SCHOOL AGE

Week 41

Smart Activities

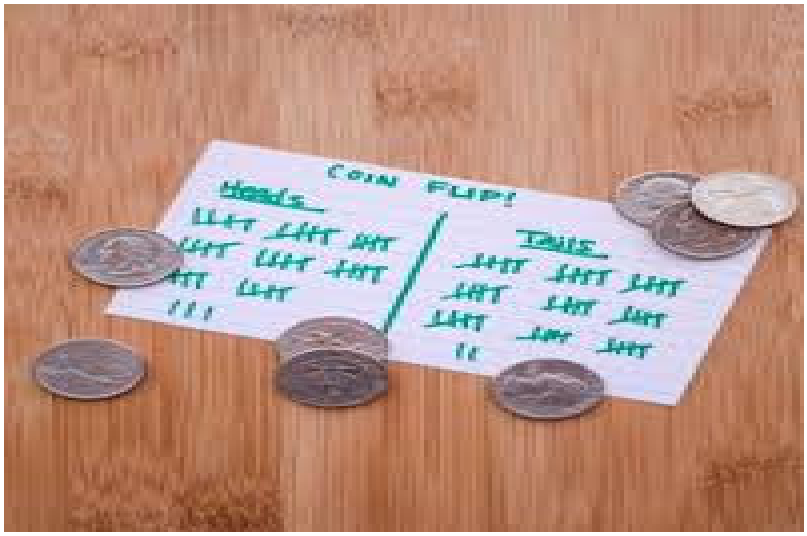
Kids R Kids Learning Academies

SMART CHOICE. SMARTER CHILD.®

Estimations and Probabilities (Part I)

Materials: coin (penny, nickel, or quarter), construction paper, pencil
Preparation: Find or create an open area. Gather materials.
Instructions:

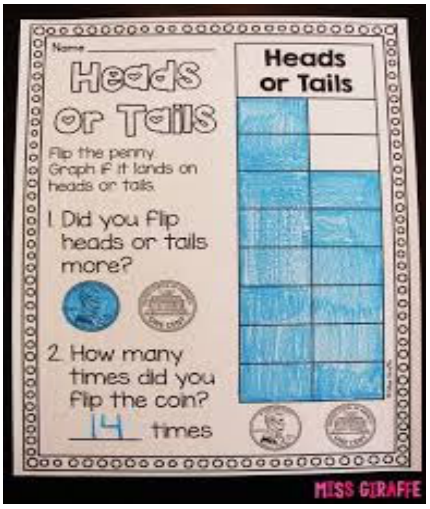
1. Fold the sheet of construction paper in half.
2. Label one half of the sheet "heads." Then label the other half "tails."
3. Choose how many times you would like to flip the coin. Ex: 25, 50 or 100 times!
4. After choosing how many times you would like to flip the coin, make an estimation of how many times you think the coin will land on heads vs tails.
5. Write your estimations on the top of the construction paper. Label it "Estimation" if you choose.
6. While flipping the coin, make tally marks in the appropriate column to keep track of which side the coin landed on.
7. After flipping the coin the number of time you chose, count the tally marks for each column and write the amount down at the bottom for each column.
8. Did you come close to your estimations?

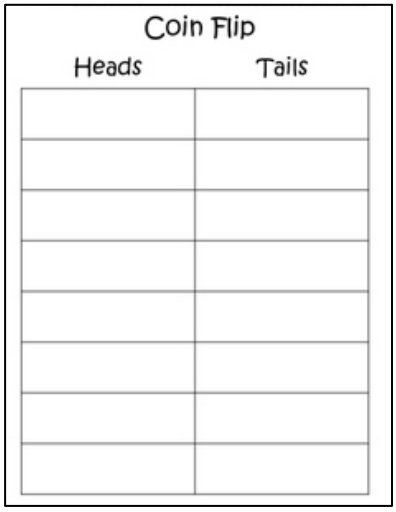


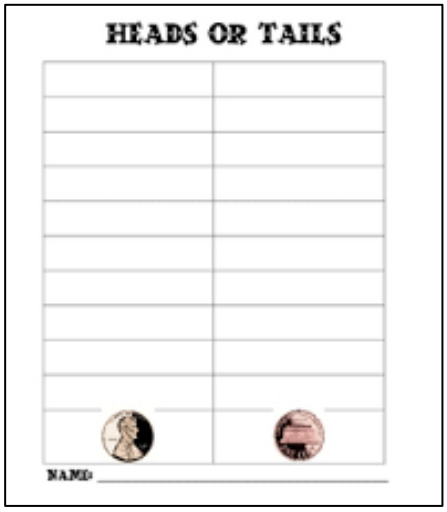
Estimations and Probabilities (Part II)

