

4-H Cloverbud Activity Book 2020-2021

Barron County 4-H



Please register for Project Discovery on 4-H Online to join us on Zoom each Month—2nd Monday at 6:30 (you don't have to attend all)

Projects can be done on your own too!

Developed by Burnett County 4-H Youth and Family Development Educator, Beth Rank
November 2014, September 2017, and September 2020 except as noted.

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Project Discovery 4-H Cloverbud Project

The Barron County 4-H Cloverbud Project is open to all youth in Kindergarten through 2nd grade. Youth in 3rd grade or higher are encouraged to join 4-H as a 4-H member.

Cloverbud projects are designed for the member to explore and discover project areas. Safety is the primary concern of the 4-H Cloverbud Project Leaders. Please let the Barron County 4-H Educator, Sara Waldron know of any food allergies or special accommodations needed to ensure participation to the fullest extent.

This book contains activities that will be used throughout your participation in the Project Discovery Sessions from January 2021-June 2021 OR on your own. The activities for the remaining months can be completed on your own. January-June meetings will be virtual, unless otherwise noted. Please register in advance.

Meeting Cancellation Policy: If a meeting needs to be canceled, you will be notified by email through the 4-H online system.

This book should compliment the Barron County 4-H Cloverbud Record Book. Many of these projects can also be entered in the fair in July.

Cloverbud Calendar

Date	Location and Time	Topic
Monday, January 11, 2021	Virtual @ 6:00 PM	Paper Bag Pet
Monday, February 8, 2021	Virtual @ 6:00 PM	Be the Story Solver
Monday, March 8, 2021	Virtual @ 6:00 PM	Painters' Tape Art
Monday, April 12, 2021	Virtual @ 6:00 PM	Let's Grow Vegetables
Monday, May 10, 2021	Virtual @ 6:00 PM	Sink or Float?
Monday, June 14, 2021	Virtual @ 6:00 PM	Better Bubbles

Please contact your club leader/cloverbud leader to find more about cloverbud activities in your clubs! We hope you will join us virtually this year to meet with other Cloverbuds from around the area. To register for the Virtual opportunities, please sign on to wi.4honline.com and look for events.

**Have questions? Call UW-Madison, Division of Extension,
Barron County at 715-537-6250**

Excerpt from Barron County Fair Junior Division Entry Book

All entries must be conference judged on Tuesday of Fair Week from 1-6 pm in the Youth Expo Building.

Division B: Cloverbuds – Open to members in Grades K-2

Posters must be no smaller than 11" x 14" and no larger than 22" x 22" in size. White tag board or poster board to be used for mounting posters.

Entry Suggestions, but not limited to:

- Rock Creature Vegetables and fruit
- Flowers Puppet
- Sewing Article Collection
- Drawing Painting
- Pinch Pot Any Craft
- Photography Woodworking
- Rocket Foods
- Tie Blanket Creative Writing
- Puzzle School Project
- Jewelry Scrapbooking
- Mobile Kite
- Lego Model
- Terrarium Plant
- Puppets

DIVISION B: CLOVERBUD

PREMIUMS: \$2.00 – Uniform Premium

CLASS NUMBER

1. Exhibit prepared by an Cloverbud
2. Exhibit prepared by an Cloverbud
3. Exhibit prepared by an Cloverbud
4. Exhibit prepared by an Cloverbud
5. Exhibit prepared by an Cloverbud
6. Exhibit prepared by an Cloverbud
7. Exhibit prepared by an Cloverbud
8. Exhibit prepared by an Cloverbud
9. Exhibit prepared by an Cloverbud
10. Exhibit prepared by an Cloverbud
11. Exhibit prepared by an Cloverbud
12. Exhibit prepared by an Cloverbud

CLOVERBUD GROUP PROJECT

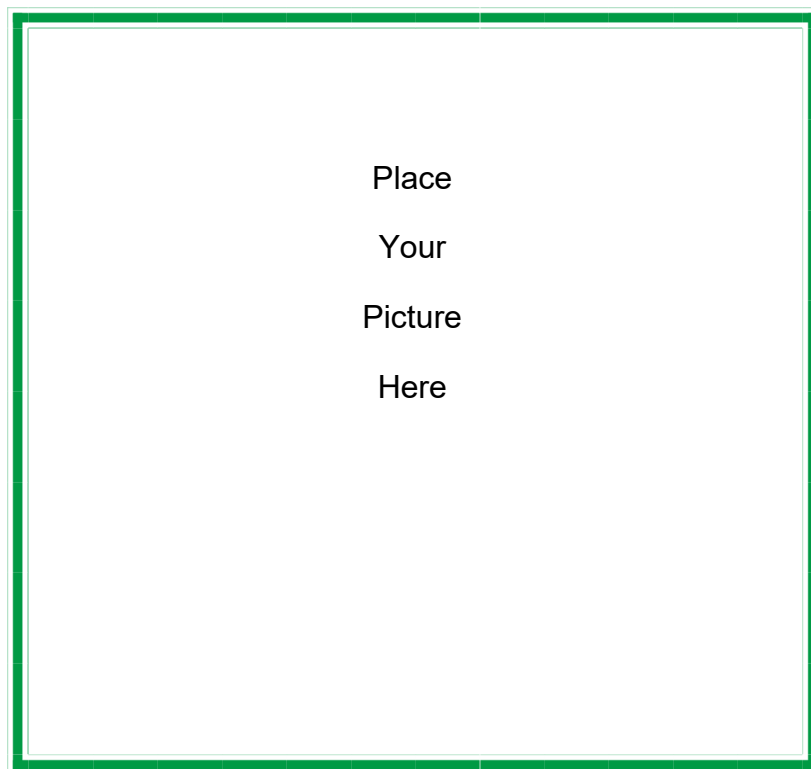
13. Scrapbook illustrating the club's Cloverbud activities. (Must be completed by Cloverbud Group).

PREMIUMS FOR Group Project:

Blue \$5.00, Red \$4.00,
White \$3.00, Pink \$2.00



A Little Bit About Me



Place
Your
Picture
Here

Name: _____

Age: _____ Grade: _____

My family members: _____

My favorite activities: _____

My 4-H Club



My name: _____

4-H club name: _____

4-H club leader's name: _____

Phone number: _____

4-H club president's name: _____

Phone number: _____

4-H Educator's name: _____

Phone number: _____



Pledge of Allegiance

(Place right hand over heart.)

