

Purpose: Students will use information from the MN Ag in the Classroom AgMag to learn about pork production and the pork industry. This knowledge will be used to play *Truth or Hogwash*.

Time: 60 minutes

Level: 4-5

Materials:

- *Hogs from Producers to Plates* found in *AgMag (Vol 28, 2)*
- One small dry erase board, clipboard with paper, or other writing surface for every group of 3-4 students
- Truth or Hogwash cards (included in this lesson)

Glossary

Hogwash – swill, slop, nonsense – foolish or meaningless words or actions

Swine – any of the family of mammals having short legs, cloven hooves, bristly hair and a hard snout used for digging

Pigs – young swine animals that weigh less than 120 pounds

Hogs – older swine animals that weigh over 120 pounds

Boar – mature male hog

Gilt – Young female hog that has not had a litter

Sow – mature female hog that has had a litter

Lean – containing little or no fat

Pork – The flesh of a pig or hog used for food

Lard – The white solid or semi-solid rendered fat of a hog



Truth or Hogwash

Common Core/Minnesota Language Arts Standards and Benchmarks

4.2.1.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

4.8.1.1/5.8.1.1 Engage effectively in a range of collaborative discussions with diverse partners on grade 4/5 topics and texts, building on others' ideas and expressing their own clearly.

4.10.5.5/5.10.5.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings to develop word consciousness.

Minnesota Science Standards and Benchmarks

5.4.1.1.1 Describe how plant and animal structures and their functions provide an advantage for survival in a given natural system.

Background

Swine were believed to be domesticated as early as 4900 BC in China. Hernando de Soto is credited for bringing the first pigs to North America and the U.S. in 1539 when he arrived at Tampa Bay, Florida. He landed with 13 pigs, and by the time of his death three years later his herd had grown to 700. Pig or hog (see Glossary for definitions of these terms) production was popular with the New England colonists. Pennsylvanian colonists developed the practice of “finishing” hogs on corn – feeding them nothing but corn in the few weeks before butchering. This improved the quality of the pork and laid the foundation for the modern pork industry.

Raising hogs became an important enterprise during the 1800s when the Midwest farm regions were settled. Settlers fed hogs corn, grass, clover, or even table scraps that would have otherwise been garbage. The word “hogwash” meaning something that is worthless, came from this practice. Today, Merriam-Webster’s Dictionary defines hogwash as “swill, slop, nonsense – foolish or meaningless words or actions.”

In early American history large, fat pigs were raised. Their fat, known as lard, was in high demand for baking. Today people are health conscious consumers who want lean meat. Pork producers are meeting this demand by changing the way they feed and raise their hogs. Most cuts of pork are as lean or leaner than similar cuts of beef and chicken. Pork has a high nutrient density (a high level of nutrients for the level of calories). It provides protein, iron, zinc and B vitamins (thiamin, riboflavin, niacin and vitamin B12).

Many people picture a hog farm as smelly and muddy. Years ago you would have seen pigs lying in the mud to protect themselves from overheating (pigs can’t sweat) and biting insects. Today on modern farms, hogs are kept indoors in buildings where producers can control temperature, humidity and other environmental factors. These buildings are well-lit and clean, so the producer can monitor and promote the health of the pigs. Healthy, unstressed animals grow faster and are more profitable, so producers try to keep their hogs comfortable and content.

In addition to pork, hogs provide many valuable by-products. By-products made from hogs include adhesives, plastics, shoes, paint, glue, crayons, chalk, and chewing gum. Pig heart valves are used to replace diseased or damaged human heart valves. The skin from hogs is also used to

treat severe burns on the skins of humans and hog pancreas glands provide insulin to treat diabetes.

Procedure

Preparation - before class begins:

- Secure AgMag volume 27, issue 2 or print out pages 4-5 from <http://www.mda.state.mn.us/kids/~//media/Files/kids/maitc/agmag2.ashx>
 - Print out Truth or Hogwash pages at the end of this lesson. Copy them back to back to make cards.
1. Inform students that they will be learning about pigs and pork production. Set a timer for 30 seconds and tell students that they have 30 seconds to write down as many things as possible that they know about pigs. After 30 seconds call on students or ask for volunteers to share what they know.
 2. As a class or individually, have students read the *Hogs: from Producers to Plates* information from the AgMag.
 3. Lead a class discussion about this information. Some possible questions to facilitate discussion:
 - a. What were you surprised to find out about pigs?
 - b. What information confirmed something that you already knew about pigs or hogs?
 - c. How do pigs impact your life?
 - d. What would it be like to be involved in the pork production industry?
 - e. What are some words or phrases that we use that involve the terms hog, pig, etc. (Examples: pig out, go hog wild, that's hogwash). Discuss with students why they think the phrases came about. Define the word **Hogwash** (use Background Information and Glossary).
 4. Divide students into teams of 3-4. Give each group a dry erase board, clipboard with paper, or another writing surface.
 5. Inform students that you are going to play a game that will allow them to use their new knowledge about hogs. The rules of the game are:
 - a. I (teacher) will draw one card and read the statement.
 - b. Each team will quietly discuss the statement and determine if it is **True** or if the statement is **Hogwash**. (Possibly remind students to use their knowledge about the definitions of these terms)
 - c. I will allow 30 seconds for discussion, then each team must write Truth or Hogwash on their writing surface. At the end of 30 seconds I will say "show your answers" then all teams must hold up their writing surface with their answer.
 - d. Each team that has the correct response will get one point. The first team to get five points (or whatever amount the teacher determines) will win.
 6. Play the game! Remember to keep score and recognize the winning team.

