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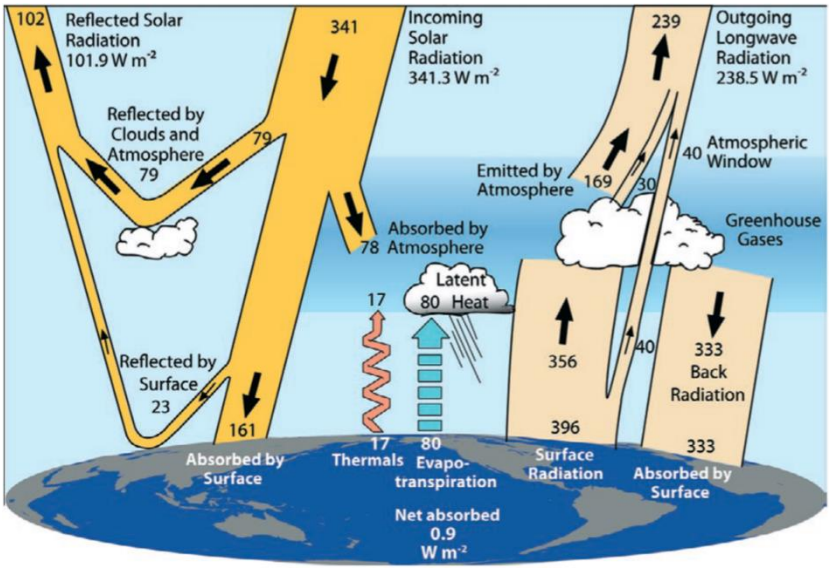
Energy on Earth and Biomes

1. A) The sun is the main source of energy on Earth. However, not all of the energy reaches Earth's surface. Looking at the diagram, give some reasons why not all of the energy is absorbed by surfaces or the biosphere of Earth.



B) What reflects sunlight the most on Earth?

C) Make a change to Earth and explain how it would increase or decrease the amount of light Earth receives.

2. A) Explain what the diagram means when it shows "back radiation" from the greenhouse gas layer.

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B) What are some examples of greenhouse gases?

3. A) Draw and explain a picture of a convection current.

B) Why are convection currents important to Earth’s climate?

4. Describe the term "Goldilocks' zone” in reference to energy on Earth.

5. A) Explain why Australia’s winter occurs between June and August.

B) Explain why the equator has very little seasonal variation.

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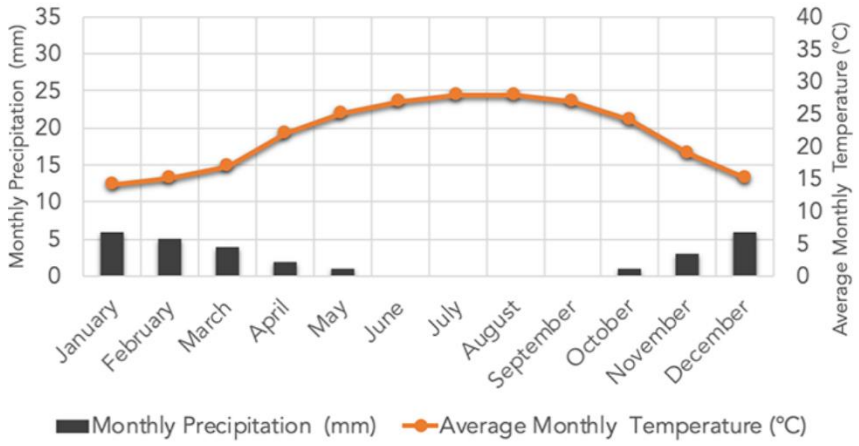
6. A) Describe what a biome is.

B) Describe (with details) 3 biomes on Earth and where they can be found. Include what kind of organisms live there.

C) Look at this climograph! What kind of biome could it represent?



Options:

a) A Rainforest b) A Desert c) Boreal Forest d) Tundra

Extending Question: Studies show that the second planet in the solar system, Venus, is covered in greenhouse gases. It has also been found that the surface temperature of Venus is 464°C, while the planet closest to the sun, Mercury, is 430°C.

Using prediction models, Earth's average temperature without any greenhouse gases would be -18°C, compared to today's 15°C.

Using this information, explain the importance of greenhouse gases and the impact they have on Earth's spheres. Do additional research for this question.