

# PIG ADVENTURE PROGRAM GUIDE

*A squealing good time!*

FAIR OAKS

— FARMS —

ENRICHMENT

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### STEM Relation

- **Science** | Learn how ultrasounds are used to monitor the development of baby pigs.
- **Technology** | Did you know that electricians play a vital role in animal care?
- **Engineering** | Explore the various components of a hog farm feeding system.
- **Math** | Calculate growth rates and the amount of feed and water it takes to raise a pig.

### 6 Pillars of Sustainability

Safety | Animal Care | Environment |  
Employees | Community | Nutrition

*Standards based lesson plans and resources to utilize as part of the Fair Oaks Farms field trip experience for grades K-8. MS-PS1-3, MS-LS1-4, MS-LS1-5, MS-LS3-1, MS-LS3-2, 8.RN.1, 8.RV.1. Please see the Standard Alignment Document to see the full list of standards that the curriculum meets.*

# HOW TO BEST USE THIS GUIDE

Here is how we suggest you use the Pig Adventure Field Trip Guide.



## Our Timeline Suggestions

We are excited that you are planning a visit to Fair Oaks Farms! We have created this guide to help make your experience more engaging when coming to the Farm. In this guide, you will find resources to help prepare you for a fun-filled but educational day. Here is what we suggest:

- Before coming on the field trip:
  - Teach Lesson 1 over the course of two days
  - Teach Lesson 2 over the course of two days
- Make yourself familiar with the "Know Before You Go Guide"
- Print the Field Trip Guide to keep your groups on engaged during the day

## Example Passports

**The passports below will vary on group size and the amount of time you have on campus. You will receive a more detailed passport a week in advance and a final passport the day of.**

### **Dairy Adventure Only**

9:00 AM | Arrival

10:00 AM | Dairy Bus

11:30 AM | Lunch

12:00 PM | Free Time

*\*\* Free time is a great time to explore the other buildings.*

### **Dairy and Pig Adventure Only**

9:00 AM | Arrival

9:30 AM | Pig Bus

11:00 AM | Lunch

12:20 PM | Dairy Bus

*\*\* During any downtime, it is a great opportunity to explore the crop building.*

### **Pig Adventure Only**

9:00 AM | Arrival

9:30 AM | Pig Bus

11:00 AM | Lunch

12:00 PM | Free Time

*\*\* Free time is a great time to explore the other buildings.*

### **Hands On Field Trip**

9:00 AM | Arrival

9:30 AM | Pig Bus

11:00 AM | Lunch

12:20 PM | Dairy Bus

2:00 PM | Hands on Activity

*\*\*The activity can 15 minutes to 45 minutes depending on the time you have available and the program you want*

# KNOW BEFORE YOU GO

Have a field trip with us? Here are some things that may help engage your students during your visit!



## Arrival

- Please keep your children on the bus until you have checked in.
- Go to the Admissions Building to check in
- We will give you a passport to help you stay engaged throughout the day
- You will be given a lanyard, this identifies your group
- Bathrooms are located in each building

## Other Buildings

If time allows:

- Get a sneak peek at a working dairy farm on the Dairy Adventure.
- Learn how we can feed 9 BILLION people at the Crop Adventure.
- Take a stroll and look for the newest seasonal blooms on the Nature Trail.
- Take your herd over to get a tasty treat or souvenir at the Cowfe.
- See a baby cow being born at the birthing barn, go when the light is green.

## Places in the Pig Adventure

- **Home Kitchen** | Learn all about pork and its health benefits! You can also look at recipes.
- **Farmer Mural** | Check out the mural to show how many farmers it takes to get not only pork to your plate but many other crops as well.
- **Pig Camera** | See what our hogs are up to before you go visit by the pig cam!
- **Treehouse** | Our treehouse is something that all kids love with a bacon slide and a pig movie playing inside! Have them check it out, built by the Redwood Kings of California.

