

**Manitoba**  
High School

**Starry Night Lesson Plans**

*In order of relevance*

**Specific Learning Outcomes**  
**Senior 1 Science Learning Outcomes (Grade 9)**  
**Exploration of the Universe**

S1-4-01	Use a coordinate system to locate visible celestial objects, and construct an astrolabe to determine the position of these objects.	E1-E4	G1					
S1-4-02	Observe the motion of visible celestial objects and organize collected data.	E1-E4	C2	A1-A5				
S1-4-03	Investigate how various cultures used knowledge of the position and motion of visible celestial objects for navigation.	E1-E4						
S1-4-04	Compare and contrast historical perspectives on the relationship between Earth and space.	E1-E4	B1-B2	C1-C4	D1-D3	F1-F3	G1-G3	H1-H3
S1-4-05	Explain reasons for the apparent motion of the Sun, stars, planets, and the Moon as seen from Earth.	A1-A5	B1-B2	C2	F3	E1-E4		
S1-4-06	Differentiate between units of measure used for astronomical distances, and perform simple calculations using these units.	G1	B2					
S1-4-07	Compare and contrast scientific and cultural perspectives on the origin and evolution of the universe.	H1-H3	G1-G3	I1-I3	F3	E4		
S1-4-08	Differentiate between the major components of the universe.	G1-G3	H1-H3	C1-C4	D1-D3			
S1-4-09	Explain how various technologies have extended our ability to explore and understand space.	I1-I3	H1-H3	G1-G3	F1-F3			
S1-4-11	Evaluate the impact of space science and technologies in terms of their benefits and risks to humans.	I1-I3	F2	D1-D3	C1	C3		