

Tested, edited & approved by:

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# Fairy, Princess, & Knight

#### Grades: K - 5th

Each of the five days is set to three-hour periods. Depending on how much time is allotted you may extend or shorten times if needed, however, the set minutes are a good time frame. Each day also has time built in for breaks, time overflows, cleanups, and playtime.

# Day One:

## **Introductions - Ten Minutes:**

Have the entire group starting with the instructor state their name, age, and favorite princess or prince. Run through expectations for the kids throughout the week, such as listening skills, being a good friend, sharing, etc.

## **Clothespin Flower Fairy Craft - 45 Minutes:**

Start by separating the stems from the petals by pulling firmly. The petals will be used to create the fairy's skirt, and the plastic center pieces make great hats. Select a petal piece to be the skirt and cut small slits in the center hole until it is large enough to fit around the clothespins. Slide the flower petal skirt onto the clothespin. Mix and match the petal pieces to create different layers and patterns on the skirts. Secure the petals to the clothespin with hot glue. Use some washi tape to create a belt that covers the top edge of the flower. Use rose petals, other round flower petals or leaves to be wings and hot glue them onto the back. Use a small complete flower piece or a center piece as a hat for the fairy. Finish the fairy by using a black marker to draw eyes and a red or pink marker to add some blush circles on the cheeks.

## Frozen Dragon Eggs Experiment - One Hour:

Start by preparing the eggs the day before. Place the dragons into the egg molds and fill with colored water before placing it



in the freezer. Each bin gets a container with some warm or lukewarm water inside of it. The water containers will be used to fill up the pipettes. Finish set up by filling up small containers with some salt. Started by telling the kids dragons had been frozen into ice eggs. It was their job to help rescue the dragons and free them from the ice. Discuss with the kids how they might be able to rescue the dragons from the ice. Have them begin to use the pipettes to pour water and use salt to melt the ice. Explain that the salt makes the ice melt because salt lowers the freezing temperature of water, so instead of staying solid the ice turns into water.

#### Design a Princess Dress Activity - 10 Minutes:

Print out the template and have the kids discuss what they want their dream princess dress to look like. Then have them color the template to look like their dress.

## **Toilet Paper Roll Cuff Craft - 25 Minutes:**

Cut the paper towel tube in half. Each kid needs ½ of the roll. Cut a slit straight from end to end of the holes so that the cuff can be easily put on. Paint the tube cuff with acrylic paint in your color of choice. After the paint has dried, use hot glue or tacky glue to attach ribbon onto the edges to trim the cuff. Finish the cuff by gluing rhinestones in a line along the middle with even spaces in between. After this step, the cuff can be worn on the wrist.

## Day Two:

#### Paint a Fairy House Craft - 45 Minutes:

Start the project by researching pictures of fairy houses to base your house off of. Once you find a house you like, begin to paint your house as desired. Once the house is finished and dry, if you want to add some extra sparkle by gluing some rhinestones onto the house. After the rhinestones are added, you have a cute house for fairies to live in!

## **Color Changing Potions Activity - 45 Minutes:**

This activity uses red cabbage because it contains a chemical called anthocyanin. Anthocyanin changes color depending on the acidity of its environment. It turns pink or red when in the presence of an acid, purple when neutral, and blue or green when mixed with an alkaline substance. Red cabbage is considered a pH indicator because it is a substance that has one color when added to an acidic solution and another when added to an alkaline solution. Start by adding the chopped red cabbage into a pot and cover with water. Turn the heat to medium and turn it off when the water has turned purple(an adult does this beforehand). Pour the contents of the pot into a strainer with a container underneath to collect the cabbage water solution. Portion the indicator into smaller beakers and jars, each about half full. Before you



begin, make sure that everyone involved is wearing safety goggles. Start experimenting by adding different amounts of vinegar and baking soda into each one. If you want to change it up a little bit, you can mix the beakers containing baking soda and vinegar for a foaming reaction.

#### Foam Crown Craft- 30 Minutes:

For this project, you can either use the crown template or allow the kids to make their own design. If they make their own, make sure that it is large enough to go around the front half of their head(if it's larger than that, it is fine). If you choose a template, print out enough so that each child can have one to cut out and trace onto the foam. After the crown is cut out, have the kids decorate the crown as they see fit. Once the decorating is done, use the end of a sharp pair of scissors or a hole puncher to make a hole on the bottom left and right corners of the crown. Measure a piece of elastic that's two to three inches longer than the distance between the ends of the crown. Insert the elastic into the hole and tie it off on both ends, and the crown is finished.

