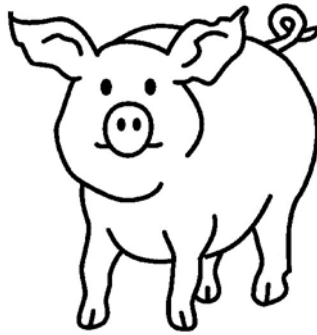
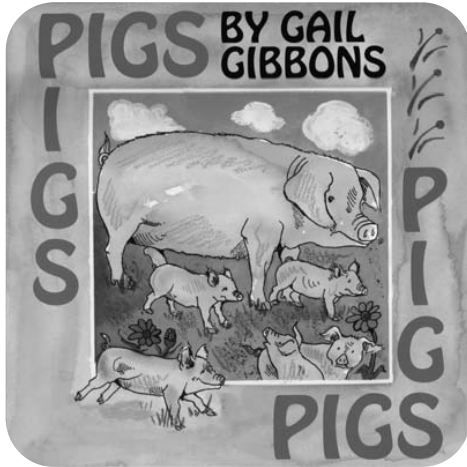


# Swine

## Pigs by: Gail Gibbons



### Talking Points:

Like corn, wheat, soybeans, cattle, sheep, and other farm commodities, hogs are important to agriculture and to our daily lives. They provide not only meat and other foods for us, but supply us with numerous by-products as well.

#### HOGS FOR GOOD HEALTH:

As a food item, pork is important because it has high amounts of protein, B-vitamins, and thiamin. In fact, pork has three times as much thiamin as many other foods. Thiamin is important in our diet because it changes carbohydrates into energy and encourages a normal appetite.

Bacon, sausage, ham, and pork chops are some favorite foods that come from hogs. Interestingly, there are about 500 different by-products that come from hogs, as well. Some examples include fertilizers, glass, china, floor wax, chalk, crayons, and medicines.

#### HOG BY-PRODUCTS:

Hogs are very much like humans because their heart and other organs work the same way. Many times, a hog's heart valve is used by doctors to replace a human heart valve during surgery. Pigskin is used to treat people who have been burned. Some types of insulin, used by diabetics to maintain blood glucose levels, also come from hogs. Research has shown that more often than not, if a certain medication helps hogs, then chances are great that it will help humans also.

**Activity: Hog Feed Sacks**  
**Grade Level: Prek - 6th**  
**Subject Area: Science & Nutrition**

### Materials

Hog feed labels (one per student)  
Blue jellybeans  
Candy corn  
Peanuts  
M&M's  
Raisins  
Wheat Cereal  
Brown paper lunch sacks or zip-loc bags (one per student)  
Glue stick

### Vocabulary

**Barrow** - a male pig that can't breed.  
**Boar** - a male pig used for breeding.  
**Feeder** - a young pig that is being raised for meat.  
**Litter** - a group of young born at one time.  
**Mucus** - a slimy substance that moistens a newborn pig's body.  
**Needle teeth** - a pig's two pointed upper teeth.  
**Notch** - to make a V-shaped cut in the ear of a newborn pig for identification.  
**Nurse** - to drink milk from their mother's teats.  
**Piglets** - baby pigs.  
**Snout** - a pig's round, flat nose.  
**Sow** - a female pig that has already had babies.  
**Teat** - a small, raised part on a female pig's belly through which a young pig drinks milk.  
**Trough** - a long, narrow container from which animals can eat or drink.

## More Talking Points:

### INTERESTING PIG POINTS:

It is believed that the hog was one of the first animals to be domesticated. They were introduced in America by Hernando DeSoto, an explorer, around 1539. Today, hogs are raised all across the United States. Typically, a sow will give birth to a litter of piglets twice a year. Each litter usually has seven to ten piglets. Giving birth to piglets is also called farrowing. Pigs are weaned when they are two to four weeks old. Until a pig reaches 120 pounds, it is known as a pig. When a pig weighs more than 120 pounds, it is called a hog. Hogs are usually taken to market when they weigh 240-260 pounds. There are approximately 600,000 hog farmers nation wide. Hogs and pigs make up 14% of all production commodities on America's farms.

### NUTRITION:

Pigs and hogs are fed a balanced diet so they can grow healthy and strong in order to reproduce and provide meat (protein) for humans. The typical diet consists of a mixture of corn, soybean meal, and additional vitamins and minerals to increase growth and improve health.

**Protein** is needed for growth; brain, nerve, and eyesight development; hair growth; to grow strong muscles and bones; growth of skin; and the development of a healthy immune system. Hogs are fed soybeans, oats, and other grains to gain protein. Humans eat meat, eggs, beans, soybeans, peanuts, and dairy products to obtain the protein they need.