Materials: construction paper, crayons, marker, pencil, ruler
Preparation: Gather materials.
Instructions:

1. We are going to create a bar graph from the coin toss tally.
2. Utilizing the pencil and ruler, create two columns: one for heads and one for tails.
3. After creating the two columns, draw boxes in each column. Each box created represents five-coin tosses (counting by fives).
4. Draw enough boxes to represent the number of times you flipped the coin. Ex: If you flipped the coin 25 times, you would have five boxes for each column (Heads and Tails).
5. After you have finished drawing and numbering the boxes (by five), and labeled each column "Heads" and "Tails." Select a color for each column, ex: red for "heads" and blue for "Tails."
6. Color/shade the appropriate number of boxes for tally marks. (Remember each box represents five tally marks.)
7. Now you have created a coin toss bar graph!







Geometric Coasters

Materials: cork coasters (round), foam paintbrushes, paint (various colors), painter's tape, scissors
Preparation: Gather materials.
Instructions:

1. First, cover your work area using old paper, newspaper, etc.
2. Then, use your painter's tape to make a pattern onto your square coasters by crisscrossing the tape and leaving triangle shaped cork openings.
3. Next, paint each open space a different color and let dry. Be sure you use enough paint to fill in all the little holes in the cork.
4. Carefully remove the tape.
5. If desired, you can add more shapes to your coasters after the first section dries.
6. Now, your coasters are ready to use!

Finish Line - Probability

Materials: pencil or small items to use as place markers, two dice
Preparation: Each number represents a cyclist on the game board.
Instructions:

1. Select a cyclist to cheer for (the one you think will reach the finish line first).
2. Roll two dice. Add the two numbers rolled.
3. Pick that cyclist's column and color in one space towards the finish line.
4. During play, try to predict which one will reach the finish line first. Is it the same as the cyclist you originally chose? Why do you think this?
5. Continue until one of the cyclists reaches the finish line (all of the spaces in the cyclist's column are filled in).

Finish Line										
2	3	4	5	6	7	8	9	10	11	12

Skee Ball Laundry Basket Style

Materials: balls (plastic, ex: ball pit balls), cardboard, cardboard box, duct tape, laundry basket (2), markers, paper, scissors or box cutters (adult supervision needed)
Preparation: Gather materials.
Instructions:

1. First, with an adult assistance cut your cardboard box into a ramp. To make the ramp, cut off the top and one end from the box.
2. Then, cut some pieces from your cardboard to create a curved ramp and tape it in place with duct tape.
3. Decide on a point system and tape the numbers (like the picture below) to the baskets.
4. To play the game, simply roll the balls up the ramp and launch them into the laundry baskets. It works best if you kneel to roll the balls.

Edible Geodes Creation

What is a Crystal Geode?

Geodes are formed when a liquid mineral solution enters a hollow space inside a rock. Over many years the water evaporates, leaving a crystalized mineral inside the rock. When the rock is cut open, you can see the crystals inside the rock shell. Geodes start as a bubble inside a layer of rock, this could be from an animal burrow, tree roots, or even an air inside explosive volcanic rock. The crystals are formed over time, as the rain pelts over them, as tiny clusters or single crystals. (Use the internet to discover more facts about Crystal geodes and see all the different colors.)

Materials: silicone muffin cups, cookie sheet, hard candies (i.e. Jolly Ranchers), rolling pin, plastic baggies, cocoa powder, oven (Adult supervision or assistance is required)

Preparation: Gather materials. Preheat oven to 350 degrees.

