

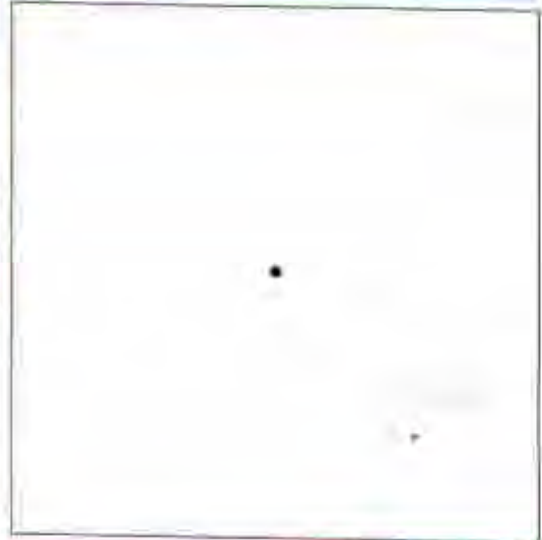
1. a) Use the information below to draw a fully labelled diagram showing the structure of the Earth.

Part of Earth	Distance from centre of Earth in cm
Inner Core	0.7
Outer Core	1.6
Mantle	3.1
Crust	3.2

b) If the scale used in your diagram is 1cm: 2000km. What is the radius of

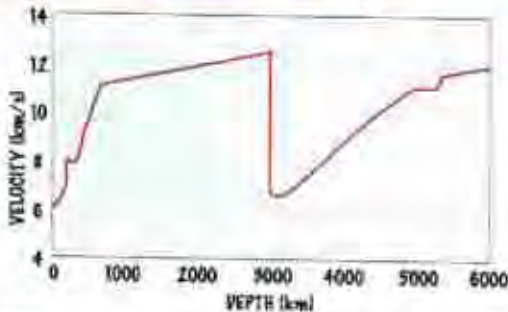
(i) The Inner core?

(ii) The Earth?



2. The diagram shows how the speed of P waves change as they travel through the Earth.

HIGHER/SPECIAL TIER



a) Explain why the speed of the waves falls at a depth of 3000km.

b) What evidence has the study of seismic waves given scientists about the structure of the Earth. Explain your answer.

3. The diagram shows the structure of the Earth. An earthquake occurs at point A on the Earth's surface. Two types of shock waves are produced by the earthquake P waves and S waves.

a) Complete the diagram to show the path of the P waves (in red) and S waves (in blue) through the earth.

b) State whether P waves or S waves or both will reach

(i) Station Y

(ii) Station Z



c) Explain your answer

d) Buildings at X were seen to vibrate up and down and then a few seconds later vibrate from side to side. Explain why this was so.