## Other Fun Things about the Farm

*Here are some other fun facts about the farm that can be used to explore STEM deeper in your classroom before your visit.*

*We are utilizing a drop-feeding system. This feeding system will provide a regulated and consistent daily feed program. Rather than one pig being fed at a time, the farmer is able to set a timer and the food will drop down into their bowls all at once. Pigs are a lot more content when they can eat at the same time! This has allowed Fair Oaks Farms to explore the newest technology in modern agriculture.*

*As you learned today, farms are always changing to make their practices far more efficient and safer for the animals and farmers! This is true about all of agriculture. There is progressive research and science applied whenever it is practical.*

# PIG ADVENTURE GUIDE

Keep your eyes and ears open! Find each of these on the farm.

## PORK EDUCATION CENTER

HOME  
KITCHEN



LEAN PORK IS A  
HEALTHY OPTION FOR  
PEOPLE WITH DIABETES.

FARMER  
MURAL



THOUSANDS OF  
FARMERS PUT PORK ON  
YOUR PLATE!

PIG CAMERA



OUR PIG CAMERA  
CATCHES OUR HOGS  
GOING WILD!

TREE HOUSE



PEPPA PIG PLAYHOUSE  
WAS BUILT BY THE RED  
WOOD KINGS.

## PIG FARM

STRAY  
VOLTAGE



PIGS CAN SENSE A  
CHANGE IN WATTAGE OF  
A SINGLE LIGHT BULB!

SHOWER  
IN



LISTEN TO THE GUIDE  
AS TO WHY YOU HAVE  
TO SHOWER!

AIR  
FILTRATION



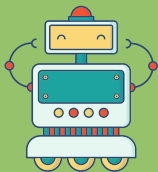
PIGS ARE SUSCEPTIBLE  
TO BREATHING  
PROBLEMS.

AUTOMATIC  
FEEDERS



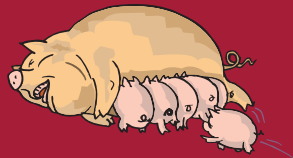
THE TUBES ABOVE  
HOLD FEED THAT IS  
DROPPED TO THE PIGS.

BOAR  
BOT



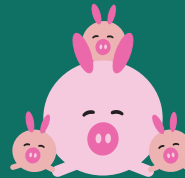
YOU MIGHT BE LUCKY  
ENOUGH TO SEE OUR  
BOARBOT IN ACTION!

NURSING  
PIGLETS



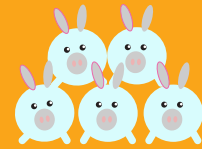
THE RED MATS THAT THE  
PIGLETS LAY ON ARE  
HEATED TO 90 DEGREES!

FARROWING  
STALL



SOWS HAVE BARS FOR  
SUPPORT AND THE PIGLETS  
HAVE A SAFE SPACE TO  
NURSE.

COLOR  
PIGLETS



FIND SOME PIGLETS  
THAT ARE NOT PINK!

Fair Oaks Farms has far more than we can ever discover in a day, but here are some other class favorites if time allows:

- Get a sneak peek at a working dairy farm on the Dairy Adventure.
- Learn how we can feed 9 BILLION people at the Crop Adventure.
- Take a stroll and look for the newest seasonal blooms on the Nature Trail.
- Take your herd over to get a tasty treat or souvenir at the Cowfe.
- See a baby cow being born at the birthing barn, go when the light is green.

FAIR OAKS  
— FARMS —

ENRICHMENT

# LESSON 1

## Biosecurity and Health of Pigs



FAIR OAKS

— FARMS —

ENRICHMENT

## SOME BACKGROUND

The health of our pigs is our number one concern. We practice biosecurity here on the farm. Biosecurity means that we prevent diseases, viruses, and pathogens from entering our farm. Of course, we are not perfect, but we certainly try very hard! We practice biosecurity in many ways. You will notice that biosecurity is different on every farm. You might even notice a big difference between the pig farm and the dairy farm! The most common way that all our farmers practice biosecurity is by taking showers! Every day when the farmers come to work, the first thing they do is take a shower. Once they have showered in, they can enter the barn. The farmers are provided with uniforms that are kept right here on the farm where we can wash and sanitize them we even sanitize their boots! The farmers then go about their day working with the pigs. It is impossible to eliminate every risk of viruses and pathogens entering the farm, so we must do whatever we can to minimize the risks as much as possible to keep the herd healthy. We want them to be healthy so they can grow, just like you need to stay healthy!