I pledge allegiance to
the Flag of the United
States of America,
and to the Republic for
which it stands,
one Nation under God,
indivisible,
with liberty and justice
for all.

4-H Pledge

I pledge

my **HEART** to
greater loyalty,



(Right hand over heart)

my **HEAD** to
clearer thinking,



*(Right hand points
to forehead)*

my **HANDS** to
larger service,



*(Arms slightly bent,
palms up)*

and my **HEALTH**
to better living,



(Arms at sides)

for my club, my community, my country, and my world.



4-H Emblem



The official emblem is a four leaf clover with the letter "H" on each leaf which stands for head, heart, hands, and health. The colors of the emblem are green and white.

4-H Motto

The 4-H motto is "TO MAKE THE BEST BETTER." This motto challenges everyone involved in 4-H to do the very best job they can.

4-H Slogan

The 4-H Slogan is
"LEARN BY DOING"

Pasta Skeleton

Materials:

- Black construction paper
- Chalk or pencil
- Liquid glue
- 1 piece of Linguine pasta or a small handful of Ditalini pasta (to make individual vertebrae)
- 1 piece of medium Seashell pasta or Wagon Wheel pasta
- 1 piece of Bowtie pasta
- 8 pieces of Rigatoni pasta
- 6 pieces of Elbow macaroni for ribs; more if you want fingers/toes

4-H Connection

4-H believes in "Learning By Doing." The Do, Reflect, Apply Learning Module is foundational to 4-H. This approach allows youth to experience the learning process with minimal guidance from adults. Instead of being told the answers from activities, youth are exposed to experiential learning. Experiential learning is based on the theory of "learning from experiences."

Do:

1. Make a chalk/pencil outline on the paper of a skeleton.
2. Use one piece of linguine/ditalini pasta (spine), one medium seashell/wagon wheel pasta (head), one bowtie pasta (pelvis), eight rigatoni pasta (arms and legs), and six regular macaroni (ribs).
3. Glue pasta on black paper to look like a skeleton.
4. Read the bullet points under the apply category below. Select two statements to write on a piece of white paper and attach to your pasta skeleton poster to share information with others.

Someone thought it would be fun to use string and make a 3D skeleton using yarn or string to thread the noodles together. Feel free to try this and see how it works.

Reflect:

- * How do you keep your bones healthy?
- * Why do you think it's important to keep your bones healthy?

Apply:

- * Calcium is essential to maintaining total body health. Your body needs it every day not just to keep your bones and teeth strong over your lifetime, but to ensure proper functioning of muscles and nerves. It even helps your blood clot.
- * Calcium deficiency is usually due to an inadequate intake of calcium. When blood calcium levels drop too low, this vital mineral is "borrowed" from the bones. It is returned to the bones from calcium supplied through the diet.
- * The average person loses 400 to 500mg of calcium per day. If an individual's diet is low in calcium, there may not be sufficient amounts of calcium available in the blood, to be returned to the bones, to maintain strong bones and total body health.
- * Building healthy bones by adopting healthy nutritional and lifestyle habits in childhood is important to help prevent osteoporosis and fractures later in life.
- * Bones are the framework for your child's growing body. Bone is living tissue that changes constantly, with bits of old bone being removed and replaced by new bone.
- * For most people, the amount of bone tissue in the skeleton (known as bone mass) peaks by their late twenties. At that point, bones have reached their maximum strength and density.
- * Calcium is used for building bones and teeth and in maintaining bone mass. Dairy products are the primary source of calcium in American diets. Diets that provide 3 cups or the equivalent of dairy products per day can improve bone mass.
- * For more information about bone health visit the National Institute of Healthy's Publication: Kids and Their Bones A Guide for Parents at <https://www.bones.nih.gov/sites/>

Pasta Skeletons

What was your favorite part of making the pasta skeleton?

If you could make another pasta skeleton, what would you do differently?

Why did you choose to share the two information statements on your pasta skeleton?

What is your favorite source of calcium? (Examples include: milk, cheese, yogurt, broccoli, ice cream, cottage cheese, canned fish, soy products, kale, collard greens, etc.)

Draw a picture or attach a photo of you with your Pasta Skeleton.

The Science of Felting

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!

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).

4-H Connection

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 groups 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.

What products are sometimes made from wool?

Holding a piece of roving, answer the following questions:

- What does the roving feel like?
- What does the roving smell like?
- What does it look like?
- How does it sound when you rub it gently between your fingers?

This activity involves putting wool into a container of warm water and shaking it, predict (guess) what you think will happen?

Materials:

- Dyed Wool Roving (dark colors felt better; 20 grams (0.7 oz) of roving makes about 30 small felt balls)
- Small container with a tight-fitting lid (we will shake water in it)
- 1 drop of baby shampoo
- Hot Water
- Cold Water
- Paper Towels

Instructions:

1. Put your roving into the container.
2. Add 1 drop of baby shampoo and hot water halfway up the side of the container.
3. Close the lid tightly and shake in all directions (up and down, back and forth, around and around) for several minutes.
4. When the roving has formed into a ball shape, take the felt ball from the container and plunge it into cold water, gently squeeze the water and leftover soap from it.
5. Roll the ball between your palms to finish shaping the ball.

Science of Felting

What was your favorite part of making the felted ball?

What is one thing you learned from this activity?

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

What else do you think you could make from felted wool?

Draw a picture or attach a photo of you with your felted wool ball.

Let's Learn About 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 the basic musical instrument and how there is science behind the notes and sounds that it makes.

Did you know that sound travels in waves, just like the wave you see in water? Sound travels very quickly—up to 700 miles per hour! Compare that to a car that only travels 55-70 miles per hour on the highway.

Close your eyes and think about what you think sound looks like. Now,

4-H Connection

Just like the length of straws, 4-H involves all sizes of youth members. 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!

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, stretch it some so it is tight, and secure it tightly with a large rubber band. A piece of waxed cloth or disposable press 'n' wrap could also work for this activity.
2. Set the bowl on a table or flat surface. Sprinkle a few pieces of uncooked rice on top of the plastic wrap.
3. Hold a cookie sheet horizontally about twelve inches above the "drum" (bowl with wrap). Hit the top of the cookie sheet with a wooden spoon.
4. What happened to the rice on top of the drum?
5. Were you able to "see" the sound waves? Circle your answer. YES or NO

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

The next activity involves **making your own pan flute out of drinking straws**. You will be able to make your own music.

