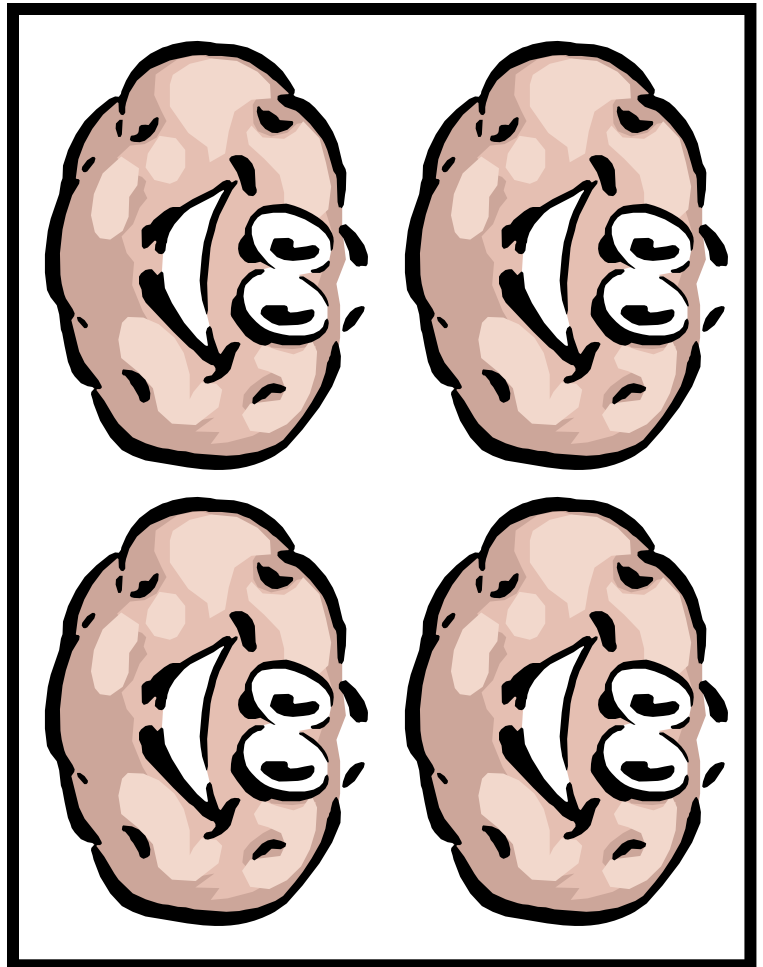
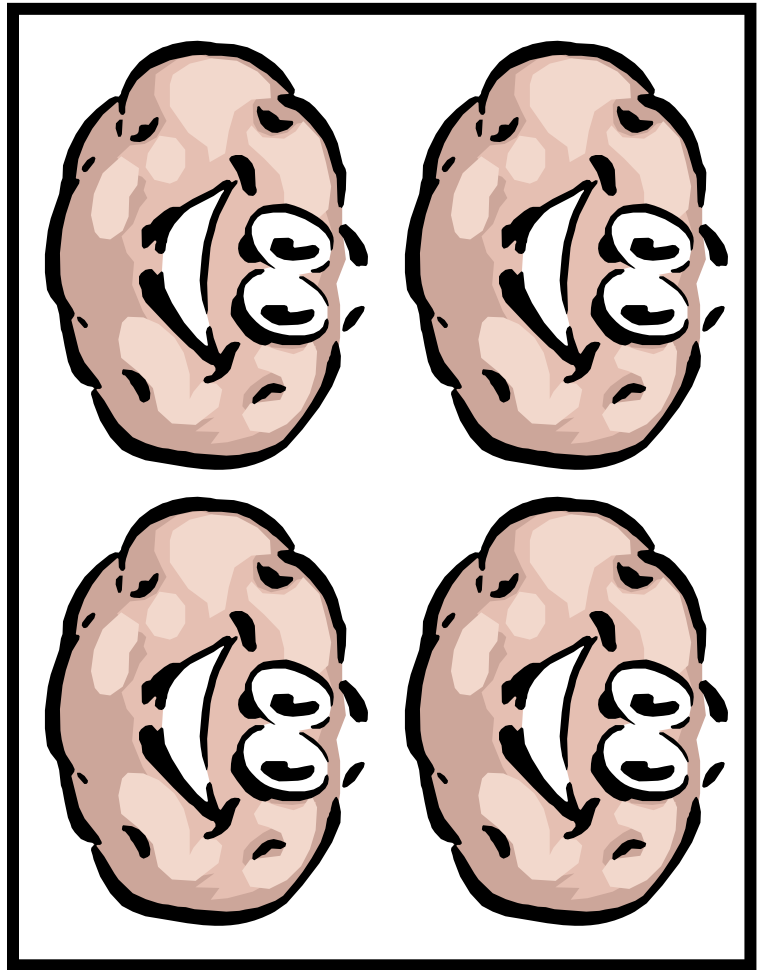
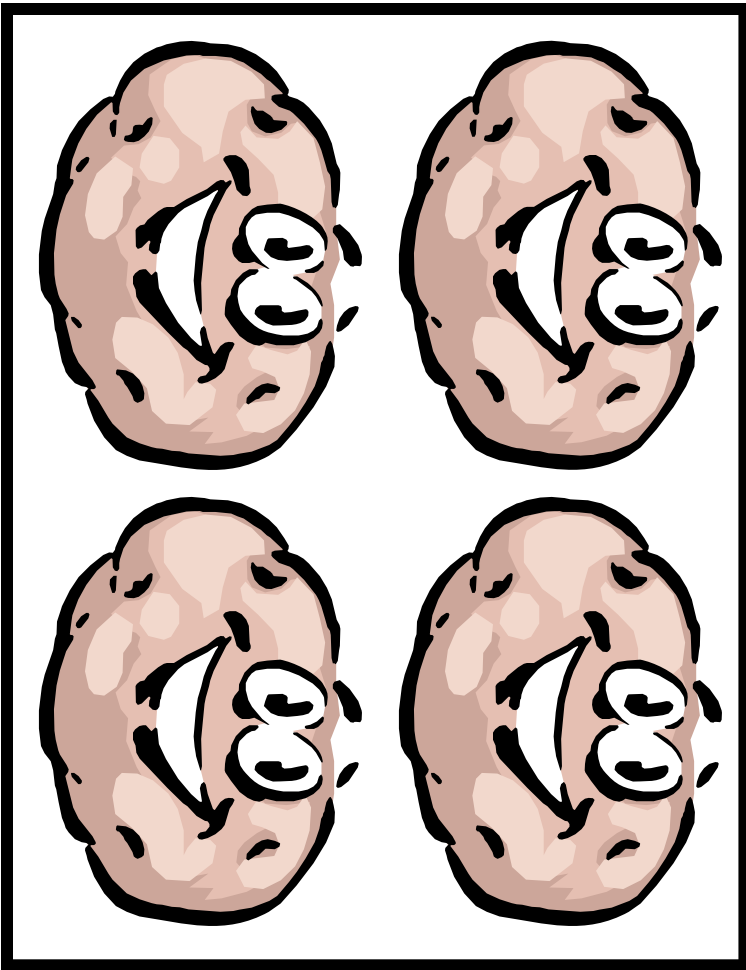
Introduce yourself and the Maine Harvest Lunch program – see the introduction page for some background information.

