

Girl Scouts of Chesapeake Bay Council Breaking Ground Patch Program



Virtual Groundbreaking Activities

1. Philanthropy - Rainbow Fish Story & Activity

Read or tell the story of the rainbow fish. Remind the group that we all have gifts that we can share with others. Ask for examples. Then, ask each participant to trace the outline of their hand on a piece of paper and decorate their handprint with words, symbols, and colors to represent what gifts they have to share with others. Have each participant cut out their handprint and glue it to the fish outline (fingers pointing toward the tail) to represent rainbow fish scales. Display your fish poster as a reminder that we should share our gifts with others.

Discussion:

What does creating our own Rainbow Fish tell us about sharing our gifts?
Why is it important to share our gifts with others?

Prep:

Draw an outline of a fish shape on poster board or newsprint with a marker and hang in a conspicuous place on the wall.

Supplies:

posterboard or newsprint	white paper
markers	glue sticks
Rainbow Fish Story (attached)	scissors

2. Construction Activity –Build the tallest free-standing tower.

Determine, based upon your group's size, age and the available space which type of tower building activity is best for your group. Give each team an equal # of supplies. The object is to build the tallest freestanding tower in the time allowed. (Appoint a time keeper) Allow time for discussion after you declare a winner.

Suggested rules:

- Use only the supplies provided and the designated base (floor or tabletop).
- Towers must stand unsupported for at least 30 seconds.
- When time up is called – Hands Off!
- Everyone's feet stay on the floor. (No climbing on tables, chairs or other people.)

Discussion:

- What skills did your group need to use to help build their tower? (communication, planning, teamwork, etc...)
- How would your groups experience be similar to that of a group of people trying to design and build a real tower or other building? Would they use the same skills?
- What difficulties did your team have? (issues with timing, materials, communication, expectations, assumptions, etc..)
- How would your groups experience be similar to that of a group of people trying to design and build a real tower or other building? Would they struggle with the same issues?
- If you were to do it again, what would your team do differently?

Supplies:**Tabletop activity – (5-10 minutes)**

- Mini marshmallows or Gum drops (1 bag or ½ bag per team)
- Toothpicks or Dry Spaghetti Noodles (approx. 50 per team)
- Yard Stick, ruler or measure tape

Tall Ceiling – (15 – 25 minutes)

- Big bag of balloons (50-75) per team
- 1 roll of masking tape per team
- Roll out measuring tape

3. Geotechnical Survey Activity - Soil / Water Filtration

Before we can begin construction on the buildings at camp, we need to know certain things about the ground that we are building on. Engineers took soil samples from each building site for tests to help them decide how to build the strongest, safest building that will have the least impact on the environment. One of the things we need to know when planning the construction is how quickly water drains through the soil.

Instructions:

Pour a cup of water through each bottle of soil.

For each bottle, record:

1. How long it takes the water to come through?
2. How much water passes through the soil?
3. How clear is the water that drains through?

Do It Again: Repeat the steps above and record the differences you notice when the soil is already wet (as with rain).

Discussion:

Why do you think we need to know about how different soils absorb and/or filter water when designing a building? How might that be important?

Prep:

Cut off the bottom of each bottle. Fill each bottle with a different type of soil –

1. sandy soil
2. top soil
3. composted material

Then place each bottle, neck end down in a clear cup or the end that you cut off of each bottle to catch the water that you are going to pour through.

Supplies:

- 3 empty, clean plastic soda or water bottles
- 3 8 oz. cups of water
- 3 clear plastic cups
- 3 types of soil
- Experiment Record Work Sheet (see attached)

4. Mapping – Topography

To help us decide where on the camp to build these new structures we looked at a map of the campsite. By looking at maps and seeing where important features are, we will be able to decide where the best place to build.

Daisies / Brownies: Plan to take your girls on a walk of an area. Make sure that the walk includes a place with trees and if at all possible a bit of hill. Draw a map of the area.

Next, go on a walk with your girls and collect natural materials such as acorns and leaves from different places along your path. As you walk, help your girls map the location where you found those natural items.

Supplies:

- A pre-decided route
- A blank piece of paper for each girl (or a sheet of newsprint, if you prefer to do a group map)
- Crayons, markers or colored pencils for girls to draw their map

Discussion: Where would be the best place to put a native plant species garden on their map? Where would be the best place to put a new hiking trail on their map? If they wanted to build a tree house, where would they put it on the map?

