

Garden topic: Planting Correctly

Lesson: Where does our food come from?

Goal: Teach children about how fruits and vegetables grow.

Objectives:

- Children will learn the steps in the food system.
- Children will learn about where fruits and vegetables come from.
- Children will plant their own seed to take home.

Overview:

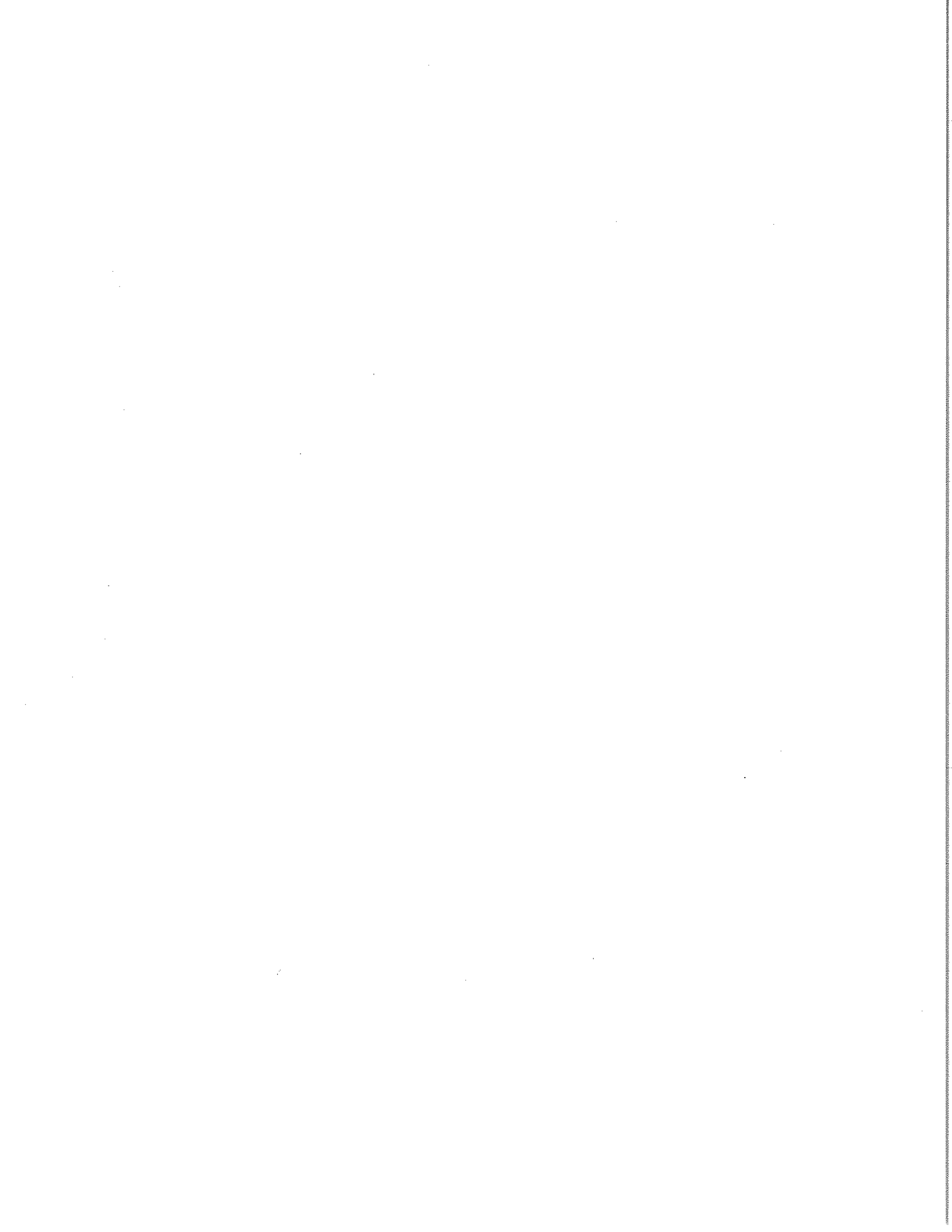
- Activity: Making cheese from a rock
- Lesson: Where does our food come from?
- Activity: *The Story of Miguel's Tomatoes*
- Garden topic: Planting correctly
- Activity: Seed planting

Supplies:

- Sheets of paper for *Making Cheese from a Rock* activity
- *The Story of Miguel's Tomatoes* story
- *Food Systems* diagram
- *The Story of Miguel's Tomatoes* picture-drawing handout
- Soil
- Seeds
- Plastic cups
- Trowel

Activity: Making Cheese from a Rock

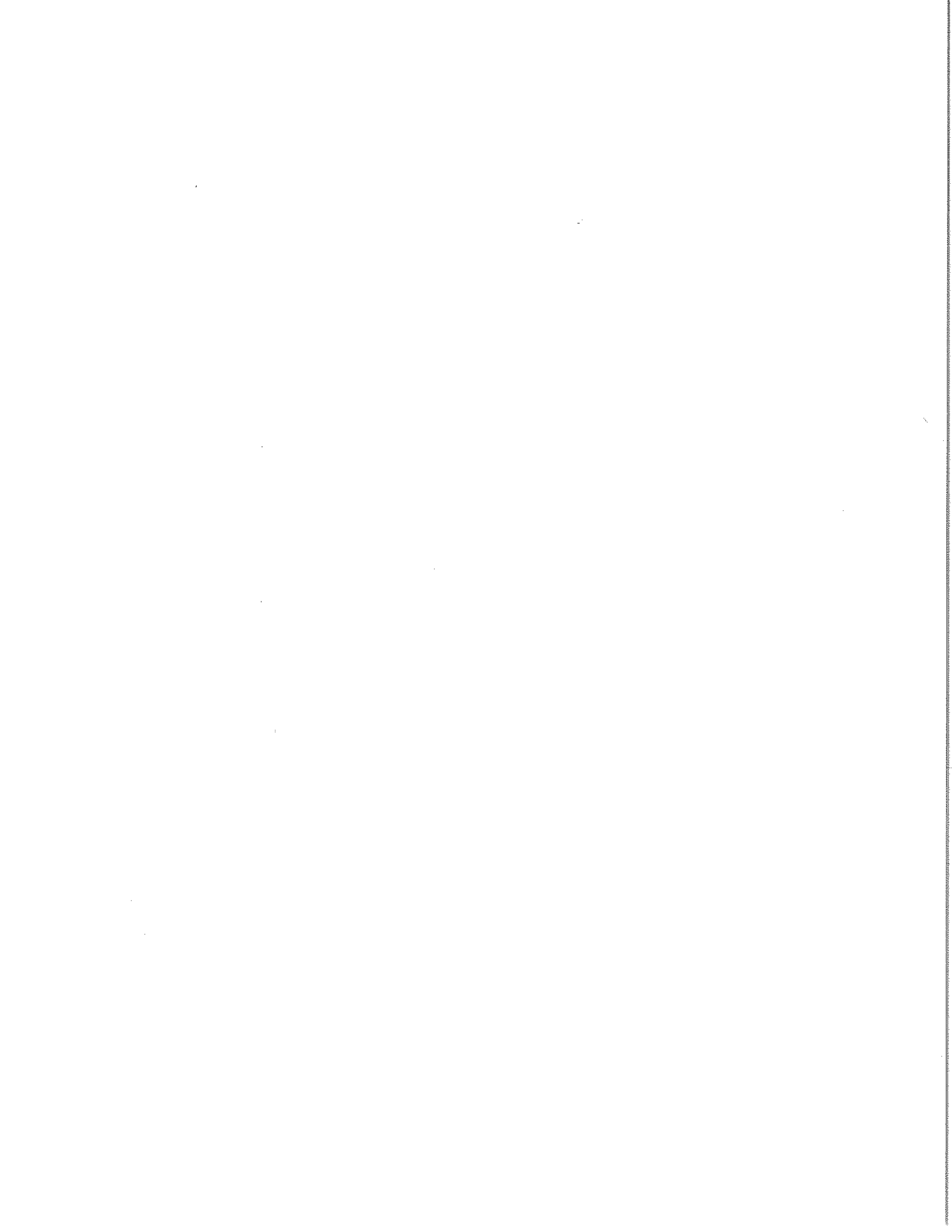
- Ask: Do you think it's possible to make cheese from a rock? We are going to do an activity to show that you can make cheese from a rock!
- Give each child a step/picture (can write/draw them on individual sheets of paper) and help them line up in the following order, while discussing each step:
 - Rock: the basis for all soil is rock
 - Wind and rain: weathers the rock
 - Gravel/sand: rocks weather to become sand, clay, and gravel
 - Dead leaves: sand, clay, and gravel mix with organic matter
 - Soil: these become soil
 - Grass: soil is a habitat for plants like grass, which becomes hay
 - Sun: grass grows by the energy of sunlight, through a process called photosynthesis
 - Hay: hay is harvested from grass