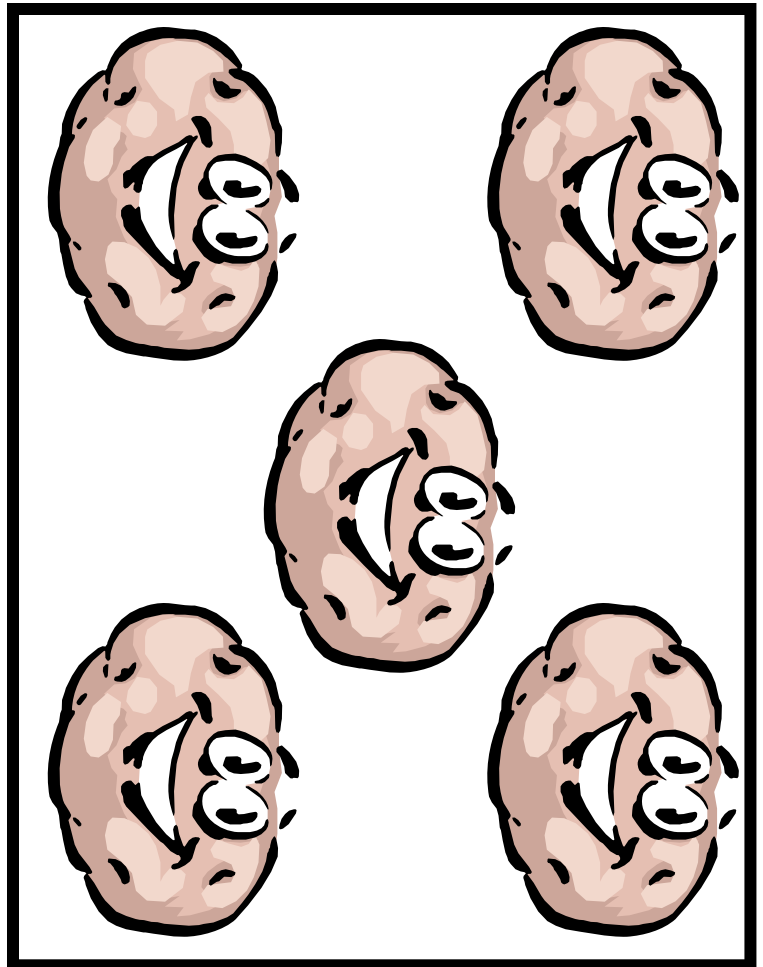
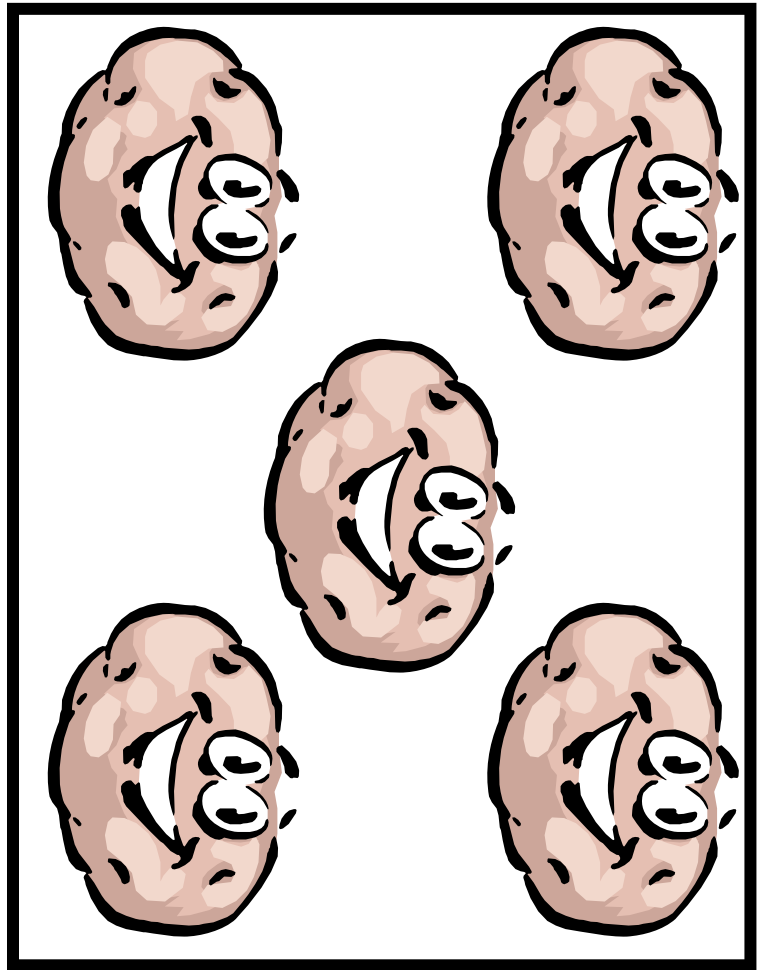
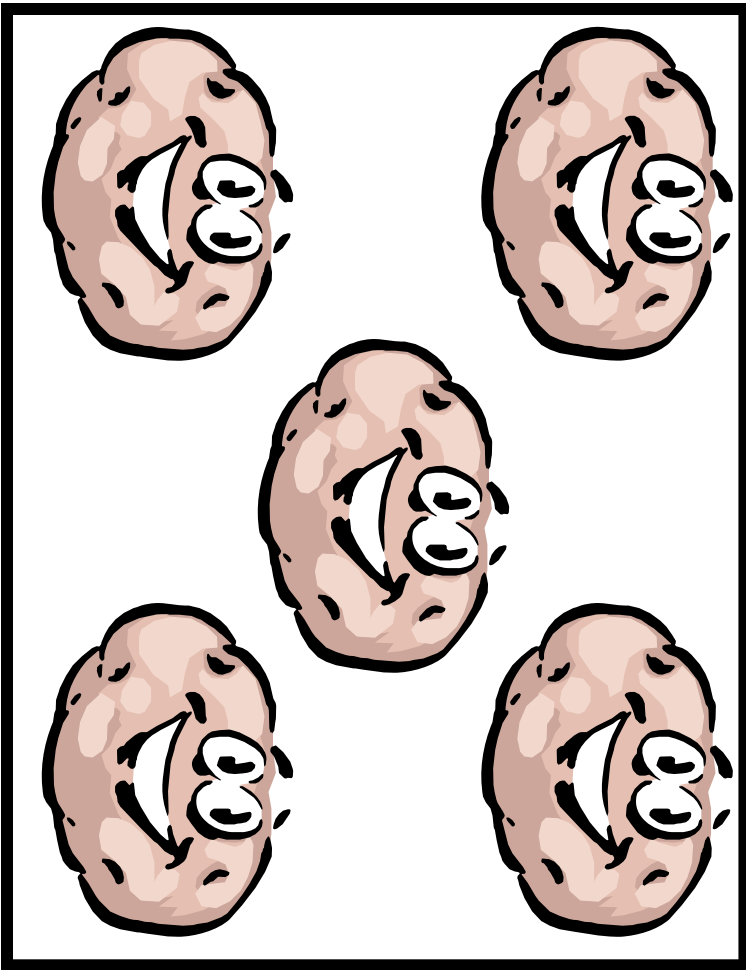
1. Tell students you will be playing a game that will include some information you are going to talk about right now.
2. Ask students if they remember the Program from years past. If they do, ask what they remember. If this is a new program, tell students about the program (It's an event where all local foods are served for school lunch. Local foods mean they are grown near to where you live, etc. Local foods are beneficial because...(see page 3). There is also a poster contest where your posters will be hung up in the cafeteria, etc.) Be sure to include information that is incorporated into the "Maine Harvest Lunch in _____ (Your Town)" category, such as:
 - Number of years it's been at your school
 - Poster contest – information to include in your poster & the prize for the winner (see page 7)
 - The date lunch will be served
 - What type of foods will be served at the Maine Harvest Lunch (in general, meaning local foods)
3. Explain how the game is played: Students will raise their hands and chose both a category and a level. For example, they might say, "I'd like Local Foods for 2 potatoes." Generally, a higher potato level corresponds to a more difficult question. The teacher or guest presenter take this card off the board and reads the question aloud. The person who asked for the question gets the first chance to answer. If they answer incorrectly or cannot answer, another student may be called upon to answer until the question is answered correctly. Optional: The correct answerer receives a prize (scratch & sniff sticker, etc.).
4. This game acts as an assessment, as you are able to determine if students were listening to your introduction of and information about the Program by whether or not they are able to answer the questions correctly.