Materials:

- Pan Flute Template
- 8 drinking straws
- Double-stick tape
- Masking or duct tape
- Scissors

Instructions:

1. Rip the Pan Flute Template from your book.
2. Place a strip of double-stick tape on the paper. This will help hold straws in place before taping with masking or duct tape.
3. Measure and cut straws and spacer pieces according to the template.
4. Match each straw with the sizes of the template.
5. After all the pieces are lined up, cutting spacers from the leftover pieces of straw.
6. Double check that all pieces are lined up then wrap them with masking or duct tape. Make sure that the straws stay flat!
7. Now, blow across the top of the straws and make music!

Let's Learn About Sound

What was your favorite part of learning about sound?

What happened when you blew across the top of your pan flute?

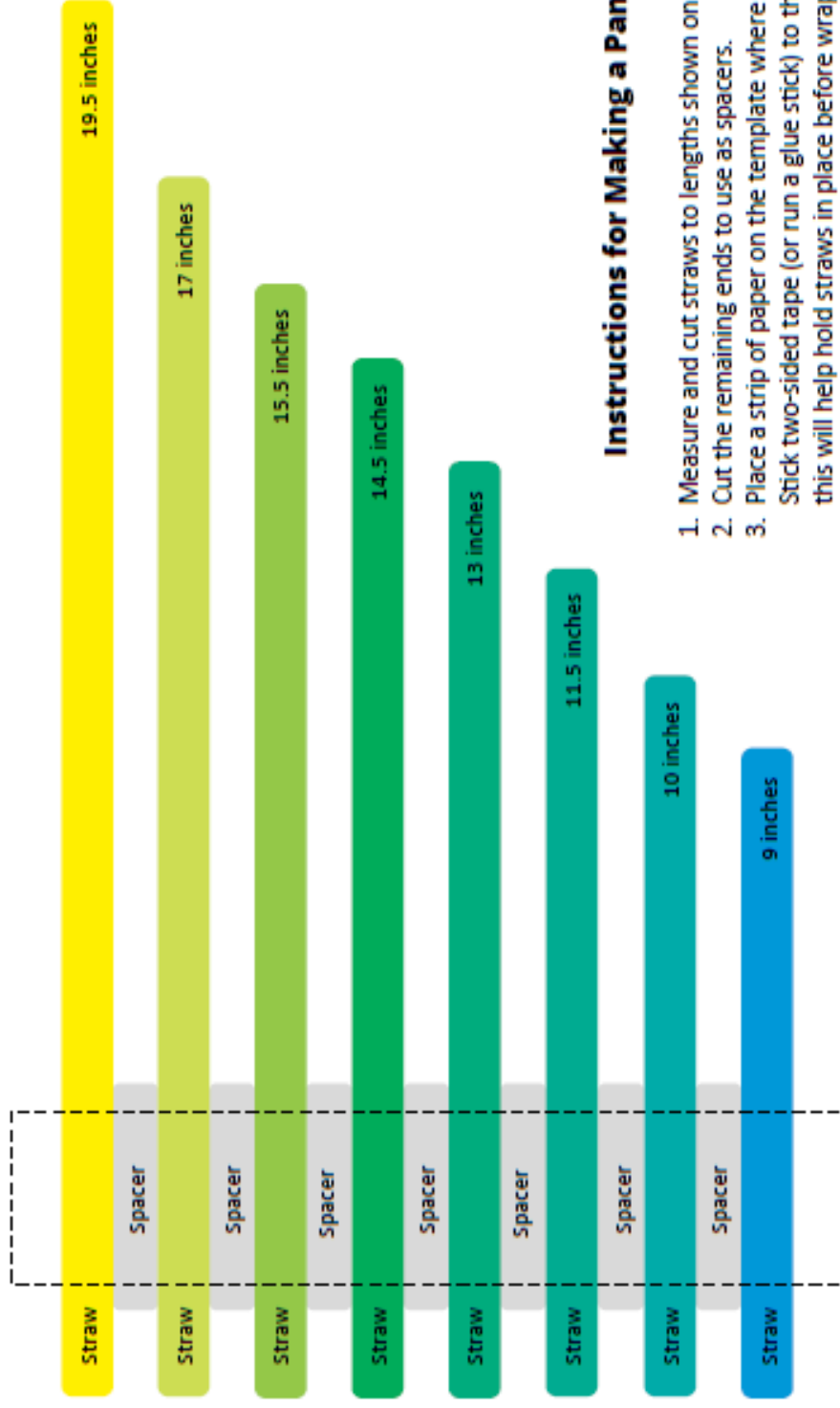
How is the sound being made?

How do you think the length of the straws affects the sound it makes?

What other instruments or items use wind to make sound? (Examples: flutes, trumpet, saxophone, whistle, etc.)

Draw a picture or attach a photo of you with your pan flute.

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!



This page intentionally left blank so youth may remove Pan Flute Template from this book.

Paper Bag Pet Parade

Having a pet can be very rewarding! In the United States, pet lovers take care of nearly 100 million dogs and cats. However, there are other animals that can be pets, too. Guinea pigs, hamsters, lizards, rabbits, birds, and fish also make great pets. Youth can be involved in deciding what kind of pet is best for their family and can help research possibilities. Even if youth don't have a pet at home, this activity will get them thinking about the qualities they would want in an animal companion and give them a paper bag animal friend. This lesson is also great for youth because after creating a paper bag pet, they are encouraged to verbally share about their paper bag pet. Youth can learn communication skills and confidence from this lesson. It's way more than gluing stuff to a bag!



4-H Connection

4-H exhibits at public events (like county fairs) are usually evaluated by a judge. Youth will need to be able to talk to others about what they learned and did in 4-H. Youth may be shy about speaking in front of a group or talking with someone they do not know, so it is important to provide opportunities to practice.

Look at the pictures of pets on the next page and describe what you notice about the animals' bodies. Next to each animal write two things that make each animal different from the others. Do they have fur? Are there scales on the animal? What kind of ears do they have? Does the pets have tails, feet, ears, fins? Now think about the different features of those animals and create your own paper bag pet.

To make a Paper Bag Pet

Materials:

- Brown paper lunch bags
- Scraps of colorful paper
- Fake feathers and other random craft supplies
- Crayons or colored pencils
- Yarn
- Googly eyes
- Scissors
- Glue (sticks, liquid, or hot)

Instructions:

1. Select supplies to craft your paper bag pet. Try to include at least two of the animal parts you observed when looking at the animal pictures.
2. Glue supplies to paper bag.
3. Give your pet a name and describe him/her below.

















