

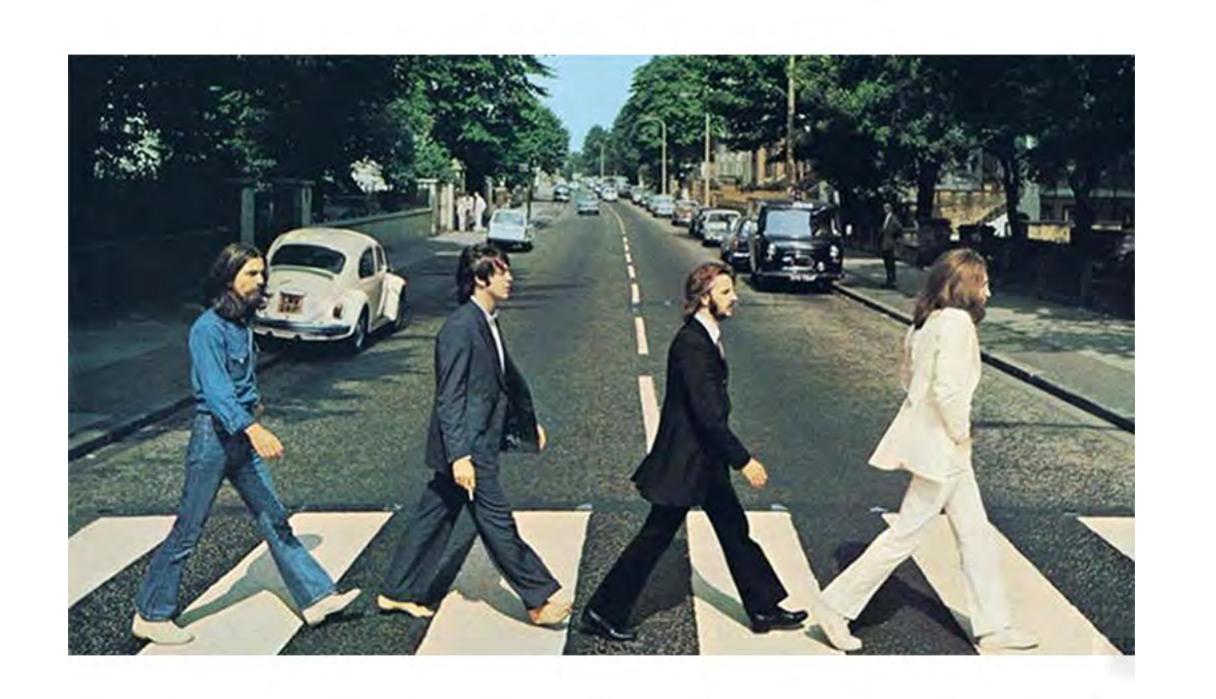
Why has the Sun been an object of study, inspiration, and celebration throughout human history?

In this lesson you will:

- Discover the cultural importance of The Beatles' song, "Here Comes The Sun"
- Understand why the Sun moves across the sky throughout the day and year
- Explore ancient structures that align with the sun
- Learn about the significance of the solstices and equinoxes
- Discover how holidays and other celebrations are often based around the seasons

In 1969, The Beatles released the song "Here Comes The Sun," from the album Abbey Road.

