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Lesson Plan #:AELP-AST0004

## Constellations

An Educator's Reference Desk Lesson Plan

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**Endorsed by:** These lesson plans are the result of the work of the teachers who have attended the Columbia Education Center's Summer Workshop. CEC is a consortium of teacher from 14 western states dedicated to improving the quality of education in the rural, western, United States, and particularly the quality of math and science Education. CEC uses Big Sky Telegraph as the hub of their telecommunications network that allows the participating teachers to stay in contact with their trainers and peers that they have met at the Workshops.

**Date:** May 1994

**Grade Level(s):** 3, 4, 5, 6

**Subject(s):**

- Science/Astronomy

**Overview:** Astronomy provides practice in those skill that are prerequisite to the scientists of tomorrow: observation, graphing, recording, and predicting. Basic to many astronomical observations are the North Polar Constellations. The following activities provide our young scientists with success-oriented practice in locating and recognizing these stars in the sky.

**Purpose:** The purpose of the following activities is to strengthen the skills of visual perception, observation, and recording by using repetition of visual bulletin board displays of the North Polar Constellations and graphing those star patterns.

**Objectives:**

Students will:

1. Recognize patterns of constellations
2. Graph the constellations on graph paper
3. Draw their own version of the constellations using star patterns

**Resources/Materials Needed:**

All listed Below.

**Activities:**

1. Using Christmas lights, fluorescent markers or paint, mark the stars of Ursa Major on a bulletin board. Use string or chalk to draw the lines to connect the stars to form the constellation figure as you tell the story of the constellation (classical and Native American versions are available through your librarian). Repeat this procedure for Ursa Minor, Draco, Cepheus, and Cassiopeia.
2. After familiarizing students with the North Polar Constellations, use graph paper and coordinates to make the star patterns of each constellation.

Ursa Major: (M,37); (Q,34); (R,34); (U,33); (W,35); (Z,32); (X,30).

Ursa Minor: (R,17); (O,18); (N,20); (M,22); (K,22); (L,25); (N,25).

Draco: (B,33); (C,30); (E,32); (D,34); (B,24); (C,22); (F,24); (G,22); (G,28); (G,30); (I,31); (N,30); (R,27); (U,27).

Cepheus: (G,6); (E,10); (I,12); (J,8); (O,11).

Cassiopeia: (L,1); (K,4); (O,4); (S,5); (R,2).

3. Have the students transfer the star patterns onto white drawing paper and draw their own versions of the North Polar Constellations.

### **Tying it all Together:**

This activity may be easily extended and enhanced with a visit to a local planetarium or a portable planetarium unit. These lessons may be the spark that starts a lifetime hobby or career in astronomy or other scientific field.

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