

# WI 4-H

# CLOVERBUDS

## ACTIVITY PLANS & FAMILY LETTERS



## PART 3



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# Animals of All Ages



*Just like people, livestock animals have special names for mothers, fathers, and babies. We will learn these special names for animals, and we will work together to teach the names to other people.*

## Did You Know?

Animals like sheep, goats, cattle, poultry, and swine provide us with foods—meat, milk, and eggs—that are high in protein. Eating and drinking these products help us build healthy bones and muscles. Many animals also provide us with fibers including wool, leather, and hair. We also use animal co-products (which used to be called by-products) to make items that we use every day.

Each male, female and young animal has a special name. It helps farmers and others to know the right words to use when talking about animals.



### 4-H Project Areas:

- Animal Science

**Time:** 30 Minutes

### Life Skills:

- Cooperation
- Communication
- Teamwork

### Materials:

- Animal Name Cards (provided)
- Construction paper
- Markers or crayons
- Tape/glue sticks

### Prep Ahead:

- Print and cut out Animal Name Cards.

## ASK

*What did you eat or drink for dinner last night?*

Make a list on a whiteboard or chart paper.

*Which of these foods or drinks come from animals?*

Circle the ones they tell you. Help to make sure they find all of them.

Tell the youth that foods that come from animals have lots of protein, which helps us to grow strong bones and muscles. These foods, along with fruits, vegetables, and grains, help us to stay healthy.

*What are you wearing right now that comes from animals?*

Tell the youth that fibers from animals like wool or leather help to keep us warm and dry.



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# Activity



## INVESTIGATE

Explain to the youth that animals are usually raised for two main reasons. One is to give us products such as meat, milk, eggs and fibers (such as wool or leather) that help us in our day-to-day lives. The other reason is to breed more young animals.

Write the words “Male,” “Female,” and “Child” on a whiteboard.

Ask, *What else do we call a human male who has a child?*

Ask, *What else do we call a human female who has a child?*

Ask, *What other words do we use instead of child?*

Explain that we are going to learn more about five types of animals on farms. These animals have special names for males, females, and babies too.

## CREATE

Allow each youth participant to choose an Animal Name Card. Tell them not to show their card to anyone else.

Ask, *What sound does a sheep make? Ask this question for each species—cattle, swine, chickens, and goats to make sure the youth know what sound each animal species makes.*

Tell the youth to walk around the room making the sound of the animal on their card. Use the sounds to find others with the same species’ cards. They should have at least three youth (but may have more) in their groups.

When the youth are in species groups, encourage them to tell group members about their animal’s special name and the fact that is on the card. Adults should walk around and help them read and understand the facts.

Then, give each group construction paper, tape/glue sticks, and markers/crayons. Ask them to work together to create a poster about their species, including the name of the species and the special names of the males, females and babies.

*Adaptation: For smaller groups, one youth can search to find all the pictures and create a poster about the animals from one species.*

## SHARE

Ask youth to work together to decide how they will tell the other youth about their animal species. Everyone in the group should play a role, which might be speaking, holding the poster, pointing to parts of the poster, or helping to answer questions about the animal.

Give each group a chance to share their poster. After all the groups have presented:

Ask, *What did you like about cooperating with the other members of your group to share your posters?*

In closing, tell the youth that it is important for farmers to be responsible and take good care of their animals because their animals do so much for us too.

*Adaptation: You could also hang their pictures on the wall like a mini-gallery and have them walk around to look at everyone’s posters.*

## MORE TO EXPLORE

- Bring five items made from animal co-products such as feather pillows, wool, leather/suede, paint brushes with natural bristles, crayons (made with tallow from cattle), goat milk soap, tennis balls (made with sheep wool), Jell-O (made with gelatin from swine and cattle). Also bring five items not made from animal co-products such as plastic, wood, ceramic, or other non-animal materials. Encourage youth to identify which products we get from animals.
- Bring cheeses made from cow, sheep, and goat milk. Encourage the youth to taste and compare the flavors.
- Invite a speaker who knows about leathercraft or fiber art who could lead a simple hands-on activity and/or share product samples with the youth.

## CONNECT TO 4-H

- One of 4-H’s most popular project areas—specific topics that youth want to learn more about—is animal science. Animal Science projects include livestock, dairy and smaller farm animals, dogs and other pets, and horses. Youth can participate in these projects even if they do not own an animal.
- Animal science projects teach youth life skills such as caring, empathy, responsibility, decision-making, problem solving, and more.



### Animal Name Cards



Image used with permission from Amanda Patterson

### Animal Name Cards



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### Animal Name Cards



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### Animal Name Cards

## **BULL**

Male (father) cattle are called bulls. Bulls eat grass, hay, and grain.

## **RAM**

A male (father) sheep is called a Ram. Rams eat grass, hay, and grain.

## **ROOSTER**

Male (father) chickens are called roosters. Roosters eat a combination of corn, soybean meal, and vitamins and minerals.

## **BUCK**

A male (father) goat is called a buck. Bucks eat grass, hay, and a grain mixture. Bucks produce a scent that identifies them differently than other farm animal males.

## **BOAR**

A male (father) pig is called a boar. Boars eat a combination of corn and ground-up soybeans.



## **COW**

Female (mother) cattle are called cows. A cow is pregnant for about 263 days before she gives birth to a calf.

## **EW**

A female (mother) sheep is called a ewe. A ewe is pregnant for about 145 days before she gives birth to one or more lambs. A ewe can produce wool, meat, and depending on the breed, milk for cheese and other products.

## **HEN**

Female (mother) chickens are called hens. A hen lays eggs that can be used for food or incubated to hatch chicks.

## **DOE**

A female (mother) goat is called a doe. Does give birth to one or more goats after 114 days of being pregnant.

## **SOW**

A female (mother) pig is called a sow. A sow is pregnant for about 114 days before giving birth to many piglets (8-13 piglets) at a time.

## **CALF**

A baby in the cattle world is called a calf. A calf drinks milk from the cow until they can eat grain and grass.

## **LAMB**

A baby sheep is called a lamb. A lamb drinks milk from the ewe until they can eat grain and grass.

## **CHICK**

Baby chickens are called chicks. They can eat and drink on their own, but need to be kept warm.

## **KID**

A baby goat is called a kid. Kids drink milk from the doe until they can eat grain and grass on their own.

## **PIGLET**

A baby pig is called a piglet. Piglets drink milk from the sow until they can eat grain on their own.

# Be the Story Solver



*Join us for a look at a book and the challenges the characters face. Can you help the characters solve the problems in their story?*

## Did You Know?

In every good story, there are a few common parts: a setting, one or more characters, a problem the character faces, and a solution. Did you know that when an author wants to write a successful book, they put their characters in difficult situations and write the story to get them out of the problem? They “engineer” a solution!



### 4-H Project Areas:

- Science & Technology
- Communication/Performing Arts

**Time:** 30 Minutes

### Life Skills:

- Communication
- Critical Thinking
- Problem Solving
- Wise Use of Resources

### Materials:

- 3 Little Pigs story (abbreviated, attached)
- Challenge Cards (attached)
- A variety of building supplies:
  - Index cards
  - Pipe cleaners
  - Straws
  - Craft sticks
  - Tape or mailing labels
  - Paper clips
  - Plastic/paper cups
- Any other miscellaneous supplies you have available (pom poms, beads, blocks, etc.)

### Prep Ahead:

- Gather all building supplies. If you wish, you can put them in individual baggies, so each participant gets their own bag. Otherwise, make a “storefront” where the participants can choose what they want. Consider setting limits on materials so youth are not oversupplied!
- Print one story card to read story to participants.
- Print challenge cards (one per participant).

## ASK

Invite youth to tell you about a story or book they have read.

*What was the last book you read? Who was the main character? What was the problem in the story? How did the character overcome the problem?*



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# Activity



## INVESTIGATE

Explain to youth that today, we are going to read part of a book. Then, we are going to see how YOU can engineer (create) a solution to the character's big problem.

Invite youth to sit on the floor, get comfortable, and listen to the story you will read. Read the story, "The Three Little Pigs," to the youth with as much expression as you can. The story is provided with this lesson.

The third little pig needs the youth participants' help. Ask, *Can you help him make a house that will stand up to the "huff and puff" of the big bad wolf?*

## CREATE

1. Give each youth a challenge card and a bag of supplies (or allow them time to get supplies from a general supply space).
2. Challenge each youth to use the supplies they have been given to create at least one wall—four inches tall—that will stand up to the "huff and puff" of the big bad wolf.
3. Give each youth a space to build on their own.
4. Allow ten to fifteen minutes for youth to build and create.
5. When the time is up, invite all youth to share their creation (how they built it, what they used, etc.) with a friend. Then test the creations by "fanning" a piece of cardstock or cardboard to see if the wall(s) will stay upright.

Adapted by Melinda Pollen, 4-H Youth Development Educator, UW-Madison Division of Extension, Brown County, from Novel Engineering, <https://www.novelengineering.org/>  
Image sources: Shutterstock and Articulate 360 Content Library

## SHARE

Invite youth to come together.

Ask, *What were some solutions that were really creative and/or successful?*

Ask, *What is something someone else thought of that they thought was a good idea?*

Ask, *What would you do differently if we did it again? Would they like any additional supplies?*

Engineering is not always perfect, and we can learn from our first tries and other people's ideas. Being an engineer is about seeing a problem and working to find a solution.

## MORE TO EXPLORE

Do more story solving at home! Pick another story, and read it until there is a problem. Stop reading, grab supplies and see how YOU can solve the character's problem! If you are not sure what books to use, check out the list below:

- *The Snowy Day*, by Ezra Jack Keats—Read the story, and have the youth think about problems the main character has with snow. Then have them design a solution to one of the problems!
- *Muncha! Muncha! Muncha!*, by Candace Fleming—Read the story and have the youth think about problems in the garden. Then have them design a solution to one of the problems!
- *Peter's Chair*, by Ezra Jack Keats—Read the story and have the youth think about the problems with Jack's chair. Then have them design a solution to one of the problems!

If you have a bookcase in your house or a library in your community, almost ANY book will do! Read it out loud, and have youth think about the problems. Then, challenge them to create a solution.

## CONNECT TO 4-H

There is not just one, single way to take part in this organization we call 4-H. Youth can be part of a year-round club or a short-term project exploration. They could attend an event or participate in so many other opportunities. Youth and their families get to design and engineer their own experiences. 4-H has a place for everyone, and Extension educators are available to help engineer each youth's best experience. Reach out to an Extension staff member today to get, or stay, connected!



# THREE LITTLE PIGS

Once upon a time there were three little pigs who lived in a village with their mother and father. The time soon came for them to move out.

The first pig decided to build a house for herself made out of straw. Soon, a wolf came by walking by when he saw the first pig.

“Little pig, little pig, let me in,” he said. “Not by the hair on my chinny chin chin!” replied the pig.

“Then I’ll huff and I’ll puff and I’ll blow your house down!” growled the wolf, and he began to blow so hard that the straw house blew away!

The next pig built his house out of sticks. As he was building, the same wolf came by. “Little pig, little pig, let me in.”

“Not by the hair of my chinny chin chin!” replied the second pig.

“Then I’ll huff and I’ll puff and I’ll blow your house in!” said the wolf, and he began to blow so hard that the house of sticks blew away!

The third pig saw what happened to his brother and sister, and didn’t want that big bad wolf to blow over his house!

*The third little pig needs your help - can you help him make a house that will stand up to the huff and puff of the big bad wolf??*



### Challenge:

Use as many items as you can to build a wall or structure that you think can withstand the Wolf's "huff and puff."

The structure or wall you build must be between 4-5 inches tall.  
Use the ruler on this card).

Continue your learning at home. What else can you build?



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Use the ruler on this card).

Continue your learning at home. What else can you build?



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# Dragons and Damsels



*Discover the differences between dragonflies and their cousins, damselflies. Play a game imitating their movements and build models of them!*

## 4-H Project Areas:

- Environmental Education
- Natural Resources

**Time:** 30 Minutes

## Life Skills:

- Critical Thinking
- Comparing

## Materials:

- Handouts:
  - Dragonfly & Damselfly Photos (1 copy per youth)
  - Dragonflies & Damselflies Body Parts (1 copy per team)
  - Assembly Answer Key (1 copy)
- Tape
- Glue sticks
- Crayons
- Blank sheets of paper (optional)
- Device to show a video (optional)
- Boundary markers for a game (optional)

## Prep Ahead:

- Cut out the insect body parts for smaller children.
- If the relay game is used, set boundaries.
- Cue the video if it is used.

## Did You Know?

Many people mistake damselflies for young dragonflies, but they are actually a different species of insects. Dragonflies are one of the best predators in the animal kingdom because they catch their prey more than 95% of the time, and lucky for us, they like to eat mosquitos!