**Carbohydrates and fats** are needed to provide energy. Hogs are fed corn, oils and fats to meet their energy needs. Humans eat sweets, fats, breads and other starches to meet their energy needs. It is recommended that less than thirty percent of our energy (calories) come from fats.

**Minerals** are necessary for development of bones and teeth, as well as regulating body systems. Hogs are fed mineral supplements and food processing by-products to supply their mineral needs. Humans that eat a well balanced diet including a variety of foods (dairy, meat, vegetables, fruits, etc.) usually meet their mineral needs without need for supplements. If someone does not eat a well balanced diet, they may need to supplement their diet with iron, calcium or some other mineral.

**Vitamins** are chemicals that are needed in very small amounts and assist the body in protecting itself against disease. Hogs are fed vitamin supplements if their diet is low in a particular vitamin. Again if humans eat a well balanced variety of foods, they will meet all of their vitamin needs. The recommended servings of meat, dairy products, fruits and vegetables provide more than enough for most people. Some cereals and milk products are fortified with minerals and vitamins that are lost during processing.

Hogs and humans need **water!** It does not provide energy, protein, vitamins or much minerals, but it is very essential. Humans and animals can live much longer without food than they can without water. Producers raise hogs today that weigh more, grow more efficiently, and yield more lean meat than ever before.

## Quick Swine Facts

- Pigs usually consume eight (8) pounds of feed per day.
- Common breeds of hogs:
  - Landrace
  - Duroc
  - Berkshire
  - Chester White
  - Hampshire
  - Poland China
  - Yorkshire
  - Spotted

## Hog By-Products

Hundreds of by-products are derived from the internal organs of a pig. We use them at home and at school.

- Hogs are the source of over 40 drugs and pharmaceuticals. To name a few examples:
  - Cortisone (adrenal glands)
  - Cholesterol (brain)
  - Burn dressings (skin)
  - Hormones (ovaries)
  - Insulin (pancreas gland)
- By-products are sources of chemicals used in manufacturing of a wide range of products that cannot be duplicated by synthesis. To name a few examples:
  - Art brushes; insulation (hair)
  - Glass; fertilizer (bone meal)
  - Buttons; bone china (dried bones)
  - Glue (bones and skin)
  - Sticking agent; plywood adhesive (blood)
  - Pet food; commercial feeds (meat scraps)
- By-products from pigs' fatty acid and glycerine:
  - Antifreeze
  - Cosmetics
  - Floor waxes
  - Waterproofing agents

For a more extensive list, visit [www.mnpork.com/education/swine.php](http://www.mnpork.com/education/swine.php).

# Hog Feed Sack Activity Instructions:

- Ask the students what they need to grow big and strong, run fast, and think well. (Answers will vary.)
  - Make a list on the chalkboard that has the words “grow, strong, bones, teeth, run, see, think, stay healthy.”
  - Share information from the talking points to describe what nutrients we need to be able to be healthy. You may also have each of these nutrients and where we get them. For example: strong bones and teeth - minerals and Vitamin D - milk.
  - Compare what humans need and what hogs need. Similar? Yes!
  - Help the students make their own “Hog Feed Sack”. Give each student a bag. Have the students glue their “Hog Feed Label” onto the bag.
  - After the students have assembled and discussed their feed sacks, they should put the food items into their feed sacks. They can eat their goodies now or save them for a snack to eat later.
- Note:** Some school systems may not allow you to use candy items; therefore, consider using fruits and vegetables as a substitute.

## Prek-K Activities:

- “Parts of a Pig” worksheet
- “Color in the Shapes” worksheet

### How do pigs keep cool?

Pigs have no sweat glands. When they get hot, they cannot sweat to cool off like you can. Pigs and hogs can also get sunburned because their hair is not a dense coat like a cow or horse has. So, to naturally keep cool and not get sunburned, pigs dig in the earth and make mud wallows. Today, producers keep the pigs and hogs shaded and sprinkle them with water to accomplish the same goal, but it also helps them stay clean. Hogs are naturally the cleanest of all farm animals if this method of cooling is provided.

# Farm Day Fun

## Hog Feed Sacks (all grades)

- See instructions to the left. If you provide students with a snack at your farm day, this could be used as their snack.