- Cows: cows eat hay
- Milk: cows produce milk
- Farmer: the farmer uses the milk to make cheese!
- Ask children again if they think we can make cheese from a rock

Lesson: Where does our food come from?

- Ask: Where do we get our food? (If they say the market or grocery store, ask where do you think the store gets the food?) Food starts with the farmer!
- Now tell the children that you are going to read a story about a farmer and his tomatoes. Ask them to think about all of the things that might happen to the food before it is eaten. Read *The Story of Miguel's Tomatoes* out loud to the children.
- Hold up the *Steps in the Food System* picture and discuss the different steps
- Now we're going to discuss the steps of the food system that we read about in *The Story of Miguel's tomatoes*
 - Getting ready to grow food
 - What did Miguel need to begin growing his tomatoes? Seeds, fertilizer, a plough and land. What would happen if these were not available? Could Miguel grow tomatoes without these supplies?
 - Growing the food
 - What did Miguel need for the tomatoes to grow? Sunshine, rain, his hands to work, weed and care for the tomatoes (labor), understanding of growing food, the land and agriculture (education/knowledge). Could Miguel's tomatoes have grown if these were not available?
 - Moving food from the field
 - Where were Miguel's tomatoes moved to after he and Ana picked them?
 - Some were taken to Miguel and Ana's house to be eaten for dinner or to be put into jars to store. The rest were taken to the village market by Miguel in a cart. At the village market they were loaded into a truck and taken to the city. Some were taken to the city market. The rest were taken to the food processing factory.
 - How far did the tomatoes travel for Miguel and Ana's dinner? How far did the tomatoes travel to get to the city? How did they make this journey? (Miguel's cart, Pedro's truck). What would happen to the tomatoes if the cart or truck broke down on the way?
 - Processing, selling or storing food
 - How did Ana process the tomatoes? How did Miguel sell his tomatoes? How did Pedro re-sell the tomatoes? What happened to the tomatoes at the food processing factory?
 - Preparing and eating the food
 - Discuss how people need money to buy food unless they grow their own as Miguel and Ana do. Discuss how people must understand how to use the food



safely and choose foods that keep them healthy. Discuss the problems that could arise with each of the above steps and how the food would then not be available for people to eat. Discuss the difference between the tomatoes that were eaten directly by Miguel and Ana from their field and the tomatoes that came back in a can.

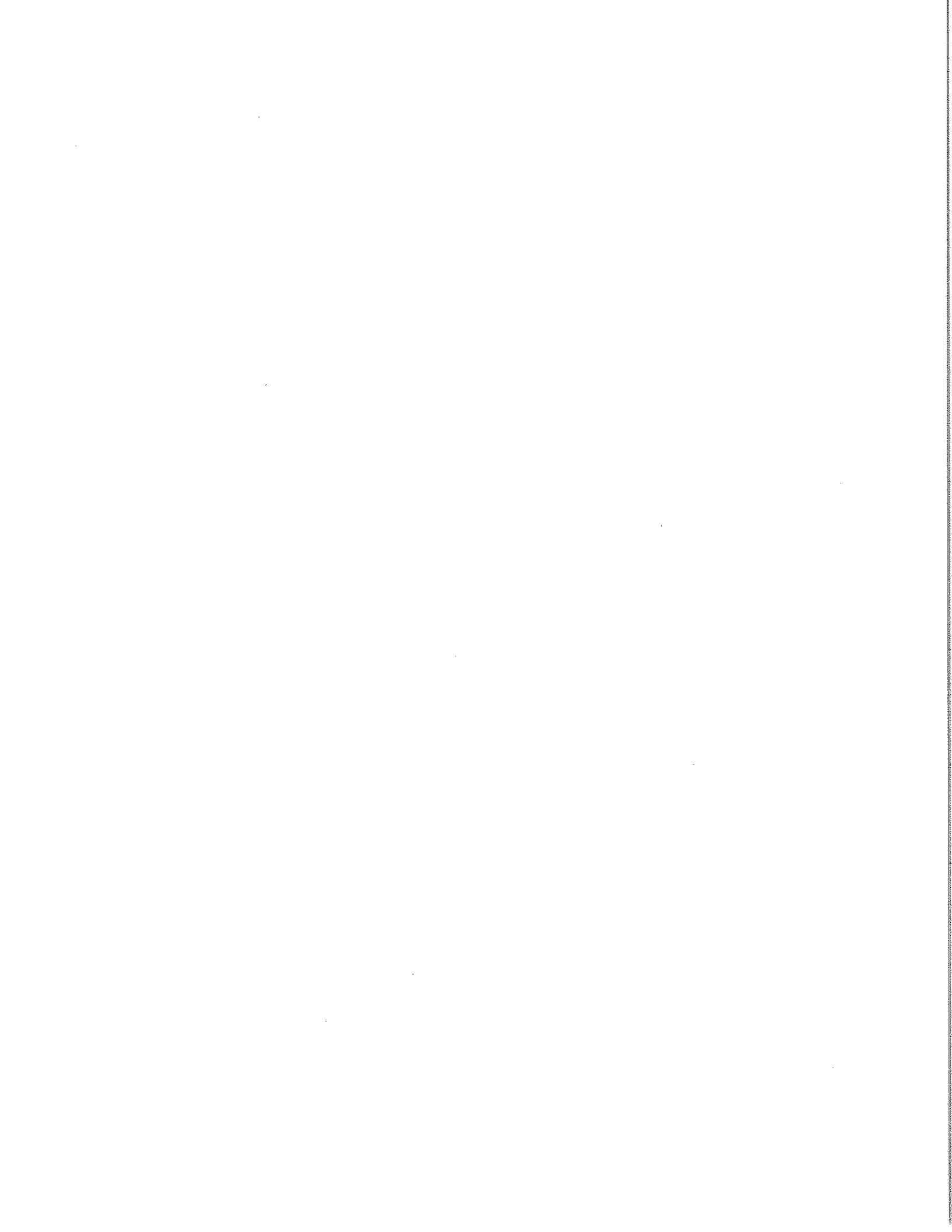
- Activity: For each step in the food system process, have them draw a picture to describe it.