Insert pictures of your Paper Bag Pet here

Be the Story Solver

Let's look at a book and the challenges the characters face.
Can you help the characters solve the problems in their story?

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 different situations and write the story to get them out of the problem? They "engineer" a solution!

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? Read/listen to the Three Little Pigs story below.

4-H Connection

There is not just one, single way to take part in 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 Beth Rank 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?? Turn the page for challenge directions.



To make a Big Bad Wolf-proof house...

Gather any of the following materials:

- Index cards
- Pipe cleaners
- Straws
- Craft sticks
- Tape, glue, or mailing labels
- Paper clips
- Plastic/paper cups
- Miscellaneous supplies you have available (pom-poms, beads, blocks, LEGOS, etc.)

Instructions:

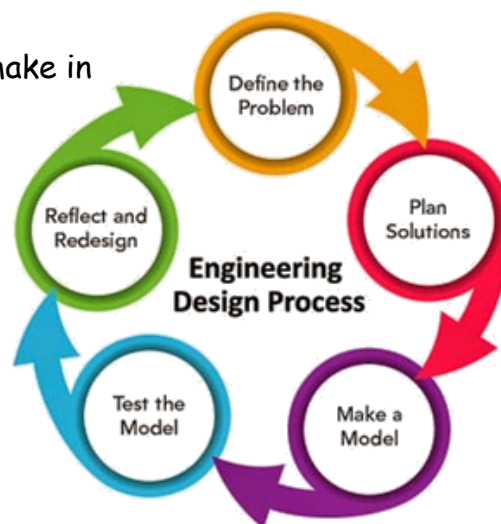
1. Using any and all the supplies gathered from the list on the left, spend about 15 minutes constructing a "wolf-proof" house that is at least 4-5 inches high (pretend that the pig in the story is 3 inches tall. We wouldn't want him to bump his head inside his house!) and 4-5 inches on

each side (he should be able to lay down in his house, right!)

2. Share your creation with others, make sure to take a picture and/or video of you explaining the features of the house.
3. Test the creation's ability to withstand the huffing and puffing of the big bad wolf by fanning a piece of cardstock or cardboard to see if the walls will stay upright.
4. If the house falls down, reflect and redesign then retest until it withstands the huffing and puffing!
5. Reflect on your experience.

1. What is the problem/challenge?

5. What changes do I need to make in



2. How can I solve it?

3. What supplies will I use and what style of home will I build

4. What happened when I fanned the pig's house with cardstock/cardboard?

Be the Story Solver

What was your favorite part of making the 'wolf-proof" house for the pig?

What is one thing you learned from this activity?

What would you do differently if you did it again?

Are there any materials you wished you had used?

Draw a picture or attach a photo of you with your "wolf-proof" house.

Painters' Tape Art (Tape Resist Painting)

Materials:

- Blank canvas (canvas board or stretched canvas)
- Painters' tape
- Paint
- Paint brush
- Newspaper

4-H Connection

The arts are for anyone! No matter your grade or interest, there is something for you to try and learn through a 4-H Arts project. Arts provide the creativity and outlet your soul needs to sing!

Instructions:

1. Cover the surface you will be working on with newspaper.
2. Tear or cut off strips of tape and press to the canvas in the pattern or shape you want. There will not be paint on the areas under the tape.
3. Make sure edges of tape are pressed firmly down.
4. Paint different colors inside the shapes you made with the tape OR paint a picture over the entire canvas, including the tape.
5. Rinse all the paint out of your paint brush.
6. Allow paint to dry.
7. Peel off the painters' tape.
8. Display and enjoy!



Painters' Tape Art

What was your favorite part about making painters' tape art?

If you could do this activity again, what would you do differently?

How did you choose the colors you used?

Attach a photo or drawing of your painters' tape art piece.

Let's Grow Vegetables!

Let's identify seeds using a handy seed chart.

Materials:

- White Paper Plate
- Ruler
- Glue
- Markers
- 8 Kinds of Seeds (Example: Bean, Pea, Spinach, Corn, Radish, and Cucumber)

Procedure:

1. Divide the paper plate so it looks like a pie with 8 pieces. First divide the plate in half by drawing a line in the middle of the plate, then cut your paper plate pie into fourths by turning your plate and adding another line to make a "+" shape on your plate. Do this two more time to make your plate have 8 pieces. Draw lines using a marker and a ruler.
2. In each segment, glue a seed, label it, and draw a picture of the vegetable.



It's now time to plant some seeds!

Materials:

- Seeds (leftover from the handy seed chart)
- Potting Soil
- Paper Egg Carton
- Water

Procedure:

1. Remove the lid from the egg carton and fill each section about $\frac{3}{4}$ full with potting soil.
2. Place the seeds in the soil according to the package directions.
3. Place the egg carton on a tray to catch any extra water. Make sure your seeds are in a location of natural light.
4. Water the seeds regularly according to the directions on the seed packet.
5. Watch your garden grow! As the seedlings get larger, transplant them into your garden or larger pots by cutting the egg carton segments apart and planting the whole part in the ground.

4-H Connection

Health is one of the four H's that make up 4-H! It is healthy to eat vegetables. Health is also more than just eating food. Health stands for healthy lifestyles, character, ethics, stress management, and disease prevention.



Which seeds came up first? _____ Second? _____ Third? _____

Did all the seeds sprout into small plants? If not, tell why you think they didn't grow.

What vegetable grew the tallest?

Did you taste any of the vegetables that were produced from your garden? What did they taste like?

Let's Grow Vegetables!

Do you want to grow a garden again? Tell why you do or do not want to grow a garden in the future.

Draw a picture or attach a photo of you with your garden.

Sink or Float?

Does it float? Try different objects and record if they sink or float.

Materials:

- Sponge
- Paper clip
- Toothpick
- Marble
- Plastic
- Penny
- Plastic straw
- Crayon
- Plastic dishpan or bucket, filled with
- Towels
- Pencil



spoon



water

4-H Connection

One of the four H's is Head. According to the 4-H Pledge, we use our "...Head for clearer thinking..." We use our heads to guess what items will sink or float in this experiment and then science proves us either right or wrong.

Procedure:

1. On the chart below, make predictions of which objects you think will sink and which will float.
2. Time for testing!
 - A. Fill a shallow container with a few inches of water.
 - B. Place each object in the container one at a time.
 - C. Record whether the object floats or sinks.