Maine
Foods

Why Local
Foods are
Good

Harvest Lunch
in _____

The following questions go on the back of the potato cards. The level, indicated on the back of the card, should match the picture of the number of potatoes.

Maine Harvest Lunch Jeopardy Questions

Category: Maine Foods

Level: One potato

Question: Maine is the third biggest grower of this vegetable out of all 50 states! You might eat this vegetable mashed, baked, or as chips or French fries.

Answer: Potato

Category: Maine Foods

Level: Two potatoes

Question: Over one million bushels of this Maine-grown fruit are harvested every fall! Many varieties of this fruit grow in Maine, including Macintosh and Yellow Delicious. You might pick this fruit with your family in the fall.

Answer: Apple

Category: Maine Foods

Level: Three potatoes

Question: This Maine-grown fruit is commonly used to make jelly, pies, pancakes, and muffins. The plant it grows on is very tough and can grow in the cold winters and poor soils that are common in Maine.

Answer: Blueberry

Category: Maine Foods

Level: Four potatoes

Question: This sweet liquid is made from tree sap! You usually eat this Maine food on pancakes, waffles, or French toast.

Answer: Maple syrup

Category: Maine Foods

Level: Five potatoes

Question: This tough looking shellfish lives in the cold Maine ocean waters. People from all over the world get very excited to eat this Maine seafood! It looks red when it's cooked and you may have eaten it in the summer with butter.

Answer: Lobster

Category: Why local foods are good

Level: One potato

Question: Many fruits and vegetables travel a long way to get to Maine. Think about the apples you buy in your grocery store. Some apples are grown in Washington, 3,000 miles away next to the Pacific Ocean. Apples travel in trucks to get to your grocery store. Moulton Farm, the orchard that is donating the prizes for our poster contest, is 10 miles away. What would a truck use less of to get a Moulton Farm apple to the grocery store than a Washington apple?

Answer: Gasoline or fuel

Category: Why local foods are good

Level: Two potatoes

Question: Sometimes it takes days, or even weeks, for foods from far away to arrive at your grocery store. As fruits and vegetables get older, they lose some nutrients. Eating Maine foods that can get to your grocery faster is better because the food is...

Answer: More nutritious, healthier, better for you, etc.

Category: Why local foods are good

Level: Three potatoes

Question: As fruits and vegetables get older, they lose some flavor. Since foods grown in Maine arrive at the grocery store more quickly than foods from other states or countries, they will taste...

Answer: Better, yummiier, etc.

Category: Why local foods are good

Level: Four potatoes

(Option 1/Easier) Question: Many Maine farmers let wild animals live on their land, like deer, moose, and birds. If we buy Maine foods, the Maine farms will stay open and these animals will have a place to live. What will happen to the animals' homes if there aren't any more Maine farms?

Answer: The animals won't have a place to live anymore.

(Option 2/Harder) Question: Buying Maine-grown foods keeps Maine farms open for business. Many Maine farms have forests and other land that are fallow, which mean no crops grow there. Wild animals live in these areas. If we buy food that is grown far away instead of in Maine, and Maine farms have to close, how could that affect the wild animals?

Answer: They would have no place to live.

Category: Why local foods are good

Level: Five potatoes

Question: A Maine farmer sells milk that he gets from his cows. He uses this money to buy things in Maine, so the money stays in Maine. There is another farmer from Massachusetts that sells milk in Maine, too. If you buy this milk, what state does the money benefit most?

Answer: Massachusetts

Category: Harvest Lunch in _____ Schools

Level: One potato

Question: What will be served at Maine Harvest Lunch? (in general)

Answer: All foods that are grown locally or made with local foods, like pizza, vegetables, rolls, and salad

Category: Harvest Lunch in _____ Schools

Level: Two potatoes

Question: What day will Harvest Lunch be on this year?

Answer: _____

Category: Harvest Lunch in _____ Schools

Level: Three potatoes

Question: What information should be included in the poster you make?

Answer: Reasons why eating local foods is good

Category: Harvest Lunch in _____ Schools

Level: Four potatoes

Question: What is the prize for the poster contest winners?

Answer: _____

Category: Harvest Lunch in _____ Schools

Level: Five potatoes

Question: How many years have _____ schools been doing Maine Harvest Lunch?

Answer: This is the _____ year

Maine Foods for Maine Kids: *Follow That Apple*

Grade Level: 5th grade

Objectives: Students will:

1. Calculate the number of miles a given apple traveled to reach a grocery store.
2. Choose what apple they would rather eat based on transportation costs.
3. Defend their apple selection by listing the benefits of eating local foods, with a focus on the cost of transportation.

Time: 20-25 minutes

Materials:

Student worksheets (included)

Calculators (optional)

Teacher transparency worksheet for overhead projection (optional)

Procedure:

Introduce yourself and the Maine Harvest Lunch program – see the introduction page for some background information.

1. Ask students why it is important to eat local foods (better tasting, more nutritious, more beneficial for local economies and better environmentally – see page 3 for additional information). Allow the class to include several important reasons. Getting students to say some important reasons might take time and coaching.
2. Describe what it means to be part of the local food system (within about 100 miles); compare to regional or global food systems (regional – the general New England area; global – anything further than regional, including across the country). You might also discuss that some of the food we eat cannot be grown locally due to our climate and growing conditions, such as bananas. We are lucky to have a global market so we can eat a variety of different foods, or eat certain foods in the winter, for example, when fresh local produce would be unavailable. The important point to make is that when both local and “from away” foods are available, it is important to choose local.
3. Pass out the apple activity sheets (on the following page) to students. Divide the students into two groups. One group represents Maine and will be responsible for the “Apple from Maine” column on the worksheet. The other group represents Washington and will be responsible for the “Apple from Washington” column on the worksheet.
4. Once the two groups have answered all the questions for their column, share the answers and allow each group to reach some sort of consensus. Groups may need help with the math questions. Afterwards, ask students if they would rather eat the apple from Maine or the apple from Washington.

Name: _____

APPLE FROM WASHINGTON

VS.

APPLE FROM MAINE



Is this apple part of the
Local food system?

Miles Traveled
(Estimate)

If the cost of gas is \$3.49 per gallon,
how much money is spent on gas to
bring the apple to you if the truck
it's riding in gets 6 miles per gallon?



Place a check mark next to the apple
that impacts the environment the least.