Garden topic: Planting correctly

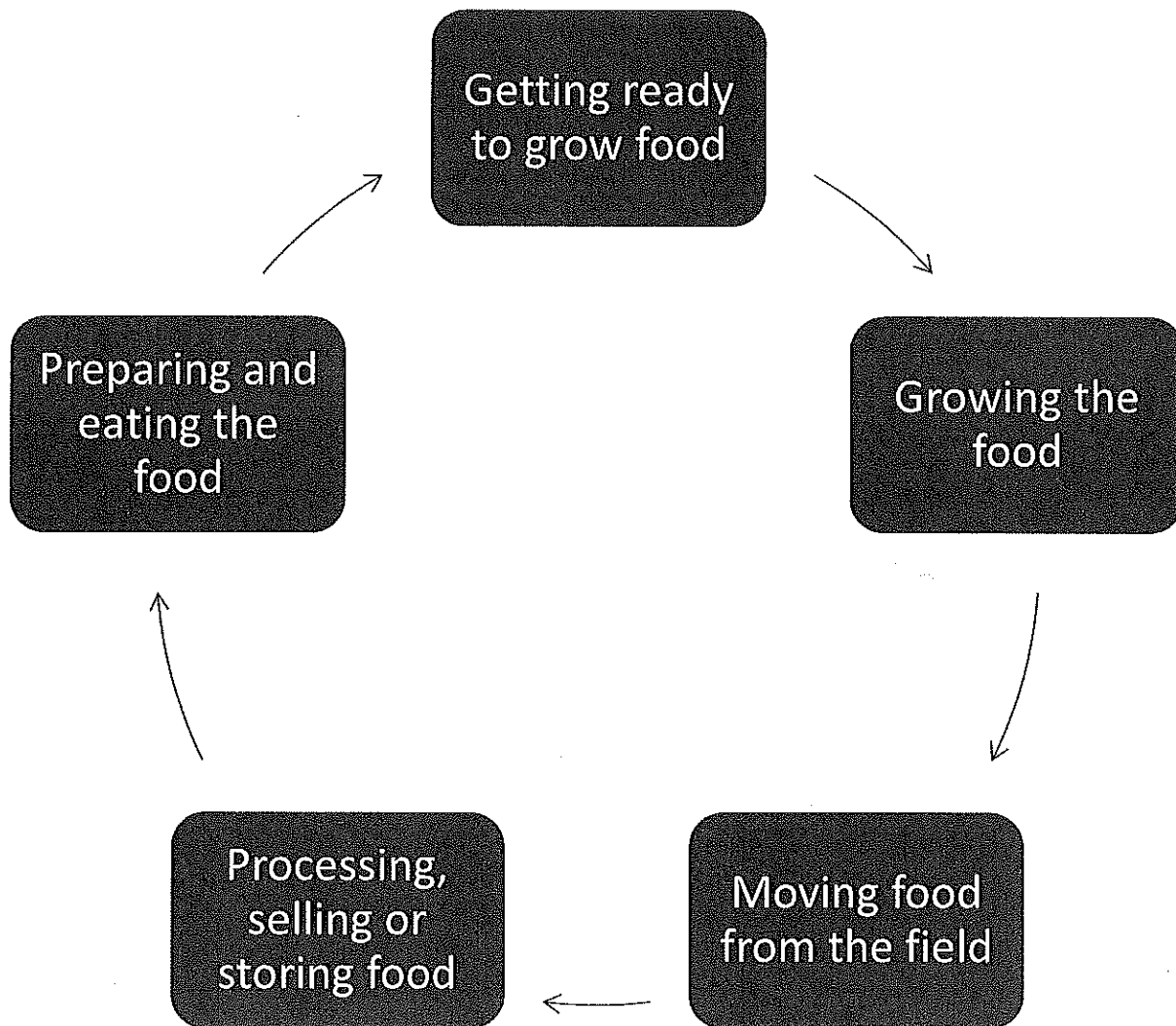
- Ask: If you wanted to plant a garden, what would you have to do?
 - Seed or seedling?
 - Seedlings: little baby plants that can be planted directly into your garden
 - Seeds: come in packets and will turn into a seedling and eventually, a full-grown plant
 - Prepare the ground
 - Remove large sticks, rocks, roots, and crush any large dirt clods. Seeds and seedlings like a nice smooth area to grow in
 - Plant your seeds or seedling
 - Seeds: dig appropriately-sized holes. Small seeds get small holes and larger seeds get bigger holes. Use your fingers to make the hole so it's not too deep
 - Seedlings: dig a small hole the exact size or a tiny bit deeper than the seedling. Gently pull the seedling out of the container using the base of the stem or by tipping it upside down. Set the ball of the seedling in the hole and fill in the space around the seedling with soil.
 - Spacing
 - Different plants need different spacing in between plants. The seed packet or seedling tag will tell you how much space is needed in between plants
 - Water well
 - Water right after planting and water every day until plants become big and strong

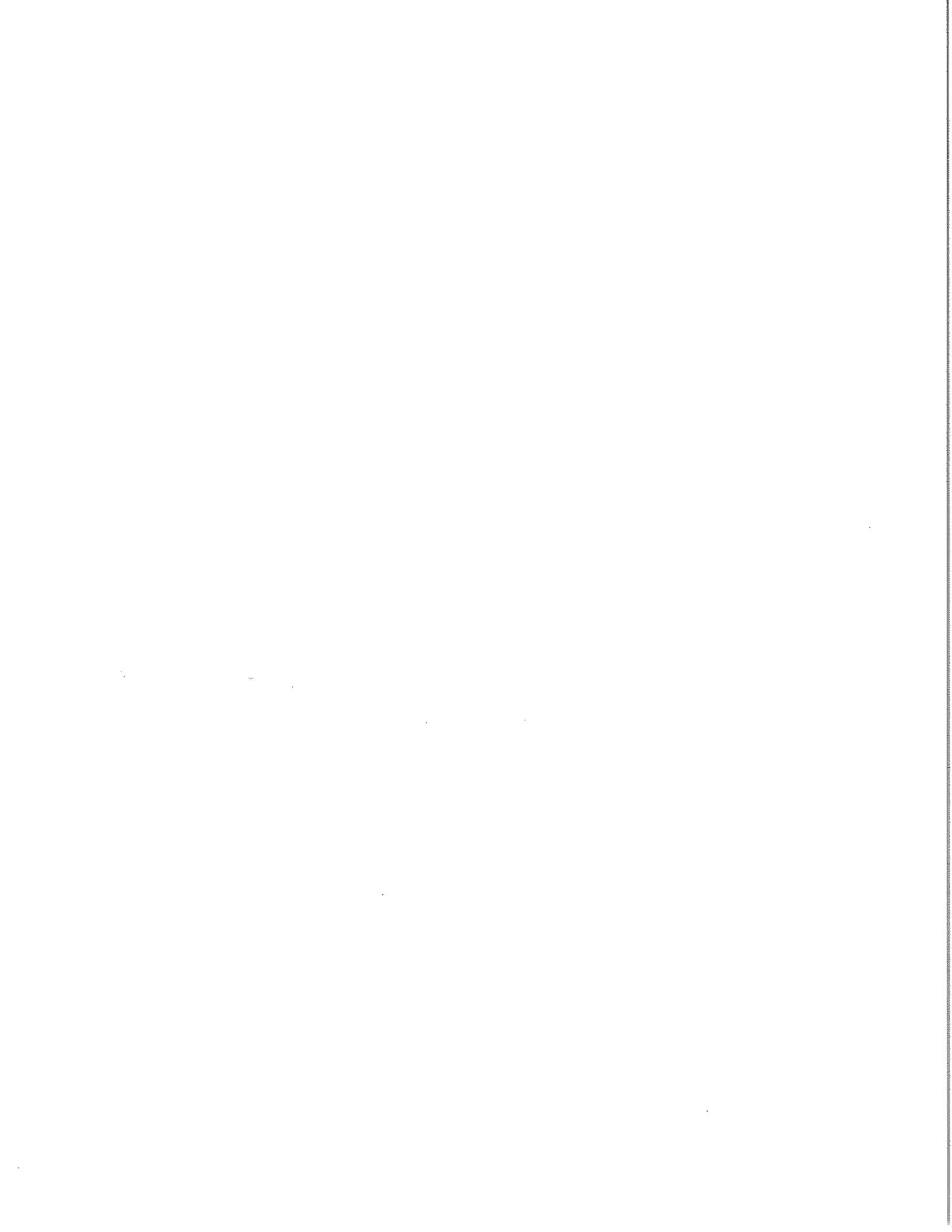
Garden activity: Seed planting

- Explain to children that are going to plant our own seeds to take home so we can see how plants grow.
- Give each child a plastic cup, label it with their names
- Help each child fill the cup almost full with soil, leaving about 2 inches at the top
- Help children plant seeds in their cup at the appropriate depth
- Have each child water their plant and put it near the window