Circle what you think will happen.		Items	Circle what actually happened.	
Sink	Float	Sponge	Sink	Float
Sink	Float	Paper Clip	Sink	Float
Sink	Float	Toothpick	Sink	Float
Sink	Float	Marble	Sink	Float
Sink	Float	Plastic Spoon	Sink	Float
Sink	Float	Penny	Sink	Float
Sink	Float	Plastic Straw	Sink	Float
Sink	Float	Crayon	Sink	Float

Sink or Float?

Reflection Questions:

Which items did you guess correctly?

Why do you think some items sink and some float?

To learn more about why things sink or float go to: <https://www.youtube.com/> and search **Sesame Street Science: Sink or Float? - The Lemon Conclusion.**

Draw a picture or attach a photo of your experiment of what sinks and what floats.

Better Bubbles



Bubbles are simply air trapped inside a liquid. The surface of a liquid, like water, has a "surface tension" which makes the surface behave like a stretchy, rubber sheet.

Soap allows the surface of water to stretch more and keeps bubbles from breaking. Adding glycerin to water prevents bubbles from drying out quickly.

You can vary the ingredients to change the characteristics of bubbles. More soap allows for bigger bubbles. Glycerin makes stronger, longer-lasting bubbles. Which solution will you prefer? Do you big bubbles or strong bubbles?

Materials for Bubble Solution #1:

4 cups water
1/3 cup dish soap (Dawn Pro recommended)
2 1/2 teaspoons glycerin*

Materials for Bubble Solution #2:

4 cups water

4-H Connection

The way club meetings are structured depends largely on the size of the group and the age of the members. However, all meetings should have 3 common "ingredients" — business, education, and recreation.

Whether children participate in the full meeting or just for a part of it, it is important that they begin to know what to expect at club meetings and how they can be involved. Talk about how they can make decisions about what to do in the club (business), learn

like

1/4 cup dish soap (Dawn Pro recommended)
1/2 cup glycerin*

Procedure:

1. Basic bubbles solutions are made of three different ingredients—water, soap, and glycerin. Dip a finger in the soap and the glycerin.
2. In a large pan, labeled "Bubble Solution #1," combine the three ingredients above.
3. In a second large pan, labeled "Bubble Solution #2," combine the three ingredients above.
4. Let the solutions rest for 24 hours as the solutions improve with age.
5. Dip a finger in each of the bubble solutions. Did you notice any differences in texture?
6. Let's do an experiment to test each bubble solution to see if adding more or less glycerin and more or less soap makes bigger and stronger bubbles.
7. Solution #1 has more soap while Solution #2 has more glycerin.
8. Go outside and blow bubbles using Solution #1 then Solution #2.
9. Record results from each solution on the next page.

* Glycerin is a natural by-product in soap and is used as a moisturizer in personal care products. You can find 100% glycerin in most pharmacies or supermarkets. Karo Syrup can be substituted but leaves surfaces slightly

EXTRA FUN:

Just as you experimented with different bubble solutions, you can make your own bubble wands using craft wire, string, straws, or plastic hoops. You can experiment to see which one works best for each bubble solution.

Better Bubbles Experiment	Bubble Solution	Bubble Solution #2
Count how many seconds it takes between blowing a bubble and the time it pops.		
Estimate how big is the biggest bubble you can blow with each solution.		
Which bubble solution do you prefer?		

Reflection Questions:

Did it make a difference if you blew gently or harder?

Was there a difference between the two solutions?

Which one worked better?

What other tests or experiments might you try to make a better bubble?

Include a drawing or picture of you blowing bubbles.



LEGO® Fun!

"In 1949, Danish carpenter Ole Christiansen created a set of interlocking red and white blocks, the first of what would go on to become LEGO®. It wasn't until 1958 that the LEGO® Company (its name derived from the Danish words for 'play well') patented the small bricks. The genius was in the simplicity of the unassuming blocks, which allowed children to create freely without limits and in nearly endless combinations. [Six blocks can be combined in almost a billion different ways!]" - Allie Townsend, Time Magazine, 2011.

More than 400 billion LEGO® building blocks have been produced since 1949, which means there are 62 LEGO® building blocks for every person on Earth. "What will you do with your 62 blocks?"

4-H Connection

4-H builds a better community; 4-Hers connect (like LEGO® Building Blocks) with different people and make a change. Community Service is a big part of building the community so it is something that all 4-H clubs aim to include during each 4-H year.

Here are a few ideas:

- Create a car. It can be as simple or fancy as you want. Did the design come to you as you were building or did you know what you wanted from the very start?
- Create a maze. Make a confusing set of pathways of our LEGO® building blocks and then use a mini figure to find its way through the maze.
- Create your favorite Olympic moment or sport out of LEGO® building blocks.
- Create a mixed media object. Mix your LEGO® building blocks with any of the following items and see what you can come up with. Here are some items to get your creative juices flowing: beads, cardboard, fabric, glue, marbles, plastic, rocks, ice, gems, paper, or wire. Now add some ideas of your own.
- Create a shadow. Build something that you think will create a great shadow. Now take your creation to a sunny spot, inside or outside on a sunny day. Look at the shadow it casts. Move it around until it makes a shadow you like best. Look at the shadow on the ground compared to the texture of a trunk of a tree. Take a photo or draw a picture of the shadow only.
- Create a creature. A creature is a living organism. It can be a bug, a bird, an animal, a plant, or even something out-of-this-world. Then tell your friends about its habitat... where it lives, what it eats, etc.
- Create a tool then tell others what the tool is and what it will be used for.
- Create the tallest tower. This structure must be able to stand alone without anyone supporting it. Measure it and share how tall it is.
- Create a flag. Tell about why you chose this flag, what the colors mean, and where it flies.
- Create something specific to one of the four seasons (fall, winter, spring, or summer). Example: a flower to represent spring, snowball for winter, etc.



LEGO® Fun!

Draw a picture, attach a photo or tell a story about your favorite creation (see ideas on the previous page.)

All About Leaves

Let's collect, identify and preserve leaves!