#### Index Card Castles Activity - 30 Minutes:

Index Card Castles This site gives a great explanation and tutorial with pictures for an index card castle STEM challenge.

## Day Three:

#### **Smoking Dragon Science Activity - 25 Minutes:**

Start the activity by decorating a styrofoam cup to look like a dragon. Use the markers to color the cup, and hot glue on pom-poms for the eyes and nose. Additionally, hot glue googly eyes onto the front of the pom-poms for eyes. Cut out a circle on the bottom of the cup to make a mouth, leaving about a ½ inch border around the edge of the circle and the cup. On the other end of the cup, cover the top with a plastic baggie and use a rubber band to secure it. Once the cup is prepped, you can start the experiment. Pour a small amount of water into the cup, then place a few small pieces of dry ice in. If you're using dry ice in a large block, you can break off pieces with a sharp knife. Because dry ice is extremely cold and can cause frostbite, <u>only an adult should handle dry ice and needs to wear thick gloves</u>. After the ice and water is added, turn the dragon onto its side. Lightly tap the plastic bag on the back, and a white fog that emulates smoke will emerge from the dragon! Because dry ice is frozen carbon dioxide, it breaks down into a gas instead of a liquid.



## **Catapults Craft - 20 Minutes:**

Start by making a stack of seven popsicle sticks and use rubber bands on each end of the stack. Make a stack of two popsicle sticks and use a rubber band to secure only one end together. Use two rubber bands to attach a plastic spoon to one of the two popsicle sticks. Next, pull the two popsicle sticks apart on the end without the rubber band, and wedge the stack of seven popsicle sticks in between them. Secure these pieces with a rubber band attaching opposite corners, which should cross on the front and be slightly twisted in the back(see the pictures in the catapult folder). To use the catapult, place a ball in the spoon and push down on the spoon with one hand while using the other to hold the catapult stable before letting go.

#### **Trajectory Experiment - 40 Minutes:**

Trajectory is the path a free-flying object follows through the air. That object, also called a projectile, has two forces working on it. The inertia that launches the projectile into the air, and the gravity that pulls it back to the earth. Using the catapults made in the previous activity, discuss with the group what ways of using the catapult might make a projectile travel further. Some examples of this could be switching the type of projectile used, how hard you push down on the catapult, the angle the catapult is set at, etc. After trying out these ideas, see which one works the best. Another way to see if you can get better results is by changing the catapult. Since the catapults are very simple, you can switch out the spoon for a plastic or metal lid by gluing it onto the end. Changing the end is an interesting way to see the differences between the spoon and the lid. Try to observe which type of catapult is better at launching the projectile farther and which is better at launching it higher.

## **Crest Designing Activity - 15 Minutes:**

Crests show things that are important to their owner and represent them. Color and draw four important things onto the crest to create your own!

#### Pipe Cleaner Dragons Craft - 50 Minutes:

There are pictures to help with the process in the drive folder, they can be referenced throughout the craft for guidance. Start the project with four pipe cleaners of the same color and a fifth in a different color. (For this example, four white and one purple, but you can use any color of the same amount.) Cut the purple in half, and fold one of the halves in half. Begin to wrap one of the white pipe cleaners around the folded end of the purple, leaving a small amount at the end out to be the nose. Wrap around the folded up until the halfway point, leaving ½ inch left on the bottom. The purple left sticking out can be shaped into horns. Stick an end of another white pipe cleaner into the back of your dragon's head and twist it together



with the other end sticking out. Wrap the remaining white around a pen or pencil to form the body. Cut one more green pipe cleaner in half, and one of the halves in half again. Bend one of the smaller pieces into the shape in the pictures, and the larger half into the second image. Attach them to the dragon by sticking them into the coils. Take the other fourth of a pipe cleaner and wrap it around a small piece of purple. Add a dot of hot glue onto the white end of the tail and stick it into the open end of the dragon. For the wings, cut the final white pipe cleaner in half, and fold it into the pattern on picture 14. Cut off the ends pictured in photo 15, and arrange them onto a foam sheet. Glue them onto the foam sheet and cut them out once they have cooled. Attach them to the dragon by gluing the very end of the wing and sticking it into one of the body coils. Finish the dragon by gluing googly eyes onto the head.