To learn more about the differences between dragonflies and damselflies, watch this short video:  
<https://youtu.be/l-vjvo3kFSY>.



## ASK

*Who has seen a dragonfly?*

*What kind of animal are they?*

*What do all insects have in common?*



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# Activity

## INVESTIGATE

Show pictures of dragonflies and damselflies, and ask the children to describe them.

Ask, *What do all of these animals have in common? Do they have something on their heads? How many legs do they have? Where are the legs and wings attached?*

Insects all have the following traits: three body parts (head, thorax, abdomen). The head has compound eyes with hundreds of lenses in them and antenna to help the insects feel and smell. The middle (thorax) is where their six legs attach and the wings too, if they have any.

Now, hand out the photos of dragonflies and damselflies, and ask, *What are the differences? How can you tell a damselfly apart from a dragonfly?*

- Head: Dragonfly eyes meet in the middle. Damselflies' eyes are on the sides and look like dumbbells.
- Body: Dragonflies are bigger and thicker. Damselflies are very thin.
- Wings: Both can have clear or colored wings, but the shape is different. Damsels have much more of a teardrop shape and are skinnier where they attach to the body.

## CREATE

Hand out the pieces of body parts and have the children put them together to make models of the animals. Options for putting the models together include:

1. Have the youth color the pieces, adding a background such as leaves.
2. Make it more challenging by mixing damsel and dragon parts together so more advanced youth can sort them out. *Note: Wings are the most difficult pieces to match.*
3. Have a relay race with teams of youth. Put the pieces in piles, and have team members go and pick up one piece at a time. Models can be built while collecting pieces, and the first team to put a dragonfly and/or damselfly together correctly wins. (Models do not have to be glued or taped.)

## SHARE

Review the similarities and differences between dragonflies and damselflies. Ask, *What body part is the easiest way to tell them apart? Why?*

It can be more difficult to tell animals apart when they are moving in nature, but we can tell dragons and damsels apart while they are flying! Dragons fly very fast—up to 45 miles an hour—and dart quickly when making turns. They move in very straight lines. Damsels are much slower and “flit”; their flight looks much wavier. Another way to tell them apart is when they land. Damselflies fold their wings, while dragonflies hold them out sideways.

Have the children stand with some distance between them, and play a game like Simon Says, using the commands below. Warn them to run just a little way and to watch out for other people.

- Dragons fly! Fast running in straight lines with sharp turns. Arms should flap quickly.
- Damsels fly! Slower running in sort of a weaving pattern. Arms should flap slower.
- Dragons land! Youth stop running and hold their arms straight out from their sides.
- Damsels land! Youth stop and hold their arms straight behind them, hands touching.

## MORE TO EXPLORE

Insects go through a big body change called metamorphosis, and the nymph stage for dragons and damsels lives in water, sometimes up to six years. Dragonfly nymphs have a big lower jaw that acts like an arm to help them eat.

- Watch the short video, “Dragonfly Hunting Mosquito Larva” (1:38 minutes) <https://www.youtube.com/watch?v=Edx86lluRKO>—Other prey are captured as well, such as tadpoles and small fish.
- Watch the short video, “Dragonfly Captures a Tadpole” (27 seconds) <https://www.youtube.com/watch?v=SJiwcRt-gQw>—Good footage of jaws reaching out and grabbing prey.
- What other videos can you find to help you learn about dragons and damsels?

## CONNECT TO 4-H

4-H provides an opportunity for youth and adults to look at topics in critical ways. We do this almost every day in our projects and clubs/groups. We compare and contrast, look deeply at things, and try to figure out how and why things work. As adults and older youth leaders, we have an opportunity to role model and involve younger youth in lifelong learning, curiosity, and making decisions based on critical thinking.



# Dragonflies & Damselflies

**Compare the position of the eyes on their heads.**



**Damselfly**



**Dragonfly**



**Compare how they hold their wings when they land.**



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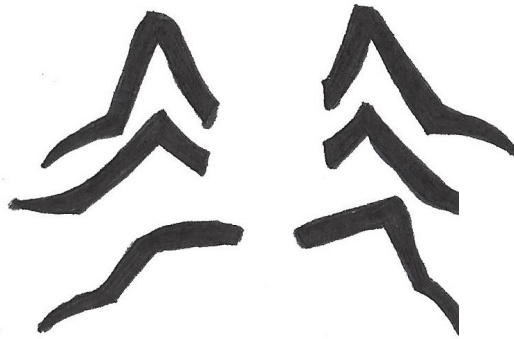
# Dragonflies & Damselflies

Which parts belong to the Dragonfly?

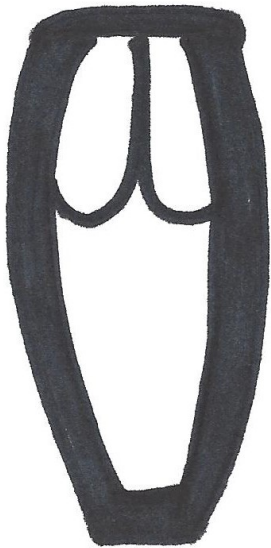
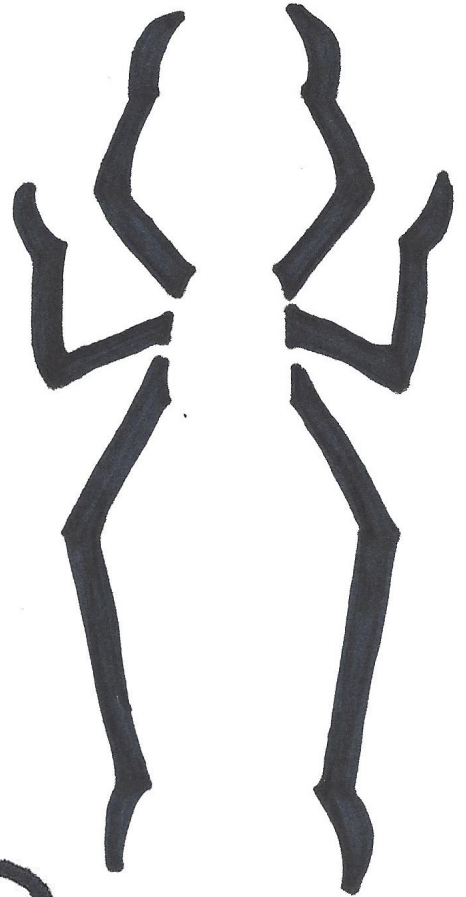
Which parts belong to the Damselfly?

Cut out all the parts. Then, use what you have learned about Dragonflies and Damselflies to put their parts together.

**Note:** Print this handout on 2 separate sheets of paper



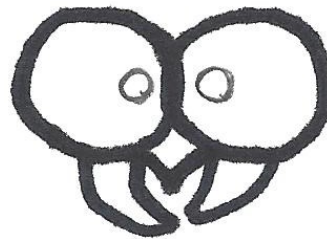
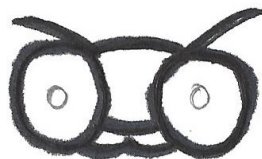
**Legs**



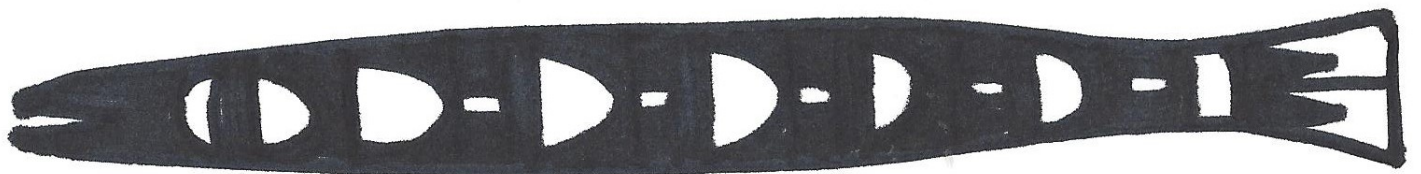
**Thorax**



**Head**

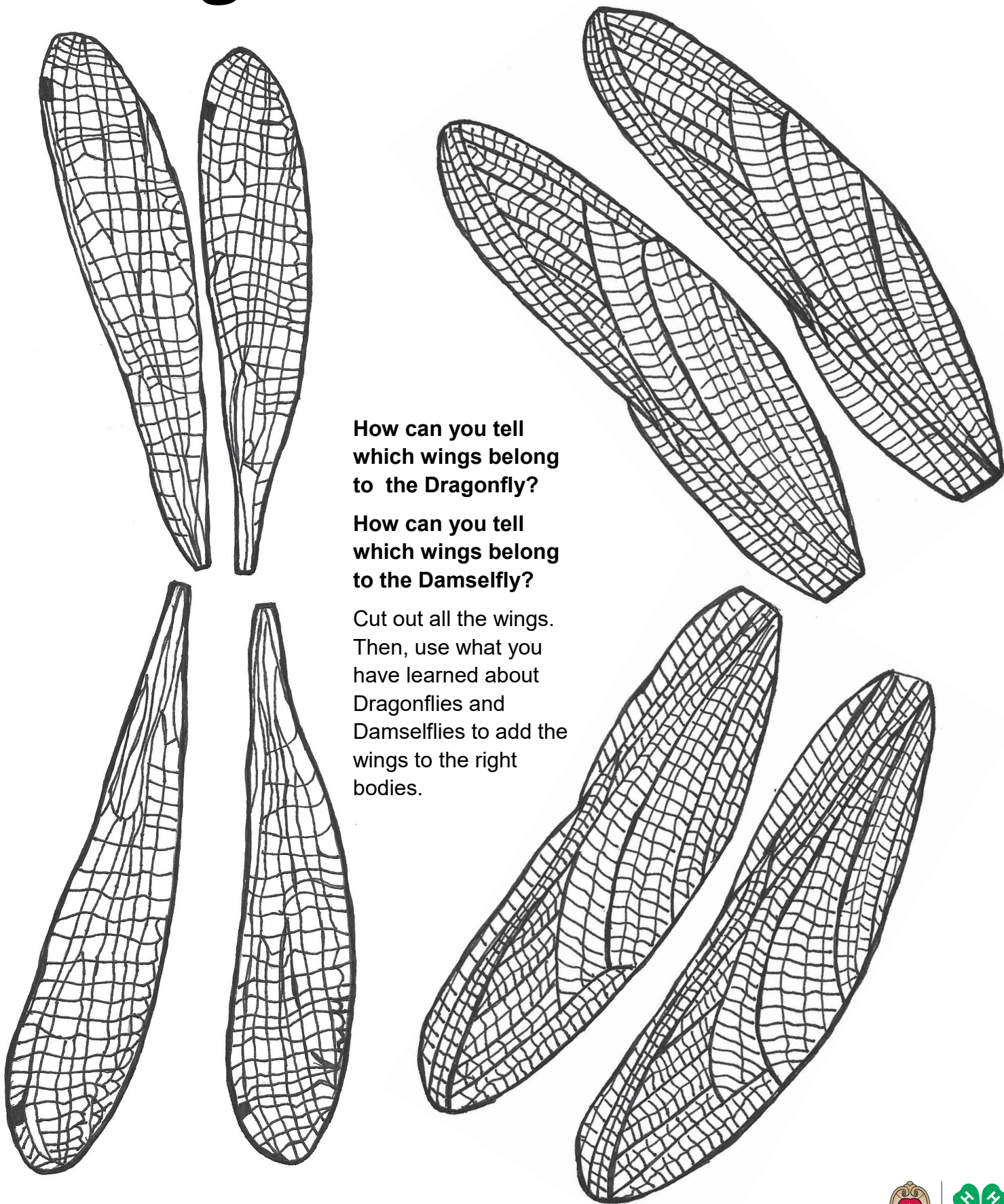


**Abdomen**





# Dragonflies & Damselflies



**How can you tell  
which wings belong  
to the Dragonfly?**

**How can you tell  
which wings belong  
to the Damselfly?**

**Cut out all the wings.  
Then, use what you  
have learned about  
Dragonflies and  
Damselflies to add the  
wings to the right  
bodies.**