Materials:

- Roll of Wax Paper
- Fall Leaves
- Plain, Scrap Paper
- Clothes Iron
- Ironing Board
- Old T-shirt
- 9 x 12" Construction Paper
- Stapler or glue
- Marker for Labeling Leaves
- Tree Field Guide

Procedure:

1. Take a nature walk and collect some fall leaves.
2. Using a tree field guide identify each leaf (see next page.)
3. Lay leaves flat by layering them between plain paper. Repeat layers until all leaves are placed. Make a paper-and-leaf sandwich and place a heavy book on top. After a couple of days carefully remove the pressed leaves. Use a clothes iron to smooth the leaves out if you don't want to wait!
4. Cut two pieces of waxed paper 1 foot long. Lay out the pressed leaves on one piece of the waxed paper in any pattern, but make sure to leave a 1 inch border on the long sides and a 2 inch border at each end.
5. Have an adult help you with ironing your design.
 - A. Fabric is needed between the wax paper and the iron. Place a piece of soft, thin cotton cloth on the ironing board. (An old T-shirt works well)
 - B. Place your wax paper with your leaf design on top of the cloth.
 - C. Place the second piece of wax paper on top of your leaf design.
 - D. Place a second piece of cloth on top of that.

4-H Connection

Fall leaves present an opportunity for us to stop and take a look around at how our world can change so quickly. Leaves can be green one day and then they change colors and float to the ground the next. In 4-H, it is important to also to stop and take a look around. Look at what older 4-Hers are doing so younger 4-Hers have something

6. Set the iron to a medium setting. When the iron is heated, press it firmly onto the cloth where one corner of the wax paper is located. Slowly pull the iron across the cloth over the wax paper while maintaining firm pressure. It will only need a second or two for the wax to adhere. Repeat until the entire assembly has been ironed.
7. Use the construction paper to make a border around your waxed paper and adhere it using a stapler or glue.
8. Have an adult help hang your artwork in a window!















All About Leaves

Leaf Identification Guide

Circle the leaves you have found around your house, school, neighborhood, or on a nature hike.

				
Maple	Oak	Birch	Ash	Poplar
				
Black Walnut	Hickory	Sycamore	Basswood	Cottonwood

These are just a few types of leaves, please use a Tree Identification Guide from a bookstore or library for more information.

All About Leaves

Draw a picture or attach a photo of your waxed paper leaf craft or of you on a nature walk in the woods.

3-2-1 Molten Lava Cake Mix

Materials:

- 1 box Angel Food Cake mix, single package kind
- 1 box Devil's Food Cake mix
- Chocolate squares (2 per mug) or mini chocolate candy bar
- Large bowl
- Whisk or large spoon
- 1 tablespoon measure
- Non-stick cooking spray
- 2 tablespoons water

Instructions:

NOTE: There are many variations on the internet for 3-2-1 cakes. The name comes from the ratio of ingredients and the cooking time. Try experimenting with flavors by substituting the Devil's Food Cake mix with White Cake Mix, Lemon Cake Mix, Spice Cake, Carrot Cake Mix, etc.

1. Wash your hands.
2. Collect the materials.
3. Combine the Angel Food Cake mix with the Devils' Food Cake mix in large mixing bowl.
4. With the whisk or large spoon, mix the ingredients together thoroughly.
5. Store mix in an air-tight container until ready to use or create small packages with 3 level tablespoons of mix per package with instructions below. If you give the mix as a gift, don't forget to include the directions below.

4-H Connection

Generosity is one of the four Essential Elements of Positive Youth Development. Encouraging youth to share generously can also teach them to value things that are given to them. It also develops the skill of empathy as they explore that someone else may enjoy a fun snack as much



Source of inspiration: <https://www.kstatecollegian.com/2016/12/06/diy-gift-for-college-students-mug-cake-in-1-minute/>

Directions for Molten Lava Cake

Combine 3 level tablespoons of the cake mixture into a microwave safe coffee mug that has been sprayed with non-stick cooking spray (or use a microwave safe disposable paper cup for easier cleanup!). Add 2 tablespoons of water, milk, or chocolate syrup. Stir well to combine. Push two chocolate squares into the center of the cake mix. Microwave for approximately 1 minute. Let cool for 1-2 minutes. Note: Each microwave cooks differently so start watching the cake at 45 seconds. It is done when the top of the cake looks dry.

Enjoy!

Directions for Molten Lava Cake

Combine 3 level tablespoons of the cake mixture into a microwave safe coffee mug that has been sprayed with non-stick cooking spray (or use a microwave safe disposable paper cup for easier cleanup!). Add 2 tablespoons of water, milk, or chocolate syrup. Stir well to combine. Push two chocolate squares into the center of the cake mix. Microwave for approximately 1 minute. Let cool for 1-2 minutes. Note: Each microwave cooks differently so start watching the cake at 45 seconds. It is done when the top of the cake looks dry.

Enjoy!

Reflection Questions:

What is one thing that you did to make sure the food is safe to eat?

What measuring spoon did you use today to create your delicious creation?

What would happen if you used a different size measuring spoon such as using a teaspoon instead of a tablespoon?

This cake mix can be packaged up and given as a gift, being generous is a major concept 4-H promotes. Can you list two people who might enjoy receiving a cake mix gift from you?

Include a picture or drawing of you making your Molten Lava Cake Mix and/or of you giving the mix to someone as a gift.

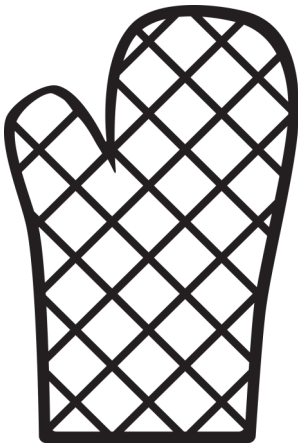
Kitchen Safety

There are many things to talk about related to kitchen safety. Some major things we can do to be safe in the kitchen can be related to when we are cooking and even when we are not cooking. Draw a line to connect the short list of kitchen rules with the correct picture.



Kitchen Rules

- * Use oven mitts or pot holders when inserting or removing items from the oven or microwave
- * Wear shoes when working with hot or sharp items in the kitchen
- * Wipe down counters to prevent cross-contamination
- * Tie up long hair to avoid it getting in the food
- * Wash your hands thoroughly before touching food and after touching raw meat, fish, or poultry
- * Do not run in the kitchen; especially if someone is cutting food or cooking/baking food



This project could be made in to a Safety Poster and entered in the County Fairs under Department 17 Class A Lot 66 A Poster on Safety.

Edible Color Wheel



The color wheel is a representation of the structure and properties of color. A basic color wheel includes primary (red, blue and yellow) and secondary (green, orange and purple) colors. In this activity we are going to experiment with creating colors with frosting on graham crackers!