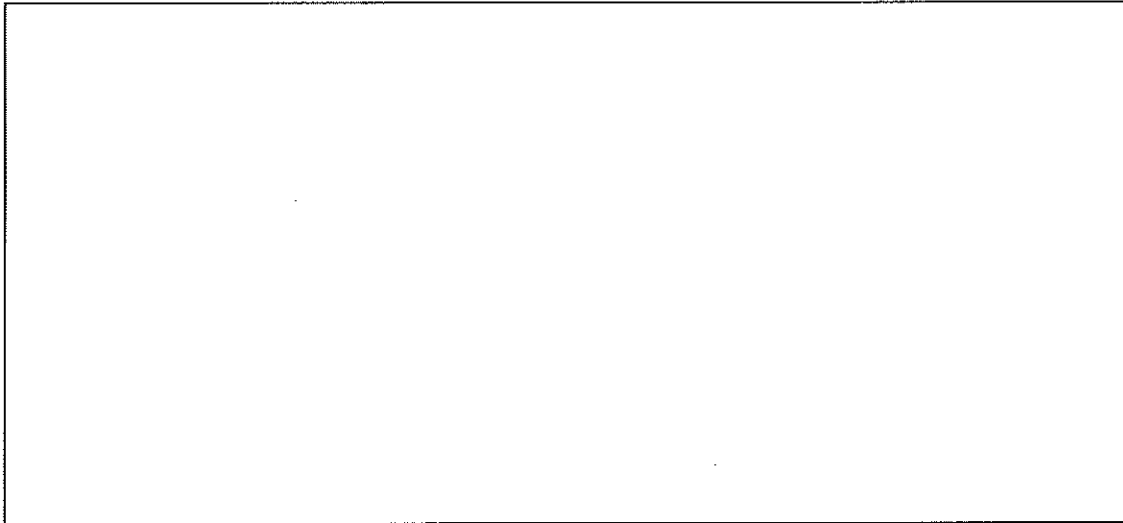
The Food System



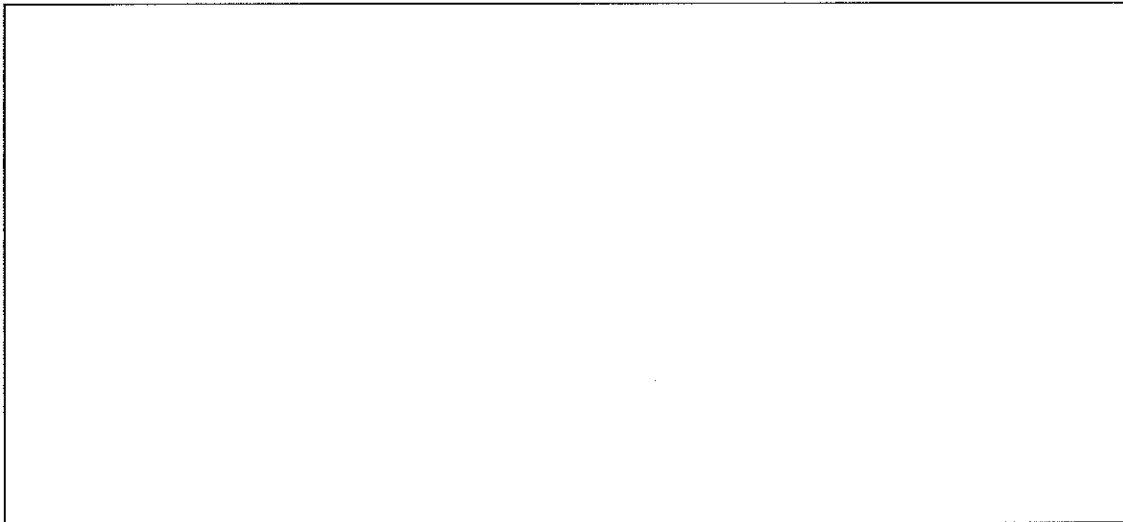


Pretest/Posttest

Draw a picture to show where our food comes from.



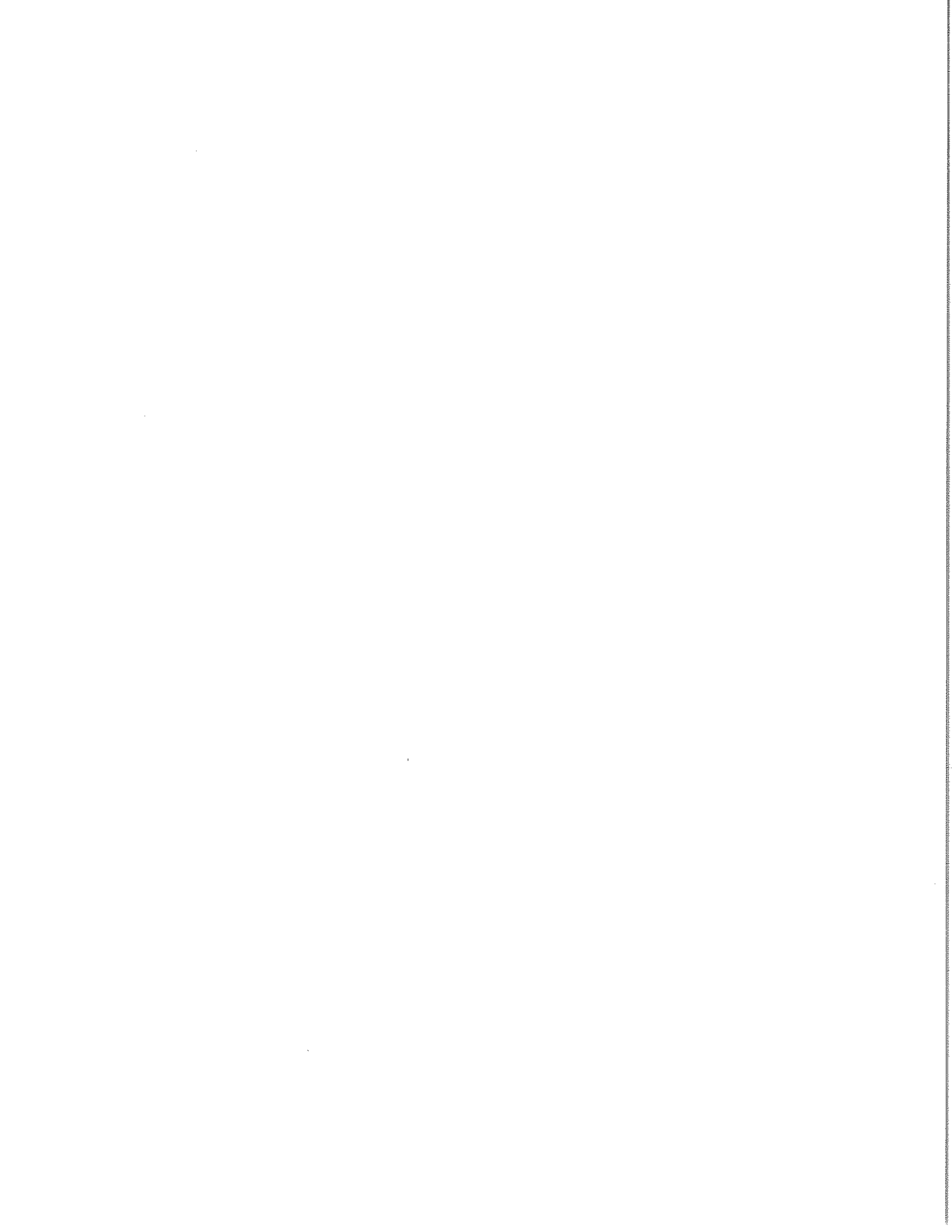
In the space below, write what you think you need to grow a tomato.