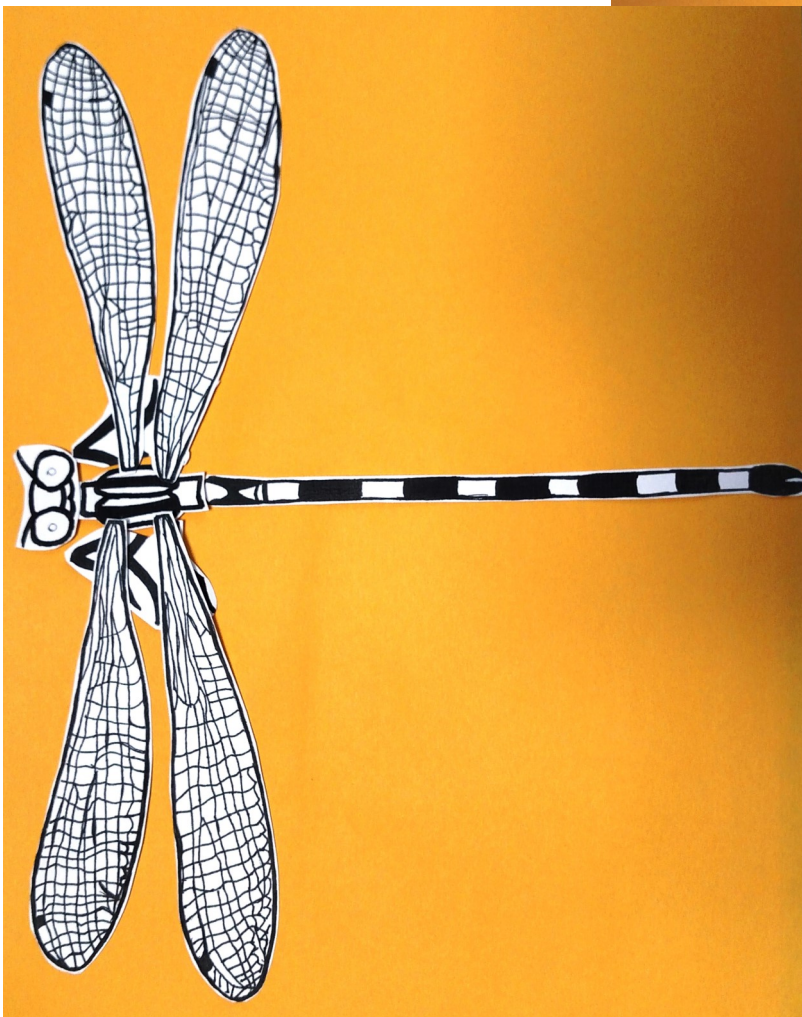
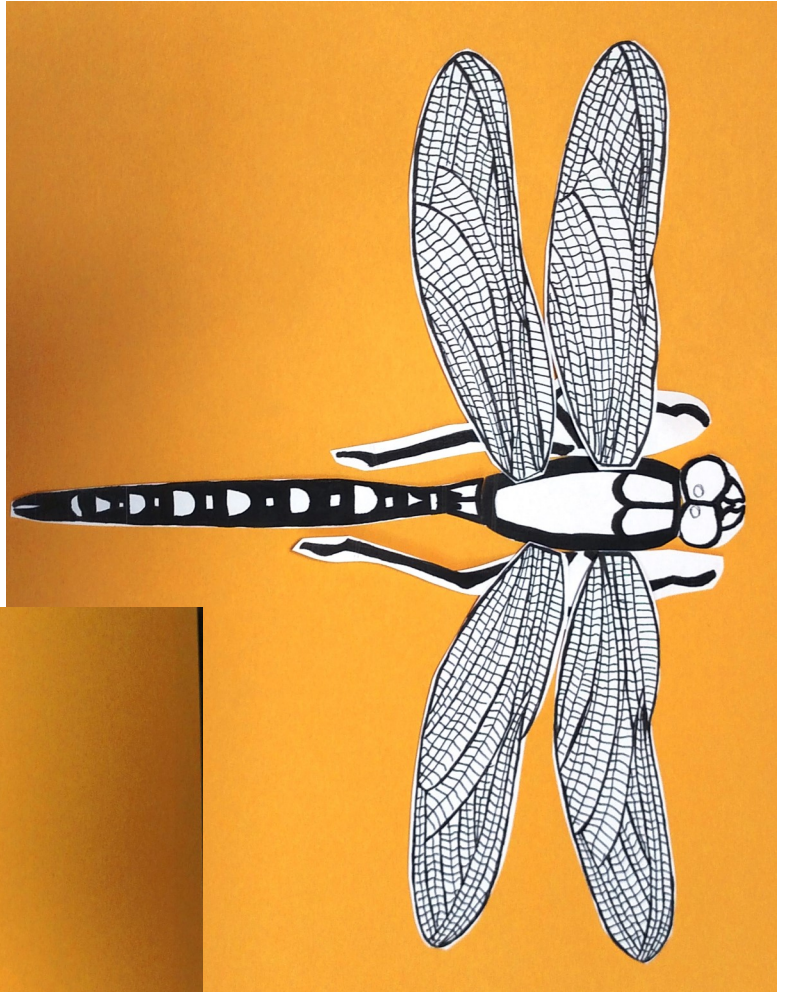




# Dragonflies & Damselflies

## Answer Key for Assembly

**Dragonfly** →



← **Damselfly**



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# Learning by Doing



*In this interactive lesson, we will explore what we **THINK** we know, and what we **REALLY** know by experiencing something familiar in different ways!*

## 4-H Project Areas:

- General— Positive Youth Development

**Time:** 30 Minutes

## Life Skills:

- Communication
- Critical Thinking
- Sharing
- Learning to Learn

## Materials:

- Learning by Doing handout (3 pages)
  - The word “Apple” in Chinese
  - The word “Apple” in English
  - Picture of an apple
- Plastic apple (optional)
- Fresh apples
- Knife
- Cutting board
- Napkins

## Prep Ahead:

- Print out one copy of each of the handouts.
- Gather all other supplies.

## Did You Know?

Every day, we have a chance to experience new things. Sometimes, those things are so new, we do not even know what they are. Did you know that learning by doing, what we call experiential learning, actually helps people learn more and remember it longer? Research has shown that hands-on learning, when done in a safe environment, can help all of us learn so we understand and remember, be more interested in what we are learning, and explore in a way that is best for each of us as individuals!



## ASK

Invite the youth to tell you about a time they learned something by doing it. *Note: It may help to share an example of your own, such as riding a bicycle, drawing a picture, or tasting a new food.*

*When was a time you learned something by doing it?*



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# Activity

## INVESTIGATE

Explain to youth that “Today, we are going to explore what we know—or what we THINK we know—by doing an experiment with something you all might know well. I am going to show you an item and ask a few questions.”

## CREATE

Make sure to hide pictures and apples in a bag or box so the youth cannot see them before it is time.

1. Hold up the picture of the Chinese character for “APPLE.” Ask, *What do you KNOW about this symbol?* Allow the youth to answer.
2. Hold up the sign for the English word “APPLE.” Ask, *What do you KNOW about this word—just from the letters on this paper?* (Be sure they focus ONLY on what they know from the spelling. For example, they know it is a word, they know it has letters, but they do not know it is a fruit! They only see letters!) Ask, *Do you know more about the first word or this one?*
3. Hold up the picture of the APPLE. Ask, *What do you KNOW about this object—just from this picture?* (Be sure they do not talk about the taste, that it is edible, etc. They do not know that yet from the picture!) Ask, *Do you know more about the picture or the words on paper from the first two experiments?*
4. (Optional) Hold up the plastic APPLE. Ask, *What do you KNOW about this object just from looking at it?* (At this point, you will likely hear things like what color it is, has a stem, looks shiny, etc.). Ask, *Do you know more about the apple in my hand or the apple on the paper?*
5. Hold up the real APPLE. Ask, *What do you KNOW about this object just from looking at it?* (This time, you will likely hear answers similar to the plastic apple.) Ask, *Do you know more about the apple in my hand or the plastic apple?*
6. Cut the apple into quarters or sixths. Pass a piece around to each youth. Invite them to use their senses to explore the apple. Touch, smell, taste, see, and hear. Then, ask, *What do you KNOW about the object? Do you know more about the apple in your hand, or the apple in mine?*

## SHARE

Invite youth to come together.

Ask, *When did you know the MOST about the apple? Why?*

By doing things in a hands-on way, we get to use more of our senses in learning, and many of us will learn better and remember more if we actually learn by doing!

## MORE TO EXPLORE

Want to explore more about hands-on learning? Check out the hands-on activities that are inside of all of the 4-H curriculum books. Call your local educator for more ideas and resources!



## CONNECT TO 4-H

In 4-H, the slogan is “learning by doing.” Based on youth development research, we know that youth learn better by doing activities. As we do activities with youth, we take time to incorporate three important parts into our activity plans: DO the hands-on activity, REFLECT on the activity, and APPLY what was learned the next time we do something. When they do, reflect, and apply, our youth are truly engaged in learning!

# Learning by Doing

苹果

(Pronounced: “pinyin”)



# Learning by Doing

# APPLE



UW-MADISON EXTENSION



# Learning by Doing



UW-MADISON EXTENSION



# Our Bodies Talk



*We use words to share how we feel. We also use our faces, arms, hands, how we sit, and how we stand to help others know what we are thinking and feeling. We might not always even know what we are saying with our bodies!*

## 4-H Project Areas:

- Animal Science
- Communication/Performing Arts

**Time:** 15-20 Minutes

## Life Skills:

- Communication
- Critical Thinking
- Self-Awareness

## Materials:

- Doggie Language poster
- Cat Language poster
- Waggle Dance handout
- Different colored ribbons or flagging (3 ribbons of each color)

## Prep Ahead:

- Review and practice the Waggle Dance instructions so you can show youth how to play.

## Did You Know?

People can use 18 different kinds of smiles. Laughter is something everyone in the world understands as a way to show happiness, just like everyone understands finger pointing as a negative message. Surprisingly, Princeton researchers state that our bodies express emotions better than our faces!

Animals use body language too. For example, bees use body language to tell each other where the best flower nectar is. Bees waggle their bodies at the hive in a special way to tell other bees where to find those flowers. Scientists call it the “waggle dance.”

## ASK

Ask, *What face do you make when you are angry? When you are sad? Happy? Worried? Surprised?*

Have each child pick an emotion to show in front of the group. Can the group guess what it is?

Ask, *What are some ways to show you are friendly and welcoming? What does unwelcoming look like?*

See if they can come up with other examples. Friendly people smile, nod, shake hands, and hug. Unwelcoming people frown, cross their arms, look bored, or scowl.

Ask, *How does someone who is shy look different from someone who is angry?*

Show them the differences in how someone who is shy holds their body and how someone who is angry holds theirs. Sometimes people who are shy can appear a lot like people who are angry, and it might take someone who is good at understanding body language to know the difference.





# Activity

## INVESTIGATE

Look at the cat language poster. Ask, *What are some of the differences in the cat's body with different emotions?*

Compare: interested with anxious; worried and frightened; friendly and predatory. Ask, *What are the similarities and differences?*

Look at the dog language poster. Ask, *What are some of the differences in the dog's body with different emotions?*

Compare: ready with alert; pretty please with curious; peace with anxious. Ask, *What are the similarities and differences?*

Ask, *What are the similarities with dog and cat languages? What emotions do they use the same body parts for? How do they use their eyes, ears, and tails to show fear, happiness, anger, or boredom? What similarities do people show with these feelings?*



## CREATE

Some animals do not show emotion, but they still communicate with their bodies. Did you know bees waggle dance to help direct other bees to the best flowers outside the hive?

Find an indoor or outdoor area that allows for movement for the size of the group you are working with.

Split the youth into smaller groups (three to seven youth per group with one adult or older youth, if possible) based on how many different colors of ribbons there are.

Each group gets three ribbons of their color. Ask the children to pretend the ribbons are flowers the bees want to find. One child, who starts as the lead bee, hides the flowers in different parts of the play area while the others close their eyes.

Adapted by Emily Crook, UW-Madison, Division of Extension, Positive Youth Development Educator, La Crosse County using resources from: Fact Retriever, <https://www.factretriever.com/body-language-facts> PBS Kids, [https://pbskids.org/plumlanding/educators/activities/pdf/WaggleDance\\_FFA\\_Eng\\_Span.pdf](https://pbskids.org/plumlanding/educators/activities/pdf/WaggleDance_FFA_Eng_Span.pdf)

"Doggie Language" and "Cat Language" posters used with permission from Lili Chin. Image Sources: Shutterstock and Articulate 360 Content Library

Explain how to do the waggle dance/loop:

- How to waggle loop: face the flower, and waggle your body as you take three steps forward, circle to the right back to where you started. Then, waggle your body three steps toward the flower again and circle to the left back to where you started. That is one complete waggle dance loop.
- The number of waggle loops tells the other bees how far the flower is from the hive.
- Nearby is one complete waggle loop; Medium is two complete loops; and Far is three complete waggle loops.

Have the lead bee perform a waggle dance to direct the rest of the bees to the flower. The bees take the flower back to their hive (start).

The lead bee then performs the waggle dances for the rest of the flowers. The first team with all their colored ribbon flowers found wins!

Repeat the process with new lead bees for each group.