Additional Activities

- Have students write their own questions. Encourage them to do some research on their own to come up with “Super-Stumper” questions.
- Invite a local hog farmer to visit your class and share his/her experiences raising hogs.
- Invite a chef from a local restaurant to visit your class and share information on preparing and serving pork meals.
- Use MyPlate and other nutritional education resources to discuss the importance of pork and other protein rich foods in a well-rounded diet.

Resources

- MN Ag in the Classroom has swine and pork production focused resources including:
 - Commodity Card set –featuring MN plants and animals
<http://www.mda.state.mn.us/kids/commoditycards.aspx>
 - Videos featuring MN farm families and the livestock and crops they produce.
<http://www.mda.state.mn.us/kids/videostories/feedus.aspx>
 - Farm Animal Bookmarks
<http://www.mda.state.mn.us/kids/teachresources/bookmark.aspx>
- The Minnesota Pork Board has a variety of educator resources that would be excellent supplements to this lesson.
<http://www.mnpork.com/>
- The AgMag magazine is available FREE from Minnesota Ag in the Classroom. Complete the on-line order form to receive this teaching tool. <http://www.mda.state.mn.us/maitc/>

Adapted from Oklahoma Agriculture in the Classroom.

In accordance with the Americans with Disabilities Act, this information is available in alternative forms of communication upon request by calling 651/201-6000. TTY users can call the Minnesota Relay Service at 711 or 1-800-627-3529. The MDA is an equal opportunity employer and provider.

Truth

Sows are pregnant for about 114 days before they give birth to a litter of piglets. Average litters are 10-14 piglets.

Hogwash

Hogs will only eat until their energy requirements have been met. When compared to humans, hogs eat more frequently throughout the day and in smaller amounts.

Hogwash

Pigs are fed carefully balanced rations matched to their age and weight.

Ration – amount of feed consumed by one animal for one day.

Hogwash

Pigs cannot sweat like humans. They will lie in mud to cool themselves. As the mud dries on their skin, it evaporates and cools the pig. The mud can also provide a protective barrier against the sun.

Truth

After the fat, bones and organs are removed, a 270 pound hog ends up as a carcass of about 185 pounds. From this, about 140 pounds will become cuts of meat.

Truth

On most MN farms, pigs live in clean, modern buildings that protect them from weather and predators. Temperature is carefully controlled. Fans and sprinkling systems cool pigs in summer. Heat lamps warm them in winter.

<p>Truth or Hogwash Hogs will “pig out” or overeat.</p>	<p>Truth or Hogwash Female hogs, called sows, are pregnant for 3 months, 3 weeks and 3 days before giving birth.</p>
<p>Truth or Hogwash Hogs lay in the mud because they are lazy and dirty.</p>	<p>Truth or Hogwash On modern hog farms, hogs are fed table scraps and garbage.</p>
<p>Truth or Hogwash Most hogs are raised in temperature controlled buildings.</p>	<p>Truth or Hogwash A hog is ready to go to market when it weighs between 260-280 pounds.</p>

Hogwash

Minnesota hog products are shipped all over the world. Japan and Mexico are our leading buyers.

Truth

Heart valves from pigs are used to replace diseased/damaged human heart valves because they function the same way. Once the valve is removed from the pig it is chemically treated to preserve the tissue and prevent negative reactions when it is placed in the human.

Truth

Pigs need 2.5-3 pounds of feed to gain one pound. This is called their Feed Conversion Ratio. Beef cattle average 5.5-6.5 pounds of feed for one pound of gain. Chicken need 2 pounds of feed for one pound of gain.

Hogwash

Fresh pork chops are cut from the pork carcass, packaged, and sold in grocery stores or meat markets. Bacon, ham, and pepperoni go through additional processing. This processing could involve smoking, curing, marinating, or additional preservation and flavor enhancing techniques.

Truth

Nothing is wasted on a hog. The parts that can't be used as food (blood, bones, hooves, hair, hide, fats) are used in by-products. By-product – something of value that's made in addition to the main product.

Hogwash

Newborn piglets weigh about 3 pounds and are 11 inches long. On average, newborn human babies in the U.S. are 7.5 pounds and 20 inches long. This is about twice as big as a piglet.

<p>Truth or Hogwash</p> <p>Pig heart valves are used to replace damaged human heart valves.</p>	<p>Truth or Hogwash</p> <p>Pork products produced on Minnesota farms are used only in our state.</p>
<p>Truth or Hogwash</p> <p>Pork chops, ham, bacon and pepperoni are all made from pork using the same process.</p>	<p>Truth or Hogwash</p> <p>In order to gain one pound of body weight, a pig must eat 2.5 to 3 pounds of feed.</p>
<p>Truth or Hogwash</p> <p>A newborn piglet is approximately the same size as a human baby.</p>	<p>Truth or Hogwash</p> <p>Chewing gum, crayons, bristle brushes and drum heads are all hog by-products.</p>