# Lesson 1 | Biosecurity and Health

## Learning Objectives

Students will be able to:

- Describe the how we keep pigs healthy
- Define biosecurity and know why it is important
- Describe how farmers and farms meet the needs of pigs

## Vocabulary

- **Pathogen** | Female who has already given birth to a litter of piglets.
- **Virus** | A young female pig that has not had piglets.
- **Airborne** | Intact male pig (they can be really aggressive).
- **Disease** | Male who cannot reproduce, he is castrated.
- **Biosecurity** | Procedures intended to protect humans or animals against disease or harmful biological agents

## Materials & Setup

- KWL Chart – Printed for each student (last page of this guide)
- Biosecurity Activity
  - M&Ms
  - Skittles
  - Small (not clear) cups
  - Spoons (Optional)
- Power Point
- For optional activity you will need bubbles

## Recommended Timeline

**Estimated Time: 45 to 55 minutes or two days (recommended)**

- Engage | 5 minutes | 10 minutes
- Explore | 15 to 20 minutes | 30 minutes
- Explain | 10 to 15 minutes | 10 minutes
- Elaborate | 10 minutes | 25 minutes
  - 2 options and can be extended if you would like
- Evaluate | 5 minutes | 5 minutes

## Engage

**Students will have a quick introduction to Fair Oaks Farms Pig Adventure. Students will then engage in various activities related to the Pig Industry. Provide KWL Chart, this can be done individually (recommended), in groups, or as a class.**

*Today we are going to learn about Fair Oaks Farms' Pig Operation and the Life Cycle of pigs. There are a lot of daily tasks that go into owning and operating a large scale pig farm, even small farms are hard work! In your "K" section of your worksheet, respond to the following questions:*

1. *What information do you know about pigs and pig farming?*
2. *What do you call a baby pig?*
3. *What is a full grown female pig called?*
4. *How much do they eat?*

**Give students two to three minutes to brainstorm what they know about pigs. Once complete ask a few to share.**

## Lesson 1 | Biosecurity and Health

### Explore

**Once they have finished the "K" section give all the students cups or paper bags. See full instructions below.**

*Imagine you are a pig farmer and all of our pigs are in the same pen. Walk around and socialize with each other just like a pig would! When you stop to talk to someone, take a scoop of your flour (or M&Ms, whatever you choose to use) and put it in there cup and have them put a scoop in your cup. When pigs socialize, they need to touch snouts but since we are not pigs we are touching cups!*

### Explain

**Use the short power point provided to explain how Fair Oaks Farms operates and how we keep them healthy so they can reach the right weight.**

*Now that we really understand why biosecurity is so important, let's see how Fair Oaks Farms practices biosecurity and check out how we keep them healthy!*

### Elaborate

**Option 1 | After reviewing how Fair Oaks Farms takes care of their pigs have the students repeat the biosecurity activity but this time have them separate the healthy pigs and the unhealthy pigs (allow them to figure out how to determine this). This is also a good time for them to fill out the "W" portion of the KWL chart in regards to what they want to know when they go to Fair Oaks Farms (if you are taking a field trip there).**

**Option 2 | Indirect Contact Airborne Pathogens | See full instructions on the next page**

*Germs can be passed on not only by touch but by the air or indirectly. An airborne disease can be contracted when an animal breathes in infected air or from contact with a contaminated surface.*

### Evaluate

**You can edit, adjust, or add to the the following questions but by the end of the lesson students should be able to answer the following.**

- *What is biosecurity?*
- *How does Fair Oaks Farms practice this?*
- *What are other ways of keeping pigs healthy?*