*Adaptation: Ask the youth to suggest other dance moves to tell the bees if the flower is high or low; under or over something, etc. Play again with the new moves.*

## SHARE

Ask, *When is it a good time to read someone's body language?*

Ask, *Have you ever wished you knew what someone was feeling?*

Ask, *What signals is your body showing right now? Is that how you are feeling?*

## MORE TO EXPLORE

- Watch how bees waggle dance!—[https://youtu.be/LU\\_KD1enR3Q](https://youtu.be/LU_KD1enR3Q)
- Chimps have astounding body language just like us. In fact, they learn from mimicking each other just like we do—<https://youtu.be/BjMhSfxL1sw>

## CONNECT TO 4-H

Our expressions and our body language communicate messages to other people. 4-H gives youth a space to learn about how we communicate—with our words, our faces, and our bodies. We all have the chance to practice these types of communication in a safe and welcoming group setting through activities, special events and meetings. Through these experiences, youth learn how to manage their own verbal and nonverbal communication, and they learn how to understand others.

# CAT LANGUAGE



INTERESTED



FRIENDLY



ATTENTIVE



RELAXED



TRUSTING



FRIENDLY, RELAXED



CONTENT



CONFLICTED, CAUTIOUS



PLAYFUL



EXCITED



"THIS IS MINE"



ANXIOUS



PREDATORY



WORRIED



FRIGHTENED



THREATENED



TERRIFIED



SUPER TERRIFIED



IRRITATED



DISGUSTED

# DOGGIE LANGUAGE

starring Boogie the Boston Terrier



ALERT



SUSPICIOUS



ANXIOUS



THREATENED



ANGRY



"PEACE!"  
look away/head turn



STRESSED  
yawn



STRESSED  
nose lick



"PEACE!"  
sniff ground



"RESPECT!"  
turn & walk away



"NEED SPACE"  
whale eye



STALKING



STRESSED  
scratching



STRESS RELEASE  
shake off



RELAXED  
soft ears, blinky eyes



"RESPECT!"  
offer his back



FRIENDLY & POLITE  
curved body



FRIENDLY



"PRETTY PLEASE"  
round puppy face



"I'M YOUR LOVEBUG"  
belly-rub pose



"HELLO I LOVE YOU!"  
greeting stretch



"I'M FRIENDLY!"  
play bow



"READY!"  
prey bow



"YOU WILL FEED ME"



CURIOUS  
head tilt



HAPPY  
(or hot)



OVERJOYED  
wiggly



"MMMM...."



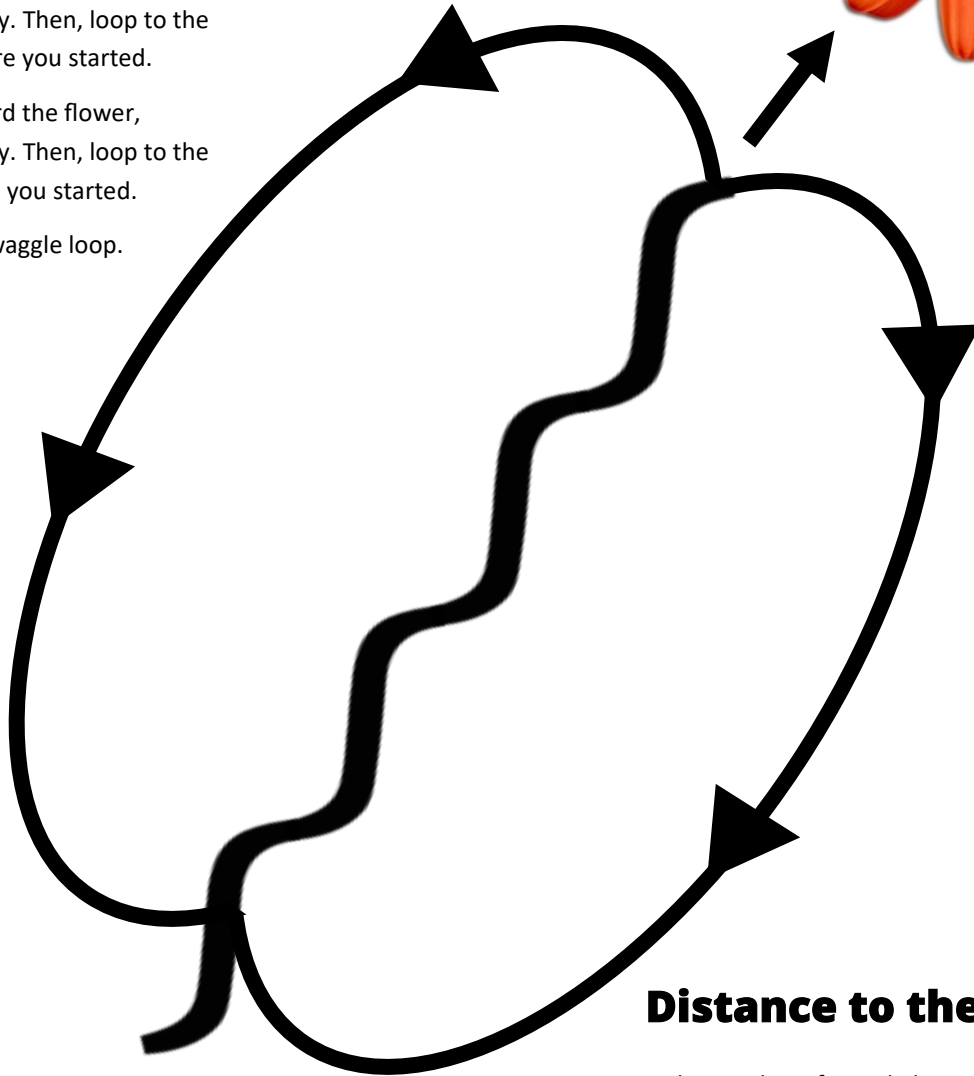
"I LOVE YOU,  
DON'T STOP"



# Waggle Dance

## Instructions for 1 Waggle Loop

1. Face the flower.
2. Take 3 steps toward the flower, wagging your body. Then, loop to the right, back to where you started.
3. Take 3 steps toward the flower, wagging your body. Then, loop to the left, back to where you started.
4. This completes 1 waggle loop.



## Distance to the Flower

The number of waggle loops the bee does tells the others how far away the flower is.

- 1 Waggle Loop = Flower is nearby.
- 2 Waggle Loops = Flower is a medium distance away.
- 3 Waggle Loops = Flower is far away.







# Outdoor Mindful Minis



*We will have fun together outside, noticing our surroundings in new ways, exploring and letting nature remind us of other things in our lives.*

## Did You Know?

Practicing mindfulness helps us—both adults and youth—to reduce stress and anxiety. It helps us learn to pay attention and to feel more kindness and compassion for ourselves and others.

So what is mindfulness? Mindfulness means being aware of what is happening right now without judging ourselves or the experience. It often, but not always, helps people feel calm. Youth who learn mindfulness tend to feel better overall, feel less anxious, and show better behavior.

Learn more about how to lead mindfulness with youth on page three of this lesson or in the short video linked to the left.

## ASK

Gather the youth outside. Ask them to sit cross-legged in a circle.

Softly ring a bell/chime and gently encourage the youth to settle and quiet themselves.

Ask, *Have you ever just listened to the world around you? What do you usually hear?*

Ask, *What are our five senses?*

### 4-H Project Areas:

- Health & Wellness
- Environmental Education

**Time:** 20-30 Minutes

### Life Skills:

- Managing Feelings
- Learning to Learn

### Materials:

- Chime or bell (optional)
- Handheld magnifying glasses or paper towel/toilet paper rolls (optional)

### Prep Ahead:

- Review the “Outdoor Mindful Minis Mindfulness Tip Sheet” or watch this short video ([https://youtu.be/i3UwmYTae\\_Q](https://youtu.be/i3UwmYTae_Q)). Then try this activity yourself and/or lead it with other adult volunteers before presenting it to your Cloverbuds.



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# Activity



## INVESTIGATE

Prompt the youth to take a big breath in through their noses and to breathe out slowly through their mouths. Encourage them to calm themselves and take two more deep big breaths.

Then ask the youth to softly close their eyes (If they prefer, they may have their eyes gently open looking at the ground.). Invite them to pay attention to their breathing, feeling the breath as it enters the body and feeling the breath as it leaves the body.

Leaving time between each one, begin to prompt different sensory experiences.

- Touch/Feel Prompt—"While your eyes are closed, think about what you feel in your body." Provide examples: bodily sensations, feet on the ground, hands in lap, sun on skin. They may also not feel anything, and that is okay.
- Hear Prompt—"While your eyes are closed, think about what you hear." Provide examples: birds, crickets, wind, voice.
- Smell Prompt—"While your eyes are closed, think about what you smell." Provide examples: pine trees, scent in the air.
- Taste Prompt—"While your eyes are closed, think about what you taste." Provide examples: tongue, breath, air, something you ate earlier.
- Sight Prompt—"Now very quietly, slowly opening your eyes and think about what you see. Think about what you notice."

If you have a bell/chime, softly ring it and gently encourage youth to bring their attention back to you.

Ask, *What did you notice about each of the five senses?*

Encourage each Cloverbud to share at least once.

## CREATE

(Optional) During the following activities, youth may use a magnifying glass or paper towel/toilet paper tube to help them explore with their sight.

Find a space outside where it is safe for the youth to explore (preferably with trees). Spread them out about five feet apart and ask them to spend the next one to three minutes exploring in each of the following three ways.

- "I notice..."—Encourage the youth to say out loud everything they notice about nature using all their senses, saying "I notice..." each time. For example, "I notice the sun is warm." "I notice the tree is green." "I notice the grass is wet." Prompt them to keep saying "I notice" until they notice something again.
- "I wonder..."—Encourage the youth to say out loud everything that they wonder about in nature, saying "I wonder..." each time. For example, "I wonder why that nest is empty." "I wonder why that rock has moss." Prompt them to keep saying "I wonder..." until they wonder something again.
- "This reminds me of..."—Encourage the youth to say out loud "This reminds me of..." about things in nature that remind them of other things in their lives. For example, "This reminds me of a tree at my dad's apartment." "This reminds me of my family going hunting." Prompt them to keep saying "This reminds me..." until something comes to mind.

## SHARE

After each of the explorations, bring the group together to share what they noticed, wondered about or remembered.

## MORE TO EXPLORE

- Explore ways to practice mindfulness with your family and for yourself. Find more resources at <https://centerhealthyminds.org/>. Hover over "Join the Movement" and click on "child well-being" to find more practices to do with children.
- Try adding colors, smells, tastes to explore the senses on purpose. Notice, wonder, and remember even more. Mint leaves, oranges, and other herbs or fruit work great.

## CONNECT TO 4-H

Being mindful is a way of paying attention to our thoughts, emotions and experiences. When we pay attention, it is easier to focus on things like reflection, or thinking about our experience. In 4-H, we give ourselves time to reflect, which can help us to learn from our mistakes and successes. We might think about questions such as: Did I do my best? Did I follow through? Did I follow the rules and guidelines? How can I do better in the future? Then, rather than judging our answers, we can learn from them.

# Outdoor Mindful Minis

## Mindfulness Tip Sheet

### What is Mindfulness?

To be mindful simply means to pay attention on purpose without judging whatever happens.

Everyone's mind wanders. Everyone fidgets at times. Everyone's surroundings are distracting. By paying attention, we train our brains to watch when those distractions happen, to be kind to ourselves, and to start over.

**For children**, mindfulness can be a helpful tool to use when they need it most, such as when they have strong emotions. Mindfulness helps them learn new ways to deal with those emotions, which can help them calm themselves and focus. This can also improve their problem solving and healthy decision making.

### Preparing Yourself to Lead a Mindfulness Activity

If you are new to mindfulness, here are a few tips to help you get comfortable and better lead the activity.

1. **Practice mindfulness yourself.** That way, you know what to expect, and it's easier to support youth when they try it.
2. **You don't need to be "good" at it.** What is important is the practice of bringing your attention back when your mind wanders.
3. **Start small.** Try mindfulness at least 3-5 times. You might start with 2 intentional breaths a few times a day. Then, when you're ready, if you want, try using a guided practice for 3 minutes or 5. One of these free apps can help.
  - Headspace (<https://www.headspace.com/>)
  - Stop, Breathe & Think (<https://www.stopbreathethink.com/>)

### Tips for Leading Outdoor Mindful Minis (and other Mindfulness activities)

1. **Pace yourself.** Practice reading the script at a pace that will give youth time to fully experience your guidance. *Note: If you're not sure how fast to speak, listen to the voices on the apps above, or try leading the activity with one or more willing adult participants and ask them for feedback.*
2. **Encourage group participation.** If everyone takes part, it's easier for the youth to show their interest and excitement. If adults choose not to participate, it may be better to ask them to leave the space to avoid distracting participants.
3. **Have fun. Be flexible.** Try to let go of strict expectations about how the activity should go. Show them you understand when they have the wiggles. Smile when they smile, laugh when they laugh, and then gently, kindly, move the activity along.
4. **Make it comfortable.** Give participants a choice to softly close their eyes if that feels safe or to look down at their laps if they prefer. Consider different kinds of seats – chairs, mats on the floor or other options – to accommodate different physical abilities.