If you planted a seed in a pot, do you have to water it right away? (Circle one).

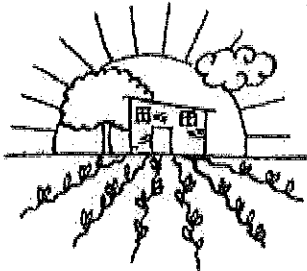
YES

NO



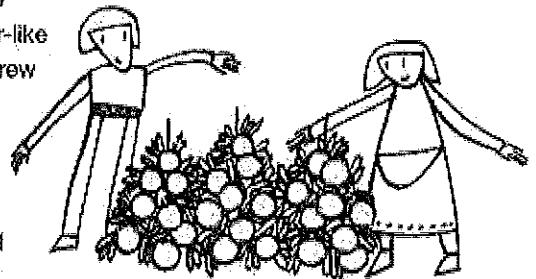
Story of Miguel's Tomatoes

The Tomatoes Grow In the Fields

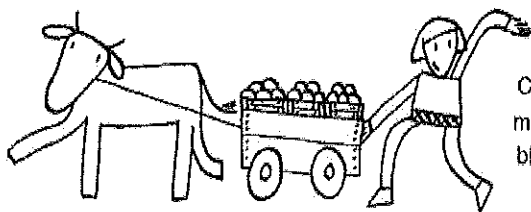


The sun was shining on the field beside a small wooden house. The earth was damp with rain and rich with manure from the animals. Miguel pushed his new plough slowly back and forth across the field, making long rows that looked like tiny mountains in the dark-brown soil. Satisfied that his little mountain rows were neat and straight, he gently planted small green tomato shoots that he had raised from seeds. Many days and nights went by. Rain came and went, and the plants grew tall and thick with leaves. Miguel walked up and down the rows, caring for the plants and adding more droppings from the animals to give nutrients to the soil. One day Miguel saw small yellow flowers

peeking through the green leaves. Soon there were so many flowers that they looked like stars in the sky. And then, under each star-like flower, a tiny, round, green tomato appeared, as if by magic. The tomatoes grew and grew, and changed colour as the days went by. One by one, each tomato turned from dark green, to yellow and then to orange-red. When a tomato became large and red, Miguel knew it would be soft and juicy and ready to eat. He went up and down the rows and picked the tomatoes that were red and ready for his family to eat that day. Miguel brought a small bowl filled with tomatoes into his house. Ana, his wife was happy to see how large and red the tomatoes were and knew they would taste sweet and good. She washed the tomatoes carefully to remove the dirt, and cut them into small pieces to make a sauce for their dinner that evening.



After many days, the field was coloured with bright red tomatoes on the green plants as they stood in long, neat rows. Now many tomatoes were ready to be picked. Ana could not use all of the ripe tomatoes for dinner that night. Early the next morning Miguel and Ana came into the field carrying large flat boxes. They slowly went up and down the rows of tomato plants, gently picking the tomatoes and packing them into the boxes. Miguel and Ana loaded the boxes of ripe tomatoes into their rickety cart. Saying goodbye to Ana, Miguel slowly pushed the cart down the dusty path to the village market.

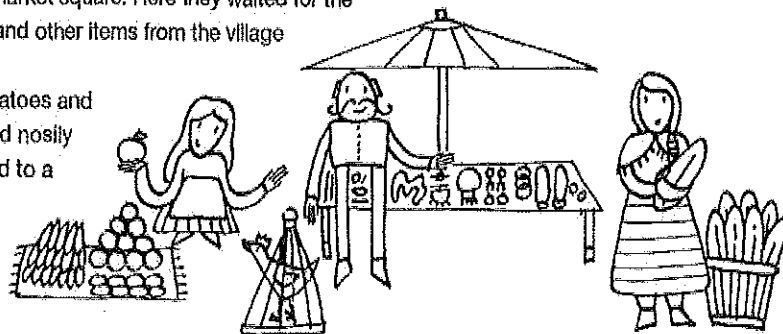


The Tomatoes go to the Village Market

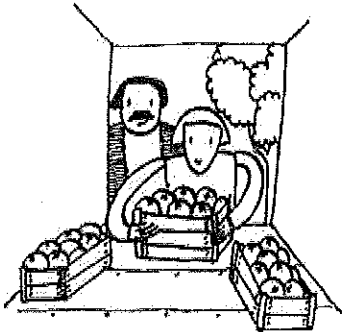
The market square was busy with people unloading goods to sell. Clothing and jewellery, belts and shoes, as well as cakes and breads made early that morning, were spread out for display on tables and blankets under brightly coloured umbrellas. Eggs, meat and cheeses were being kept cool under wet cloths, and fruits and vegetables were carefully stacked into high piles. Some people, including Miguel,

unloaded their boxes on one side of the market square. Here they waited for the people who came in trucks to buy foods and other items from the village and take them to the big cities.

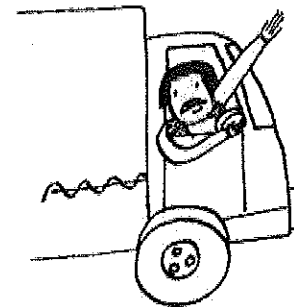
Miguel stood by his boxes of tomatoes and watched as an old battered truck rumbled noisily into the little market square and sputtered to a stop. Pedro waved to the villagers in the market as he jumped out of the truck and slammed the door with a noisy bang. Pedro was happy to see many



Story of Miguel's Tomatoes



people in the market with boxes piled high with fresh, ripe fruits and vegetables. Pedro and Miguel talked about the price and quality of Miguel's tomatoes. When they agreed on a price, Pedro agreed to buy all of Miguel's tomatoes. Miguel then helped Pedro load the boxes of tomatoes into the truck. Pedro visited other people in the market and bought many more fruits and vegetables. Soon the back of the old truck was crowded with fresh fruits and vegetables raised in the village gardens. Pedro knew it was time to start the long journey back to the city. He was satisfied that he would

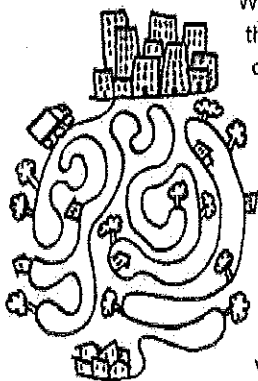


make a profit on the resale of the foods he had just purchased in Miguel's village. Pedro climbed into his truck, carefully started the engine, and slowly pulled out of the market square, with a friendly wave to Miguel, who was pushing his cart back to his little house.

While Miguel was at the market, Ana picked more ripe tomatoes to be made into sauce. She carefully cleaned the jars with hot water and prepared the tomatoes for the sauce. When Miguel returned from the market, Ana had many beautiful red jars of tomato sauce to be eaten long after the summer sun was gone and their fields were covered with white snow. Ana was pleased that Miguel was able to sell all of their tomatoes. She knew that they would now have money to purchase other foods and supplies they needed for the family. After the long day, Miguel and Ana were tired and hungry and were glad to sit down to their evening meal of foods they had raised in their garden, including sauce made from their bright red tomatoes.

