

Anatomy of the Sun

You've probably seen models of the inside of the Earth, but what about the inside of the Sun? Do you know the names of the layers that compose the star that keeps our planet spinning? Follow the steps below to explore the inside of the Sun.

MATERIALS

blue clay



red clay



orange clay

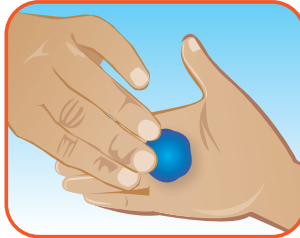


yellow clay



INSTRUCTIONS

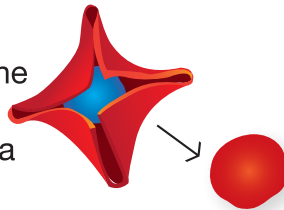
- 1** Roll some blue clay in your hands to form a ball. The amount of blue clay should equal about one fourth the amount of yellow and orange clay used later.



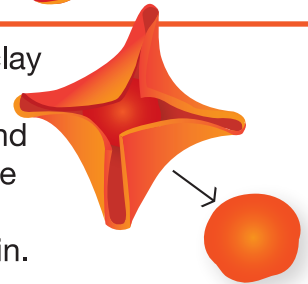
- 2** Make a flat sheet of red clay, using twice the amount of red clay as you did blue.



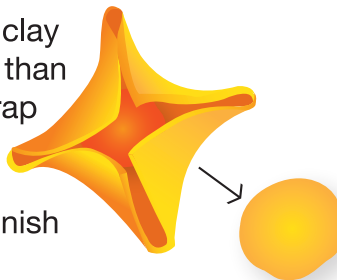
- 3** Wrap the red sheet around the blue ball and pinch the ends together to surround the blue clay. Roll the new red ball in your hands to create a smooth round exterior.



- 4** Flatten a piece of orange clay (use about twice as much orange as you used red) and wrap the orange around the red ball. Roll the new ball until it is smooth once again.



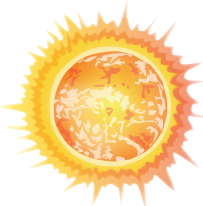
- 5** Flatten a piece of yellow clay (use slightly more yellow than you used orange) and wrap this piece around the orange ball. Roll the ball between your hands to finish your model of the Sun.



- 6** Once complete, use a plastic knife to cut the model in half. Pull the two halves apart to see the separate main layers of the Sun. Match the colors to the description below to learn the name of each layer.



The Layers of the Sun



Extreme temperatures are created deep within the **Sun's Core**. Energy created in the core through a process called nuclear fusion radiates outward and travels through the **Radiative Zone**. This energy rises as solar plasma (the Sun's material) in the **Convection Zone**. When the plasma nears the Sun's surface, it cools and falls to be heated once again. This cycle continues with the solar plasma held in place by magnetic fields in the relatively thin outer layers called the **Photosphere** and the **Chromosphere**. (The outer atmosphere of the Sun is called the Corona and is only visible during solar eclipses.)

Fun Facts

- The Sun doesn't actually move across the sky from east to west; it only appears to move across the sky because of the Earth's rotation.
- If the Sun were the size of a volleyball, the Earth would be approximately the size of a peppercorn and would orbit the volleyball at a distance of 26 yards.
- Many famous scientists throughout history have studied the Sun, including Galileo and Copernicus.
- The Sun never changes color, but moisture and dust in the atmosphere can sometimes cause the appearance of color change.