**Thank you for being a part of young people's lives,  
and thank you for giving them the experience of mindfulness!**





# Saving for What?



*It is never too early to talk with youth about saving money and keeping money safe! This activity gives the opportunity to talk about money, while making a youth-friendly duct tape wallet!*

## Did You Know?

Talking with youth about money, although it may seem difficult, is really a good thing. When we talk with youth about how much things cost at a young age, they have a better understanding of how to stay smart with money in the future. They might even become less focused on material things, and save money for what is really important to them, instead of little things.



### 4-H Project Areas:

- Financial Literacy
- Workforce Development Skills

**Time:** 30 Minutes

### Life Skills:

- Goal Setting
- Planning/Organizing
- Managing Resources

### Materials:

- Duct Tape Wallet Template (handout)
- Duct tape—variety of colors
- Mini duct tape for decorations (optional)
- Scissors
- Velcro dots
- Wallet template
- Permanent markers
- Ruler (optional)

### Prep Ahead:

- (Optional) Pre-cut the duct tape sheets as shown in the attached handout.
- (Optional) Cut duct tape into narrower strips for sealing the sides, instead of purchasing mini duct tape.

## ASK

Ask, *How do people keep money safe?*

Ask, *What are some things you would like to save money for, in the future?*



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# Activity

## INVESTIGATE

Ask, *Where do people usually keep their money, when they leave their homes?* In wallets!

Today, we are going to make our own duct tape wallets to keep our money safe.

## CREATE

1. Ask the youth to cut six strips of the regular duct tape approximately twelve inches long. Lay three of the strips side-by-side, overlapping the edges a quarter inch. Then lay the other three strips of regular duct tape one by one on top of the first three strips, sticky sides touching. This forms a duct tape sheet. After the sheet is finished, trim clean edges to a finished size of eleven inches.
2. (Optional) Using the template, trace a rounded edge on one side of the sheet (to form the wallet flap) with a permanent marker. Then use a pair of scissors to cut the rounded edge. Some may choose to create a triangle or square edge.
3. Fold the duct tape sheet into thirds to form the wallet. Using the colorful skinny tape, seal the sides closed. Finally use a Velcro dot to close the wallet flap.
4. If making wallets in a group, have youth write their name on the inside flap with a permanent marker.
5. Pass out a small piece of paper, and ask the youth to either write or draw something they would like to save their money for. Invite them to put that paper safely in their wallet.

*Optional discussion (if needed while youth wait for supplies or for others to finish):*

Ask, *What are some good ways you can earn or get money?*

Ask, *What are some other ways people save money?*

Ask, *Have you ever been to a bank? What was it like?*



## SHARE

Invite the youth to show their wallet to the group

Ask, *What is one thing you are going to save your money for?*

## MORE TO EXPLORE

Financial literacy involves not only being mindful of how people save and spend money but also considers things like donating money to charitable causes. Consider exploring ways to talk about the three areas of financial literacy: save, spend and donate!

### CONNECT TO 4-H

Most things cost money. As a 4-H member, everything about 4-H may have a price tag associated with it, and most clubs and groups have a budget to help pay for things. The money that is raised by the club or group is important. Members and leaders must pay attention, because the money belongs to the whole group and to 4-H as a public organization. So the whole club or group can be involved in creating a budget—in other words, planning for what to spend and how much fundraising to do. Budgeting for the club or group is a lot like how we plan to save in our duct tape wallets!

# Saving for What?

## Duct Tape Wallet Template

### Instructions:

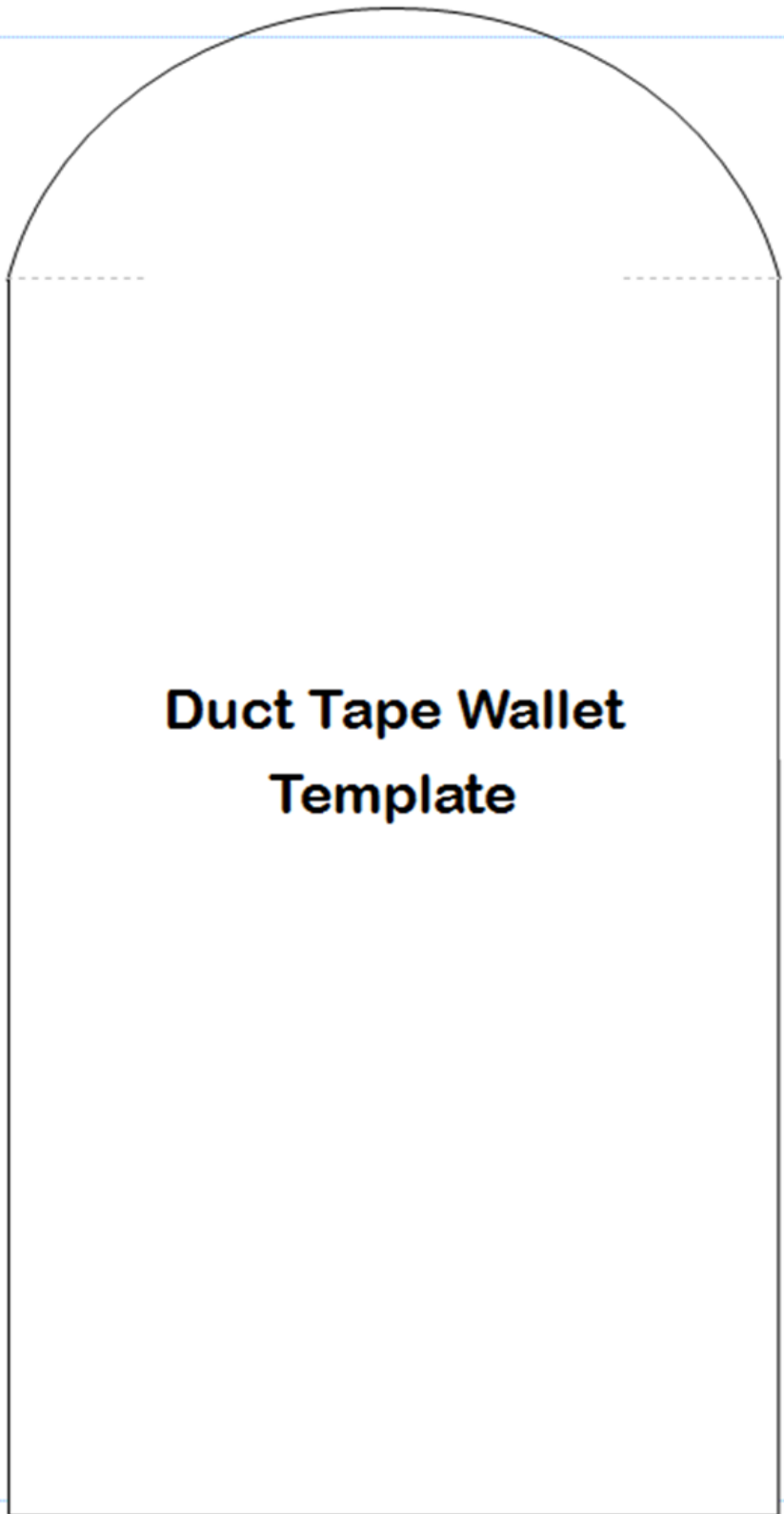
Follow the instructions to create a duct tape sheet, listed in the “Saving for What?” financial literacy lesson for Kindergarten-2nd grade youth.

Then, have youth:

- Cut out the template to the right.
- Use the cut template to trace the shape on the duct tape sheet youth created.
- Cut the duct tape in the shape of the wallet.

Finally, follow the instructions from the lesson to guide the youth through finishing their wallets.

When they have finished creating their wallet, ask, *What do you want to save your money for?*







# The Science of Felting



*While making their own felted wool ball, youth will learn about the science of what causes wool fibers to stick to one another and stay stuck.*

## Did You Know?

Mammal hair is composed of a material called keratin (pronounced *care-a-tin*). On the surface of the keratin, on each strand of hair, are tiny scales. If conditions are right, these scales can fuse together to produce a strong fabric called “felt.”

Two things help those scales on the surface of hair to fuse together: agitation (or moving it around quickly and roughly) and a temperature change.

The tiny scales on the hair lift up when they are put into hot water. Then, they slowly stick together as they rub back and forth against each other. This is why wool shrinks in the washer and dryer. After felting has occurred, it cannot be undone!



## ASK

Hold up a small piece of roving. Explain that roving is the wool of sheep that has been cleaned, dyed, and carded (or brushed so each fiber is straight without twisting or tangling with other fibers).

Ask, *What do you know about wool?*

Ask, *What products are sometimes made from wool?*

### 4-H Project Areas:

- Science & Technology
- Visual Arts

**Time:** 20 Minutes

### Life Skills:

- Critical Thinking
- Learning to Learn

### Materials:

- Dyed roving (dark colors felt best; 20 grams (0.7 oz) of roving makes about 30 small felt balls)
- Sealable plastic containers
- Hot water
- Baby shampoo
- Paper towels

### Prep Ahead:

- Review this photo demonstration of how to felt balls easily and with less mess here:
  - <http://www.megacrafty.com/2011/09/tip-easy-way-to-make-felted-balls.html>.
- Fill small containers (1 per youth) half full of warm water plus no more than one drop of baby shampoo.
- Pull apart small pieces of roving. *NOTE: Roving should be gently pulled apart, never cut.*



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# Activity

## INVESTIGATE

Hand out the materials, making sure each youth has a small amount of roving. Encourage the youth to hold the wool gently and use their senses (excluding taste) to explore the wool.

Ask, *What does it feel like? Look like? Smell like? How does it sound when you rub it gently between your fingers?*

Tell the youth not to do it yet, but that in a moment they are going to put their wool into the container of warm water and shake it all around.

Ask, *What do you predict will happen to the wool when we put it into the container of water and shake it?*

Explain that predicting means to guess what will happen. Take all answers, without correcting them or telling them the right answer.

## CREATE

Tell the youth to put their roving into the container and close the lid tight. Then, demonstrate how to shake the container—in all directions, up and down, back and forth, around and around.

Over the next few minutes, tell them that scales in the strands of wool fibers can become stuck together as they rub against each other.

Now ask, *What do you think is happening to your wool?*

Ask, *What shape do you think your wool might be in when you finish shaking it?*

Finally, when the roving has formed into a ball shape, have each youth take their felt ball from the container and plunge it into cold water, gently squeezing the water and leftover soap from it. Rolling the ball between their palms will “finish” the shaping.

## SHARE

Ask youth the following questions, making sure each participant gets to share at least once.

Ask, *What is one thing you learned from this activity?*

Ask, *What is one thing you could do with your felt ball?*

Ask, *What else do you think you could make from felted wool?*

## MORE TO EXPLORE

- Search for places nearby that raise sheep, process wool, or sell roving (loose wool fibers) for craft projects. Ask if you can visit to learn more.
- Experiment with different types of wool. Wool from sheep is especially good to use in the felting process, and different kinds of sheep (or llamas and alpacas) felt differently. Also, dyed and natural wool felt differently. Which one do you like best? Why?
- Explore other types of felting—needle felting, felting knitted items and more.



## CONNECT TO 4-H

Much like felting wool, there is a science and an art to forming a group of young people. If youth and adult leaders encourage the members of a group—providing opportunities to get to know each other, creating safe and welcoming conditions, checking on them regularly—a 4-H club or other youth group can build strong, trusting bonds. While a great deal of research supports this kind of group development, it is the caring and support from youth and adult leaders that artfully creates the positive space for groups to form.

Adapted by Monica Lobenstein, UW-Madison Division of Extension, Learning Resources Specialist, from “The Science of Felting,” by Paula Rogers-Huff and Kevin Palmer. Retrieved from: <https://manitowoc.extension.wisc.edu/files/2013/09/The-Science-of-Felting.pdf>

Image sources: Shutterstock, Articulate 360 Content Library, and (sheep) image by Rudy and Peter Skitterians from Pixabay

# Science of Sound



*We will learn about sound waves and how even though we cannot see them, we know they are there. We will also look at a basic musical instrument and how there is science behind the notes and sounds that it makes.*

## Did You Know?

Did you know that sound travels in waves, just like the waves you see in water? Sound travels very quickly—up to 770 miles per hour! Compare that to a car that only travels at 55-75 miles per hour on the highway.