Juniors/Teens: There are many types of maps that can show us different things. When architects are deciding where to build, they primarily use topographic maps. A topographic map is a representation of a three-dimensional surface on a flat piece of paper.

Teach your girls how to read and understand a topographical map. Give each girl or set of buddies the "What Do Maps Show". Go over with them the explanation of what a topographical map is and have them answer the on the first page. After a few minutes go over the answers and ask the girls how they got them.

Supplies:

- What Do Maps Show- see attachments

Follow-up Discussion: Why might these types of maps be important to architects when they are trying to decide where to build a structure? How would you use these maps to decide where to put a building?

5. Geometry in Building Design - Geometric Scavenger Hunt

Geometric shapes are all around us. Buildings are constructed of materials in the shapes of whole or partial squares, rectangles, circles and triangles. Have a scavenger hunt for geometric shapes in the design and construction of buildings and/or furnishings around you. Choose the appropriate type of hunt based on your girls' ages and abilities.

Daisies / Brownies: Give each girl or set of buddies a cut out of a different shape (circle, triangle, rectangle, square, cylinder) and ask them to see how many they can find in your meeting room or take a walk outside and search for shapes on the exterior of buildings. After a few minutes, have the girls swap shapes and see what they can find that another girl didn't see.

Brownies / Juniors: Give each girl or sets of buddies a Geometry Scavenger Hunt `Worksheet. Ask them to see how many of each shape and size they can find in your meeting room or take a walk outside and search for shapes on the exterior of buildings. Keep a tally of the # of each in the space provided. Who can find the most?

Supplies:

- Scavenger Hunt Worksheets – see attachments

Follow-up Discussion: What have we learned about shapes used in building design? Were there any shapes that you found more often than others? Why do you think that might be?

Side Note: be prepared for a discussion over the size of the shapes. This is an opportunity to discuss that what one person considers large or tiny may not be judged the same way by another. It's all relative, there is no right or wrong answer. Discuss how people often see or experience the same thing, but perceive it differently.

6. Design Charettes - Graphing / Architectural Design

Background: Before we begin building on our campsites, we had several meetings where we discussed how we wanted each building to look, what type of activities would take place there and how things should be generally planned out. Then we got together again to actually begin designing our buildings. We had an all day working meeting. This kind of working meeting is called a "charette". "Charette" is a French word that refers to carts or wagons that were used a long time ago in architectural schools to go around and pick up the students' project drawings. The students might not be finished when the time was up, so they would hop onto the cart and continue to draw as it was wheeled around collecting other drawings. Since then, a "charette" has become known as a fast, intensive, working design session. A "charette" involves all of the types of people that will be involved in the building of the project and in the use of the building after it is finished. We invited girls, funders, architects, engineers, contractors, leaders, parents, camp staff and community members to our charettes. In this activity, you get to have a mini-charette of your own to design a special place for you and your friends.

Instructions: Working with a group or a buddy, design your dream room, camp cabin or meeting place. First talk with your group to determine what you want your room to be like- make a list of the important things. Then draw out the design and floor plan on graph paper. Share your design with another group and explain how you decided what your room would be like.

Note: The squares on the graph paper may be counted to represent 1 square = 1 foot, 1 square = 2 feet, 1 square = ? whatever you choose)

Discussion: What part of the design process did you think was the most difficult and why? Was it difficult to get your group to agree on what was most important? Why do you think it might be important to include other people besides the architect in the design planning?

Supplies:

Compasses	Protractors
Rulers	Graph Paper
Pencils	Crayons or markers

7. Dollar\$ for Dreams – Giving Station

Choose a theme or catchy name, such as: Science Cents, Pennies for Ponies, Nickels for Nature, Coins for Camp, Dollars for Dreams and take up a collection to support the capital campaign. After your event, forward the donation on to the council office along with your service unit contact information. You may choose to incorporate a hands-on math activity such as:

- Adding to the running total as donations are received.
- A coin for each inch a child is tall.
- A gift percentage of product sales profits
- A dollar for each birthday.
- A quarter for each loose or missing tooth.
- A dime for each time you jump rope without missing.
- A coin for each book read during a week or each good grade.
- The cost of giving up one snack a day or a movie for a week.

Supplies:

- Collection Container or Jar
- Posterboard for charting your progress
- Calculator(s)
- Markers

The Rainbow Fish

By Marcus Pfister*

*The Rainbow Fish is picture story book available in the children's section of your local library or bookstore. Rainbow Fish plush toys and puppets will also add a nice touch to story. This activity was taken from the GSUSA Strength in Sharing Patch Program.