## Muddy Pigs (Prek-2nd)

### Materials:

- Pig pattern
- Pink construction paper
- Brown tempera paint, watercolors, or chocolate pudding (for fingerpainting)
- Pipecleaners
- Scissors
- Glue

### Directions:

- Using the pig pattern, have students trace the pattern on pink construction paper and cut the pig out. Or, to save time, you can do this ahead of time.
- Using brown tempera paint, watercolors, or chocolate pudding, have the students fingerpaint “mud” on their pigs.
- Use pipecleaners to make a curly tail and glue to the pig.
- Discuss with students why pigs lie in the mud. See bubble to the left.
- Ask the students, “How do other animals cool off?”

horses - sweat

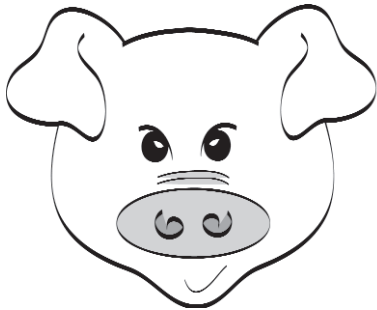
dogs - pant

elephants - fanning their huge ears helps with cooling and act as radiators,

birds - migrate to cooler climates

insects - hide in the shade

## My Very Own Hog Feed Sack



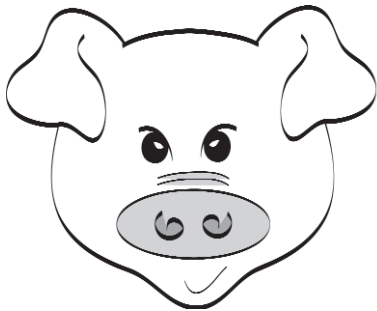
### What hogs need:

Water  
Carbohydrates  
Protein  
Minerals  
Vitamins

### Represented by:

Blueberry Jellybeans  
Candy Corn and Puffed Wheat Cereal  
Peanuts  
Raisins  
M&M's

## My Very Own Hog Feed Sack



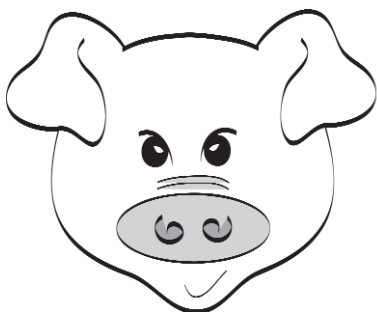
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## My Very Own Hog Feed Sack



### What hogs need:

Water  
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### Represented by:

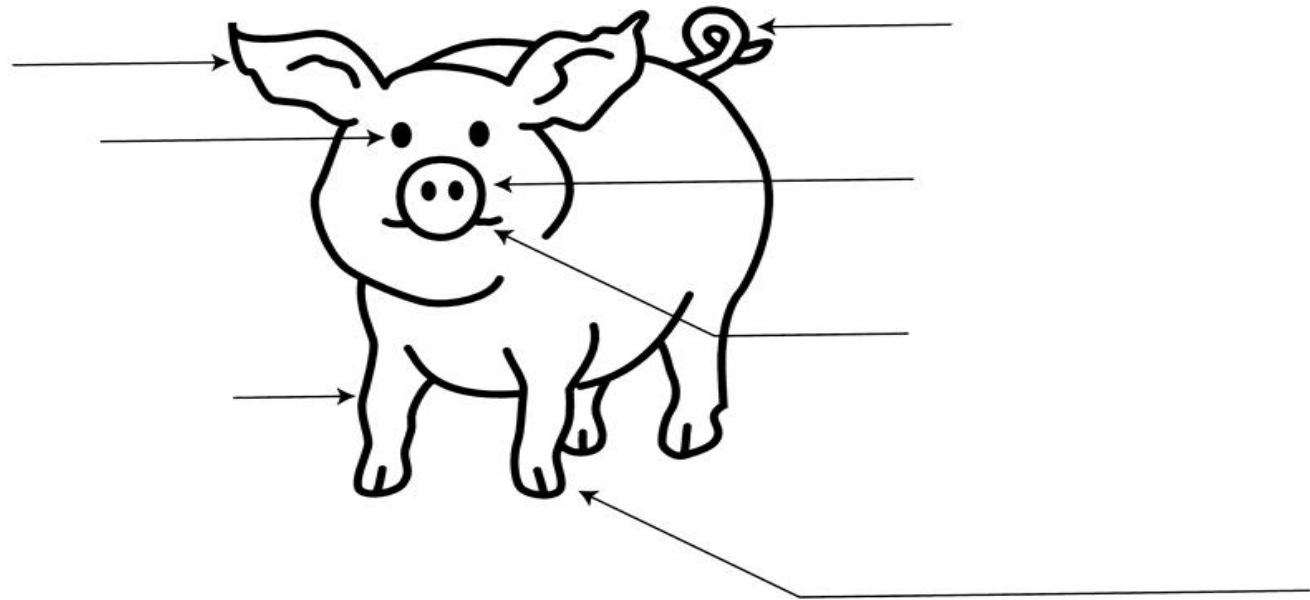
Blueberry Jellybeans  
Candy Corn and Puffed Wheat Cereal  
Peanuts  
Raisins  
M&M's

# Muddy Pigs



## Parts of the Pig

Directions: Write the names of the parts of the pig using the words found at the bottom of the page.



### Words

Eye

Ear

Snout

Leg

Mouth

Hoof

Tail

# Color in the shapes

