Constellations

Overview

Age Range:

7 – 9 years

Prep. Time:

20 min

Lesson Time:

20 min

Cost per activity:

Zero

Includes the use of:

Northern star map, mobile phone, white sheet of paper, shirt button, 20 x 20 cm food foil, laptop.

Classroom Activity

Outline

By using a file **Constellations.pdf** students of younger ages will explore the modern and ancient Northern sky maps and understand what constellations are and how stars are divided by brightness.

Students can make their own constellation and project its image to ceiling for everybody to see.

Pupils will Learn:

- The sky is divided into regions - constellations.
- That greater brightness stars have the smaller magnitudes.
- How the brightest stars are labelled.

The online observatory collaboration consists of the following partners:
Baldone Observatory, Brorfelde Observatory, Cardiff University, Harestua Solar Observatory, Helsinki Observatory

Lesson Plan:

Overview of the time required to complete lesson.

Description	Time	Notes
Before the lesson	3 min	Go to the Online Observatory home page, to the part I01 Observing the Sky. Print sky map (https://www.heavens-above.com/skychart2.aspx?lat=51.4934&lng=0.0098&loc=Greenwich&alt=0&tz=GMT).
Activity 1	15 min	Use file <Constellations.ppt> for introduction to the subject.
Assessment	5 min	How to orientate in the North starry sky is discussed.
Activity 2	12 min	Each student chooses his/her own constellation from Sky map copy. Place the foil under the star map and easily pierce the dots / needle with the brightest stars in the constellation. The holes in the brightest star places are slightly reinforced. Darken the classroom. Turn on the lamp function on your mobile phone and project the constellation on the classroom ceiling.
Assessment	3 min	Share your projection with neighbours. The teacher encourages you to find the projected constellation on the Sky map and write down the recognized constellations and their short designations.

Assessment:

- What is an important constellation in the Northern sky?
- What is the brightest star in the sky (day and night)?
- How can you search Polar star?
- How many constellations are there?
- Which constellation do you find the prettiest/most exciting?
- Students have to find more information about of the presented constellation.

Further Activities:

Homework for students:

On a clear moonless night, find the Cassiopeia constellation on the sky. Draw the constellation of Cassiopeia. What letter does the constellation Cassiopeia currently have at the observation time? (W or M)?

Background Material/Knowledge:

Not required background knowledge for the activity. Please take care in limiting the amount of text and use illustrations or free images (Use the text at Online Observatory link or Online Observatory network images where appropriate).