# **Day Four:**

## Fairy Bottle Necklace Craft - 35 Minutes:

These necklaces are simple and fun to make, so try and get creative with the process! To set up the project, place a plastic tablecloth on your surface; fill several bowls with water and add food coloring to make your colors of choice. Next, each kid needs to shred one cotton ball into tiny pieces. If they need more later on, they can shred another. Use tweezers to dunk the small pieces of cotton into a bowl of dye and then place it in the jar. Add more colored pieces of cotton and layer them with glitter and sequins. After the jar is filled, dry off the rim of the bottle and hot glue the lid on. To finish, tie a piece of string around the neck of the bottle and tie the two ends together.

## Marshmallow Toothpick Castle Activity- 30 Minutes:

Discuss how architecture goes over design, planning, and the overseeing of buildings. Architects use math and science to come up with problems that come up when they construct a building. Start by researching different castles with different types of architecture. Once you find one you like, you can start the activity. Use the toothpicks and marshmallows by sticking the toothpicks into the marshmallows to create a replica of your castle. This activity would also be fun to turn into a contest to see who can make the tallest castle or the most creative.

## Princess and the Pea STEM Experiment - 45 Minutes:

The goal of this activity is to recreate the Princess and The Pea fairytale. Put the kids into small groups to work together. Have the materials out for them and explain the directions. The goal is to make a mattress out of the materials that you cannot feel the "pea" through. Construct a mattress using the bubble wrap, sponges, and felt on top of the marble "pea". Once they are done, press down on the mattress to see if they can feel the marble. Once they have done this,



try another task such as what the thinnest the mattress can be without feeling the pea; or replacing the marble with a coin or dice. Optionally, you can make a bed out of popsicle sticks or bring a toy doll bed to do the experiment on.

## Fairy Wands Craft - 40 Minutes:

Begin by tracing the star shaped cookie cutter onto your choice of felt two times, and cut the stars out. Hot glue the edges together, leaving an inch long opening. Stuff the star with stuffing. Add some hot glue onto the end of a dowel and stick it into the opening, afterward pressing down the open edges together to fully close the hole. To finish the fairy wand, glue some ribbon strips no longer than the length of the wooden dowel where the star attaches to the dowel. Now you can use your fairy wand to create magic and joy!

# Day Five:

## Perler Bead Keychains Craft - One Hour:

You may want to start by putting some beads into small cups for each child or in a bowl for a small group so that they aren't digging around in a larger container which can lead to a mess. Follow the instructions on the perler beads container to begin. If you choose to use the templates, make sure that you have a clear perler pegboard large enough to create the chosen piece. However, the larger the piece the longer the time needed to make it, so if your group has a shorter attention span you may want to only allow small pieces to be made. Another item to note is to make sure that whatever design the kids choose does not have small pieces sticking out. Anything less than three or four beads wide will break extremely easily once ironed. Once they are finished, carefully set the board onto your ironing surface and place the parchment paper on top. Use the iron to fuse the beads together, but make sure that you don't iron for too long because the beads can lose their shape and you can also melt the pegs on the board. Let the piece cool before removing it from the board. To finish the keychain, use needle nose pliers (two at a time work best) to separate a jump ring and insert it into one of the beads. If the hole is too small, use a large safety pin to widen it. Thread the end of a keychain onto the jump ring and use the pliers to firmly close the jump ring, and make sure there is not a space between the ends.

## Princess Stem Challenge - 40 Minutes:

<u>Use this link for the STEM cards</u> This idea comes from a blog, so to get the free cards all you need is an email to sign up with. Print and cut out the cards ahead of time. Use the divided trays to set out all of the items listed in the supply list other than the challenge cards. You can have the kids work individually or on teams for this challenge depending on the size of your



group. Draw a card at random and give the kids 10 minutes to use anything from their tray to create what they need. You can judge them on the challenge if you would like, however it is not necessary to the project. The challenge can be done up to four times in the time period if you would like, but if you find more time is necessary two or three times may work as well.

#### Snack and Free Time/Catch Up Time - One Hour:

This is a great time to catch up on any projects if some kids weren't able to get theirs finished in the allotted time. Once everyone is all caught up or if nobody needs to, having some form of snack for the group is a fun way to end the week. You can plan something for the kids to do such as frost their own cupcakes, or you can prepare something ahead of time so there's less cleanup.