A long way out in the deep blue sea there lived a fish. Not just an ordinary fish, but the most beautiful fish in the entire ocean. His scales were every shade of blue and green and purple, with sparkling silver scales among them.

The other fish were amazed at his beauty. They called him Rainbow Fish. "Come on, Rainbow Fish," they would call. "Come and play with us!" But the Rainbow Fish would just glide past, proud and silent, letting his scales shimmer.

One day, a little blue fish followed after him. "Rainbow Fish," he called, "wait for me! Please give me one of your shiny scales. They are so wonderful, and you have so many."

"You want me to give you one of my special scales? Who do you think you are?" cried the Rainbow Fish. "Get away from me!"

Shocked, the little blue fish swam away. He was so upset, he told all his friends what had happened. From then on, no one would have anything to do with the Rainbow Fish. They turned away when he swam by.

What good were the dazzling, shimmering scales with no one to admire them? Now he was the loneliest fish in the entire ocean.

One day he poured out his troubles to the starfish. "I really am beautiful. Why doesn't anybody like me?"

"I can't answer that for you," said the starfish. "But if you go beyond the coral reef to a deep cave you will find the wise octopus. Maybe she can help you."

The Rainbow Fish found the cave. It was very dark inside and he couldn't see anything. Then suddenly two eyes caught him in their glare and the octopus emerged from the darkness.

"I have been waiting for you," said the octopus with a deep voice. "The waves have told me your story. This is my advice. Give a glittering scale to each of the other

fish. You will no longer be the most beautiful fish in the sea, but you will discover how to be happy."

"I can't..." the Rainbow Fish started to say, but the octopus had already disappeared into a dark cloud of ink.

Give away my scales? My beautiful shining scales? Never. How could I ever be happy without them?

Suddenly he felt the light touch of a fin. The little blue fish was back!
"Rainbow Fish, please, don't be angry. I just want one little scale."

The Rainbow Fish wavered. Only one very very small shimmery scale, he thought. Well, maybe I wouldn't miss just one.

Carefully the Rainbow Fish pulled out the smallest scale and gave it to the little fish.

"Thank you! Thank you very much!" The little blue fish bubbled playfully, as he tucked the shiny scale in among his blue ones.

A rather peculiar feeling came over the Rainbow Fish. For a long time he watched the little blue fish swim back and forth with his new scale glittering in the water.

The little blue fish whizzed through the ocean with his scale flashing, so it didn't take long before the Rainbow Fish was surrounded by the other fish. Everyone wanted a glittering scale.

The Rainbow Fish shared his scales left and right. And the more he gave away, the more delighted he became. When the water around him filled with glimmering scales, he at last felt at home among the other fish.

Finally the Rainbow Fish had only one shining scale left. His most prized possessions had been given away, yet he was very happy.

"Come on Rainbow Fish," they called. "Come and play with us!"

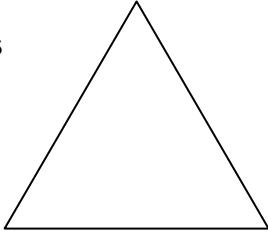
"Here I come," said the Rainbow Fish and, happy as a splash, he swam off to join his friends.

THE END

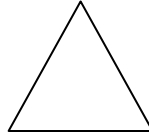
Geometric Scavenger Hunt

Look around you. Shapes are everywhere. See how many of each size and shape you can find. Keep a record of the # you find in the space provided.

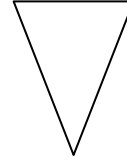
Triangles



Big Triangles

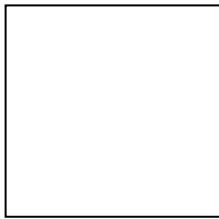


Little Triangles



Upside-down Triangles

Squares



Big Squares



Medium Squares

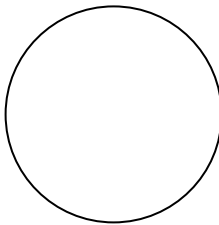


Little Squares

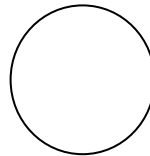


Tiny Squares

Circles



Big Circles

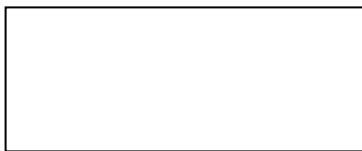


Little Circles

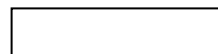


Half Circles

Rectangles



Big Rectangles



Small Rectangles

Cylinder Shapes





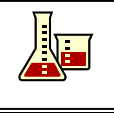
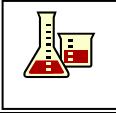