## ASK

Ask, *Have you ever wondered how sound travels to our ears?*

Ask, *What do you think sound looks like?*



### 4-H Project Areas:

- Science & Technology
- Communication/Performing Arts

**Time:** 20-30 Minutes

### Life Skills:

- Critical Thinking
- Self-responsibility

### Materials:

- Pan Flute Template (1 per youth)
- Cookie sheet
- Metal bowl
- Plastic wrap
- Rice (small amount)
- Rubber band (to fit around the bowl)
- Wooden spoon
- Large plastic straws
- Scissors
- Double stick tape or glue stick
- Masking or duct tape
- Template for cutting straws
- Strips of paper (2" x 8.5")

### Prep Ahead:

- Print Pan Flute Template (attached) for straw length.
- Cut straws to specific lengths (use the template for sizes) to save time.



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# Activity

## INVESTIGATE

Even though we cannot see sound moving, we can do activities where we are able to simulate the sound waves and see how they move. Let's set up our experiment to see the waves:

1. Take a metal bowl, put plastic wrap over the top of the bowl, and secure it with a large rubber band. Ask, What musical instrument does this look like?
2. Set the bowl on a table or flat surface. Sprinkle a few pieces of rice on top of the plastic wrap.
3. Ask for two volunteers to hold a cookie sheet horizontally about twelve inches above the "drum." Ask another volunteer to hit the top of the cookie sheet with a wooden spoon.

Ask, *What happened to the rice on the top of the drum?*  
Ask, *Were you able to "see" the sound waves?*

The sound of the spoon hitting the cookie sheet caused sound (vibrations) that travel through the air. Ask, Did you hear the spoon hitting the cookie sheet? Explain that the sound waves hit their ears and causing them to hear the sound. Some of the sound waves also moved toward the "drum." The sound waves created movement in both their ears and on the plastic wrap, causing the rice to move.

Now that we have seen sound waves in motion, let's take a closer look at air and how it can make different sounds.

## CREATE

In this activity, we will make our own pan flute out of drinking straws and we will be able to try making our own music! To create a pan flute, follow these directions:

1. Print out a "Pan Flute Template" for each participant.
2. Measure and cut straws and spacer pieces.
3. Place a strip of paper on the template where the dotted line indicates. Place a piece of double-stick tape (or run a glue stick) on the paper. This will help hold straws in place before taping with masking or duct tape.
4. Place straws on double-stick tape or glue, matching each with the sizes on the template.
5. After all the pieces are lined up, wrap them with masking or duct tape. Make sure that the straws stay flat!
6. Now, blow across the top of the straws and make music!

## SHARE

Ask, *What happens when you blow across the top of the pan flute?*

Ask, *How is the sound being made?*

When you blow across the top of the straws, the air in the straw vibrates. The vibrations are sound waves that travel out of the straws and reach our ears causing us to hear a sound.

Ask, *How do you think the length of the straw affects the sound it makes?*

Test the difference between the longest and the shortest straws. Can you tell the difference? The length of the straw changes the pitch (how high or low the sound is) of the sound. A longer straw creates a low note, and shorter straw creates a higher note.

Ask, *What other instruments or items use wind to make sounds? (Examples: Flute, trumpet, saxophone, whistle, etc.)*

## MORE TO EXPLORE

We know what happens when we change the length of the straw, but what do you think might happen if we used wider straws? What might happen if we used narrower straws?

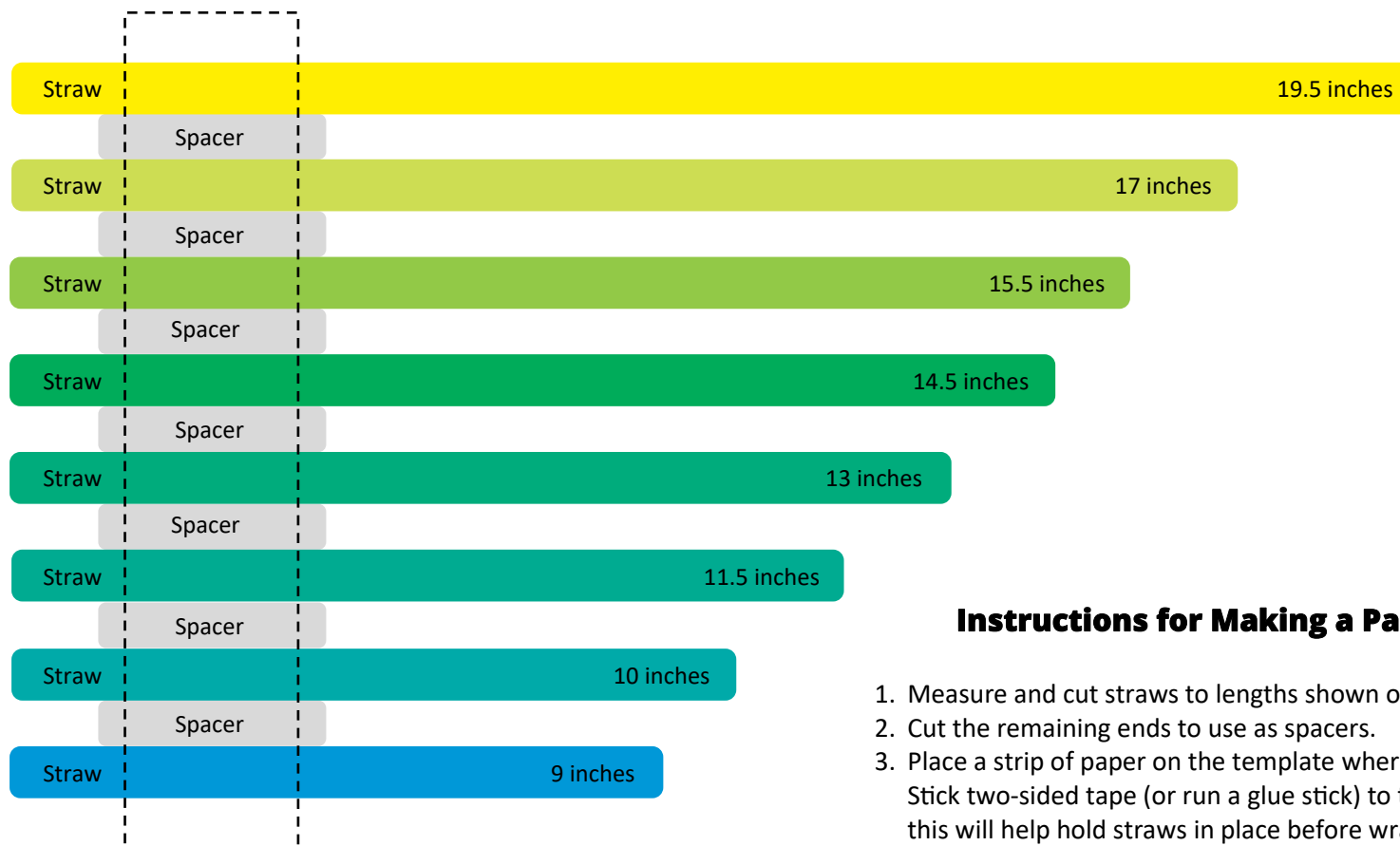
### CONNECT TO 4-H

Just like the length of straws, 4-H involves all sizes of youth members. A youth in Kindergarten begins 4-H in a Cloverbud project, and a senior in high school takes part in specific projects. Is the senior more important than the Cloverbud member? No! A 4-H program needs all sizes of members—and all colors and ages too—to be the most awesome, inclusive group. Just remember, be sure we wrap around all members—just like the tape in the activity—to make sure everyone feels they belong!

Adapted by Dawn VandeVoort, UW-Madison Division of Extension, 4-H Youth Development Educator, Door County from: Science of Sound: STEM Challenges for Elementary Grades, <http://spellboundinsecond.blogspot.com>; Hands On Science: Straw Pipe, Museum of Science & Industry, Chicago, <https://www.msichicago.org/experiment/hands-on-science/straw-pipe/>

Image Sources: Dawn Vandevoort

# Pan Flute Template



## Instructions for Making a Pan Flute

1. Measure and cut straws to lengths shown on the template.
2. Cut the remaining ends to use as spacers.
3. Place a strip of paper on the template where the dotted line. Stick two-sided tape (or run a glue stick) to the strip of paper – this will help hold straws in place before wrapping with masking or duct tape.
4. Place straws on double-stick tape or glue, matching each with the sizing on the template.
5. After all the straws and spacers are lined up, wrap them with masking or duct tape. Make sure that the straws stay flat!
6. Blow across the top of the straws to make your own music!





# Animals of All Ages

## *As we did that we learned...*

That just like people, livestock animals have special names for mothers, fathers, and babies. We learned these special names for animals and worked together to teach others.

## *Ask your child...*

- What sounds do farm animals make? We talked about sheep, swine, cattle, chickens, and goats.
- What animal did you get to teach about?
- What are the names for the male, female, and baby of that animal?
- How did you help your group teach other children about the animal? Did you like helping to teach? Why or why not?

## *Explore more...*

- Have a scavenger hunt at home. Help your youth find foods and drinks that come from animals. Then, look together for products made with wool, leather/suede, feathers, or animal fur/hair. For more ideas of what we get from animals, do an internet search for “products from animals.”

## *Today we...*

Worked together to teach each other about farm animals and their names.



**Connect to 4-H...**

One of the most popular project areas—specific topics that youth want to learn more about—in 4-H is animal science. Animal Science projects include livestock, dairy and smaller farm animals, dogs and other pets, and horses. Youth can participate in these projects even if they do not own an animal. Animal science projects teach youth life skills such as caring, empathy, responsibility, decision-making, problem solving and more.







# Animales de todas las edades

## *Al hacer esto aprendimos...*

que, al igual que los humanos, el ganado tiene nombres especiales para las madres, los padres y los bebés. Aprendimos los nombres especiales para los animales y trabajamos juntos para enseñarlos a otros.

## *Pregunte a su hija(o)...*

- ¿Qué sonidos hace el ganado? Hablamos sobre las ovejas, los cerdos, el ganado bovino, los pollos y los chivos.
- ¿Sobre cuál animal les enseñaste a los otros?
- ¿Qué son los nombres para los machos, las hembras y los bebés de ese animal?
- ¿Cómo ayudaste al grupo a enseñar a los otros niños sobre el animal? ¿Te gustó enseñar? ¿Por qué o por qué no?

## *Explore más...*

- Haga un juego de búsqueda en casa. Ayude a su hija(o) a encontrar comidas y bebidas que proceden de animales. Luego, busque productos hechos de lana, cuero/gamuza, plumas o piel de animal junto con su hija(o). Para más ejemplos de los productos que proceden de animales, busque en internet “productos animales”.

## *Conecte a 4-H...*

Una de las áreas de proyecto más populares - temas específicos que les interesan a los jóvenes - en 4-H es la zootecnia. Proyectos de zootecnia incluyen proyectos relacionados con el cuidado del ganado, vacas lecheras y otros animales de granja más pequeños, perros y otras mascotas y caballos. Los jóvenes pueden participar en estos proyectos incluso si no tienen animales propios. Los proyectos de zootecnia enseñan a los jóvenes habilidades vitales como la preocupación por los demás, la empatía, la responsabilidad, la capacidad de tomar decisiones y más.



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# Be the Story Solver

## *Today we...*

Became story engineers and created our own solutions to the problem in the story, “The Three Little Pigs.”

## *As we did that we learned...*

That there are many ways to solve a problem in a story. We discussed how the job of an engineer is to see a problem and try to solve it. We were engineers when we used everyday items to solve the problem of walls being blown over by the Big Bad Wolf. We also shared our solutions with each other.

## *Ask your child...*

- What supplies did you use to build your wall(s)?
- Did you use something you thought was really neat? Did you use something simple in a new way?
- Did anyone else have the exact same idea as you?
- What other books have you read that we could find a new solution to?

## *Explore more...*

- Visit your local library to look for books you and your youth could read together. From books about princesses locked in towers to mice riding motorcycles to youth getting into trouble, there are books with challenges everywhere! Read the book with the youth, and stop when they see a problem in the story. Then, give them time to design and engineer a solution.



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## *Connect to 4-H...*

There is not just one, single way to take part in this organization we call 4-H. Youth can be part of a year-round club or a short-term project exploration. They could attend an event or participate in so many other opportunities. Youth and their families get to design and engineer their own experiences. 4-H has a place for everyone, and Extension educators are available to help engineer each youth's best experience. Reach out to an Extension staff member today to get, or stay, connected!







# Sea un solucionador de cuentos

## *Al hacer esto aprendimos...*

que hay muchas formas de resolver un problema en un cuento. Hablamos sobre como la responsabilidad de un ingeniero es reconocer e intentar resolver los problemas. Fuimos ingenieros cuando utilizamos objetos cotidianos para resolver el problema de las paredes derrumbadas por el lobo feroz. También compartimos nuestras soluciones mutuales.