Materials/Ingredients:

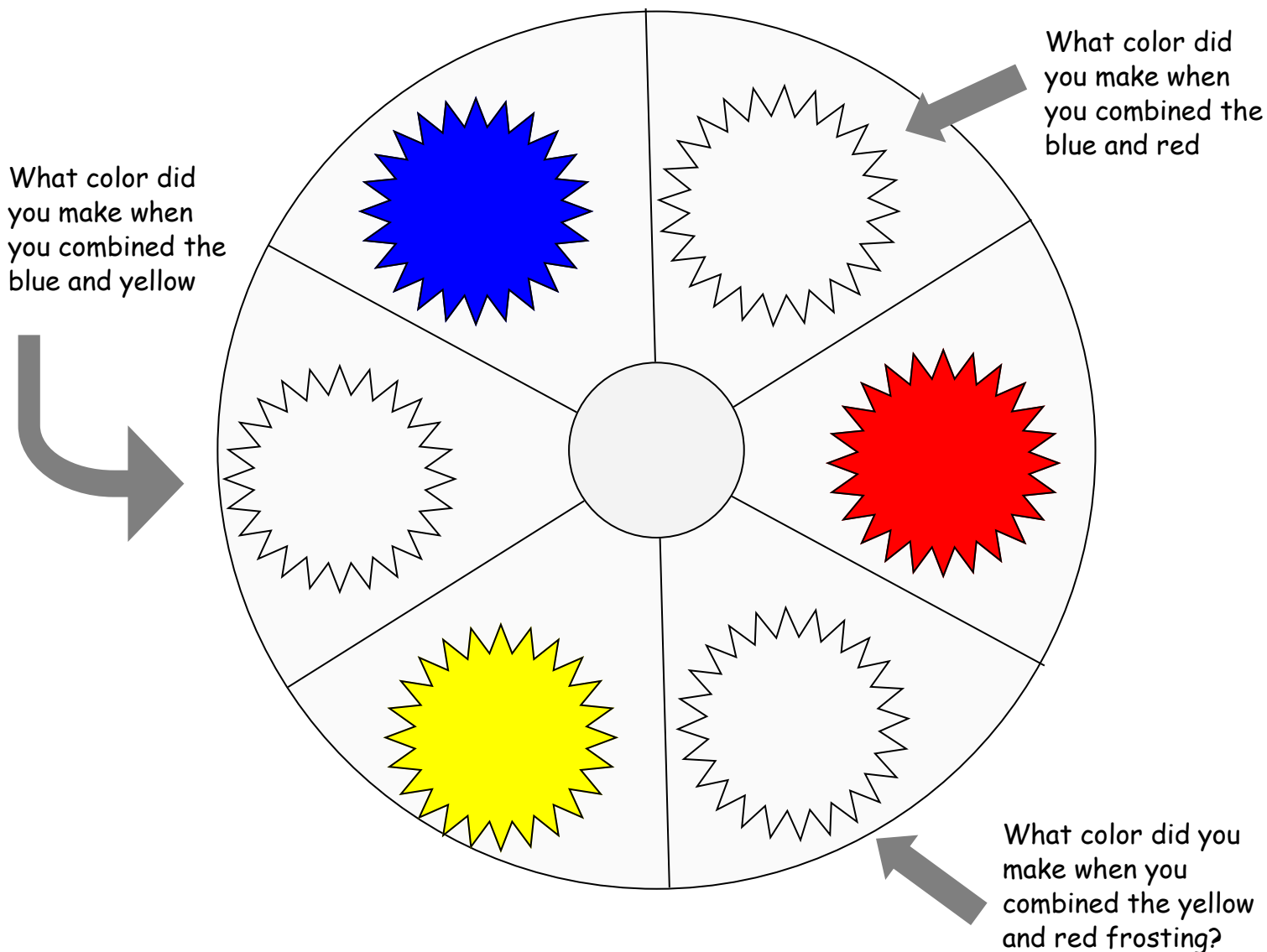
- 3 tablespoons white frosting per person
- Mixing bowls
- Red, blue and yellow food coloring
- 1 paper plate per person
- 6 small rectangles of graham crackers per person
- 1 square of graham cracker per person
- Spoons
- 4 craft sticks per person
- Paper towels, hand wipes or access to a sink for handwashing and cleanup

4-H Connection

4-H projects can be explored independently or through guided programming from an adult or youth volunteer. Burnett County 4-H Cloverbuds Project is coordinated by many volunteers. Just like the different colors of the wheel, everyone's strengths are different. We thank everyone for their uniqueness.

Instructions:

1. We just learned on page 32 in our book that we should always wash our hands before preparing food.
2. Wait until the end of the lesson to eat any of the ingredients.
3. Put 1 tablespoon of white frosting into each of three separate bowls.
4. Add one drop of food coloring to each bowl so you have one yellow, one red, and one blue bowl of frosting.
5. On a paper plate lay out six graham crackers in a wagon wheel pattern so there is an empty space in the center.
6. Using one craft stick, spread a small amount of yellow frosting on one of the graham crackers.
7. Skip over one graham cracker and spread a small amount of blue frosting on the next graham cracker.
8. Skip over one graham cracker and spread a small amount of red frosting on the next graham cracker.
9. You should now have one empty graham cracker in between the primary colored graham crackers.
10. Spread a small amount of yellow frosting on the graham cracker between the yellow and blue graham cracker. Add the same amount of blue frosting to that same graham cracker. Flip the blue frosting craft stick over and mix the two colors together. Record what color you made on the next page.
11. Spread a small amount of blue frosting on the graham cracker between the blue and red graham cracker. Add the same amount of red frosting to that same graham cracker. Flip the red frosting craft stick over and mix the two colors together. Record what color you made on the next page.
12. Spread a small amount of red frosting on the graham cracker between the red and yellow graham cracker. Add the same amount of yellow frosting to that same graham cracker. Flip the yellow frosting craft stick over and mix the two colors together. Record what color you made on the next page.



Reflection Questions:

Of the three secondary colors, which one do you like best? Why?

What would happen if you used more blue than yellow frosting instead of using the same amounts of each?

What would happen if you added more white frosting to any of the colors?

What would happen if you mixed all the colored frostings together?

Insert pictures of your Edible Color Wheel here.