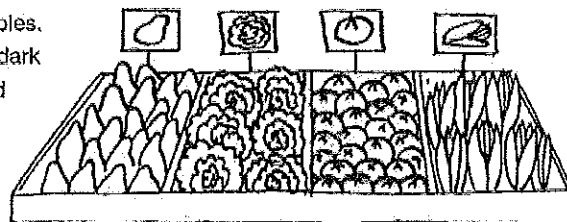


The Tomatoes go to the Big City



While Miguel and Ana were having their dinner, Miguel's tomatoes continued their long journey to the big city. Carefully packed in their boxes, the fresh red tomatoes rumbled along dusty roads, over wooden bridges and through small towns. Many people in the city do not grow their own foods. They must buy everything they need from the great new downtown supermarket, or the market stalls that have been located along the city walls for as long as anyone can remember. For many years, Pedro has gone into villages in the countryside to buy vegetables to sell in the city. He sells his fresh vegetables to the produce manager at the new supermarket, to the people who have market stalls and to the food processing factories on the outside of the city walls.

Pedro's truck came slowly to a stop at the loading dock of the new supermarket. The man from the supermarket was happy to see Miguel's fresh red tomatoes and the other vegetables in Pedro's big truck. Pedro unloaded several boxes of Miguel's tomatoes and other fresh vegetables and fruits and stacked them in a cool dark room filled with other boxes of tomatoes and vegetables. The heavy wooden door slammed shut and the room became dark and quiet. In the morning, workers from the supermarket would stack the tomatoes high in the shiny cool display cases under bright lights in the great supermarket. Busy city people would put the plump red tomatoes into plastic bags and carry them home for dinner.

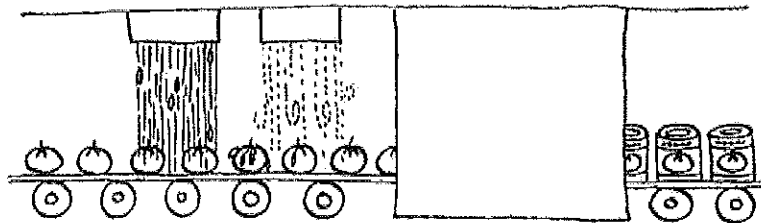


Story of Miguel's Tomatoes

The Tomatoes go to the Food Processing Factory

The rest of Miguel's tomatoes continued their journey through the crowded city streets. All around Pedro's truck, horns were honking and traffic was rushing as a police officer directed Pedro on to the highway leading to the factory district outside the centre of the city. Pedro's truck rolled up to the loading dock of the food processing factory just as the sun was going down behind the city.

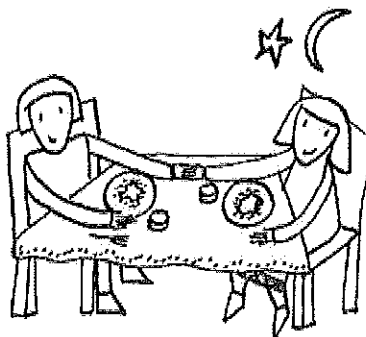
At the factory, strong men carried the boxes of tomatoes from Pedro's truck into the warehouse, talking and laughing as they worked. Long rows of boxes filled with tomatoes and other vegetables were crowded against each other, waiting to enter the factory to be turned into canned food. Boxes of tomatoes were emptied on to the conveyor belt that chugged its way through the factory to each of the processing steps. Miguel's tomatoes were now mixed up with tomatoes from all parts of the countryside. The conveyor belt slowly carried the shiny red tomatoes past the sorters. The sorters examined the tomatoes as they flowed by, looking like a flowing red river of tomatoes. Their hands, wearing plastic gloves, could be seen darting out quickly to remove any tomatoes that were damaged. The tomatoes slowly chugged to the next station, where they were squirted with hot water and tumbled to remove their skins. Next they were dropped into a large tub where they were cooked and spices and salt were added. Miguel's tomatoes were now bubbling in the large tub with all the other tomatoes, smooth and plump in the spicy red juice. They continued their journey to the canning area where they were dropped with a splash and a plop into rows and rows of shiny round cans. With a noisy bang, the cans were sealed. A bright red label with the picture of a tomato was glued on to each can. Workers quickly snatched up the cans and put them into strong brown cardboard boxes.

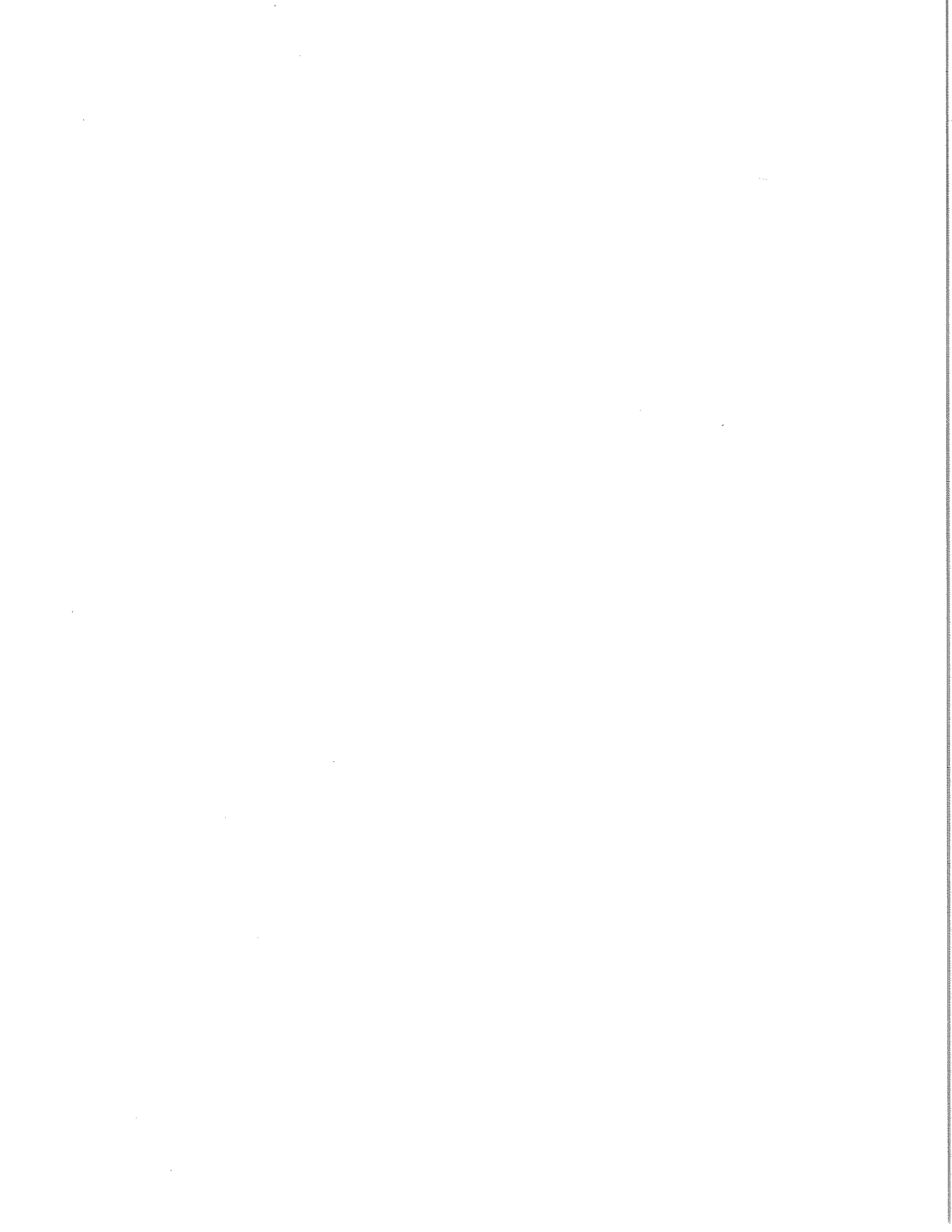


The Tomatoes go Home

Miguel's tomatoes, deep inside the round cans, packed into cardboard boxes, were piled on to an electric cart that took them to the big warehouse to be stored until they were sold. Miguel's tomatoes could spend many months waiting in the warehouse until they were ordered. They could be ordered by someone in the city, or they could travel around the world to a distant place, perhaps even a place where tomatoes have never grown. They could travel in a truck, a train, an aeroplane or a boat. They may be purchased and used for dinner at a hospital, a school, a restaurant, or by a family.