## *Pregunte a su hija(o)...*

- ¿Qué materiales utilizaste para construir tu(s) pared(es)?
- ¿Utilizaste algo que te pareció muy interesante?  
¿Utilizaste algo simple de una manera nueva?
- ¿Alguien tuvo la misma idea que la tuya?
- ¿Cuáles otros libros has leído en los que podríamos encontrar nuevas soluciones?

## *Explore más...*

- Visite su biblioteca local para encontrar libros que podría leer con su(s) hijo(s). ¡Desde libros sobre princesas encerradas en torres hasta libros sobre ratas manejando motocicletas o jóvenes que se meten en problemas, hay libros sobre cualquier tipo de desafío! Lea el libro con su hija(o), y pare cuando ella ve un problema en el cuento. Luego, déle tiempo para inventar una solución.

## *Hoy...*

nos convertimos en ingenieros de cuentos y creamos nuestras propias soluciones para el problema en el cuento, “The Three Little Pigs” (los tres cochinitos).

### *Conecte a 4-H...*

No hay una forma correcta de participar en esta organización que llamamos 4-H. Los jóvenes pueden participar en un club durante todo el año o en un proyecto a corto plazo. Pueden asistir a un evento o participar en muchas otras oportunidades. Los jóvenes y sus familias pueden idear y crear sus propias experiencias. 4-H tiene un lugar para todos, y los educadores de Extension están disponibles para ayudar a crear la mejor experiencia para cada joven. ¡Comuníquese con el personal de Extension hoy para ponerse o mantenerse en conectada(o)!



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# Dragons and Damsels

## *As we did that we learned...*

How to know if we are looking at a dragonfly or a damselfly simply by looking at their bodies or how they move. We explored the head, body, and wings of these two kinds of insects in nature.

## *Ask your child...*

- What is similar between a dragonfly and a damselfly?
- How are they different?
- Please show me how to fly like a dragonfly. Now like a damselfly.
- Show me what each of them looks like when they land on a leaf.

## *Explore more...*

Go out in nature together. Look in ponds for dragonfly and damselfly nymphs. Look for the flying insects all around.

Do an internet search for videos or images to learn more about dragonflies and damselflies.

## *Today we...*

Discovered the differences between dragonflies and their cousins, damselflies. We played a game imitating their movements and built models of both!



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## *Connect to 4-H...*

4-H Provides an opportunity for youth and adults to look at topics in critical ways. We do this almost every day in our projects and clubs/groups. We compare and contrast, look deeply at things, and try to figure out how and why things work. As adults and older youth leaders, we have an opportunity to role model and involve younger youth in lifelong learning, curiosity, and making decisions based on critical thinking.







# Dragones y Damiselas

## *Al hacer esto aprendimos...*

cómo reconocer las diferencias entre las libélulas y los caballitos del diablo con tan solo ver sus cuerpos u observar sus movimientos. Observamos la cabeza, el cuerpo y las alas de estos dos tipos de insectos en la naturaleza.

## *Pregunte a su hija(o)...*

- ¿Qué similitudes hay entre las libélulas y los caballitos del diablo?
- ¿Cómo son diferentes?
- Enséñeme cómo vuelan las libélulas. Ahora enséñeme cómo vuelan los caballitos del diablo.
- Enséñeme cómo se ve cuando cada uno se posa en una hoja.

## *Explore más...*

Disfrute de la naturaleza juntos. Busque ninfas de libélulas y caballitos del diablo en estanques. Busque los insectos voladores por todos lados.

Busque videos o imágenes en el internet para aprender más sobre las libélulas y los caballitos del diablo.

## *Hoy...*

descubrimos las diferencias entre las libélulas y sus primos, los caballitos del diablo. ¡Jugamos un juego en donde imitamos los movimientos y construimos modelos de ambas especies!



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## *Conecte a 4-H...*

4-H ofrece a los jóvenes y los adultos una oportunidad de examinar críticamente una variedad de temas. Eso lo hacemos casi cada día en nuestros proyectos y clubes/grupos. Comparamos y contrastamos conceptos, examinamos a fondo diferentes temas e intentamos entender cómo y por qué las cosas funcionan. Como adultos y líderes juveniles mayores, tenemos la oportunidad de ser ejemplos e involucrar a los jóvenes menores en el aprendizaje de por vida, la curiosidad y la toma de decisiones basada en el pensamiento crítico.





# Learning by Doing

## *As we did that we learned...*

About how hands-on learning helps us be more engaged and learn more. We did this with an apple: the word, apple, in Chinese; the English word for apple; a picture of an apple; and a real apple. When we actually have something in our hands, we learn more and know more about it.

## *Ask your child...*

- When did you know the most about the apple?
- How can you learn even more about the apple you explored?
- What is something else you would like to learn by doing (rather than simply reading or hearing about it)?

## *Explore more...*

- Whenever possible, encourage youth to learn by doing. Have them be active in their projects. Let them try (even if they are not successful). Try to use the Do-Reflect-Apply Method next time: DO something. REFLECT on it. APPLY what they learned the next time they try. This is what we call experiential learning, and it is what 4-H is grounded in. Ask these open questions to help them reflect:

- What did you do?
- What happened?
- So what did you learn?
- What will you do differently next time?
- With hands-on learning and these questions, you will be well on your way to encouraging youth to learn by doing!

## *Today we...*

explored what we thought we knew about things around us, and what we really knew because we experienced them.

## *Connect to 4-H...*

In 4-H, the slogan is “learning by doing.” Based on youth development research, we know that youth learn better by doing activities. As we do activities with youth, we take time to incorporate three important parts into our activity plans: DO the hands-on activity, REFLECT on the activity, and APPLY what was learned the next time we do something. When they do, reflect, and apply, our youth are truly engaged in learning!



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# Aprender al hacer

## *Al hacer esto aprendimos...*

Cómo el aprendizaje práctico nos ayuda a participar y aprender más. Pusimos este concepto en práctica con una manzana: La palabra, manzana, en chino; la palabra en inglés para manzana; una imagen de una manzana y una manzana verdadera. Cuando realmente tenemos algo en las manos, aprendemos y conocemos más de ello.

## *Pregunte a su hija(o)...*

- ¿En qué momento tuviste la mayor información acerca de la manzana?
- ¿Cómo puedes aprender aún más sobre la manzana que examinaste?
- ¿Hay algo más que te gustaría aprender al hacerlo (en vez de simplemente leer o escuchar sobre ello)?

## *Explore más...*

Siempre que sea posible, aliente a los jóvenes a aprender al hacer. Haga que ellos participen de manera activa en sus proyectos. Déjelos intentar cosas nuevas (incluso si fallan). Intente usar el método hacer-reflexionar-aplicar la próxima vez: HACER algo. REFLEXIONAR sobre ello. APLICAR lo que aprendieron la próxima vez que intenten. Eso es lo que llamamos el aprendizaje empírico, y en eso se basa 4-H. Pregunte estas preguntas abiertas para ayudarlos a reflexionar:

- ¿Qué hiciste? ¿Qué pasó? ¿Qué aprendiste?
  - ¿Qué harás de manera diferente la próxima vez?
- ¡Con el aprendizaje práctico y con estas preguntas, estaré listo para alentar a los jóvenes a aprender al hacer!



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## *Hoy...*

Exploramos lo que pensábamos que sabíamos sobre las cosas que nos rodean, y lo que realmente sabemos a través de nuestras experiencias.

### *Conecte a 4-H...*

La consigna de 4-H es “aprender al hacer”. Gracias a la investigación sobre el desarrollo juvenil, sabemos que los jóvenes aprenden mejor a través de las actividades. Cuando hacemos actividades con los jóvenes, tomamos el tiempo para incluir tres partes importantes en nuestros planes de actividades: HACER la actividad práctica, REFLEXIONAR sobre la actividad y APLICAR lo aprendido la próxima vez que intentemos algo. ¡Cuando ellos hacen, reflexionan y aplican lo que aprenden, nuestros jóvenes están realmente involucrados en el aprendizaje!





# Our Bodies Talk!

## *As we did that we learned...*

Animals have body language, too! It is good to know how an animal is feeling before we approach it. Reading its body language helps us to know what is safe. We also learned how animals, such as bees, communicate more than feelings using only their bodies.

## *Ask your child...*

- How do bees waggle dance?
- Can you guess how I am feeling by reading my body language?
- What are some ways cats and dogs show emotion?

## *Explore more...*

- Watch how animals communicate. Do you have a family pet that shows emotion? What is your pet's body language telling you?
- How do animals in the wild, like birds and squirrels, communicate with each other? Go on a neighborhood walk. Watch and listen to what sort of language is going on!
- Play a family game where everyone guesses what emotion someone is showing.

## *Today we...*

learned how our bodies communicate with more than words, by using our faces, arms, legs, and postures.



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## *Connect to 4-H...*

Our expressions and our body language communicate messages to other people. 4-H gives youth a space to learn about how we communicate—with our words, our faces, and our bodies. We all have the chance to practice these types of communication in a safe and welcoming group setting through activities, special events, and meetings. Through these experiences, youth learn how to manage their own verbal and nonverbal communication, and they learn how to understand others.







**Hoy...**

aprendimos cómo nuestros cuerpos se comunican no sólo con palabras, sino también con nuestras caras, brazos, piernas y posturas.

# Nuestros cuerpos hablan

## ***Al hacer esto aprendimos...***

¡Que los animales también tienen un lenguaje corporal! Antes de que nos acerquemos a un animal, es bueno saber cómo se siente. Leer su lenguaje corporal nos ayuda a mantenernos seguros. También aprendimos cómo los animales (por ejemplo, las abejas) pueden comunicar más de los sentimientos al usar sólo sus cuerpos.

## ***Pregunte a su hija(o)...***

- ¿Cómo se hace la danza del meneo de las abejas?
- ¿Puedes adivinar cómo me siento al leer mi lenguaje corporal?
- ¿Cuáles son algunas maneras en las que los gatos y los perros muestran emociones?

## ***Explore más...***

- Observe cómo se comunican los animales. ¿Tiene una mascota familiar que muestra emoción? ¿Qué le dice el lenguaje corporal de su mascota?
- ¿Cómo se comunican los animales salvajes, como los pájaros y las ardillas? Dé un paseo por su vecindario. ¡Mire y escuche al lenguaje que está presente!
- Juegue un juego con su familia en donde todos adivinan cuál emoción alguien está mostrando.



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## ***Connect to 4-H...***

Nuestras expresiones y nuestro lenguaje corporal comunican mensajes a otras personas. 4-H proporciona a los jóvenes un espacio en donde pueden aprender sobre cómo nos comunicamos—con nuestras palabras, nuestras caras y nuestros cuerpos. Todos tenemos la oportunidad de practicar estos estilos de comunicación en un ambiente seguro y acogedor a través de las actividades, los eventos especiales y las reuniones. Con estas experiencias los jóvenes aprenden cómo manejar su propia comunicación verbal y no verbal, y cómo entender a los demás.





# Outdoor Mindful Minis

## *As we did that we learned...*

Mindfulness can help us playfully pay attention to the world around us and our inner thoughts. We used our breath and our five senses. So what is mindfulness? Mindfulness means being aware of what is happening right now without judging ourselves or what happens. It often, but not always, helps people feel calm. Youth who learn mindfulness tend to feel better overall, feel less anxious, and show better behavior.

## *Ask your child...*

- Can you list all five of your senses?
- What did you notice in nature today?
- What did you hear? What did you smell? See? Taste? Touch?

## *Explore more...*

- Try this mindful breathing activity together: Stand, sit, or lay with your spine straight. Gently close your eyes or keep them open with a soft focus. Breathe in naturally, and silently count, "One." Breathe out, silently counting "Two." Repeat until you reach ten. Then, choose to stop or repeat the activity again. (Family Tip: With younger youth, gently count out loud and/or have them put a hand on their belly to feel it rise and fall as they breathe.)
- Practice more mindfulness together as a family. Here are some of our favorite mindfulness practices with youth:

<https://centerhealthyminds.org/join-the-movement/children>.

## *Today we...*

Explored mindfulness and the great outdoors using our five senses.

## *Connect to 4-H...*

Being mindful is a way of paying attention to our thoughts, emotions and experiences. When we pay attention, it is easier to focus on things like reflection, or thinking about our experience. In 4-H, we give ourselves time to reflect, which can help us to learn from our mistakes and successes. We might think about questions such as: Did I do my best? Did I follow through? Did I follow the rules and guidelines? How can I do better in the future? Then, rather than judging our answers, we can learn from them.



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# La concienciación al aire libre

**Hoy...**

exploramos la naturaleza y la concienciación con nuestros cinco sentidos.



## ***Al hacer esto aprendimos...***

que la concienciación puede ayudarnos a prestar atención de forma lúdica al mundo que nos rodea y a nuestros pensamientos internos. Utilizamos nuestro aliento y nuestros cinco sentidos.

