

The Very Hungry Iowa Caterpillar

Grade Level(s)

K-2nd Grade

Estimated Time

30 minutes

Purpose

Students begin to understand common agricultural products.

Materials

- Links: website www.linngoag.com Hover over tab- April
- Instructional video: [Hungry Iowa Caterpillar - YouTube](#)
- Hungry Iowa Caterpillar – Picture Chain
- Red construction paper (Make caterpillar head)
- The Very Hungry Iowa Caterpillar book

Vocabulary

- **Dozen** - 12
- **Field corn** – major variety of corn grown in Iowa. Used in feed for livestock, to make ethanol, and used for human consumption (cornmeal, corn flour, corn syrup).
- **Bale** – large bundle of straw or hay tightly compressed by twine prepared for shipping or sale
- **Sweet corn** – variety of corn eaten fresh
- **Acre** – measure of land, approximately the size of a football field
- **Bushel** – measure of grain, approximately the size of a small laundry basket

Interest Approach – Engagement

What did you eat yesterday? Last week? Could you eat as much as a hungry caterpillar? Students will learn vocabulary and learn about different agricultural products with this engaging activity. The story will come to life as you read and students construct their own caterpillar.

Background - Agricultural Connections

For many of the foods we eat and the foods that animals eat are important to understand how they were raised and produced. These fun facts will help students understand the food system.

Procedures

1. Preparing the Activity

- Cut the Hungry Iowa Caterpillar – Picture Chain (Might have to print duplicates, to assure enough for each student)
 - Print the *The Very Hungry Iowa Caterpillar* book
2. Read *The Very Hungry Iowa Caterpillar*
 3. Pass out a chain piece to each student and have students color each chain.
 4. After they color each chain piece, the class now will create a classroom caterpillar with the picture chain pieces. Either follow the book or call on students to come up and share their food item the caterpillar ate. As you attach chain pieces to each other. Share a few Ag Facts about each product.
 5. After creating the caterpillar, talk about how the caterpillar will then form a chrysalis and over time a butterfly will emerge from the chrysalis.

Did you know? (Ag Facts)

One Dozen Eggs: Start off the discussion by asking students where eggs come from. Iowa is the top egg producing state of the nation.

- Only female chickens (called hens) lay eggs.
- A chicken lays one egg every 26 hours - a total of 279 eggs per year.
- The color of an egg's shell is the same color as the hen's earlobe.

Two Turkey Sandwiches: We eat domesticated turkeys which are not the wild kind we think of at Thanksgiving time. They are actually farmed and raised in masses. They gain so much weight that they are unable to fly.

- Turkeys are separated by gender. A tom is a male turkey. A hen is female.
- A baby turkey is called a poult.
- Iowa farmers produce approximately 8.2 million turkeys and they supply 80% of all Subway stores with their turkey meat.

Three Ears of Field Corn: Most of the corn grown in Iowa is not sweet corn but rather field corn that is used to feed cattle and make food products for humans.

- Iowa is the top producing state of field (also called dent) corn.
- Corn is what makes egg yolks yellow.
- Corn is used to make many popular foods such as corn chips and cereal.

One Pound of Bacon: Explain that bacon comes from pigs. It comes from the fat on the sides of their bellies. Iowa has 6 hogs for every person in the state.

- Almost one fourth of all pigs in the nation are grown in Iowa.
- Hogs weigh 275 pounds at harvest time.
- 69% of all food service operations serve bacon.
- The average pig will produce more than 23 pounds of bacon.

Ten Soybeans: Soybean plants are the short plants (3-5 feet) with lots of leaves growing in many of the fields in Iowa. Soybeans are grown in pods (60-80 pods per plant with 3-4 soybeans per pod).

- Many school buses are powered by soy biodiesel.
- One acre (size of a football field) of soybeans produces 82,000 crayons.
- Ink is made out of soybeans that is used to print newspapers and books.

- Soybeans were used to make the frame of the original Ford cars.
- Elevators in the Statue of Liberty use a soybean-based hydraulic fluid.

1 Bale of Hay: Hay is a lot like grass. Farmers mow it then rake it into rows that are fluffy. When it dries, a big machine makes it into a round or square bale.

- Hay and straw are not the same thing. Straw is golden in color. Hay is more greenish or tannish.
- Hay is much more nutritional, so it is used for feed. Straw is used for bedding for animals or insulation for a house.

5 Potatoes: Iowa has great growing conditions for potatoes, but they are generally not grown in huge fields like corn and soybeans. They are not a top producer of potatoes. Idaho, Washington and Wisconsin are the top producers.

- The potato is the fourth largest food crop in the world.
- French fries are made from potatoes.
- The potato was the first vegetable grown in space.

1 Pepperoni Pizza: Many of the ingredients that make up pizza comes from a farm/garden.

- Pepperoni is the most popular pizza topping in the US.
- About 350 slices of pizza are consumed every second in the US.
- 93% of Americans eat at least one pizza every month.
- Each American eats about 23 pounds of pizza every year.

6 Chicken Nuggets: The chickens that we eat are very different than the chickens that lay eggs. They are called broilers. Although Iowa is the number one egg producer, they aren't even in the top 10 for broiler production.