Paper Strip Heart

Materials:

- 2- 1" wide strips of cardstock or thick paper 8" long*
- 2- 1" wide strips of cardstock or thick paper 7" long*
- 2- 1" wide strips of cardstock or thick paper 6" long*
- Stapler
- optional: ribbon or cord to hang hearts to make a heart mobile

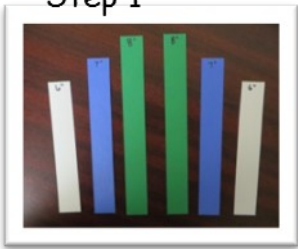
* = paper can be a variety of prints and solid colors

4-H Connection

One of the four H's of 4-H is Heart. In the 4-H Pledge, we say "We pledge...our Hearts to greater loyalty..." meaning we will be kind, sympathetic and true. Heart can also stand for strong personal values, positive self-concept, concern for others, cooperation and communication.

Directions:

Step 1



1. Arrange strips of cardstock starting with the 8" strips in the middle then put the 7" strips around the 8" strips followed by the 6" strips on the outside.

2. Stack the pieces on top of one another. Make sure all the strips are lined up. Staple all six strips of paper together.

Step 2



Step 3



3. Bend the two 6" strips over the staple to form the first heart. Hold in place.

Step 4



4. Bend the two 7" strips over the staple and around the first heart to form the second heart. Hold in place along with the 6" strips.

Step 5



5. Bend the two 8" strips over the staple to form the third heart. Hold in place. Make sure all the strips are lined up. Staple all six strips of paper together.

Adapted from: <http://www.sugarbeecrafts.com/2012/01/paper-strip-hearts.html>

Photos by Beth Rank.

Paper Strip Heart

Now that you know how to make a paper strip heart, try this craft with longer or wider strips of paper and use a variety of colors to achieve your desired paper strip heart designs. You could even make a heart mobile with a variety of colored hearts of different sizes.

What was your favorite part of making the paper strip heart?

What did you do with the paper strip heart once it was complete?

If you could make another paper strip heart, what would you do differently?

Draw a picture or attach a photo or write about what you did with your craft once it was completed.



Ant ANTatomy

Create your own ANT!

Ants are a type of insect that have six legs, two antennae and three body sections. The three body sections are the head, thorax and abdomen.

Ants live in colonies made up of queens, males and workers. They are amazing creatures that come in different colors, with black being the most common. Ants can carry up to 27 times their body weight!

What color ants have you seen before? _____

How many antennae do ants have? _____

Can you name the three body sections of an ant? _____

How many legs do ants have? _____

Time to make your ant!

Materials:

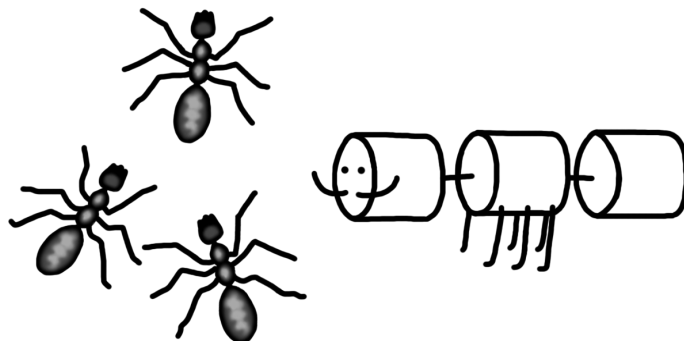
- Three large marshmallows
- 4 large pipe cleaners cut in half
- 2 toothpicks
- Scissors
- Markers

Procedure:

1. Use the three large marshmallows as the body sections and connect them using toothpicks.
2. Cut 4 large pipe cleaners in half to make 8 small pipe cleaners. Use 6 for the legs and insert 2 for the antennae.
3. Decorate your ant using markers.

4-H Connection

Much like ants (who have three main body parts) a good 4-H club meeting should have a balance of three main parts: education, business, and recreation. Members should leave a meeting knowing what business they discussed, learned something, and had fun!



Ant ANTatomy

Draw a picture or attach a photo of you and your ant creation.

Sand Painting

Let's create a picture using sand!

Materials:

- Dry sand (in paper cups)
- Pencil
- Crayons
- White glue
- Paper or cardboard
- Newspapers



Procedure:

1. Use a pencil to draw a picture design lightly on paper.
2. Apply a bead of glue to the pencil lines.
3. Sprinkle sand gently over the wet glue.
4. Tilt the paper so the extra sand falls off the paper onto the newspaper.
5. Let dry.
6. Use crayons to add details or color to the sand painting.

4-H Connection

Arts & Crafts is a national 4-H project. It features curriculum that will guide you through the project. For a copy contact your County 4-H Office . For more internet resources explore: <https://fyi.extension.wisc.edu/wi4hprojects/arts-communication/arts-crafts/>

Draw a picture or attach a photo of you and your sand painting.

Note: Colored sand can be used, if available.

Graham Cracker Scram

Let's make a delicious and nutritious snack!

Ingredients:

- Graham crackers
- Peanut butter
- Bananas, sliced
- Milk



Equipment:

- Plastic knife
- Paper plates
- Cups for milk
- Napkins



4-H Connection

Foods & Nutrition is a national 4-H project within the category of Family, Home, and Health. This project area includes cooking, baking, and food preservation.

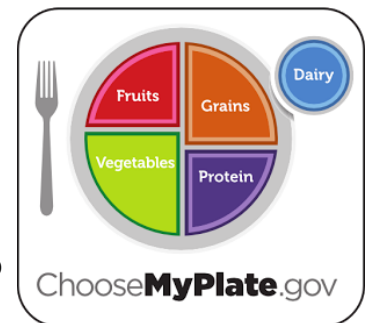
Procedure:

1. Before making the snack, make sure to wash your hands with soap and warm water.
2. Use the plastic knife to slice the bananas.
3. Take a half of a graham cracker and spread peanut butter on it. Put the slices of banana on top of the peanut butter. Add the other half of the graham cracker to the top and enjoy with a glass of milk.

This snack includes many food groups. Can you draw a line to the correct food group each ingredient belongs in?

Graham crackers	Dairy
Peanut butter	Fruits
Banana	Protein
Milk	Grains

This snack is made with everyday foods that are healthy for us, like peanut butter and fruit. Can you think of any other everyday foods you could use to make a similar snack with at least three food groups?



Cloverbud Notes and ideas

On these pages, put clippings, pictures, drawings, and other items showing your 4-H participation

References

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