

Spheres of the Earth Lesson Review, Test, and Project

Spheres of the Earth Lesson Review

The Spheres of Earth

- Earth has 3 main spheres that allow for life: atmosphere, lithosphere, hydrosphere
- Atmosphere
 - Layer of gases extending hundreds of km from Earth's surface
 - Made of 78% nitrogen gas, 21% oxygen gas, 1% other gases like argon and CO₂
- Atmosphere is critical for life
 - Acts like a blanket, providing moderate temperatures
 - Protects from solar radiation and UV rays
- Lithosphere
 - Rocky outer layer of Earth's crust and upper mantle
 - Contains rocks, minerals, landforms, mountains, ocean floors
 - 50-150 km thick
- Hydrosphere
 - All water on Earth's surface and underground
 - Includes oceans, lakes, rivers, glaciers, groundwater, moisture in air
- Biosphere
 - Areas life can exist within other spheres
 - Extends km below Earth's surface

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- Spheres interact to allow life
 - Atmosphere provides gases like O₂ and CO₂
 - Lithosphere provides land for habitats
 - Hydrosphere provides water critical for life
 - Biosphere includes areas across spheres where life exists
- Together spheres create conditions for life by providing necessities like gases, water, land and places to live
- Atmosphere - gaseous environment
- Lithosphere - solid land
- Hydrosphere - life sustaining water
- Biosphere - where organisms can live

The Spheres of Earth Test

Multiple Choice

1. What are the three main spheres that allow for life on Earth?
 - a. Atmosphere, lithosphere, biosphere
 - b. Hydrosphere, mesosphere, stratosphere
 - c. Atmosphere, lithosphere, hydrosphere
 - d. Troposphere, thermosphere, hydrosphere
2. What percent of Earth's atmosphere is made up of nitrogen gas?
 - a. 21%
 - b. 78%
 - c. 50%
 - d. 31%
3. Which

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4. What is the layer of gases surrounding Earth called?
 - a. Stratosphere
 - b. Mesosphere
 - c. Atmosphere
 - d. Hydrosphere
5. Which sphere includes mountains, ocean floors, and land?
 - a. Hydrosphere
 - b. Atmosphere
 - c. Lithosphere
 - d. Biosphere
6. Why

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7. What percent of Earth's atmosphere is made of oxygen gas?
 - a. 21%
 - b. 31%
 - c. 78%
 - d. 50%
8. Which sphere describes locations where life can exist?
 - a. Lithosphere
 - b. Atmosphere
 - c. Hydrosphere
 - d. Biosphere

9. How far does Earth's atmosphere extend from the surface?
- a. 50-150 km
 - b. Hundreds of km
 - c. 10-15 km
 - d. 1000 km
10. Which gas makes up the largest part of Earth's atmosphere?
- a. Oxygen
 - b. Nitrogen
 - c. Carbon dioxide
 - d. Argon

Matching - Match the sphere with its description.

- 11. Hydrosphere _____
- 12. Atmosphere _____
- 13. Biosphere _____
- 14. Lithosphere _____
- 15. Stratosphere _____

- a. Locations where life exists
- b. Layer of gases around Earth

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Fill in the Blank

- 16. The _____ acts like a blanket trapping heat near Earth's surface.
- 17. The _____, _____, and _____ allow for life on Earth.
- 18. Earth has stronger gravity than the Moon because it is more _____.
- 19. The _____ contains rocks, minerals, and landforms.
- 20. _____, _____, and water vapor make up most of Earth's atmosphere.

Short Answer

- 21. Why is the atmosphere critical for life on Earth?
- 22. Where is the lithosphere located and what does it contain?
- 23. What are the layers of gases that surround Earth called?
- 24. What does Earth's hydrosphere include?
- 25. How do the spheres interact to allow life on Earth?

Long Answer

- 26. Explain the key components that make up Earth's atmosphere and why the atmosphere is vital for life.
- 27. Compare and contrast the lithosphere and hydrosphere - what they are composed of and where they are located.
- 28. Describe the main spheres of Earth and the role each plays in supporting life on the planet.

The Spheres of Earth Test - Answer Key

Multiple Choice:

1. C
2. B
3. C
4. C
5. C
6. B
7. A
8. D
9. B
10. B

Matching:

11. D
12. B
13. A
14. E
15. C

Fill in the Blank:

16. Atmosphere
17. Atmosphere, lithosphere, hydrosphere
18. dense
19. Lithosphere
20. Nitrogen, oxygen

Short Answer:

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Long Answer:

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Spheres of the Earth Diorama Project

Create a Spheres of Earth Diorama

Objective: To create a 3D model depicting Earth's spheres and how they interact to support life.

Materials Needed:

- Shoebox or other small box
- Construction paper, model magic, clay, cardboard, etc. to sculpt different parts
- Markers, paint, paper cutouts, etc. to add details and labels

Instructions:

1. Design your

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