Place a check mark next to the apple
that is fresher and more nutritious.

Place a check mark next to the apple
that "feeds" the Maine economy.

Place a check mark next to the apple
that provides more jobs for Maine.

Place a check mark next to the apple
that you most want to eat.

Why?

Maine Foods for Maine Kids: *Plan to Plant!*

Grade Level: 6th grade

Objectives: Students will

1. Read seed packet and determine how to plant and grow a vegetable.
2. Observe and compare seeds from various vegetables.
3. Plant seeds according to planting instructions (extension activity).
4. Illustrate a planting plan of their own garden (extension activity).

Time: 30 minutes (Optional planting extension – 25 minutes)

Materials:

Space to record student responses

7 or more seed packets for various vegetables, or photocopies of front/back of seed packet and baggies with the corresponding seeds. Try to have one real seed packet so students can see it. You may be able to get free seed packets of old seeds at Fedco or Johnny's if you explain they are not needed for germinating, just for teaching purposes.

Student worksheets (provided)

Extension Activity Materials:

7 large plastic tubs, about 12" deep

Potting soil filled about ½ way in each tub

Graph paper and pencils (optional, for extension activity)

Procedure:

Introduce yourself and the Maine Harvest Lunch program – see the introduction page for some background information.

1. Explain to the class that one way to eat Maine grown foods is to grow a garden at home! Growing a garden is easy and fun to do with family and friends. Ask students what a garden needs to be successful (soil, water, sun, air – and a little love!). Today they are going to practice planting and planning a garden of their own. Hopefully they can take the methods home and begin planning their own garden over the winter, and build and plant it in the spring.
2. Explain that the class will work in groups, and that each group will receive a packet (or photocopy with front and back of packet) of a different type of seed. There are instructions on the back of each packet which help gardeners plant seeds and grow plants. As a group, use the worksheet (provided on page 26) to answer questions about your vegetable. Please do not open the seed packets yet; we will do this soon!

3. Divide the class into six equal groups. Distribute seed packets (or photocopies) and worksheets. Ask students if they are familiar with or have guesses about the key words on the seed packets. Then review the following vocabulary, which will help students complete their answers as they work in groups. (Note – other seed packet may have different vocabulary; review words appropriate to your packets.)

Sow – To plant, or place seeds in the ground.

Germinate – To sprout, or begin to grow.

Thin – To remove seeds once they have germinated to reduce overcrowding to provide enough space for plants to grow.

4. Review worksheet answers as a class. How did answers vary between different types of vegetables?
5. Conclude the lesson by asking students about how to plant their seeds, if all seeds look the same, and what it takes to grow a garden. Do any students plan on planning and planting a garden with their family this spring? Eating locally grown food is important, and you can't get more local than walking into your backyard to get your food. You can also go to a local farm stand or farmers' market to purchase locally grown foods if you don't have a garden or want a different food not grown in your garden (or if you want more!).

Optional Extension Activity (25 minutes)

1. Tell students they are now going to plant their seeds, using the directions on the back of the seed packets (or photocopies). Distribute plastic tubs filled with soil.
2. Use one type of seed, such as a carrot seed, to demonstrate. Show students the seed and make observations. Is this what they thought a carrot seed would look like? Read aloud the planting/sowing directions on your seed packet and show students how to properly plant your seeds in your plastic tub.
3. Have students open their seed packets (or distribute seeds in baggies). Each group should show their seed to the class, and make observations. How does this seed compare to the seed you had? Does it look the way they thought it would? Does it look like a vegetable they've eaten, or part of a familiar vegetable? How do the sizes compare? (Many more observations can be made – keep them coming! Some students may have never seen a seed before, so this could be a new experience for them.)
4. Have students follow the planting directions on their seed packets to try and “plant” their seeds in the plastic tubs. Encourage the class to share how they planted their seeds in contrast to other groups.

5. Have one student from each group bring their tub to the front and assemble all the tubs into one garden with many vegetables. Look how easy it was to plant a garden! Ask students if their plants are in a good location compared to the other plants – how far away were they supposed to be from other plants? If time permits, measure how far away each should be from the other depending on the planting instructions.

Additional Extension activities:

- Use graph paper so students can plan an entire garden, incorporating scale and the planting directions of various vegetables. How far should they space each plant, and how big will the entire garden need to be? Perhaps they'd like two or more gardens!
- Explore the concept of companion planting, including using natural means to deter pests (ex. planting marigolds with tomato plants).
- Research the locations of local farm stands and farmers' markets. Use www.getrealmaine.com or www.mainefoods.net as resources. Generate a list, or use a local map to mark the locations in comparison to students' houses, the school, the local grocery store, etc. Measure distances. Is the farm stand closer to the students' home than the grocery? Talk about transportation to the grocery versus the farm stand versus your backyard garden. What energy is used? Are any foods in the grocery locally grown? Do all products at the farm stand come from the farm? You can even calculate fuel costs or other transportation costs.

Names:

Plan to Plant!

Check out the front of your seed packet. What type of seed do you have?

What variety of vegetable is it (hint: see the smaller name beneath the first answer)?

Flip the seed packet over. Information on the back of seed packets relates to how to plant and grow the vegetable successfully. You should also see the type of seed and the variety again at the top.

When should you plant, or sow, this seed?

How do you plant, or sow, this seed?

How far apart should this seed be from other plants?

How long does it take for your seed to germinate, or sprout?