It is even possible that one day Miguel and Ana will go to the grocery store in their small village and buy a can of cooked tomatoes when their own supply of sauce made by Ana is gone. They will sit down to dinner with the canned tomatoes in a sauce. And Miguel will say these tomatoes are delicious, Ana, but not as good as ours. And Ana will reply, yes, not as good as ours, but they are very, very good, indeed. And they will not know that their tomatoes have come back home.

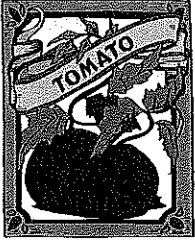




From the Farm to Your Home

Lesson Title: Crops 1: Where Does Food Come From?
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Name: _____



Draw pictures from *The Story of Miguel's Tomatoes* showing different scenes from the journey his tomatoes took from his farm to people's homes.

Step 1: Getting ready to grow food

A large empty rectangular box for drawing. To the right of the box is a small black downward-pointing arrow.

Step 2: Growing the food

A large empty rectangular box for drawing. To the right of the box is a small black downward-pointing arrow.

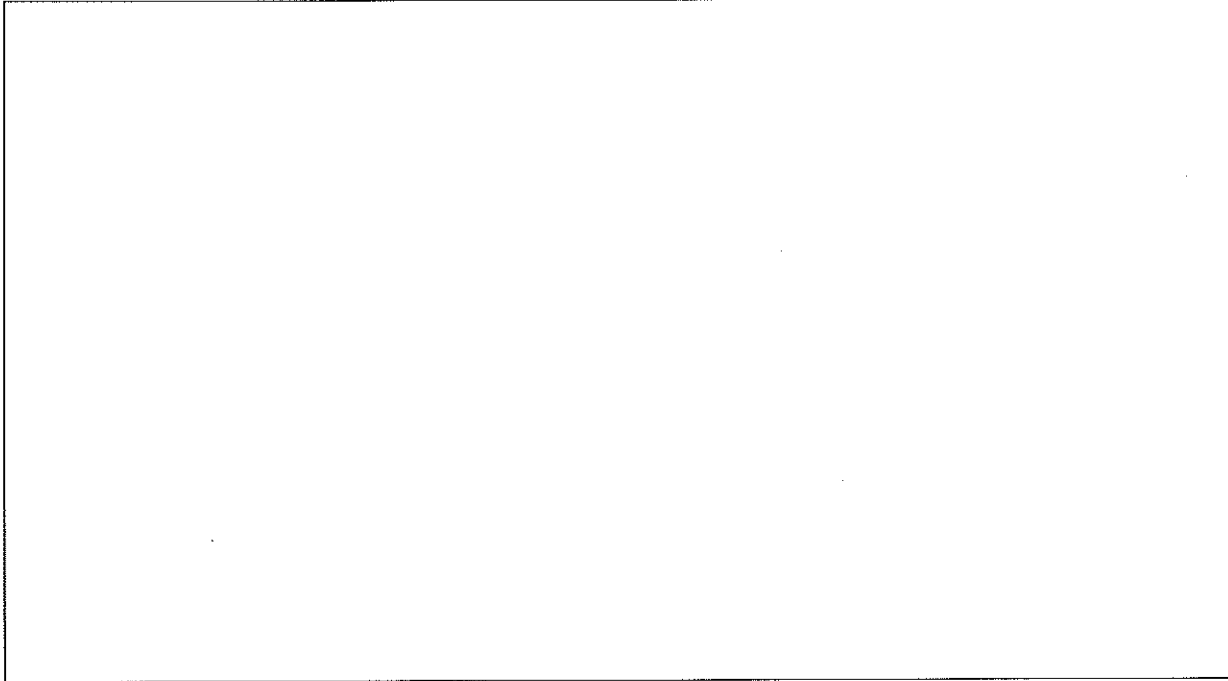
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From the Farm to Your Home

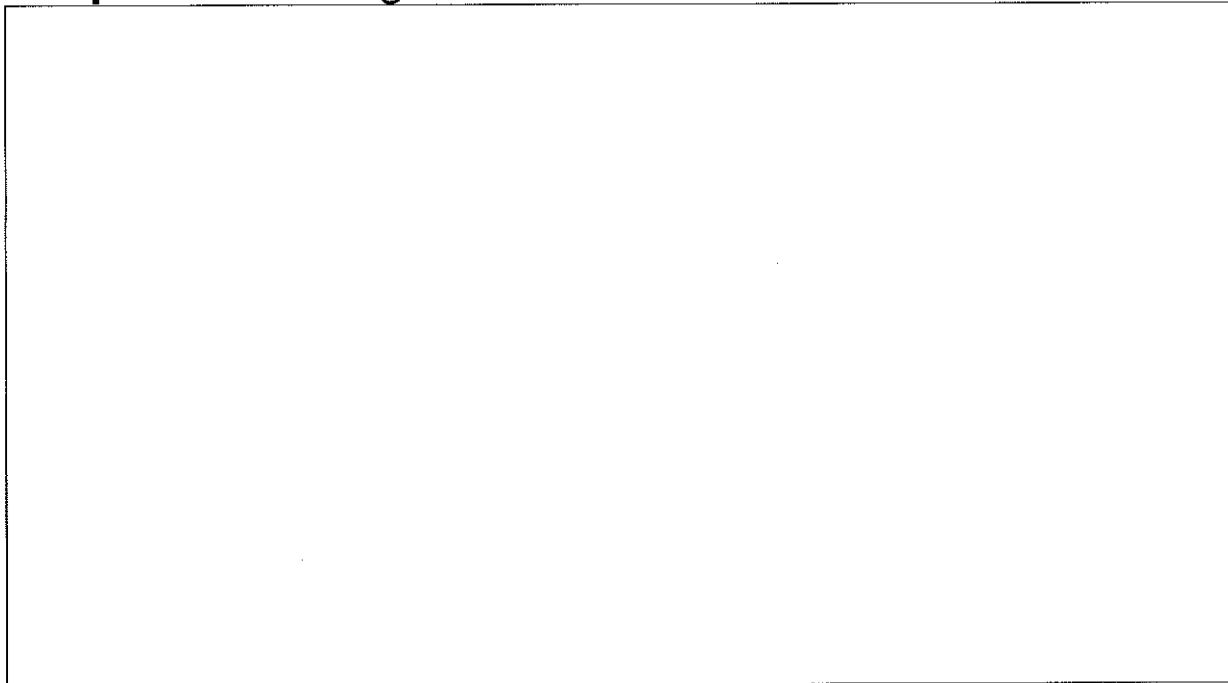
Lesson Title: Crops 1: Where Does Food Come From?
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Step 3: Moving the food from the field



