

Alaska
High School

Starry Night Lesson Plans
In order of relevance

Grade 9

B1 – Concepts of Physical Science

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

[9] SB4.2 recognizing that the gravitational attraction between objects is proportional to their masses and that it decreases with distance.

C2 A3 F3 B1 F3

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:

[9] SD3.1 recognizing the effect of the Moon and Sun on tides.

A3 A4 A5 A2

[9] SD3.2 explaining the phenomena of the aurora.

F2 F1

D1 – Concepts of Earth Science

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

[9] SD4.1 recognizing that a star changes over time.

G2 F3 F2 G3

[9] SD4.2 explaining that the position of stars changes in the expanding universe.

G1 H1 H2

[9] SD4.3 identifying the big bang theory.

H3 H2 I1

Grade 10

B1—Concepts of Physical Science

The student demonstrates an understanding of the interactions between matter and energy and the effects of these interactions on systems by:

[10] SB3.3 comparing the relative wavelengths and applications of different forms of electromagnetic radiation (i.e., x-ray, visible, infrared, microwaves, radio).

I1-I3 H1-H3 F2

D1 – Concepts of Earth Science

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

[10] SD 4.1 recognizing phenomena in the universe (i.e., black holes, nebula).

G2 G3

[10] SD 4.2 explaining that the position of stars changes in the expanding universe.

G1 H1 H2

[10] SD 4.3 describing the big bang theory.

H3 H2

Alaska

High School (cont'd)

Grade 11

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:

[11] SD3.1 describing causes, effects, preventions, and mitigations of human impact on climate.

F2 I1

[11] SD3.2 exploring causes and effects related to phenomena (e.g., the aurora, solar winds, Coriolis effect).

F2 F1 I1

D1 - Concepts of Earth Science

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

[11] SD4.1 describing phenomena in the universe (i.e., black holes, nebula).

G2 G3 H1-H3

[11] SD4.2 using evidence to explain how the position of stars changes in the expanding universe.

H1-H3 I3

[11] SD4.3 describing the big bang theory and exploring the evidence that supports it.

H1-H3 I3

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

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