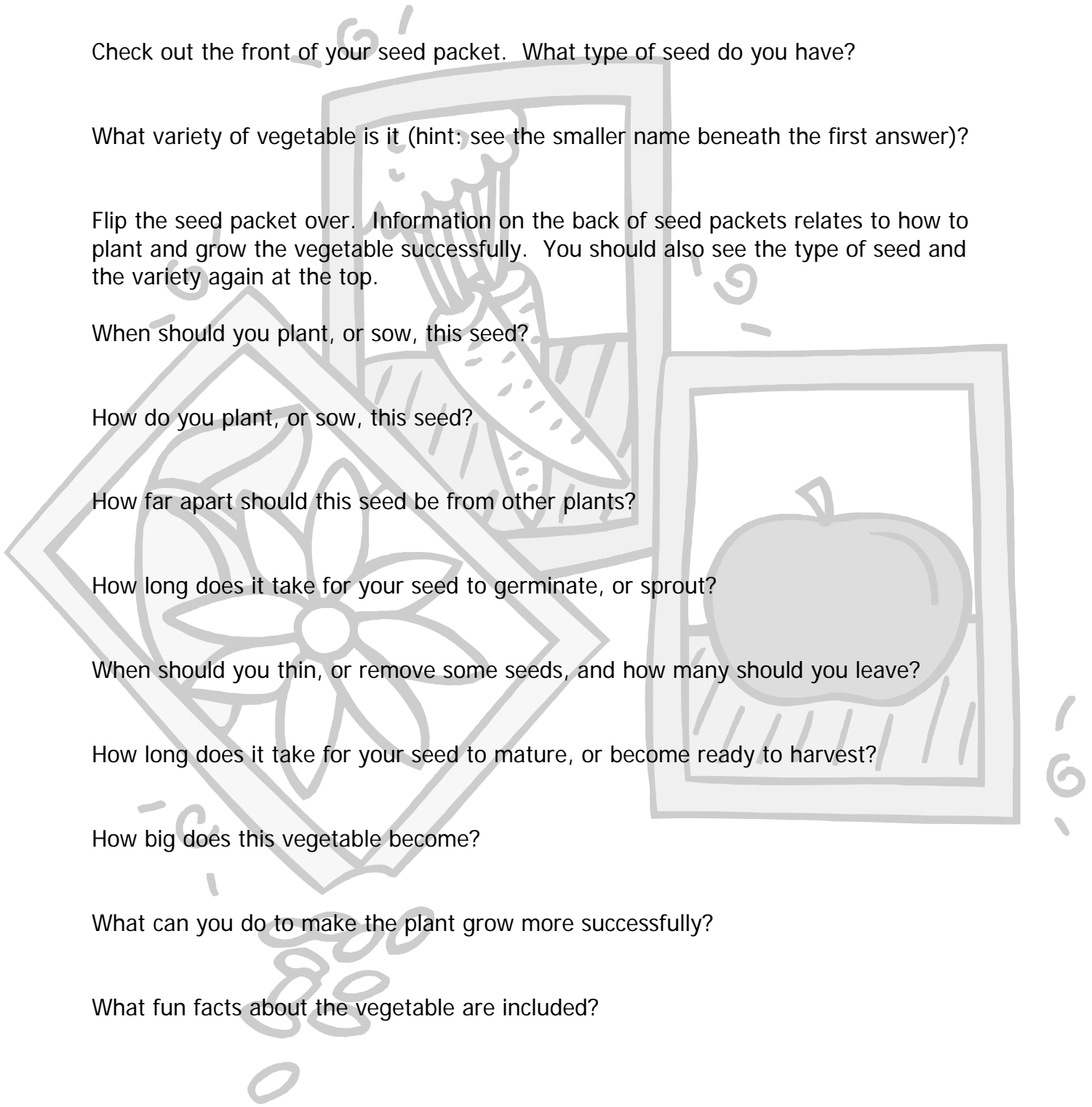
When should you thin, or remove some seeds, and how many should you leave?

How long does it take for your seed to mature, or become ready to harvest?

How big does this vegetable become?

What can you do to make the plant grow more successfully?

What fun facts about the vegetable are included?



Unfamiliar words on the packet:

Maine Foods for Maine Kids: *The True Cost of Food*

Grade Level: 7th grade

Objectives: Students will

1. Define monocropping, federal subsidies, diversity, and locally grown foods.
2. Explain the difference between cheap and affordable foods.
3. Identify 3 hidden costs in food that is grown with less sustainable methods.

Duration: 30-40 minutes

Materials:

10 pieces of large paper (flip-chart size)

Markers

Tape

The Sierra Club's *True Cost of Food* video (www.truecostoffood.org) (15 minutes) / or *King Corn* film (45-60 minutes) *

Media player and screen

* The *True Cost of Food* is cartoon format film which explores the negative aspects of industrial farming vs. small scale, locally produced food. *King Corn* is a documentary (see description in the Advanced/Supplemental Resources section, following the Grade 8 lesson of this curriculum) which touches on similar key points, yet in a more neutral and exploratory tone.

Procedure:

1. Prepare the 10 flip-chart pages before the presentation, by writing each of the words and symbols below on 1 page:

MONOCROPPING	+	SUBSIDIZED FACTORY FARMED FOOD	=	"Cheap" Food
DIVERSITY	+	FRESH LOCALLY PRODUCED FOOD	=	"Affordable" Food

Introduce yourself and the Maine Harvest Lunch program – see the introduction page for some background information.

2. Before showing the film, tell the students that they will need to understand a few terms that will be mentioned in the video. Tell them you will show them two word equations that will prepare them to understand these new concepts.