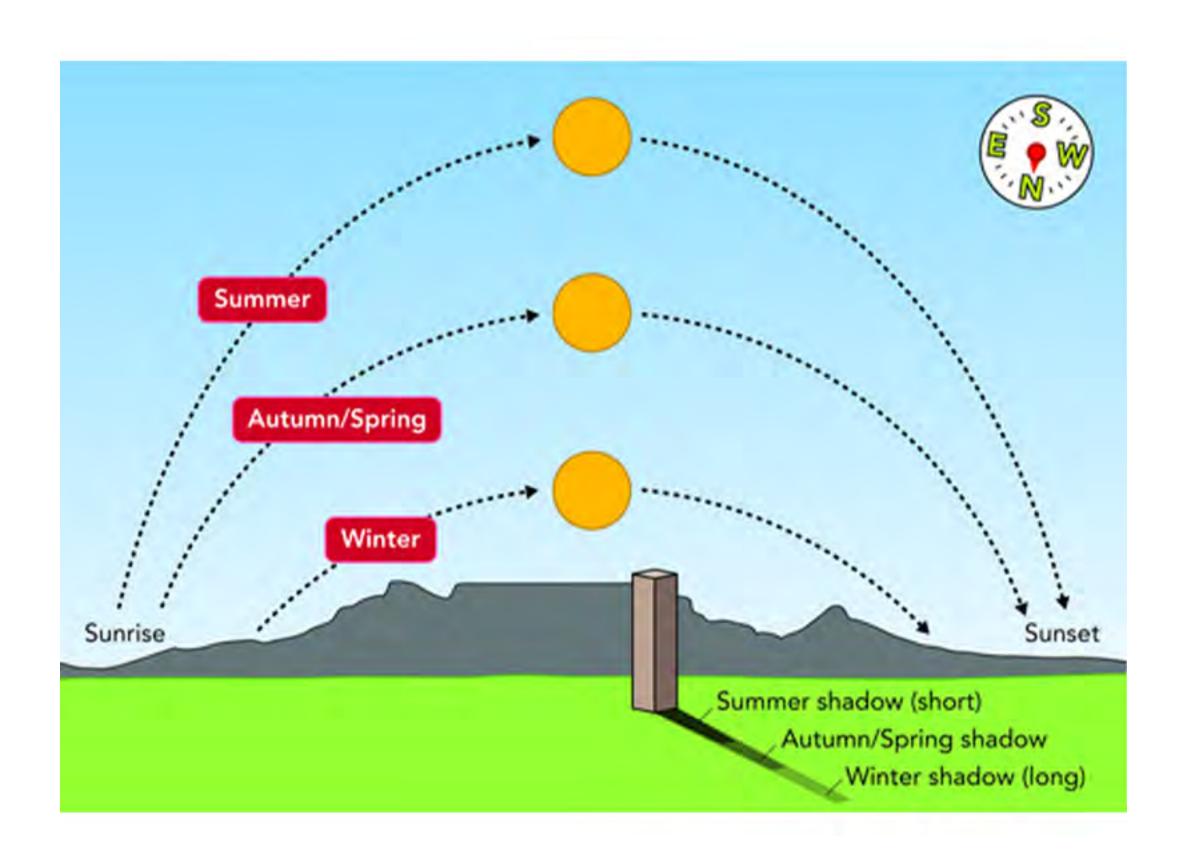
Watch the 2019 video celebrating the 50th anniversary of the song here, and read the lyrics here.



Consider or talk with a friend:

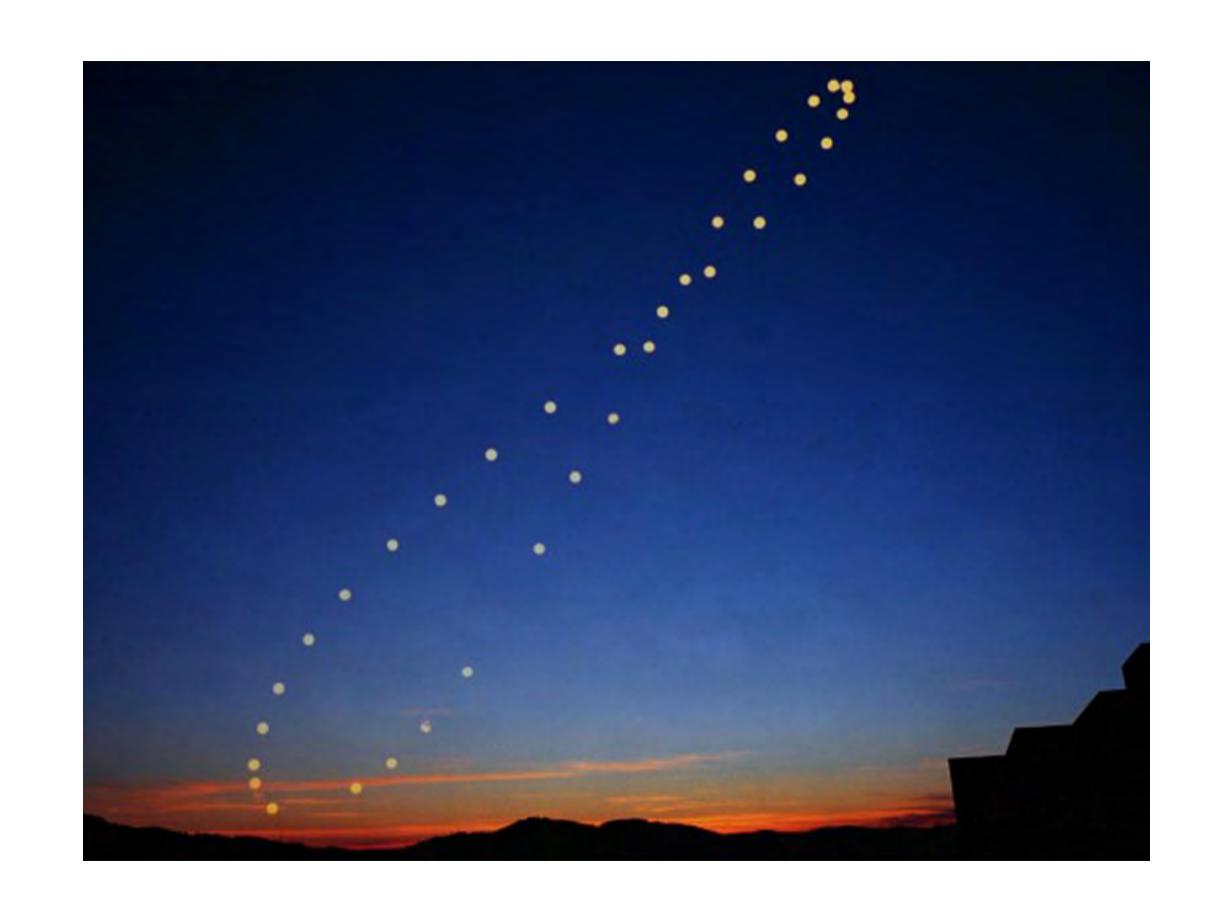
- What story is this song telling?
- Do any lyrics in this song stick with you? Why?
- What do you think the mood of this song is?
- Do you feel the Sun affects your mood and attitude? If so, in what way?

