Inside the Earth: team record.

Name: Class: Date:

Keep one record per team. Write who held each role, then the team's agreed answers to the key questions. The reflector fills in the last column after each activity.

EVERY ACTIVITY Our team

a Who held each role, and one thing the team did well.

ACTIVITY	MANAGER	RECORDER	PRESENTER	REFLECTOR	DONE WELL
1 Rocks and the past					
2 Limits					
3 Seismic waves					
4 Shadow zones					
5 Meteorites					
6 The layers					
7 Heat inside					
8 Plumes and plates					

ACTIVITIES 1 TO 4 Key questions

a Activity 1, question 4: our principle for reading old rocks.

b Activity 2, question 3: our principle, improved so it still works for the flood, the early Earth and rivers without plants.

c Activity 3, question 4: our rule for telling a solid layer from a liquid one.

d Activity 4, question 3: why there is an S-wave shadow zone.

ACTIVITY 6 The layers

a **Fill in the table.**

LAYER	DEPTH (KM)	MADE OF	SOLID OR LIQUID?
Crust			
Upper mantle			
Lower mantle			
Outer core			
Inner core			

b **If the Earth were a peach 7 cm across, how thick would the continental crust be? Show your working.**

c **Sketch a quarter of the Earth and label the five layers. Mark the lithosphere and the asthenosphere.**

ACTIVITY 7 The Habanero well

a **The well reached 4,421 m, where the rock is about 250 °C. Assume the surface is about 25 °C. Work out the average geothermal gradient, and compare it with 25 to 35 °C per km.**

ACTIVITY 8 Plumes and plates

a **Work out the speed of the Pacific Plate from each volcano (km per million years = mm per year).**

VOLCANO	AGE (MILLION YEARS)	DISTANCE FROM THE HOT SPOT (KM)	SPEED (CM PER YEAR)
Oahu	3.7	374	
Kauai	5.1	519	
Necker	10.3	1,058	
Laysan	19.9	1,818	
Midway	27.7	2,432	

b **Question 5: the eastern Australian hot-spot track is about 2,000 km long and formed over 33 million years. Work out the speed, and explain the gap in the middle.**

c **Question 10: from heat inside the Earth to the Australian Plate moving about 7 cm per year.**

d **Reflector: one thing that helped the team, and one thing to change.**