



Layers of the Earth

Using Sphero to Review

You have been learning about the structure of our Earth – its layers, components, and movement. Today you will program the Spheros in a review activity.

Part I – Research / Review

First, look back through your notes, notebooks, textbooks, Google Classroom assignments, and anything else you have used to study Earth and its layers. You need 4 sentences that describe the Earth's crust:

- 1.
- 2.
- 3.
- 4.

Now you need 4 sentences that describe the Earth's mantle:

- 1.
- 2.
- 3.
- 4.

And finally 3 sentences that describe the Earth's core:

- 1.
- 2.
- 3.

Part 2: Programming the Sphero

Now we need to enter your descriptive sentences into our Sphero program.

1. Wake up the Kindle Fire tablet with a quick tap on the screen or the power button.
2. The Sphero program should be open, but if it is not, then tap on the Sphero EDU icon.
3. If it asks you to log in, just select "Guest".
4. On the next screen, select the second icon on the bottom of the page for "Programs"
5. You should see a list of a few programs – tap on the one labeled "Earth's Layers – Review"
6. You will see a list of blocks with commands in them. Find the ones that say "Speak". You will enter your descriptive sentences here. There should be 4 different commands for the crust, 4 for the mantle, and 3 for the core.
7. If you are having difficulty figuring out how to enter your sentences, ask for help!!!
8. Do not edit any other part of the program.

Part 3: Running your Sphero

1. Connect your Sphero to your tablet. They should have the same ID code written on both the Sphero and the tablet. Place them near each other, then tap on the middle icon on the top right of your program (it looks like a semicircle with speed lines extending from the left side). Find your Sphero in the list and tap on it. You'll know it's all connected when your Sphero lights up.
2. Take your Sphero to an unoccupied map of Earth's layers.
3. Place the Sphero at the beginning (bottom left, crust).
4. Aim your Sphero – Tap the AIM icon on the top of your program. Move the blue dot around until the blue tail-light of the Sphero is pointing in the opposite direction it needs to go. Then back out of the AIM program to the program you edited.
5. Start your program! Click on the green "Start" at the top of your screen.
6. Watch your Sphero move. If you notice problems (veering off course, etc) ask for help correcting the program.
7. Once you have it running well, show the entire program to your teacher for credit.