**Supplies**: (Unless stated in the activity, each project is done by each child or a small group, so the number of items depends on the size of your group.)

- Day One
  - Flower Fairy Craft
    - Assorted silk flowers and rose petals
    - Mini leaves
    - Wooden doll clothespins
    - Doll clothespin stands
    - Washi tape
    - Hot glue gun and sticks
    - Scissors
    - Black and red/pink markers
  - Frozen Dragon Eggs
    - Silicone egg molds
    - Plastic dragon toys
    - Washable liquid watercolors
    - Pipettes or squeeze bottles
    - Salt
    - Containers to do the activity in
    - Water
  - o Design a Princess Dress Activity
    - Dress template printed
    - Colored pencils, markers, or crayons
  - Toilet Paper Roll Cuff
    - Toilet paper rolls
    - Acrylic paint
    - Paintbrushes
    - Various types and colors of ribbon
    - Rhinestones and beads
    - Hot glue or tacky glue

#### • Day Two

- Paint a Fairy House
  - Small wooden birdhouses
  - Acrylic paint
  - Paintbrushes
  - Gems and beads
  - Hot glue or tacky glue



- Color Changing Potions
  - Chopped red cabbage
  - A pot or pan and a stove
  - Strainer
  - Vinegar
  - Baking soda
  - Selection of beakers and jars
  - Spoons
  - <u>Safety goggles</u>
- Foam Crowns
  - Large craft foam in various colors
  - Washable markers
  - Adhesive backed rhinestones and stickers
  - ½" elastic
  - Scissors
- Index Card Castles: <u>https://frugalfun4boys.com/index-card-castles-stem-challenge/</u>
  - Index cards(non-heavyweight, about one package for four towers)
  - Clear tape
  - Scissors

#### • Day Three

- Smoking Dragons
  - Dry ice
  - Styrofoam cups
  - Plastic sandwich bags
  - Rubber bands
  - Markers
  - Pom-poms in various sizes
  - Googly eyes
  - Hot glue guns and glue
  - Thick gloves
  - Water
- Catapults
  - Popsicle sticks
  - Rubber bands
  - Plastic spoons
  - Pom poms or styrofoam balls that fit in the spoon



- Optional metal or plastic bottle lids
- Pipe Cleaner Dragons
  - Selection of colors of pipe cleaners
  - Googly eyes
  - Foam sheets
  - Hot glue guns
  - Scissors

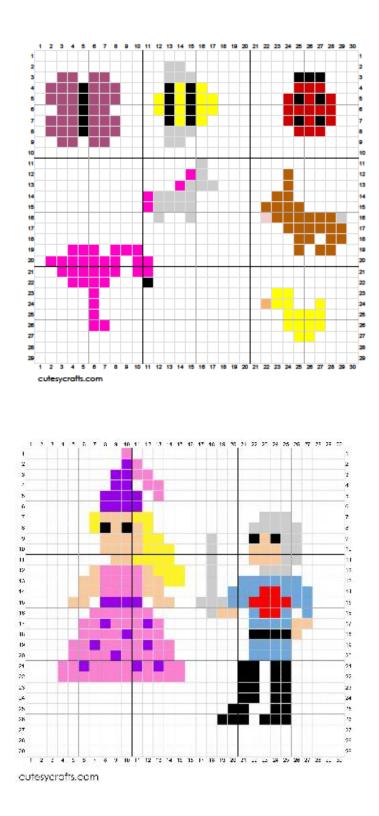
#### • Day Four

- Fairy Bottle Necklace
  - Small plastic bottles with cork lids
  - Glitter and sequins
  - Cotton balls
  - Food coloring
  - Tweezers
  - Bowls
  - Embroidery thread or elastic
  - Hot glue guns
- Marshmallow Toothpick Castles
  - Mini marshmallows
  - Toothpicks
  - Pictures of different castles
- Princess and the Pea
  - Popsicle sticks
  - Balsa wood pieces or dowel
  - Hot glue guns
  - Marbles
  - Sponges, bubble wrap, and felt
- o Fairy Wands
  - Star shaped cookie cutters or star templates
  - Various colors of felt
  - Extra long lollipop sticks or wooden dowels
  - Ribbons in various colors and textures
  - Polyester stuffing
  - Hot glue guns
  - Scissors
- Day Five
  - Perler Bead Keychains