### Field Trip Suggestions

**When you return from your field trip finish the KWL chart.  
Use the adventure guide to make sure you get all of the highlights.  
Have fun!**

# BIOSECURITY ACTIVITY

Lesson 1 | Explore | Elaborate



## Materials

- Small cups for candy (not clear)
- 2 types of individual candies
  - M&M candies
  - Skittles
- Spoons to transfer candies

## Introduction to Activity

*Biosecurity is very important to the farmers at Fair Oaks Farms. We take as many careful steps into consideration when working with our animals. We want them to be happy and healthy, just like you! We have our farmers shower in before handling the pigs and that is why when you visit Fair Oaks Farms, you are above our operation looking down at the farm. So you stay healthy and our pigs stay healthy!*

## Facilitating the Activity

- Give each participant other than 2 or 3 a small cup with 5 to 10 candies of one type inside
- Give the 2 or 3 participants that did not get a cup originally a small cup with 5 to 10 candies of a different kind
- Remind participants to not eat their candy
- Instruct participants to move about the room and talk/socialize, exchanging a candy during the conversation
- Continue this process for 2-3 minutes depending upon the size of group, before returning with the new mixture of candies to their seat.
- Have participants who started with skittles raise their hands.
- Share with them that those skittles represent a contagious disease like ringworm, warts, sore mouth, etc.
- Determine who ended up with skittles in their cup. Once hands are raised, share with participants that they have been exposed to the contagious disease and will likely be bringing it their farm.

## Reflection

- Besides animal to animal, how might these same diseases spread?
- How can we reduce the spread of disease?

# INDIRECT CONTACT ACTIVITY

Lesson 1 | Elaborate | Option 2



## Materials

- Soapy Water
- Bubble Wands

\*\* You can also buy bubbles from the dollar store.

\*\*Be careful on slippery surfaces or do this outside.

## Introduction to Activity

*Airborne diseases are illnesses spread by tiny pathogens in the air. These can be bacteria, fungi, or viruses, but they are all transmitted through airborne contact. An airborne disease can be contracted when an animal breathes in infected air or from contact with a contaminated surface.*

## What to do

*Pretend that the bubbles are a disease pathogen. Relates this to airborne pathogens explaining that disease can travel by air.*

- *Have the participants blow bubbles to observe how they are carried through the air.*
- *Lay a few ground rules before doing this activity. Such as:*
  - *You must stand 6 feet away from each other*
  - *Do not blow the soap into someone's eyes*

## Reflect

- *How many of you were touched by the bubbles?*
- *Was there anything you could do to avoid the bubbles?*
- *What human diseases are transmitted by air?*
- *What methods could you take to reduce airborne pathogen exposure in animals?*
- *Beside inhaling airborne pathogens what other ways could animals come in contact?*

# LESSON 2

## Pig Life Cycle



## SOME BACKGROUND

We have four barns at Fair Oaks Farms: the growing barn, gestation and breeding barn, and farrowing barn. Each barn is designed specifically for their stage or gestational time of growth. The growing barn is for new gilts that come in at 3 weeks of age. Our sister farm, Hopkins Ridge, produces them for us. The Gilts stay in the nursery for the first 7 weeks on our farm. The pigs are raised in pens of 30-50 and are always provided fresh feed & water. Young growing pigs spend most of their day eating, playing, & sleeping. We usually have about 125 pigs in these rooms. Next is the gestation & breeding barn! In this barn, we have 2,400 sows & the majority of them are pregnant! When the gilts are six months old and fully mature, they will move from the growing barn to the gestation & breeding barn. Lastly, is the farrowing barn. The temperature in the farrowing barn is something that must be managed very carefully. The room temperature stays at a constant 74-75 degrees. We have 250 piglets born each day, 1,700 piglets a week, and 80,000-90,000 piglets will be born on this farm in a year!

