

Graphing the Interior!

Purpose: To analyze the relationship between Depth, Pressure and Temperature of Earth's interior.

Materials: Graph paper
Data
Colored pencils

Procedure:

1. Create **two graphs** using the data below.
2. For each graph, **shade in the areas for each layer** of the earth's interior. Use different colors for the layers and include a key.

Data tables

GRAPH 1

Distance (km)	Pressure (millions of atmospheres)
0	0
1000	0.500
2000	0.900
3000	1.600
4000	2.500
5000	3.300
6000	3.600
6500	3.700

GRAPH 2

Distance (km)	Temperature (°C)
0	0
100	1400
200	1600
1000	2400
2000	2500
3000	2800
4000	2900
5000	3000
6000	3100
6500	3200

Layers of the Earth/Depth

Crust: 0-50 km
Mantle: 50-2900 km
Outer Core: 2900-5100 km
Inner Core: 5100-6500 km

Different color for each layer



Questions:

1. What is the relationship between pressure and depth?
Between temperature and depth?
2. Is this relationship a constant? Does the rate of increase stay the same?
3. Do you think that the material 2000 km below the surface would be molten?
Why/Why not?