ES104 Video Exercise **Name _____**
Earth Revealed: The Earth's Interior
c:wou:gs104:f2000:videx2.wpd

Answer the following questions as you watch the video tape. Feel free to have student representative stop and replay the tape as necessary to come up with the answers.

(1) How do geologists directly access the Earth's interior?

(2) How deep is the deepest well that was ever drilled? How far into the Earth does this represent in percent?

(3) Why is it physically difficult to drill very deep into the Earth?

(4) What types of indirect sensing of the Earth's interior may be used?

(5) List four types of damage that occurred in association with the 1989 San Francisco earthquake:

(6) What types of information can geophysicists derive from observing the way in which seismic waves travel through the Earth?

(7) What do you think about the geologist who looks like Colonel Sanders?

(8) What is continental crust made out of and how thick is it on average?

(9) What is oceanic crust made out of and how thick is it on average?

(10) How do we know the answers to questions 8 and 9? What types of data are used to derive this information?

(11) Do geologists ever have an opportunity to take a "field trip" to the upper mantle? What geologic conditions allow geologists to do this?

(12) What are the two types of seismic waves discussed in the video?

(13) What types of materials can P-waves travel through?

(14) What types of materials can S-waves travel through?

(15) What is the source of magnetism inside the Earth?

(16) In which direction are the lines of magnetic force oriented at the north pole under "normal polarity"?

(17) In which direction are the lines of magnetic force oriented at the south pole under "reversed polarity"?

Final Summary Question: Why is geophysics an important tool for studying the interior of the Earth?