- a. On a wall on the left hand side of the room, tape up the page that says “MONOCROPPING”.
 - Ask if any students know what this term means.
 - Then explain: It means mass-producing 1 crop, which can lead to more “pest” problems and the need to use more pesticides, depletes soils, and produces less disease resistant plants. Less healthy plants can mean poor quality, taste, and nutrition.
- b. On a wall on the right side of the room, tape up the page that says “DIVERSITY”.
 - Ask if any students know what this term means.
 - Then explain: In this case, it means planting various crops or raising a variety of animals in an area to minimize the impact of any one species or variety on the environment, as well as the ability for a disease or pest to affect an entire crop. Food that is raised in a healthy environment will require minimal or no antibiotic or pesticide use, and produces food that is healthier for us.
- c. On the left wall, after “MONOCROPPING”, tape up the “+” and then the “SUBSIDIES” page.
 - Ask if any students know what the term “SUBSIDIZED” means.
 - Then explain: Subsidies are money given to farmers by the government (which comes from our taxes) to decrease the cost to consumers and increase the supply of food. In 2000, the U.S. food supply provided 3,800 calories per person per day. The average American consumed 2,700 calories per day, creating an overabundance of food that is often poorly managed and wasted. (*Source: Center for Sustainable Systems, University of Michigan, www.css.snre.umich.edu/css_doc/CSS01-o6.pdf*)
 - Ask if anyone knows what a “FACTORY FARM” is.
 - Then explain it is where large quantities of food are produced in a small space, which can lead to disease and pollution.
- d. On the right wall, after “DIVERSITY”, tape up the “+” and then the “FRESH, LOCALLY PRODUCED FOOD” pages
 - Ask if any students know what this term means.
 - Then explain: Food that is distributed within the local economy instead of being shipped thousands of miles uses far less fuel, and the less time between harvesting and eating it, the more flavorful and nutritious it will be. Buying locally also supports the farmers and your local economy, and ensures that you will have access to good food in your community in the future.
- e. On the left wall, tape up the “=” and then the “Cheap Food” pages.
 - Ask if any students know what this term means.
 - Then explain: “Cheap” food will appear to cost less at the check-out, but there are more hidden costs that we do pay for in our taxes, environmental damage and clean-up, and perhaps even a greater need for healthcare to deal with these effects.
- f. On the right wall, tape up the “=” and then the “Affordable Food” pages.

- Ask if any students know what this term means.
 - Then explain: “Affordable” food is food with very few hidden costs. There is less damage to the environment, farmers make a decent living and can continue farming, and food is more nutritious and tastes better. We know the real cost to produce the food we eat and we choose to pay these costs up front instead of fooling ourselves into thinking the “cheap” food is really less expensive.
3. Play the 15-minute film (recommend ending when then family drives away from the farmer’s market, to avoid mixed messages with alcohol consumption at dinner table in last scene).
 4. Optional: If there is time at the end of the film, there are many great follow-up questions that can be pulled from the discussion guide for this film, downloadable for free at: www.truecostoffood.org/discussionguide.pdf

Maine Foods for Maine Kids: *Be a Young Agrarian!*

Grade level: 8th Grade

Objectives: Students will

1. Observe real time world population growth and farmland decline.
2. Discuss the challenge of a growing population and decreasing space to grow food.
3. Watch a film called “Young Agrarians.”
4. Discuss ways to purchase local foods in their community.
5. Discuss ways to become more involved in agriculture.

Time: 25 – 30 minutes

Materials:

Projector

Screen

Laptop or computer with internet access

Procedure:

NOTE: This presentation is designed to be done as an assembly; however, it can be easily adapted to a classroom setting.

1. As students proceed into the auditorium, they see a live website projected onto a screen with a running real-time world clock showing growing world population vs. loss of productive/farmable land (www.tranquileye.com/clock/). Fade the screen once students are settled in.
2. Introduce yourself and the Maine Harvest Lunch program – see the introduction page for some background information.
3. Bring numbers back up on the screen, then ask students:
 - What do you think the numbers on the screen means?
 - Is an increasing population and decreasing farmable land a problem? Why?
 - What can we do to change what is happening to farmland? How will those actions impact, or create, change?
4. Prepare students to watch a short (8 minute) film called “Young Agrarians” about how young people are having an impact on the future of farming. Explain that the film takes

place in California, but here in Maine we are also seeing a growing interest in agriculture by young people, and it is helping to change our environment for the better.

5. Watch “Young Agrarians” (Media that Matters Film Festival at http://www.mediathatmattersfest.org/mtm_good_food/ - Select FILM #7).
6. Host a post film discussion using the following questions:
 - Would you consider your town to be more rural, urban, or somewhere in between (urban = city/rural = country)? How might this make it easier or more challenging to buy local food than in other communities?
 - Are there ways that you and your family can buy local foods here in your community? Provide some examples. (As an extension activity, students can research the locations of local farm stands and farmers’ markets. Use www.getrealgetmaine.com or www.mainefoods.net as resources. Generate a list, or use a local map to mark the locations in comparison to students’ houses, the school, the local grocery store, etc. Measure distances. Is the farm stand closer to the students’ home than the grocery? Talk about transportation to the grocery versus the farm stand versus your backyard garden. What energy is used? Are any foods in the grocery locally grown? Do all products at the farm stand come from the farm? You can even calculate fuel costs or other transportation costs.)
 - Are there ways students can work on promoting the importance of buying local food in their community? Ask students to generate ideas and think of them as potential projects that they can organize themselves around. Remind them that young people can create big changes!

Advanced/Supplemental Resources

Following is a partial list of films and books that explore elements of our food system further, and may be considered for extension activities or as a supplement for grades 9-12 classroom discussion (lessons for these grades are currently in development). The content of these resources are not considered to be endorsed by the authors, sponsors or reviewers of this curriculum. They are provided for educators who would like to explore these topics in greater depth, and should be screened for content and age appropriateness.

