

Aboriginal Knowledge of the Solar System

Textbook pages 426–431

Before You Read

Like all aspects of Aboriginal life, Aboriginal views of the solar system involve respect for all living and non-living things. What does respect for living and non-living things mean? Write your thoughts on the lines below.



Mark the Text

Summarize

As you read this section, highlight the main point in each paragraph. Then write a short paragraph summarizing what you have learned.



Reading Check

1. In a holistic view, what are connected to form a whole?

What is a holistic view?

Aboriginal peoples, like Western scientists, have long observed the Moon, Sun, planets, and other objects in the sky. They have also theorized about Earth's relationship with all of these sky objects.

Among many Aboriginal peoples, existence is thought to be made up of many interconnected areas, or realms. Common realms include the undersea or sea world, the land world, the spirit world, and the sky world. In a universe where everything is connected, Aboriginal peoples know that each of these realms is also a source of knowledge about all of the other realms. A **holistic** view is one that sees all aspects of the physical and spiritual universe as connected to form a whole.

Western science—the type of science that is learned and practised by most people today—is based mainly on the physical realm. Western science involves the study of events that can be physically observed, measured, documented, and tested. Aboriginal knowledge can also be based on the physical realm. However, Aboriginal knowledge also often uses understanding gained from other realms. When everything is connected, the spiritual realm is as much a source of knowledge as the physical realm. ✓

How do Aboriginal peoples use their knowledge of the sky?

Aboriginal peoples have long used their knowledge of the Moon in their daily lives. The success of Aboriginal peoples who fish on the coast, for example, depends on their knowledge of the phases of the Moon and the Moon's influence on various fish species, the weather, and ocean tides. Mariners navigating coastal waters and harvesters of shellfish, kelp, and other intertidal resources must all be aware of the link between the Moon's phases and low and high tides.

Aboriginal peoples developed a way to track and forecast time based on the lunar month. A **lunar month** is the length of time from one new moon (or one full moon) to the next. The time for this cycle of change is about 29.5 days. The Coast Salish, for example, traditionally use a 13-moon system in which each moon of the year is named and linked with certain cultural activities. The Nuu-chah-nulth also use a 13-month lunar cycle that includes the four seasons. ✓

In many parts of the province, Aboriginal peoples relied on the predictable positions of planets and stars in the night sky for information. With this knowledge, traditional hunters could determine their location on the land. People who fished and mariners could determine their location on the ocean. Many Aboriginal peoples continue to use these methods of tracking and navigating today.

How does Aboriginal knowledge affect Western science?

Over the past decades, some aspects of Aboriginal knowledge and understanding of the universe have been incorporated into Western science. Aboriginal knowledge of the link between the phases of the Moon and tides, currents, and erosion along parts of the British Columbia coast is now part of the overall body of knowledge about our coastline. Aboriginal observations of constellations are now part of the overall body of knowledge called, in Western science, astronomy.



Reading Check

2. What is a lunar month?

Use with textbook pages 426–429.

Looking at the solar system

Vocabulary

12	Moon
13	physical
constellations	realms
holistic	solar month
interconnected universe	spiritual
lunar month	Western

Use the terms in the vocabulary box to fill in the blanks. You can use terms more than once. You will not need to use every term.