Step 4: Processing the food



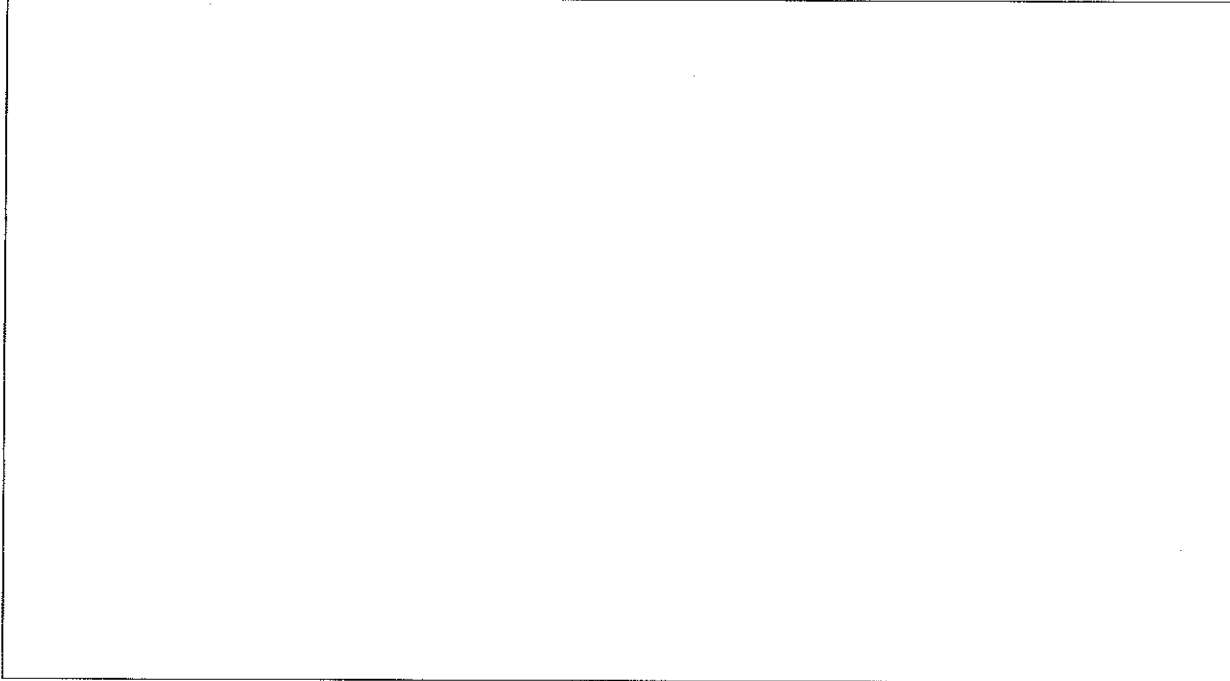
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From the Farm to Your Home

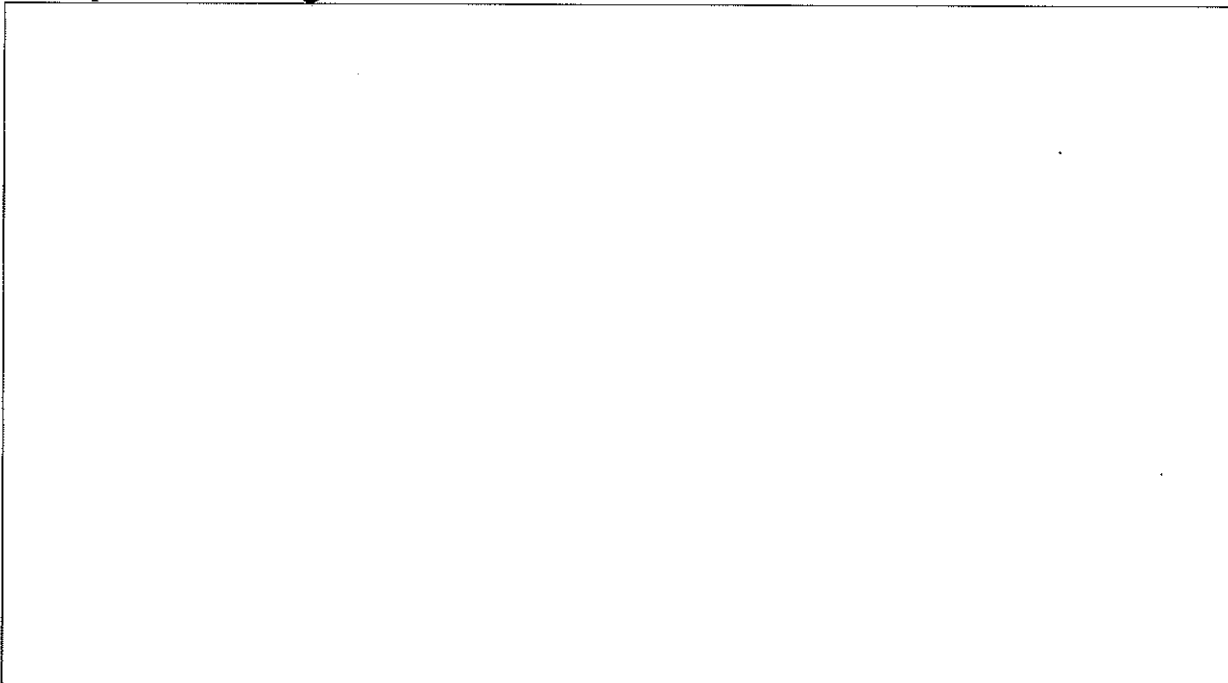
Lesson Title: *Crops 1: Where Does Food Come From?*
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Name: _____

Step 5: Selling the food



Step 6: Storing the food



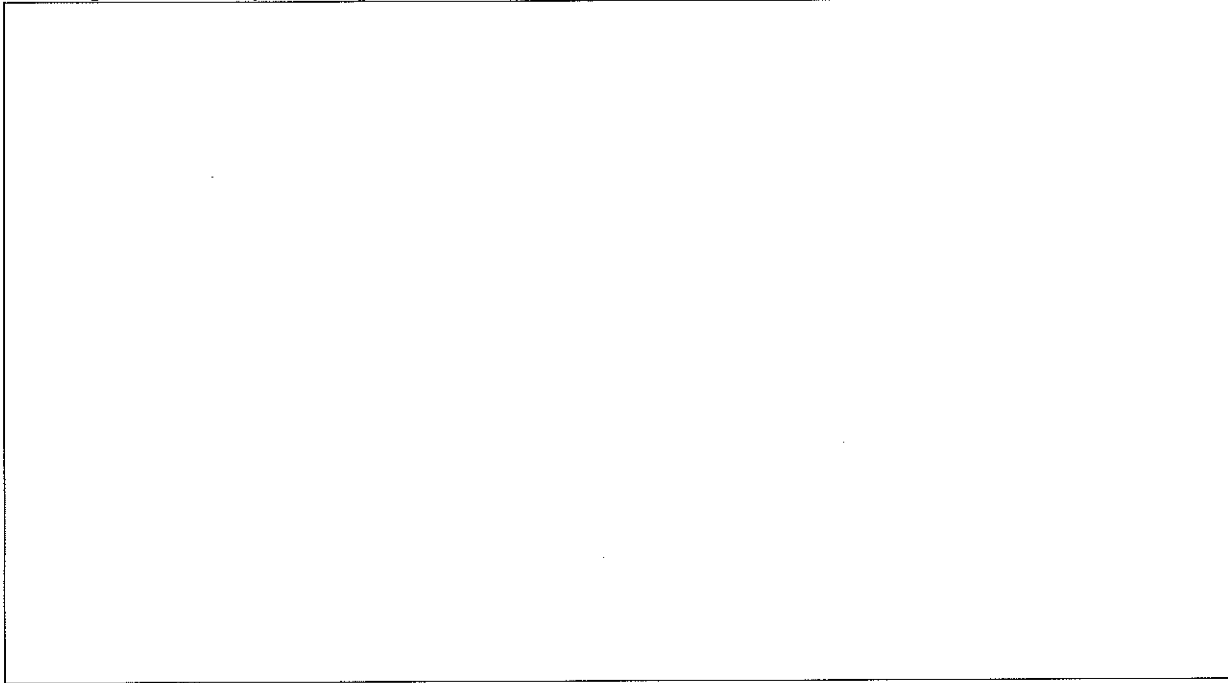
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From the Farm to Your Home

Lesson Title: Crops 1: Where Does Food Come From?
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Step 7: Preparing and eating the food



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