Canadian Provincial Correlated Learning Outcomes

British Columbia

Grade 9

	Starry Night Lesson Plans *In order of relevance*
Earth and Space Science (The Solar System and the Universe)	
1. Describe the organization of the Solar System.	B1 B2 F3
2. Describe a variety of remote sensing techniques for assessing conditions beyond Earth.	I1 I2
3. Compare distances of objects in space.	B2 G1 H1 H2
4. Describe the characteristics by which stars are classified.	G2
5. Compare the life cycles of stars of different sizes.	G2
6. Explain, with examples, the relationship between astronomical discoveries and current understanding of the Universe.	F2 F3 H1 H2 H3 I1 I2
Earth Science	
Astronomical Science (Observing the Universe)	
1. Compare the different kinds of tools and instruments used in astronomy to gather information.	I1 I2 G1 G2
2. Demonstrate a variety of methods for estimating the distance to stellar objects.	G1 G2
3. Distinguish between an astronomical unit and a light-year.	B2 G1 H1 H2
4. Compare the apparent magnitude, absolute magnitude, and luminosity of a star.	G2
5. Demonstrate how spectra are used to determine the temperature, composition, and motion of a star.	G2 I1
6. Describe the Doppler effect and how it can be used to determine the speed and velocity of stellar bodies.	I1 H3
Astronomical Science (Stars and Galaxies)	
1. Classify stars using a Hertzsprung-Russell diagram.	G2
2. Describe the life cycles of stars.	G2 F3
3. Describe the historical role of constellations in mythology and navigation.	E1 E2 E3
4. Describe the characteristics of components of the Universe, including galaxies and quasars.	H1 H2 H3 G2
5. Choose and critique a theory that explains the origin of the Universe.	H3 H2

Canadian Provincial Correlated Learning Outcomes

British Columbia Continued

	Starry Night Lesson Plans *In order of relevance*
Astronomical Science (The Sun and the Solar System)	
1. Determine the diameter of the Sun.	F1
2. Describe major characteristics of the Sun.	F1 F2 F3 G2
3. Predict the motion of orbiting bodies using Kepler's laws.	C2 H1
4. Outline the general features of each of the following components of the Solar System:	B1 F3
• Inner planets	C1
• Outer planets	C1
• Comets	D2
• Meteoroids	D2
• Asteroids	D1 D3
• Planetary satellites (moons).	C3
5. Relate features of the Solar System to the protoplanet hypothesis for the origin of the Solar System and planet types, and their distribution.	B1 B2 F3
Astronomical Science (The Earth and Moon)	
1. Demonstrate ways to determine the volume, density, shape, and circumference of the Earth.	A5
2. Describe and explain the variation in day length over a year for several widely separated positions on the globe.	A2
3. Describe evidence that shows the Earth rotates about its axis and revolves around the Sun.	A1 A2 E3
4. Describe the motion of stars and planets caused by rotation and revolution of the Earth.	A1 E3
5. Use models to explain phases of the Moon.	A4
6. Relate the motions of the Moon to low and high tides.	A3
Astronomical Science (Space Technologies)	
1. Describe uses of space technologies.	I1 I2
2. Describe some recent advances in space technology.	I1 I2
3. Assess the pros and cons of space exploration.	I1 I2 G1 B2