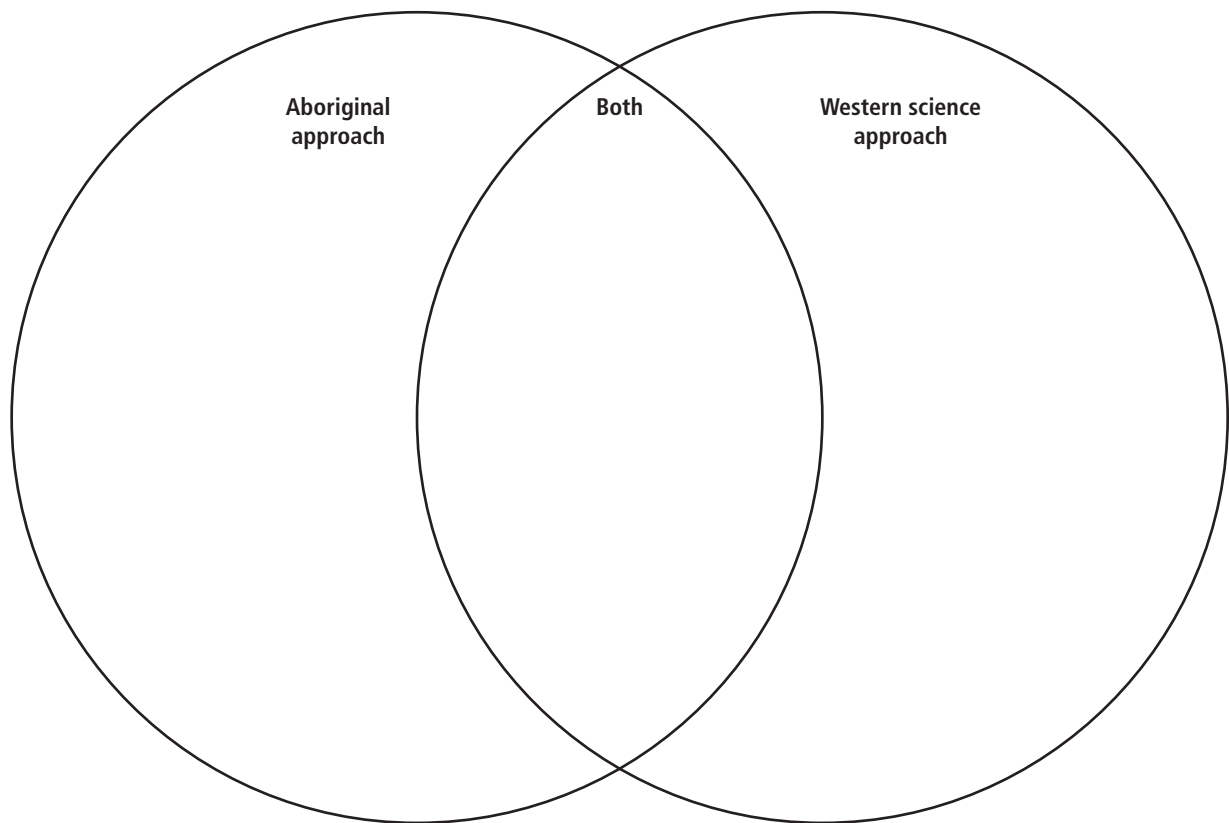
1. A _____ approach means that all aspects of the physical and spiritual universe are connected to form a whole.
2. Among many Aboriginal peoples, existence is thought to be made up of a number of interconnected areas, or _____.
3. In the _____, Aboriginal peoples know that these realms cannot be separated.
4. _____ science is based on the physical realm, which involves the study of phenomena that can be physically observed, measured, documented, and tested.
5. When everything is interconnected, the _____ realm is as much a source of knowledge and truth as the _____ realm.
6. Aboriginal peoples who fish on the coast, for example, depend on their knowledge of the influence of the _____ on various fish species, the weather, and ocean tides.
7. Aboriginal peoples developed a means of tracking and forecasting time based on the _____.
8. Traditionally, the lunar year has _____ lunar months.
9. Aboriginal observations of _____ are now part of the overall body of knowledge called astronomy.

Use with textbook pages 426–429.

Comparing Aboriginal knowledge and Western science approaches

Information gained through Aboriginal knowledge and Western science is often very similar. However, many aspects from the two approaches are different.

1. Use a Venn diagram to help you compare the two approaches. On the left side of the Venn diagram, write points that apply to traditional Aboriginal approaches to the solar system. On the right side, write points that apply to Western science approaches to the solar system. In the middle, write approaches that are common to both.



Use with textbook pages 426–429.

An interconnected universe

In an interconnected universe, all life forms are interconnected and related to one another. This unity of all includes the sea world, land world, spirit world, and sky world.

1. Draw a diagram that shows the ideas behind the interconnected universe. Be sure to explain how the parts of your diagram are related to each other.

(a) Diagram

(b) Explanation

Use with textbook pages 426–429.

Aboriginal knowledge of the solar system

Match each Term on the left with the best Descriptor on the right. Each Descriptor may be used only once.

Term	Descriptor
1. _____ realm	A. the study of phenomena that can be physically observed, measured, documented, and tested
2. _____ holistic	B. studied in Western science
3. _____ lunar month	C. an area such as the sea world, the land world, the spirit world, or the sky world
4. _____ physical realm	D. a measurement of time from one new moon (or one full moon) to the next
5. _____ western science	E. approach where all aspects of the physical and spiritual universe are connected to form a whole
	F. a study of the stars

Circle the letter of the best answer.

6. A holistic approach means to study
- A. only the physical universe
 - B. only the spiritual universe
 - C. all aspects of the solar system
 - D. all aspects of the physical and spiritual universe

7. In the interconnected universe, Aboriginal peoples know that the realms
- A. are separate
 - B. cannot be separated
 - C. are loosely linked
 - D. are independent
8. Aboriginal peoples developed a means of tracking and forecasting time based on
- A. tides
 - B. charts
 - C. the Moon
 - D. Earth's rotation
9. The Coast Salish traditionally use a lunar cycle that is how many months long?
- A. six
 - B. ten
 - C. twelve
 - D. thirteen
10. Observations of constellation movements have led to the body of knowledge known as
- A. geology
 - B. astronomy
 - C. geography
 - D. physical science
11. Aboriginal peoples have long used their knowledge of the Moon's influence on

I.	fish species
II.	the weather
III.	ocean tides

- A. I and II only
- B. II and III only
- C. I and III only
- D. I, II, and III