

Topic: Journey to the Center of the Earth.

Activity instructions:

- Gather all necessary materials and prep your workspace. Since you will be using food coloring, there is a possibility that the coloring will stain the work surface. To prevent this, cover your workspace with a tablecloth, trash bag, newspaper, wax paper, or cookie sheet.
- Scientists pre-plan. *Before you build your Earth's Layers model, draw a sketch of what you predict your model will look like.* This will help you plan better and work on problem-solving before you even begin.
- [Click here](#) to access step by step directions as they are explained in the video.
- In a bowl, mix 2 cups of flour with $\frac{1}{2}$ cup of salt.
- If you have the cream of tartar available, add 2 tablespoons of cream of tartar to the flour and salt mix. (This is an optional ingredient so if you don't have it, no worries!)
- Add $\frac{1}{2}$ cup of warm water, directly from the faucet to your mix.
- Knead or squeeze the mixture with your hands until the play-dough no longer sticks to your fingers. Add more water or flour if needed.
- Once the play-dough has achieved the desired texture, use your hands to separate the play-dough into equal parts. You may also split the dough in half using a long piece of dental floss, fishing line or thread.



- Cut one half of the play-dough sections into three equal pieces. Round each of these parts into balls. Think of these balls as ball 1, ball 2, and ball 3.
- We need to make ball 1 a bit smaller than ball 2 and ball 3. Your dough should look like this:



- Add 6 drops of red food coloring to ball #1, the smallest ball. Mix thoroughly and roll into a small ball.
- Mix 3 drops of red food coloring and 3 drops of yellow food coloring into ball #2 (Orange color).
- Mix 6 drops of green food coloring into ball #3, the same size as ball #1.
- Set aside colored balls.



- Separate the second half of the dough into three balls, two smaller balls of about 2" of diameter each and 1 larger ball about 3" in diameter.



- Add 6 drops of blue food (ball #4) coloring to the largest ball.
- For one of the smaller balls, add 3 drops of blue food (ball #5) coloring.
- Add 3 drops of blue food coloring and 3 drops of green food (ball #6) coloring to the last small ball.



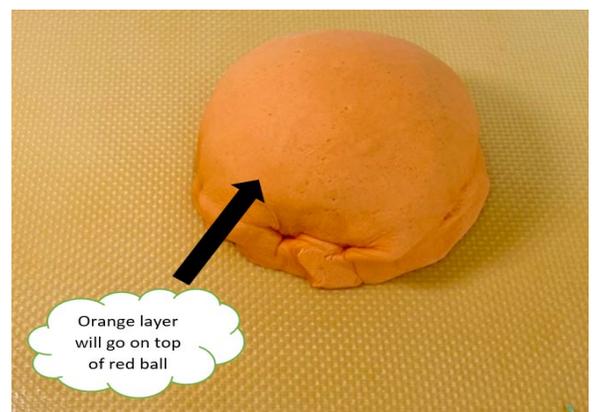
- After adding food coloring to the last portion, you should end up with **three small balls**: red (ball #1), light blue (ball #5), and teal (ball #6). **Two medium balls**: orange (ball #2) and green (ball #3). And last, **one large blue ball** (ball #4).



- To build your model, start by placing the small red ball (ball #1) in the center of your work area.



- Take the small orange batch (ball #2) and lay it flat on your surface. Press with your fingers to stretch the orange play-dough, so that its diameter is enough to cover the red ball while making a dome shape.



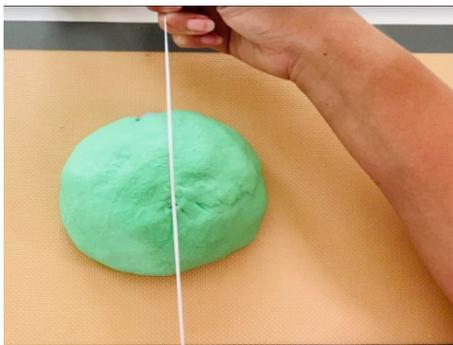
- Next, take ball #4, the dark blue one, and use your fingers to press it flat until its diameter is big enough to cover the layers you already have.



- Repeat the previous step - pressing flat with your fingers and then placing on top of the previous layer- with the remaining colors in the following order: light blue, teal, and lastly green.



- Using about 5 to 8 inches of dental floss, fishing line, or sewing thread (depending on the size of your model) cut vertically through the middle of the dome.



- Separate both halves and place them next to each other. Before moving forward with the activity, take a moment to make some observations about your model.