Tall Skinny Cylinders





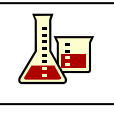
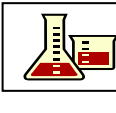


Short Fat Cylinders

Soil / Water Filtration Experiment Record



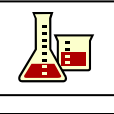
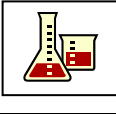


Sample #1: Type of Soil _____

Measurement	1 st Pour	2 nd Pour
Time How many minutes or seconds did it take the water to run through the soil?		
Volume How much water came through?		
Clarity How does the water look? Is it clear, cloudy, muddy? Are there particles floating in it? Which sample would you prefer to drink?		

Sample #2: Type of Soil _____

Measurement	1 st Pour	2 nd Pour
Time How many minutes or seconds did it take the water to run through the soil?		
Volume How much water came through?		
Clarity How does the water look? Is it clear, cloudy, muddy? Are there particles floating in it? Which sample would you prefer to drink?		

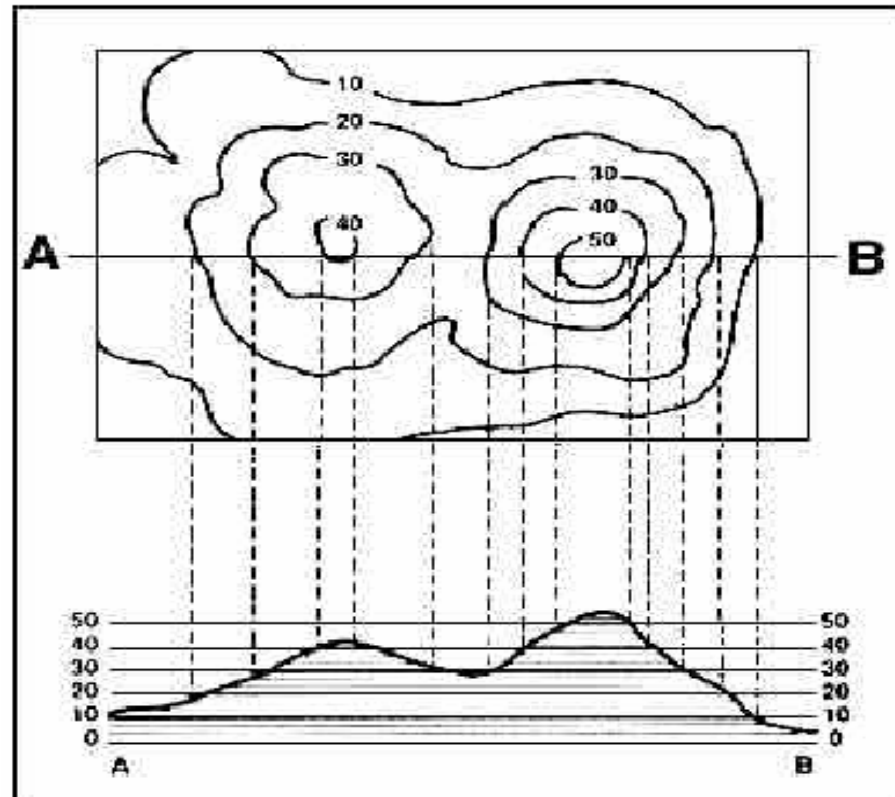
Sample #3: Type of Soil _____

Measurement	1 st Pour	2 nd Pour
Time How many minutes or seconds did it take the water to run through the soil?		
Volume How much water came through?		
Clarity How does the water look? Is it clear, cloudy, muddy? Are there particles floating in it? Which sample would you prefer to drink?		

Activity Sheet 3

One special kind of map is called a topographic Map. It has contour lines to show the shape and elevation of the land. They are sometimes called "level lines"

because they show points that are at the same level. Here's how contour lines work:



The top of this drawing is a contour map showing the hills that are illustrated at the bottom.

On this map, the vertical distance between each contour line is 10 feet.

Which is higher, hill A or hill B? _____

Which is steeper, hill A or hill B? _____

How many feet of elevation are there between contour lines? _____

How high is hill A? _____ Hill B? _____

Are the contour lines closer together on hill A or hill B? _____