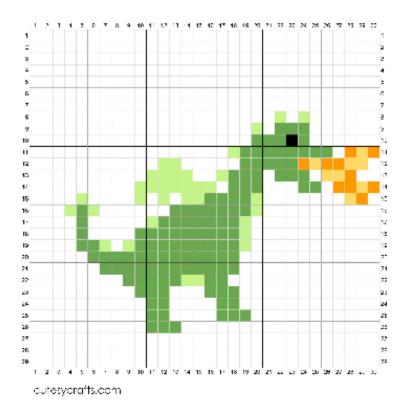


- Perler bead templates
- Perler beads
- Perler bead pegboards
- Key chains
- Jump rings
- Needle nose pliers
- Iron only used by an adult
- Parchment paper
- Ironing surface such as a thick towel folded in half or an ironing board
- Princess STEM Challenge
  - <u>Challenge cards</u>
  - Divided or regular trays
  - Index cards
  - Washi tape
  - Small plastic cups
  - Tongue depressors
  - Playdough
  - Toothpicks
  - Foam balls

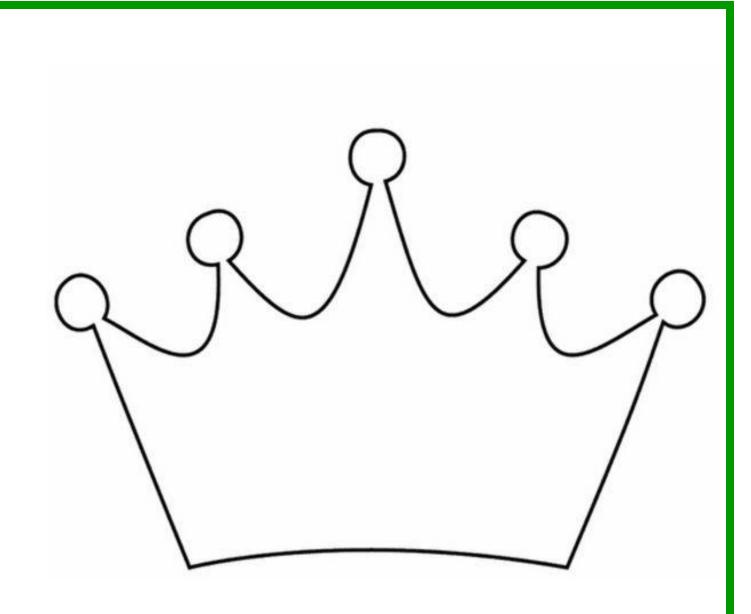




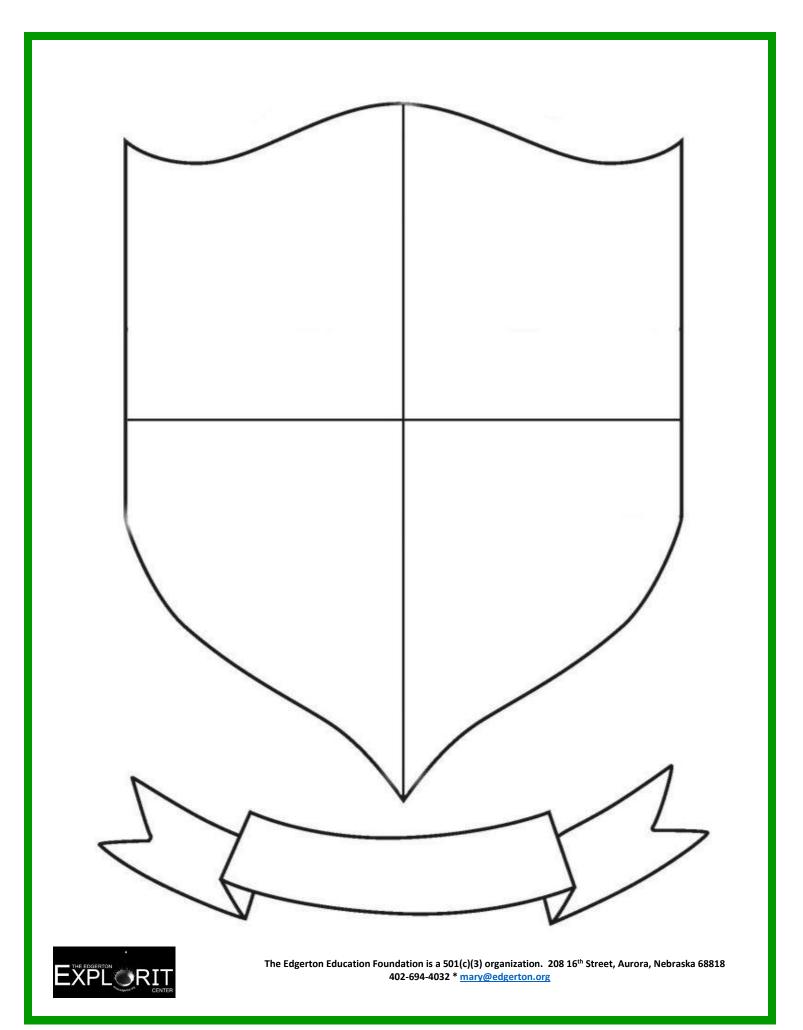


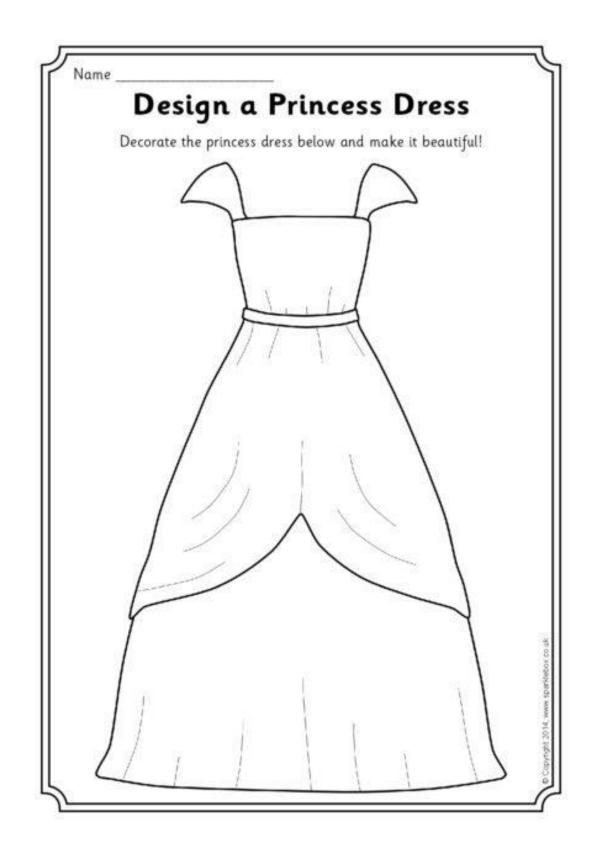






