

INVESTIGATION QUESTION

How does the thickness of each Earth layer compare to the others, and what does that tell us about how Earth formed?

HYPOTHESIS

Hint: try writing it as "If _____, then _____, because _____."

Layer Data Table

Layer	Thickness (km)	Main Material	Solid or Liquid?
Crust			
Mantle			
Outer Core			
Inner Core			
Total (Earth's radius)			

Calculate

What percentage of Earth's total radius does each layer take up?

Show your work. Crust: _____% Mantle: _____% Outer Core: _____% Inner Core: _____%

ANALYSIS

Which layer surprised you the most in terms of thickness? Why?

CONCLUSION

Why do you think heavier materials like iron ended up in the center of Earth rather than on the surface?

CONNECT IT

Inge Lehmann discovered the inner core in 1936 by studying earthquake waves. What property of waves allowed her to figure out that the inner core is solid? (Hint: look up P-waves and S-waves.)

THINK FURTHER

Earth's magnetic field is generated by the movement of liquid iron in the outer core. What would happen to life on Earth if the magnetic field disappeared?

ADDITIONAL NOTES