

# VANISHING POINTS

## Lesson Summary:

Students see how distance affects visual perception. Activity (A) uses vanishing points to illustrate the illusion of distance and depth. Activity (B) demonstrates that distance from an object affects the visual perception of the size of an object. Learning about vanishing points helps students understand shapes of the aurora, such as the corona which appears to touch at the center, and arcs which appear to touch the horizon.

## Objectives:

The student will:

- examine the effect of distance and depth on visual observations;
- discover why human sight can result in misleading information and why other methods of data collection (technology) are needed for scientific research; and
- conclude that the corona shape of the aurora is an optical illusion.

## GLEs Addressed:

Science

- [5-8] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring, and communicating.
- [9] SD3.2 The student demonstrates an understanding of cycles influenced by energy from the sun and by Earth's position and motion in our solar system by explaining the phenomena of the aurora.

## Search Terms:

- distance
- perception
- vanishing point
- depth
- optical illusion
- corona
- rayed bands
- quiet arc
- long aurora rays
- patches
- aurora
- Northern Lights