Instructions:

1. Begin unwrapping your hard candies and place them inside the plastic baggies (separate the colors).
2. Then, here is the fun part, use your rolling pin to crush the candies into tiny pieces. First, make sure you are in a place where you can smash the rolling pin on each bag breaking up the candies. Then, push down hard and roll repeatedly until they are in tiny pieces.
3. Next, get your muffin cups and place them on the cookie sheet.
4. Sprinkle a layer of the crushed candy on the bottom of each muffin cup. You can use one color or mix it up to make it really look like a real geode.
5. Place the cookie sheet (have an adult do this) in the oven for about 5 minutes. Hint: you want your candy to be just melted when you take it out.
6. Then take your rock candy geodes out of the oven and let cool. Once the candies are hard again you can pop them out of the muffin cups and coat the edges with cocoa powder (which represents the rock coating surround the real geodes).
7. Now, it is time to eat and enjoy!

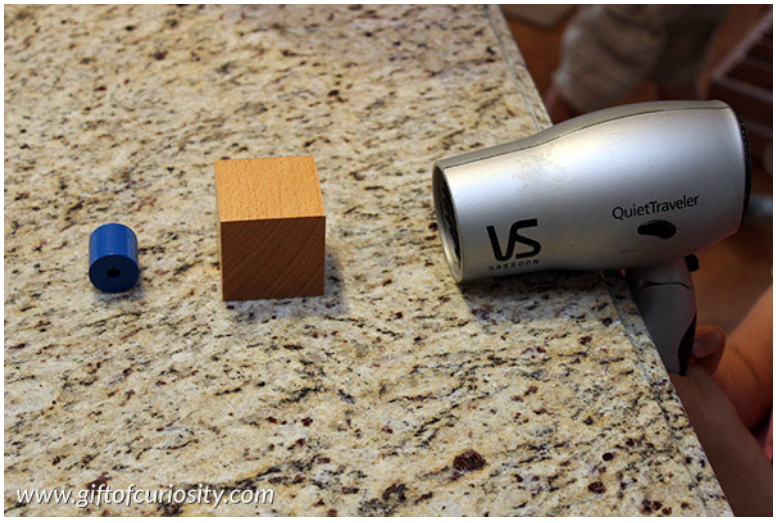
Wind Resistance of Cubes and Cylinders

Materials: cubes (ex: blocks, present box, dice), cylinder shapes (ex: blocks, cans, cardboard tube - empty and/or full, battery), hair dryer, paper, pencil, tape, tape measure

Preparation: Gather materials. Be creative and get different weights and sizes of cubes and cylinders.

Instructions:

1. First, set out all your materials and plug in your hair dryer.
2. Then place tape in two different positions on your table or counter. The first piece of tape is going to be where your hairdryer will be positioned to keep it consistent and the second position is where you will place your object.
3. Draw pictures on your paper of the various objects and make a hypothesis on which one will go the furthest.
4. Now place one of your objects on the second piece of tape and turn the hair dryer on high. (Test the cylinders two ways: 1. on its side with the ability to roll and 2. standing up unable to roll.)
5. Using your measuring tape, measure how far the object moved. Record down on your paper and draw a picture of it.
6. Continue until all objects have been tested and measured.
7. Which one of each shape went the furthest? Why do you think this happened?



Confetti Tube Launcher

Materials: balloons, cardboard tube, confetti, duct tape, scissors
Preparation: Gather materials.
Instructions:

1. Tie a knot in your balloon.
2. Cut about 1/3 off the top of the balloon using your scissors.
3. Then put the balloon on the cardboard tube like putting on a shower cap. Make sure to center the knot on the balloon. (see picture below)
4. Tape the balloon in place. If you like, wrap tape around the remainder of the tube to reinforce it.
5. Now, have some fun and get creative by using different color tapes to create cool patterns and make the confetti tube launcher look amazing! Use any supplies around the house.
6. Add the confetti in the tube.
7. Time to launch! Hold the tube with one hand and pull the knot back using your other hand. Let it go and watch the confetti fly.
8. Try it again using different angles and how far you pull back. Which goes further?
9. Remember to clean up the confetti after each use.