## Lesson 2 | Pig Life Cycle

### Learning Objectives

Students will be able to:

- Understand each growing stage
- Be able to determine weights
- Know the gestation period for a gilt or sow

### Vocabulary

- **Sow** | Female who has already given birth to a litter of piglets.
- **Gilt** | A young female pig that has not had piglets.
- **Boar** | Intact male pig (they can be really aggressive).
- **Barrow** | Male who cannot reproduce, he is castrated.
- **Piglet** | A young pig (female or male).
- **Farrowing Stall** | Helps the mother and piglets stay safe when they are nursing. The bars on the stall help keep the mom from crushing the piglets.

### Materials & Setup

- KWL Chart - Printed for each student (last page of this guide).
- Extra Paper
- Short Power Point

### Recommended Timeline

**Estimated Time: 45 to 55 minutes or two days (recommended)**

- Engage | 5 minutes | 10 minutes
- Explore | 15 to 20 minutes | 30 minutes
- Explain | 10 to 15 minutes | 10 minutes
- Elaborate | 10 minutes | 25 minutes
  - 2 options and can be extended if you would like
- Evaluate | 5 minutes | 5 minutes

### Engage

**Students will have a quick introduction to Fair Oaks Farms Pig Adventure. Students will then engage in various activities related to the Pig's Life Cycle. Provide KWL Chart, this can be done individually (recommended), in groups, or as a class.**

*Today we are going to learn about pigs and their life cycle in addition to the nutrients they provide to us. Piglets grow fast, when they are born they weigh about 2 to 3 pounds. They can double their weight in a week and in about 6 to 7 months for the piglets to reach market weight at 260 to 300 pounds. In your "K" section of your worksheet, write what you know about how a piglet grows and the different stages of growth.*

**Give students two to three minutes to brainstorm what they know about how milk gets from cow to consumer. Once complete ask a few to share.**

### Explore

**Once they have finished the "K" section divide students into small groups.**

*In order to keep our pigs safe during each growing stage we put Standard Operating Procedures or SOPs into practice. SOPs are written instructions that describes the step-by-step process that must be taken to properly perform a routine activity.*

**Continued on the next page.**

## Lesson 2 | Pig Life Cycle

### Explore Continued

*These procedures help keep our animals and farmers safe. Before going over Fair Oaks Farms' SOPs what are some SOPs you would need at home?*

**Have the kids brainstorm some ideas of how they could use an SOP at home. This could be something like what to do in case of a fire, a morning routine for school, or any other routine that they can think of. Have them write it out step-by-step.**

### Explain

**Now let's take a closer look at Fair Oaks Farms three barns.**

*You all did a great job with your SOPs. Now let's take a closer look at the barns we will see at Fair Oaks Farms and what they do every day to keep their pigs safe at each stage.*

**Use the short power point to go through each barn.**

### Elaborate

**Option 1 | After going through the powerpoint, have the kids identify some of the important SOPs that Fair Oaks Farms uses. Then complete the weight-matching game. Then have the students fill out the "W" portion of the KWL chart in regards to what they want to know when they go to Fair Oaks Farms (if you are taking a field trip).**

**Option 2 | Ear Notching Activity | See full instructions in the handout section.**

*Piglets get processed 2 days after they are born. Just like human babies, they have to get the required shots and care so they can grow big and healthy.*

### Evaluate

**You can edit, adjust, or add to the the following questions but by the end of the lesson students should be able to answer the following.**

- *How much does a piglet weigh?*
- *What does a pig weigh when they go to market?*
- *What is a SOP?*
- *What is a sow, gilt, and boar?*

### Field Trip Suggestions

**When you return from your field trip finish the KWL chart.  
Use the adventure guide to make sure you get all of the highlights.  
Have fun!**

### Links & Acknowledgments

Pig Resources from [The Ag Foundation](#)

[Pig in My Classroom](#)

Indiana Pork Producers has great information!

