

## Chapter 4 and Interior of the Earth Handout Test Study Guide: Geology 1P, Mr. Traeger

Section	Major Questions to be asked and/or tasked to be measured	Where do I find the information?
Textbook Section 4.1	<ul style="list-style-type: none"> <li>• How does the autumnal equinox give evidence of planetary changes set in motion 4.5 billion years ago? What is the autumnal equinox and what are its effects?</li> <li>• How was the solar system formed?</li> <li>• How was the Earth formed?</li> <li>• How do we know how old the Earth is?</li> <li>• What is the nebular hypothesis?</li> <li>• Why did Earth become a spheroid?</li> <li>• Why did Earth become layered? Explain differentiation of layers both chemically and physically.</li> <li>• How do zircons found in Australia indicate that the early Earth had water and plate tectonics at a time much earlier than originally thought?</li> </ul>	<ul style="list-style-type: none"> <li>• Essay on autumnal equinox you wrote and class notes</li> <li>• NOVA Origins: Earth is Born video and questions</li> <li>• Online Homework for this section (I will post answers on website.)</li> <li>• Essay on Zircons you wrote</li> </ul>
Interior of the Earth Handout and Earth Layer Project	<ul style="list-style-type: none"> <li>• How big is Earth? How did Eratosthenes calculate the circumference, radius, surface area, volume of Earth?</li> <li>• How would you calculate the average density of Earth given the mass and volume?</li> <li>• What are the different physical layers of Earth's interior and how are they differentiated? Ex. Lithosphere (rigid behavior of material) vs. Asthenosphere (plastic flowing behavior of material)</li> <li>• What are the different chemical layers of Earth's interior and how</li> </ul>	<ul style="list-style-type: none"> <li>• NOVA <i>Origins: Earth is Born</i> video and questions.</li> <li>• Eratosthenes Lab</li> <li>• <i>The Interior of the Earth</i> Handout</li> <li>• Earth Pie activity we did in class</li> <li>• Online Homework for this section (I will post answers on website.)</li> <li>• <i>Layered Earth</i> Program in class</li> <li>• <i>Seismic Waves</i> program in class</li> <li>• NOVA Science Now: <i>Journey through the Center of the Earth</i> video</li> </ul>

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	<p>are they differentiated? In other words, what is the basic chemistry of each layer?</p> <ul style="list-style-type: none"> <li>• What are the characteristics of these layers?</li> <li>• Where does earth's heat and magnetic field come from? What is a magnetic field?</li> <li>• How do we use P and S wave behavior (Geophysics) to figure out what is inside of the Earth?</li> <li>• What materials (Solid and/or Liquid) will P waves pass through? S waves?</li> <li>• What is refraction? How does it explain the formation of a shadow zone? What does the shadow zone tell us about the size of the Earth's core?</li> <li>• How does the density of a layer affect the speed of a seismic wave?</li> <li>• What would happen to Neil DeGrasse Tyson if he dropped down a well to the center of the Earth? We all know this is fictitious, but what would happen if it could happen? What would happen to his speed?</li> </ul>	