stem4math

Star constellations

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Engage

Why did you choose that star image?

Investigate

Briefly explain the myth behind the star constellation.

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Create

Version A

Telescope with star constellation

Materials:

* 1 cylinder (with diameter min. 7 cm)

* 1 piece of thick black paper

* 1 pair of scissors

* 1 ruler

* 1 thick needle

* Tape (not transparent)

* 1 pen or pencil

* Things to decorate with (optional)

* A print out copy of star constellations

Proceed like this:

1. Place one side of the paper roll on the cardboard. Draw a circle around the paper roll.

2. Cut out the circle.

3. Choose a star constellation from your print out copy of star constellations. Use a ruler, measure the distance between the stars and draw them on your circle, use the needle and make holes for each star. Use the ruler and measure the distance

between the stars again, just to be sure that it is correct. Do not forget to count the number of stars so that it matches the star constellation. Save some extra space along the edges so that you can fold and attach the circle to the cylinder (paper roll).

4. Place the circle on the end of the cylinder, with the star image inwards. Tape it with the tape. Cover all the holes with the tape, but not the star constellation that you made with the needle.

5. Decorate your telescope. Write the name of the star constellation and your own name on your telescope.

6. Look into your telescope and be amazed.

7. When you are done, discuss the work, star image and your final result with a friend that is also done and ready. Use the questions when discussing, further down.

Extra assignment: Go out one evening when you can see a lot of stars and try to find your star constellation. You can find it by counting how many stars you can see and the pattern/shape of the star image.

Explanation: The stars we see in our night sky are some of the hundreds of billions of stars that make up our galaxy, the Milky Way. Since ancient times, people have created images of the patterns the stars form when seen from the earth. It's good to know about these star constellations when you need to orientate on earth and at sea.

Create

Version B

Research how to create a telescope!

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Create

4d) If you were to create your own star constellation, how would it look? Why? Draw and write.

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Investigate

Questions to be answered in the group.

1. Which geometric shapes do you have on your telescope?

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2. Specify a star image that has a geometric form.

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   _____

3. Compare the star constellation you have researched with the one you have created. What similarities can you find?

   _____

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4. How many times bigger do you think that the real star constellation is compared to yours (miniature star constellation)?

   _____

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5. Draw twice as big a star constellation in the square, the star image that you have in your telescope. Use a ruler.

6. Draw half as small a star constellation in the square, the star image that you have in your telescope. Use a ruler.

Report

Now it is time for you to evaluate your work.

What do you think about this activity? What would you like to change?

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What went well and what went less well? Also, explain the difficulties that you encountered during this activity.

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I will remember this activity, because:

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