# WEIGHT MATCHING ACTIVITY

Lesson 2 | Elaborate | Option 1



## Stage of Growth

## Weight



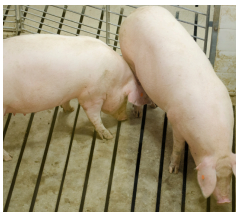
Birth

*280 to 300 pounds*



Nursery

*6 to 8 ounces*



Market

8 to 18 pounds

# EAR NOTCHING ACTIVITY

Lesson 2 | Elaborate | Option 2



## Materials

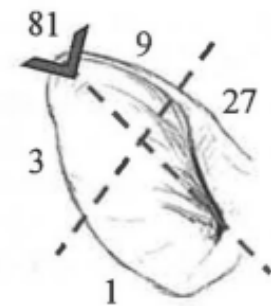
- Ear Cut Out
- Scissors
- Makers
- Tape

## Introduction to Activity

*At Fair Oaks Farms, our farmers work hard to make sure all of our pigs are healthy. In order to identify each pig we use a system called ear notching.*

## Instructions

1. Ear notches identify the pig, in the right ear is the litter number on the farm. The left ear has the individual number.
2. Divide the ear into four quadrants. Know how much each quadrant is worth.
3. Add the notches together.
4. Have the kids draw ears and add their notches.
5. Cut out the ears and the headband.
6. Have them put it on and get in line by birthday.