- There are more chickens living on Earth than people.
- Laid head to claw, all the chickens consumed from KFC worldwide would circle the Earth at the equator 11 times.
- Chickens only weigh 4-6 pounds when market ready.

1 Acre of Wheat: There is very little wheat grown in Iowa because our land is not dry or cold enough. However, wheat is grown on more land worldwide than any other crop. It is the third most produced crop.

- 70% of US wheat is winter wheat meaning it goes in the ground in the fall. It is then dormant throughout the winter and begins to grow in late winter.
- A processing plant for making pasta products from wheat is in Ames.
- Wheat is mainly used for human food.

1 Watermelon: Watermelons are grown in warm, moist soils. Iowa is a great place to grow watermelons in mid-May (usually on hills). They are often grown in home gardens and by farmers to take to the Farmers Market.

- A watermelon is 92% water and 6% sugar.
- All parts of a watermelon can be eaten, even the rind which is used as vegetable and stir-fried in other countries.
- Farmers have started to grow cube shaped watermelons in glass boxes.

1 Bushel of Popcorn: Some of JollyTime's popcorn is grown in Iowa (various other companies are in Iowa too). Nebraska produces more popcorn than any other state. A popcorn kernel is smaller than a field corn kernel.

- Popcorn pops because it contains water in its center that boils and turns to steam when heated which creates pressure causing it to pop!
- American's eat enough popcorn in one year to fill the Empire State Building 18 times.
- Orville Redenbacher started popping corn in 1919 at 12 years of age. In ancient times they would heat sand in a fire then stir kernels into the sand.

1 Pound of Cheese: Cheese is made with milk that comes from dairy cows. Iowa is 7th in number of dairy herds as well as cheese production (240 million pounds of cheese produced each year).

- It takes 10 pounds of milk to make 1 pound of cheese.
- Chevre is the name for goat milk cheese.
- The US produces more than 25% of the world's cheese supply.

1 Pound Hamburger: Iowa is ranked 6th in the nation for beef production with 30,000 operations.

- Hamburger from a single steer will make 720 quarter-pound hamburgers.
- Iowa ranks 2nd in the nation for red meat production.
- One cowhide can produce enough leather to make 20 footballs, 18 soccer balls, 18 volleyballs or 12 basketballs.

1 Acre of Oats: Oats grow in cooler climates with lots of rainfall. Some are grown in Iowa.

- Quaker Oats is in Cedar Rapids, Iowa. It is the largest cereal company in the world.
- Oats are primarily used to feed livestock, specifically horses.
- They are planted in pastures or baled for hay.
- Only about 5 percent of oats are consumed by humans as food sources, such as oatmeal.

12 Ears of Sweet Corn: Sweet corn is grown in small plots around Iowa. It can be eaten without being processed.

- Sweet corn is a result of changes in field corn to make the kernel store more sugar inside it. Their kernels are smaller than field corns.
- Sweet corn leaves were used at chewing gum by Native Americans.
- Sweet corn is grown and ready for harvest in 65-90 days.
- The tassel at the top of the stalk is the boy part and the silk at the end of the ear is the female part.

3 Cans of Pop: Corn is grown widely in Iowa and is then sold to be changed into something else, like a can of pop.

- A bushel of corn can sweeten 400 cans of soda.
- You can't tell the difference between sugar and high fructose corn syrup made from corn, nor is one healthier.
- 1 Big Apple: Iowa is the birthplace of Red Delicious Apples. Apples are grown on trees.
- Apple trees take 4-5 years to produce their first fruit.
- Apples ripen 6-10 times faster at room temperature than if they are refrigerated.
- It takes 36 apples to create one gallon of apple juice.

Organization Affiliation



Lesson adapted by Shelby Hawkins and Morgan Hibbs from Polk County Farm Bureau original plan.

Iowa/ Common Core Standards

Life Science: K – 2

- Understand and apply knowledge of life cycles of plants and animals.
- Understand and apply knowledge of the basic needs of animals and how they interact with their physical environment.
- Understand and apply knowledge of good health habits.
 - Bring this standard into your lesson by discussing with your students why the caterpillar didn't feel well after eating all that food. Lead into a lesson about the importance of putting the right kinds of food into our bodies to be sure we stay strong and health.

Mathematics: K

- Counting and Cardinality
 - Write numbers from 0-20.
 - Understand the relationship between numbers and quantities, connect counting to cardinality.

Employability Skills: K-2

- Develop initiative and demonstrate self-direction in activities.
 - Understand how to follow sequential steps to complete a task.
 - Learn that incomplete work is not acceptable.

Health Literacy: K –2

- Demonstrate behaviors that foster healthy, active lifestyles for individuals and the benefit of society.
 - Identify healthy foods. (Go throughout the book and if the food item is an item that humans can consumer, talk about whether it is good or bad for them.)

Reading Standards for Literature and Information text: K – 2 Key Ideas and Details

- Ask and answer questions about key details in a text.
- Retell stories, including key details.
- If you school has a big buddy program, have your students tell their buddy about the story you read as they show them the caterpillar they created.