Entonces, ¿qué es la concienciación? Usar la concienciación significa estar consciente de lo que está pasando actualmente sin juzgar a nosotros mismos o a la situación. Muchas veces, pero no siempre, eso ayuda a las personas a sentirse tranquilos. Los jóvenes que aprenden técnicas de la concienciación tienden a sentirse mejor en general, tener menos ansiedad y mostrar un mejor comportamiento.

## ***Pregunte a su hija(o)...***

- ¿Puedes nombrar los cinco sentidos?
- ¿Qué observaste hoy en la naturaleza?
- ¿Qué escuchaste? ¿A qué olía? ¿Qué viste? ¿Qué sabores notaste? ¿Qué tocaste?

## ***Explore más...***

- Intente hacer esta actividad de concienciación juntos: Párese, siéntese o acuéstese con la columna recta. Cierre levemente los ojos o manténgalos abiertos con un enfoque suave. Inspire de manera natural, y cuente en silencio, “uno”. Exhale, al contar en silencio “dos”. Repita hasta llegar a diez. Luego, elija entre parar o repetir otra vez la actividad. (Un consejo para su familia: Con los niños más pequeños, cuente en voz alta y/o hágalos poner la mano en la barriga para sentirla subir y bajar con su respiración.)
- Practique más técnicas de la concienciación juntos como familia. Aquí hay algunas de nuestras técnicas de concienciación favoritas que se pueden practicar con los jóvenes:
  - <https://centerhealthyminds.org/join-the-movement/children>.

## ***Conecte to 4-H...***

Practicar la concienciación es una forma de prestar atención a nuestros pensamientos, emociones y experiencias. Cuando prestamos atención, es más fácil enfocar en cosas como la autorreflexión, o la reflexión sobre nuestras experiencias. En 4-H, nos damos tiempo para reflexionar, lo cual nos puede ayudar a aprender de nuestros errores y éxitos. Quizás preguntamos: ¿Hice mi mejor intento? ¿Seguí hasta el final? ¿Seguí las reglas y pautas? ¿Cómo puedo hacerlo mejor en el futuro? Luego, en vez de juzgar nuestras respuestas, podemos aprender de ellas.





# Saving for What?

## *As we did that we learned...*

About money and how people keep it safe. We talked about saving money for things we might want to buy or do in the future.

## *Ask your child...*

- How did you make the duct tape wallet? Invite them to teach you!
- Would you share what you are saving your money for? It is okay if they do not want to tell you.
- Think about a normal day. What are some things that cost money?

## *Explore more...*

- Talk with your child about setting priorities. Prioritizing can help in many day-to-day decisions, including decisions about money. One way to practice setting priorities to encourage your child to set a goal and start saving. When they want to spend their money on something, it is a good time to talk about what is more important—the item they want now or the item they are saving for.
- Your local library has an excellent collection of children's books that focus on money management. Here are a few books to look for during your next trip to the library:

- *Farmers Market Day*, by Shanda Trent
- *The Girl and the Bicycle*, by Mark Pett
- *A Dollar, A Penny, How Much and How Many*, by Brian P. Cleary
- *The Coin Counting Book*, by Rozanne Williams
- *The Berenstain Bears' Trouble with Money*, by Stan and Jan Berenstain

## *Today we...*

Made duct tape wallets and talked about what we might want to save our money for.

## *Connect to 4-H...*

Most things cost money. As a 4-H member, everything about 4-H may have a price tag associated with it, and most clubs and groups have a budget to help pay for things. The money that is raised by the club or group is important. Members and leaders must pay attention, because the money belongs to the whole group and to 4-H as a public organization. So the whole club or group can be involved in creating a budget—in other words, planning for what to spend and how much fundraising to do. Budgeting for the club or group is a lot like how we plan to save in our duct tape wallets!



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# ¿Para qué se debe ahorrar?

## ***Al hacer esto aprendimos...***

sobre el dinero y cómo se guarda. Hablamos sobre cómo ahorrar dinero para las cosas que nos gustaría comprar o hacer en el futuro.

## ***Pregunte a su hija(o)...***

- ¿Cómo hiciste la billetera de cinta adhesiva de tela?  
¡Invítelos a que le enseñen a usted!
- ¿Puedes compartir para qué estás ahorrando tu dinero? Está bien si no se lo quieren decir.
- Piense en un día normal. ¿Qué son algunas cosas que cuestan dinero?

## ***Explore más...***

- Hable con su hija(o) sobre cómo establecer prioridades. Establecer prioridades puede ayudarle a tomar muchas decisiones cotidianas, incluso las decisiones sobre el dinero. Una forma de practicar el establecimiento de prioridades es alentar a su hija(o) a fijar una meta y empezar a ahorrar su dinero para lograr esa meta. Cuando ella quiere gastar su dinero en otras cosas, tiene una buena oportunidad para hablar sobre qué es más importante: lo que quiere comprar ahorita o lo que había planeado comprar con sus ahorros.
- Su biblioteca local tiene una excelente colección de libros para niños que se enfocan en la gestión de dinero. Aquí hay algunos libros que se pueden encontrar en su próxima visita

a la biblioteca:

- *Farmers Market Day*, por Shanda Trent
- *The Girl and the Bicycle*, por Mark Pett
- *A Dollar, A Penny, How Much and How Many*,  
por Brian P. Cleary
- *The Coin Counting Book*, por Rozanne Williams
- *The Berenstain Bears' Trouble with Money*, por  
Stan y Jan Berenstain

## ***Hoy...***

hicimos billeteras de cinta adhesiva de tela y hablamos sobre para qué nos gustaría ahorrar el dinero.



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## ***Conecte a 4-H...***

La mayoría de las cosas tienen un precio. Como miembro de 4-H, todo acerca de 4-H puede tener su precio, y la mayoría de los clubes y grupos tienen un presupuesto para ayudar a los miembros a pagar los costos relacionados. El dinero recaudado por el club o grupo es importante. Los miembros y los líderes deben estar atentos, porque el dinero pertenece al grupo entero y a 4-H como una organización pública. Entonces, el club o grupo entero puede ser involucrado en la creación de un presupuesto - es decir, en la planificación para decidir cuánto dinero se debe recaudar y cómo hacerlo. ¡Crear un presupuesto para el club o grupo es muy parecido a lo que hacemos con nuestro plan de ahorrar con las billeteras de cinta adhesiva de tela!





# Science of Felting

## *As we did that we learned...*

That wool fibers have tiny scales that stick together when they get warm and when they rub against each other. Now, we know why wool shrinks in the dryer; it is because of the scales sticking together, tighter and tighter.

## *Ask your child...*

- How did you make your felted wool ball?
- What happened to the wool when you added warm, soapy water?
- Where does the wool come from?
- What else could you create with felted wool?

## *Explore more...*

- Find out if there are places nearby that raise sheep, process wool, or sell roving (loose wool fibers) for craft projects. Ask if you can visit to learn more.
- Experiment with different types of wool. Wool from sheep is especially good to use in the felting process, and the wool from different kinds of sheep (or llamas or alpacas) felt different ways. Also, dyed and natural wool felt differently. Which one do you like best? Why?
- Explore other types of felting—needle felting, felting knitted items and more

## *Today we...*

Made our own soft balls from felted wool.



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## *Connect to 4-H...*

Much like felting wool, there is a science and an art to forming a group of young people. If youth and adult leaders encourage the members of a group—providing opportunities to get to know each other, creating safe and welcoming conditions, checking on them regularly—a 4-H club or other youth group can build strong, trusting bonds. While a great deal of research supports this kind of group development, it is the caring and support from youth and adult leaders that artfully creates the positive space for groups to form.







**Hoy...**

hicimos bolitas suaves de fieltro.

# La ciencia de la lana afieltrada

## ***Al hacer esto aprendimos...***

que las fibras de lana tienen pequeñas escamas que se pegan cuando se calientan y se frota entre sí. Ahora sabemos por qué las prendas de lana se encogen en la secadora: las escamas se pegan cada vez más apretadas.

## ***Pregunte a su hija(o)...***

- ¿Cómo hiciste la bolita de fieltro?
- ¿Qué pasó cuando le echaste agua tibia y jabonosa a la lana?
- ¿De dónde se obtiene la lana?
- ¿Qué más podrías crear con lana afieltrada?

## ***Explore más...***

- Busque si hay lugares cercanos en donde se crían las ovejas, se realiza el proceso de elaboración de la lana o se vende la fibra para hilar (fibras sueltas de lana) para proyectos de manualidades. Pregunte si puede visitar para aprender más.
- Experimente con diferentes tipos de lana. La lana de oveja es especialmente apta para usar como fieltro, y se convierte en fieltro la lana de diferentes especies de oveja (o de llamas o alpacas) de distintas maneras. Además, los procesos para fielttrar la lana teñida y la lana natural son diferentes. ¿Cuál te gusta más? ¿Por qué?
- Aprende sobre otras actividades que se pueden hacer con el fieltro: el fieltro con aguja, la creación de figuras con el fieltro y más.

## ***Conecte a 4-H...***

Al igual que con la lana afieltrada, existe una ciencia y un arte en formar un grupo de jóvenes. Si los líderes jóvenes y adultos alientan a los miembros de un grupo – al proporcionar oportunidades para conocerse mejor, crear un ambiente seguro y acogedor y preguntarles cómo están - un club de 4-H o de otro grupo juvenil puede fomentar relaciones fuertes y de confianza. Aunque se han realizado muchas investigaciones que apoyan ese tipo de desarrollo en grupo, es el cariño y el apoyo por parte de los líderes jóvenes y adultos que crean con ingenio un ambiente positivo en el que se pueden formar los grupos.



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## Today we...

Made a basic musical instrument—a pan flute—to play.

### Connect to 4-H...

Just like the length of straws, 4-H involves all sizes of youth members. A youth in Kindergarten begins 4-H in a Cloverbud project, and a senior in high school takes part in specific projects. Is the senior more important than the Cloverbud member? No! A 4-H program needs all sizes of members—and all colors and ages too—to be the most awesome, inclusive group. Just remember, be sure we wrap around all members—just like the tape in the activity—to make sure everyone feels they belong!

# Science of Sound

## As we did that we learned...

About sound waves and how we cannot see them even though we know they exist. We explored how sound is made, how sound travels, and the science behind sound. We learned that there is science in the notes and sounds that we hear.

## Ask your child...

- What did you learn about sound today?
- What happened when you tapped the spoon on the pan?
- Why are the straws in your flute different lengths?
- Can you teach me how to make a pan flute?

## Explore more...

- We know what happens when we change the length of the straw, but what do you think might happen if we used wider straws? What might happen if we used narrower straws? Make more pan flutes, experimenting with different kinds of straws.
- Explore sound in new ways:
  - <http://idahoptv.org/sciencetrek/topics/sound/facts.cfm>
- Find more science experiments at your local library with books like these:
  - Science Experiments with Sight and Sound, by Alex Kuskowski
  - Science of Sound and Music, by Shar Levine



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# La ciencia del sonido

## *Al hacer esto aprendimos...*

sobre las ondas sonoras y el hecho de que no las podemos ver, aunque sabemos que existen. cómo se hace el sonido, cómo viaja el sonido y la ciencia del sonido. que hay una ciencia detrás de las notas y los sonidos que escuchamos.

## *Pregunte a su hija(o)...*

- ¿Qué aprendiste sobre el sonido hoy?
- ¿Qué pasó cuando golpeaste suavemente la olla con la cuchara?
- ¿Por qué los popotes en su flauta de pan son de diferentes longitudes?
- ¿Me puedes enseñar cómo construir una flauta de pan?

## *Hoy...*

construimos un instrumento básico para tocar - una flauta de pan.

## *Explore más...*

- Ya sabemos que pasa cuando cambiamos la longitud del popote. ¿Qué crees que pasaría si usáramos un popote más ancho? ¿Qué pasaría si usáramos popotes más estrechos? Construya más flautas de pan al experimentar con diferentes tipos de popote.
- Aprenda sobre el sonido en nuevas maneras: <http://idahoptv.org/sciencetrek/topics/sound/facts.cfm>
- Encuentre más experimentos científicos en su biblioteca local con libros como los siguientes:
  - *Science Experiments with Sight and Sound*, por Alex Kuskowski
  - *Science of Sound and Music*, por Shar Levine

## *Conecte a 4-H...*

Al igual que con las longitudes de los sorbetes, 4-H tiene miembros de todas las edades y tamaños. Un participante de 4-H en el kínder empieza con un proyecto Cloverbud, y un estudiante del 12o grado participa en proyectos específicos. ¿Es el estudiante del 12o grado más importante que el miembro Cloverbud? ¡No! Un programa de 4-H necesita miembros de todos los tamaños - y de todos los orígenes y edades también - para ser lo más genial e inclusivo posible. ¡Sólo recuerde que debemos contar con la participación de todos los miembros - lo que hizo la cinta adhesiva en la actividad - para que todos se sientan incluidos!



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