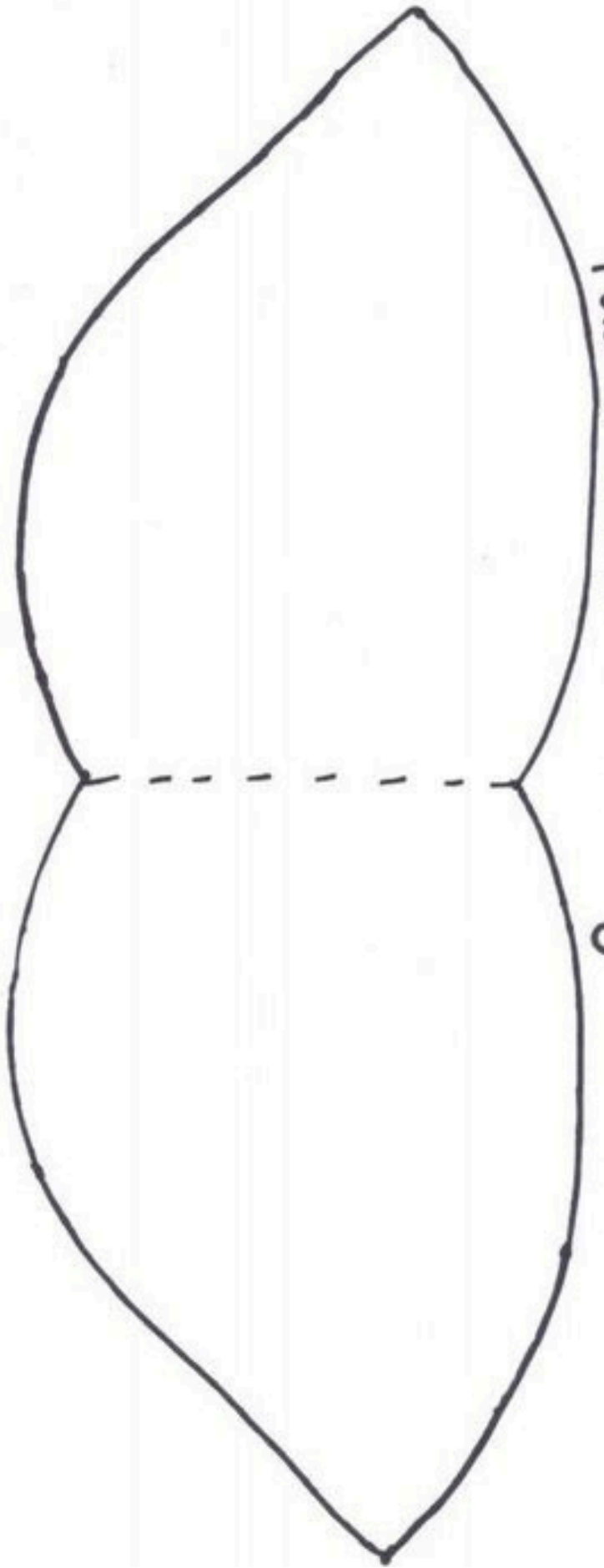


## Reflect

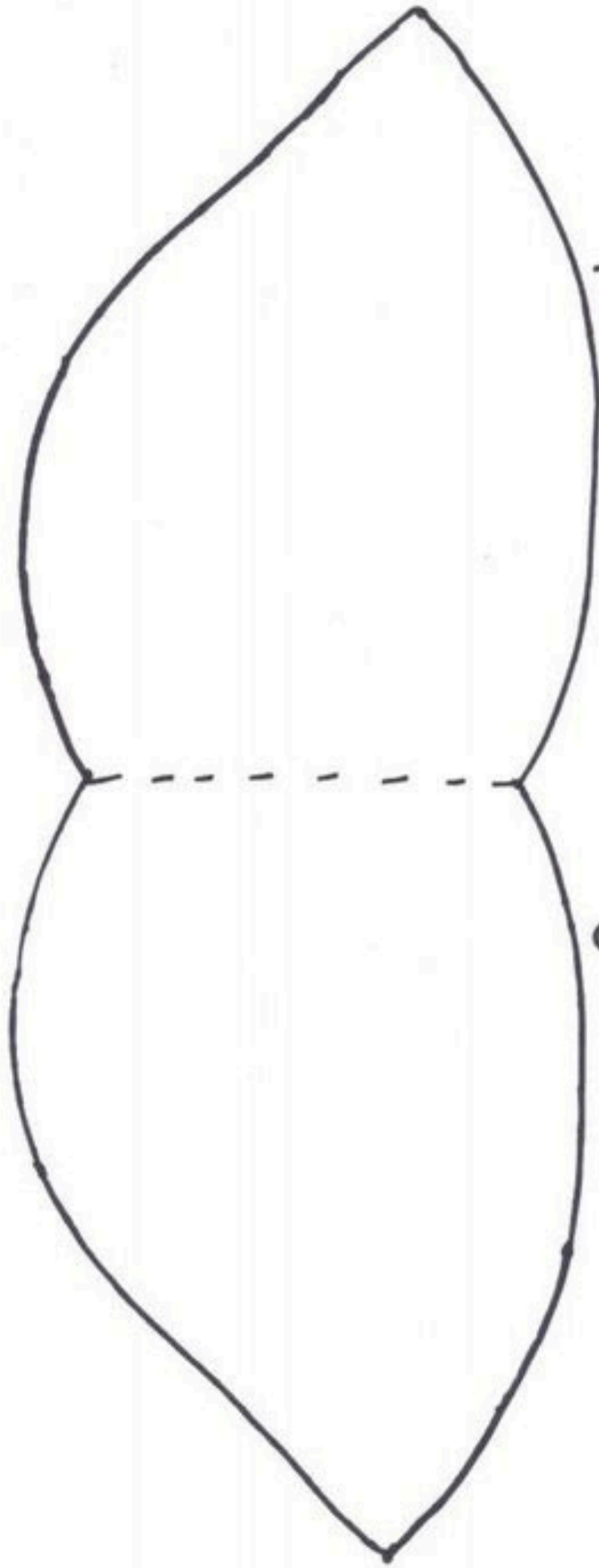
*Were you successful in getting in order of birthday?  
What is the right ear, what is the left ear?*

**Pig ear cut outs are from: [ashleyscrafts.blogspot.com](http://ashleyscrafts.blogspot.com)**

Cut 1 for each ear (2 total)  
Fold around headband along dotted line



Cut 1 for each ear (2 total)  
Fold around headband along dotted line



# KWL

Know | Want to Know | Learned



K – What I know

W – What I want to know

L – What I learned