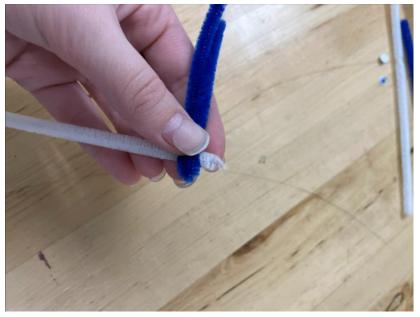








## Step One:



#### Step Two:





## Step Three:

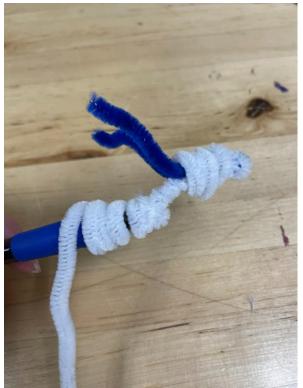


Step Four:





## Step Five:



Step Six:





## Step Seven:



Step Eight:





## Step Nine:



Step Ten:





## Step Eleven:



Step Twelve:





## Step Thirteen:



Step Fourteen:





## Step Fifteen:

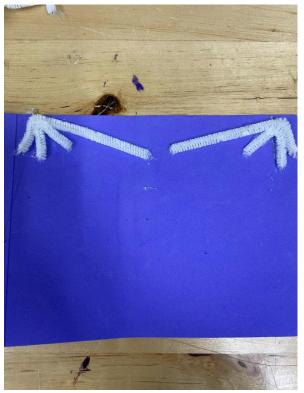


Step Sixteen:





## Step Seventeen:



Step Eighteen:





## Step Nineteen:



Step Twenty:





## Step Twenty-One:





## Step One:



# Step Two:





## Step Three:



Step Four:



