

Problem Solving Activity: What Causes Summer?

Background: When the Northern Hemisphere is tilted toward the Sun, that part of the Earth receives more direct rays of sunlight than the Southern Hemisphere does. The Southern Hemisphere, which is tilted away from the Sun, received slanting rays of sunlight. As a result, it is summer in the Northern Hemisphere and winter in the Southern Hemisphere. During the summer season, the Earth's land surface, oceans and atmosphere received the greatest amount of heat from the Sun. Why is this so?

TASK: Using a globe, a light source and 1-2 thermometers, design an experiment to compare the amount of heat produced by direct rays of light and by slanting rays of light. Write out the procedure you used and the conclusions you arrived at. Support it with illustrations where possible.

