

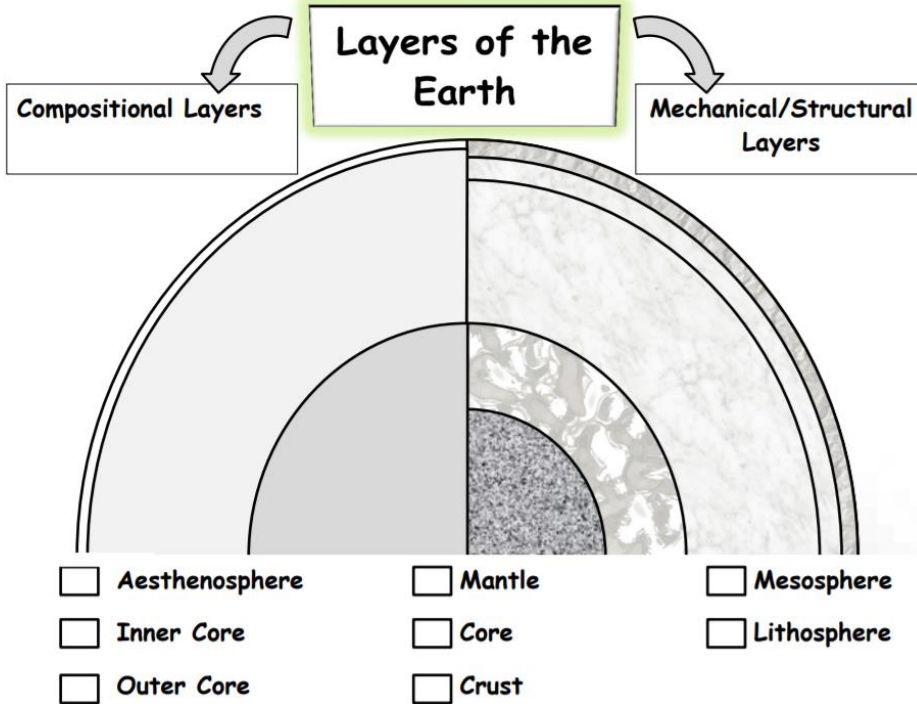
# EARTH'S INTERIOR STRUCTURE

Directions: Each section begins with specific website links for you to follow in order to find the information you need to answer each question.

## Task 1 – Different Layers

Go to [dixiemiddlscience.weebly.com](http://dixiemiddlscience.weebly.com) – 2<sup>nd</sup> quarter – find today’s date and click on the black button titled TASK 1

1. Use the information from the website above to complete the diagram below



**Directions:** Pick colors for each layer to produce a key and then color the corresponding layer of the earth.

## The Crust

### Task 2 – Types of Crust

Go to [dixiemiddlscience.weebly.com](http://dixiemiddlscience.weebly.com) – 2<sup>nd</sup> quarter – find today’s date and click on the black button titled TASK 2 WEBSITE 1

2. Use the information from the link above to complete the data table.

	Thickness (km)	Composition (rock or metals))	Most common substance in layer
<b>Continental Crust</b>			
<b>Oceanic Crust</b>			

3. Fill in the blank: Continental crust is \_\_\_\_\_ dense than oceanic crust

4. If Earth were a piece of fruit, what part would the crust be?

Go to [dixiemiddlscience.weebly.com](http://dixiemiddlscience.weebly.com) –2nd quarter – find today’s date and click on the black button titled TASK 2 WEBSITE 2

You should see a USGS graph that shows the thickness of the Earth’s crust. Carefully study the graph to answer the following questions:

5. Find the kilometer (km) scale on the right side of the graph; what color shows crust that is 30 km thick?

6. On what two continents do you find crust that is thicker than 60 km?

7. Which has thicker crust, oceanic crust or continental crust? Use evidence from the graph to explain your answer in complete sentences.

### Task 3 – The Lithosphere

8. Use information from the link below to complete the chart.

Go to [dixiemiddlscience.weebly.com](http://dixiemiddlscience.weebly.com) – 2<sup>nd</sup> quarter – find today’s date and click on the black button titled TASK 3

	Thickness (km)	Compositional Layers that make lithosphere	What is the lithosphere divided into?
Lithosphere			

9. The lithosphere floats on top of what layer? Explain why.

### Layers of the Mantle

The mantle is divided into the upper mantle and lower mantle. Additionally, the upper mantle is divided into 2 parts: a thin portion of the lithosphere and the asthenosphere.

### Task 4 – Asthenosphere

Go to [dixiemiddlscience.weebly.com](http://dixiemiddlscience.weebly.com) – 2<sup>nd</sup> quarter – find today’s date and click on the black button titled TASK 4

14. At what depth range below the Earth’s surface is the asthenosphere located?

15. List 3 ways that the asthenosphere is different from the lithosphere:

- a.
- b.
- c.

### Task 5 – Lower Mantle (Mesosphere))

Go to [dixiemiddlscience.weebly.com](http://dixiemiddlscience.weebly.com) – 2<sup>nd</sup> quarter – find today’s date and click on the black button titled TASK 5

16. Using the link above, list 3 ways that the lower mantle is different from the asthenosphere:

- a.
- b.
- c.

17. To what depth below the surface does the lower mantle extend?

## Layers of the Core

### Task 6 – Layers of the Core

Go to [dixiemiddlscience.weebly.com](http://dixiemiddlscience.weebly.com) – 2<sup>nd</sup> quarter – find today’s date and click on the black button titled TASK 6

18. Use information from the link above to complete the chart and questions.

	Thickness (km)	Composition	Temperature Range (°C)	Liquid or Solid State?
Outer Core				
Inner Core				

19. Which layer creates the earth’s magnetic field? Explain how it creates the magnetic field.

20. Why is the inner core in a solid state rather than a liquid state given the extremely high temperatures?

## Task 7 – Video

Go to [dixiemiddlscience.weebly.com](http://dixiemiddlscience.weebly.com) – 2<sup>nd</sup> quarter – find today’s date and click on the black button titled TASK 7

21. Scientists in the \_\_\_\_\_ began using data from \_\_\_\_\_ to learn about the Earth’s interior.

22. What characteristic of seismic waves did scientists use to determine the differences between the layers of the Earth?

23. What are the three characteristics of different layers of the Earth that cause seismic waves to change direction and speed?

a. \_\_\_\_\_ b. \_\_\_\_\_ c. \_\_\_\_\_

## Review Questions

25. It is incorrect to say that the crust is broken up into tectonic plates. Explain why this is false.

26. What is the deepest, hottest layer?

27. Which layer is soft and malleable (bendable)?

28. Which layer is completely in a liquid state?

29. List the 4 layers that are in a completely solid (rigid) state

30. In general, as depth increases, how does temperature and pressure change inside the Earth?

31. If you could travel the following distances, in what layer of the earth would you find yourself?

80 km \_\_\_\_\_ 5,000 km \_\_\_\_\_

2,000 km \_\_\_\_\_ 6,000 km \_\_\_\_\_