Films

Fridays at the Farm (*Richard Power Hoffman*) – Documentary; Feeling disconnected from their food, a photographer/filmmaker and his family decide to join a community-supported organic farm. Hoffman moves from passive observer to active participant as he photographs the natural processes of food cultivation. Featuring lush time-lapse and macro photography sequences compiled from nearly 20,000 still images, this personal essay is a meditation on the miracles of life.

King Corn (*Aaron Woolfe, Ian Cheney & Curt Ellis*) – Documentary; **King Corn** is a feature documentary about two friends, one acre of corn, and the subsidized crop that drives our fast-food nation. Ian Cheney and Curt Ellis, best friends from college on the east coast, move to the heartland to learn where their food comes from. With the help of friendly neighbors, genetically modified seeds, and powerful herbicides, they plant and grow a bumper crop of America's most-productive, most-subsidized grain on one acre of Iowa soil. But when they try to follow their pile of corn into the food system, what they find raises troubling questions about how we eat—and how we farm. (*Note: This film is available in an educational length format).

Super Size Me (*Morgan Spurlock*) – Documentary; Filmmaker Morgan Spurlock makes himself a test subject in this documentary about the commercial food industry. After eating a diet of McDonald's fast food three times a day for a month straight Spurlock proves the physical and mental effects of consuming fast food. Spurlock also provides a look at the food culture in America through it's schools corporations and politics. **Super Size Me** is a movie that sheds a new light on what has become one of our nation's biggest health problems: obesity.

The Future of Food (*Deborah Koons Garcia*) – Documentary; Shot on location in the U.S., Canada and Mexico, **The Future of Food** examines the complex web of market and political forces that are changing what we eat as huge multinational corporations seek to control the world's food system. The film explores the health implications, government policies and push towards globalization and rising concerns about the presence of genetically altered crops into our food supply. (*Note: This film is available in an educational length format. A year-long University level Environmental Studies curriculum has also been developed in conjunction with this film.)

Media That Matters Film Fest Clips (*Various*) – This website hosts a variety of clips and short films that could provide a springboard for numerous discussions about food and sustainability. The film styles range from documentary to cartoon, exploring perspectives from different generations, including rural and urban experiences.

http://www.mediathatmattersfest.org/mtm_good_food/

Books

Plenty: One Man, One Woman, and a Raucous Year of Eating Locally (*By Alisa Smith & J.B. MacKinnon*) – Non-fiction; On the first day of spring in 2005, Alisa Smith and James MacKinnon – a young couple living in the city of Vancouver - started a culinary revolution. They didn't know it at the time. All they were trying to do was defy the disappointing statistic that the average food item on a North American plate travels the distance between Boulder, CO and New York City to get to our plates. For one year, they ate within a 100 mile radius of their home. The diet would, perhaps, seem less daunting in a place like Los Angeles or Southern Florida, but that's not where James & Alisa lived. This is the story of their year of eating close to home.

Animal, Vegetable Miracle: A Year of Food Life (*By Barbara Kingsolver, Camille Kingsolver & Steven L. Hopp*) – Non-fiction; Part memoir, part journalistic investigation, this book tells the story of how a family of four was changed by one year of deliberately eating food produced in the rural place where they live. Barbara wrote the central narrative; Steven's sidebars dig deeper into various aspects of food-production science and industry; Camille's brief essays offer a nineteen-year-old's perspective on the local-food project, plus nutritional information, meal plans and recipes.

The Omnivore's Dilemma (*By Michael Pollen*) – Non-fiction; In this groundbreaking book, Pollen turns his own omnivorous mind to the seemingly straightforward question of what we should have for dinner. To find out, the author follows each of the food chains that sustain us— industrial food, organic or alternative food, and food we forage ourselves—from the source to a final meal, and in the process develops a definitive account of the American way of eating. His absorbing narrative takes us from Iowa cornfields to food-science laboratories, from feedlots and fast-food restaurants to organic farms and hunting grounds, always emphasizing our dynamic co-evolutionary relationship with the handful of plant and animal species we depend on.

The Art of the Commonplace: The Agrarian Essays of Wendell Berry (*By Wendell Berry*) Non-fiction; The Art of the Commonplace gathers twenty-one essays by Wendell Berry that offer an agrarian alternative to our dominant urban culture. These essays promote a clearly defined and compelling vision important to all people dissatisfied with the stress, anxiety, disease, and destructiveness of contemporary American culture. Through his staunch support of local economies, his defense of farming communities, and his call for family integrity, Berry emerges as the champion of responsibilities and priorities that serve the health, vitality, and happiness of the whole community of creation.

Four Season Harvest: Organic Vegetables from your Garden All Year Long (By Eliot Coleman, Barbara Damrosch & Kathy Bray) – Non-fiction; Eliot Coleman introduces the surprising fact that most of the United States has more winter sunshine than the south of France. He shows how North American gardeners can successfully use that sun to raise a wide variety of traditional winter vegetables in backyard cold frames and plastic covered tunnel greenhouses without supplementary heat. A true innovator, with humor and entertaining insightfulness, Coleman expands upon his own experiences with new ideas learned on a winter-vegetable pilgrimage across the ocean to the acknowledged kingdom of vegetable cuisine, the southern part of France, which lies on the 44th parallel, the same latitude as his farm in Maine.

For a more extensive database of food related films and books, visit:

<http://creator.zoho.com/showViewLinkAlone.do?viewLinkId=2&link=true&sharedBy=howardp>