

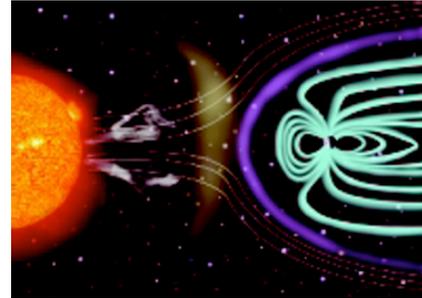
Direction of Solar Wind at the Earth

Time:

30 minutes

Objective:

The student will come to discover that the standard picture or model of light and/or particles rays coming from the Sun as parallel is very realistic.



Content Standards:

- Abilities necessary to do scientific inquiry
- Understandings about scientific inquiry
 - Identify questions and concepts that guide scientific investigations
 - Formulate and revise scientific explanations and models using logic and evidence
 - Recognize and analyze alternative explanations and models

Equipment, Materials, and Tools:

- Paper,
- Rulers,
- Protractors, and
- Colored pencils for whole class.

Instructions:

Divide the class into pairs. Have the student pairings form two lines with strings, about 4 to 7 feet long between the pairs of students, pulled taut. The strings represent direction of line of particle movement.

A1>-----<B1
A2>-----<B2
A3>-----<B3
A4>-----<B4
A5>-----<B5
An>-----<Bn

Part 1. The first line represents the surface of the Sun – a curve. Have students in line A form a half circle, each member facing out from the center of the Sun.

The second line always moves to line up facing the first (the lines are perpendicular to the surface of the Sun). Have a recorder sketch a birds-eye view of the rays on the board (divide the board into three equal sections) in section one.

Part 2. The first line represents a quarter arc of the Sun's surface. Students in the second line should move to perpendicular positions. Have the recorder sketch the directions of lines on board in section two.

Part 3. The first line represents a "small" arc (almost straight) and the second line adjusts to perpendicular positions. The recorder sketches the direction of lines on the board in section three.

Expected board recording or results. There is a person facing each other at each end of each line. The closing question to the class should determine if everyone agrees that the model representing movement of particles or photons from the Sun should be in parallel lines since the Sun is so distant to the Earth.

