

## Using Graphs: Temperature, Pressure, & Density Inside Earth

**Instructions:** use the graphs titled “Inferred Properties of Earth’s Interior” to answer the following questions.

16. The temperature, pressure, and density deep in the Earth are inferred properties. What does it mean to infer?
  - a. To guess
  - b. To find a directly stated answer
  - c. To conclude based on evidence and reasoning
  - d. To make things up
17. Temperature is the measure of an object’s or material’s energy. “Hot” objects have more energy, “cold” objects have less energy. As you go deeper in the Earth, what happens to temperature?
  - a. It increases
  - b. It decreases
  - c. It stays the same
  - d. There is no pattern
18. Pressure is the force exerted on an area, often by surrounding materials like air, water, or rock. As you go deeper in the Earth, what happens to pressure?
  - a. It increases
  - b. It decreases
  - c. It stays the same
  - d. There is no pattern
19. Density is the amount of matter in a volume of material, or how much “stuff” is packed into a space. As you go deeper in the Earth, what happens to the density of the rock and metal?
  - a. It increases
  - b. It decreases
  - c. It stays the same
  - d. There is no pattern
20. Which is more dense, oceanic crust (basalt) or continental crust (granite)?
  - a. Oceanic crust
  - b. Continental crust
  - c. They are the same density
21. What is the density of rock in the mesosphere?
  - a. 2.7 – 3.0 g/cm<sup>3</sup>
  - b. 3.4 – 5.6 g/cm<sup>3</sup>
  - c. 9.9 – 12.2 g/cm<sup>3</sup>
  - d. 12.8 – 13.1 g/cm<sup>3</sup>
22. What is the pressure in the inner core at 5,200 km deep? (atm = atmospheres of pressure)
  - a. 2.5 million atm
  - b. 3.1 million atm
  - c. 3.5 thousand atm
  - d. 4 billion atm
23. Which layer has the least pressure?
  - a. Lithosphere
  - b. Asthenosphere
  - c. Mesosphere
  - d. Outer core
  - e. Inner core
24. What is the temperature of the mantle at 2,000 km deep?
  - a. 4,000 °C
  - b. 4,250 °C
  - c. 4,500 °C
  - d. 5,000 °C
25. What is the melting point of rock in the mantle at 1,000 km deep?
  - a. 3,000 °C
  - b. 3,200 °C
  - c. 4,100 °C
  - d. 4,500 °C