Name: _____

Date: _____

EARTH'S LAYERS WORKSHEET

- ***Intro*** : Did you know that Earth has four different layers? These layers consist of the lithosphere, mantle, outer core and inner core.

  - The **lithosphere** is the layer that we live on, the layer that we interact with every day. It consists of the crust and the uppermost mantle. The lithosphere also consists of the land and oceans and the rock underneath the land and the oceans, all the way down to the middle part of the mantle. It is cold and brittle, meaning it is hard and breakable.

  - The **mantle** is the layer just below the lithosphere and is the thickest layer. It is made up of mostly rock. It is hot and also convecting, meaning that the mantle's heat can be transferred to the lithosphere. Every year, lithospheric plates, or our continents, move at rates of centimeters per year in response to movement in the mantle.

  - The **outer core** is made up of liquid Nickel and Iron and is extremely hot. This layer surrounds the inner core and is below the mantle.

  - The **inner core** is the innermost layer of the Earth. It is a solid fireball and is made up of Nickel and Iron. This layer is the hottest layer of all of the layers.

- ***Purpose*** : To help students understand the differences between layers of the earth and to educate students about basic principles associated with these layers.

- ***Materials Needed*** :
  - Oreo cookie crumbs
  - Graham cracker crumbs
  - Vanilla pudding cups
  - Chocolate/white chocolate/butterscotch chips
  - Gummy worms/bears
  - Red food coloring
  - Green sugar sprinkles
  - Gumballs
  - Clear plastic cups
  - Plastic spoons

- ***Directions*** :

  - Start by using the gumball to represent the core
    - Put a little of the red vanilla pudding in the center of the cup to stabilize the gumball from not moving around
  - Next, layer the rest of the red vanilla pudding into the cup to represent the lava that is found in the Mantle layer
  - Next, layer a mixture of the chocolate, white chocolate, and butterscotch chips to represent the mixture of bedrock above the Mantle
  - Next, layer graham cracker crumbs to represent the clay layer that hold our water in aquifers underground
  - Lastly, put a layer of Oreo cookie crumbs to represent the topsoil where organisms live
  - Add a gummy worm or bear to represent life living on Earth

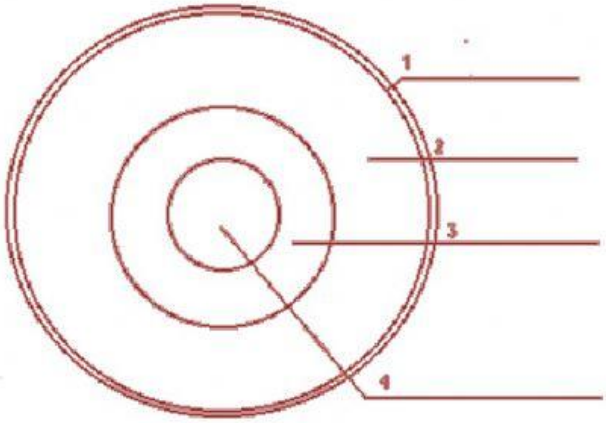
- ***Questions*** :

1. Which layer of the Earth do we live on?
   a. Inner Core
   b. Mantle
   c. Lithosphere
   d. Outer Core

2. Which layer is the hottest and is the innermost layer of Earth?
   a. Inner Core
   b. Mantle
   c. Lithosphere
   d. Interior Core

3. Which layer is the thickest and right below the Lithosphere?
   a. Inner Core
   b. Mantle
   c. Lithosphere
   d. Outer Core

4. Which layer surrounds the inner core and is made up of liquid Nickel and Iron?
   a. Exterior Core
   b. Mantle
   c. Lithosphere
   d. Outer Core

5. Can you label each layer of the Earth?

SQUARE: Lithosphere
TRIANGLE: Mantle
STAR: Outer core
CIRCLE: Inner core