

Alaska
Middle School

Starry Night Lesson Plans

In order of relevance

Grade 5

D1 – Concepts of Earth Science

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

[5] SD3.1 observing a model that shows how the regular and predictable motion of the Earth and moon determine the apparent shape (phases) of the moon over time (L)

A2 A4

The student demonstrates an understanding of the theories regarding the origin and evolution of the universe by

B1-B2 C1-C4 D1-D3

[5] SD4.1 distinguishing among stars, planets, moons, comets, and meteors (L)

B1-B2 C1-C4 D1-D3 G2 G3 E1-E4

[5] SD4.2 recognizing that the Earth is in regular and predictable motion and this motion explains the length of a day and a year

A1 A2

[5] SD4.3 recognizing and using appropriate instruments of magnification (e.g., binoculars and telescopes)* (L)

B1 C2 C3

Grade 6

D1 – Concepts of Earth Science

The student demonstrates an understanding of the theories regarding the origin and evolution of the universe by

[6] SD4.1 contrasting characteristics of planets and stars (i.e., light reflecting, light emitting, orbiting, orbited, composition).

B1 B2 C1 C3 F3 G2 G3

[6] SD4.2 defining a light year.

G1

Grade 7

B1 – Concepts of Physical Science

The student demonstrates an understanding of motions, forces, their characteristics, relationships, and effects by:

[7] SB4.1 illustrating that unbalanced forces will cause an object to accelerate.

C2

D1 – Concepts of Earth Science

The student demonstrates an understanding of the theories regarding the origin and evolution of the universe by:

[7] SD4.1 comparing and contrasting characteristics of planets and stars (i.e., light reflecting, light emitting, orbiting, orbited, composition).

B1 B2 C1 C3 F3 G2 G3

[7] SD4.2 using light-years to describe distances between objects in the universe.

G1 G2 H1 H2

Alaska

Middle School (cont'd)

Grade 8

B1 – Concepts of Physical Science

The student demonstrates an understanding of motions, forces, their characteristics, relationships, and effects by:

[8] SB4.1 demonstrating and explaining circular motion.

Starry Night Lesson Plans

In order of relevance

C2

D1 – Concepts of Earth Science

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

[8] SD3.1 recognizing the relationship between the seasons and Earth's tilt relative to the sun and describing the day/night cycle as caused by the rotation of the Earth every 24 hours

The student demonstrates an understanding of the theories regarding the origin and evolution of the universe by:

A1 A2

[8] SD4.1 creating models of the solar system illustrating size, location/position, composition, moons/rings, and conditions.

B1 B2 C1-C4 D1-D3

[8] SD4.2 comparing the brightness of a star to its distance and size.

G2 G1

F1—Cultural, Social, Personal Perspectives, and Science

The student demonstrates an understanding of the dynamic relationships among scientific, cultural, social, and personal perspectives by:

[8] SF1.1-SF3.1 describing how local knowledge, culture, and the technologies of various activities (e.g., hunting, fishing, subsistence) influence the development of scientific knowledge.

E1-E4

Cultural Standards - all grades

E - Culturally knowledgeable students demonstrate an awareness and appreciation of the relationships and processes of interaction of all elements in the world around them.

3) demonstrate an understanding of the relationship between world view and the way knowledge is formed and used

E1-E4

4) determine how ideas and concepts from one knowledge system relate to those derived from other knowledge systems

E1-E4