Student Workbook for:

Lab 02: Earth-Sun Relationships & Earth’s Energy Budget

By Andrew Perkins

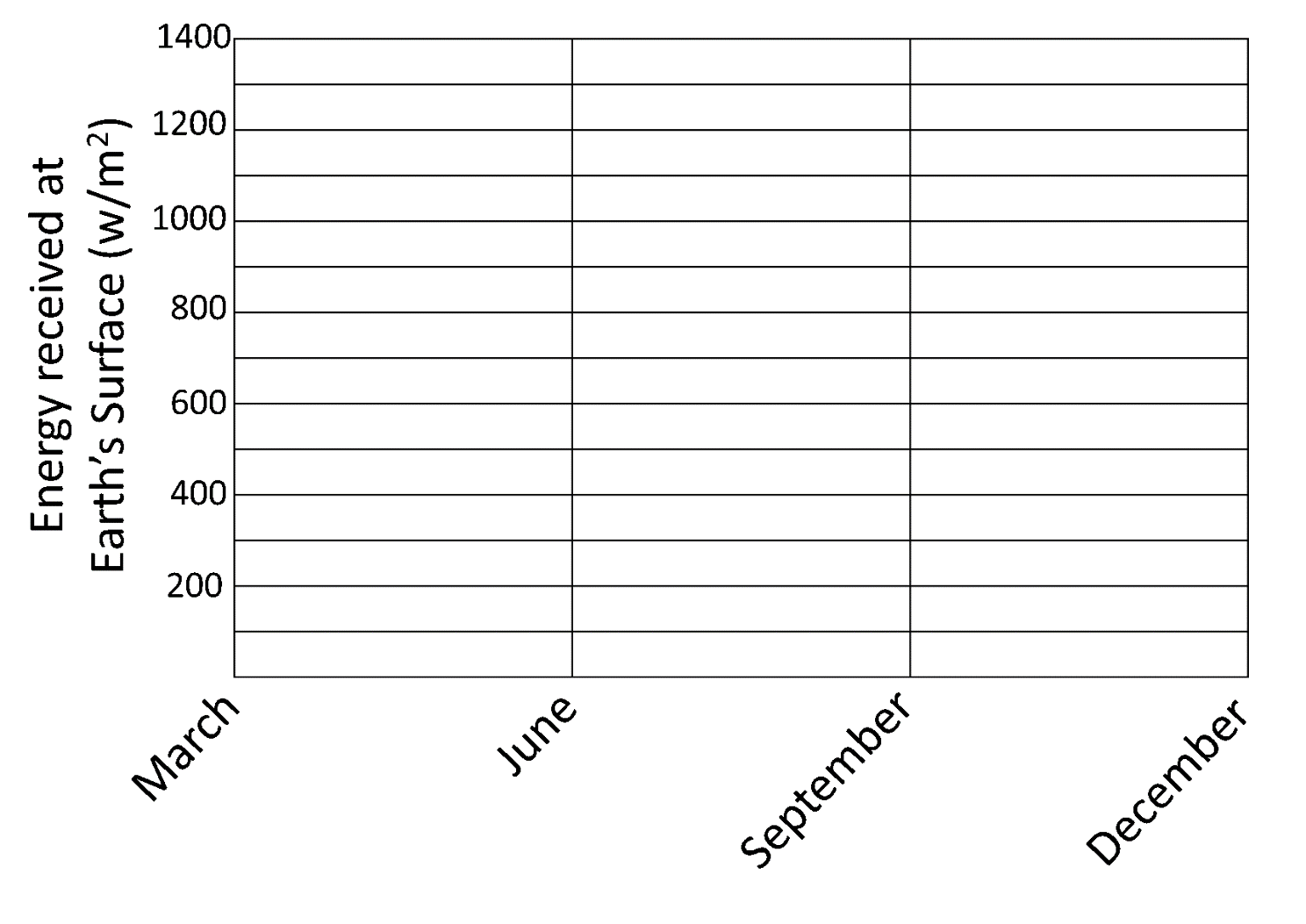
**Exercise 1: Earth-Sun Relationships and Earth’s Energy Budget**

Question 4. a.

|  |  |  |  |
| --- | --- | --- | --- |
| **Table 2.1. Actual amount of radiation received at Earth's surface on the equinoxes and solstices at three locations.** | | | |
| **Month** | **Equator** | **Tropic of Cancer** | **North Pole** |
| March |  |  |  |
| June |  |  |  |
| September |  |  |  |
| December |  |  |  |

**Exercise 1: Earth-Sun Relationships and Earth’s Energy Budget**

Question 4.b.

[](https://pressbooks.bccampus.ca/geoglabmanualv2/wp-content/uploads/sites/1032/2020/08/Figure-2.8.png) **Figure 2.8.** Change in energy received at Earth's surface through time. Source: A. Perkins, CC BY-NC-SA 4.0

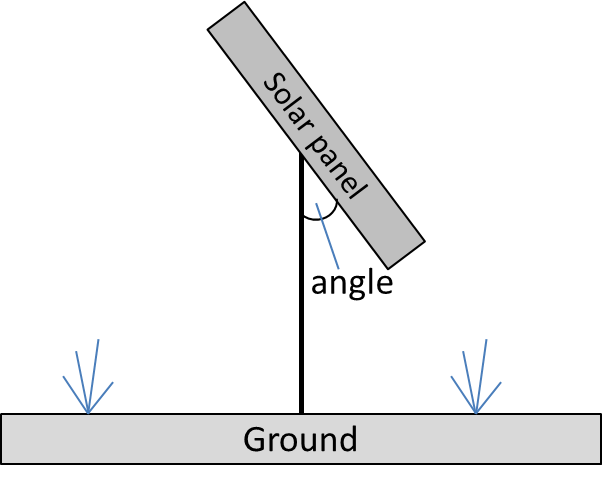
**Exercise 2: The March of the Seasons and the Angle of the Noon Sun**

Question 7.

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| **Diagram** | **Angle of Noon Sun** | **Relative Intensity of the Sun Angle** |
| On Oct. 3rd, if you are located at 0° latitude: | | |
|  |  |  |
| On April 2nd, if you are located at 61° North latitude: | | |
|  |  |  |
| On Dec. 9th, if you are located at 85° North latitude: | | |
|  |  |  |

**Exercise 2: The March of the Seasons and the Angle of the Noon Sun**

Question 8.

[](https://pressbooks.bccampus.ca/geoglabmanualv2/wp-content/uploads/sites/1032/2020/08/Figure-2.9-Solar-panel-angle.png) **Figure 2.9.** Schematic of solar panel. Source: A. Perkins, CC BY-NC-SA 4.0

**Exercise 4: Lapse Rates**

Exercise 4: Temperature Gradients Graph