The Sun moves across the sky from morning to night. The Sun's position in the sky also changes throughout the year.



An *analemma* is a composite photo that shows the position of the Sun in the sky. Photos used to create an analemma are taken from the same place at the same time of day over a full year.

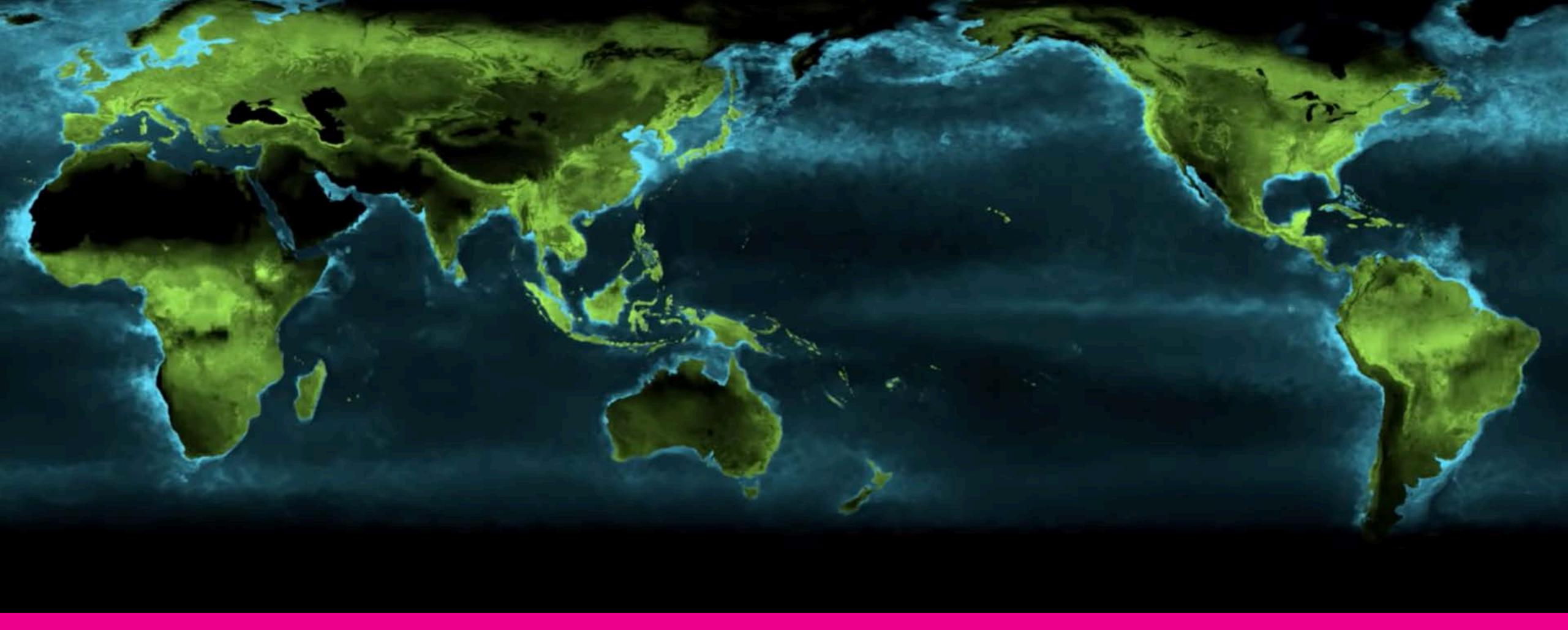
Watch this video to see an analemma being filmed.



Consider or talk with a friend:

- After looking at the analemma and watching the video, what do you notice about the Sun's movements?
- Why is the Sun moving in the sky?
 Is it actually moving, or is something else happening?





SEASONS

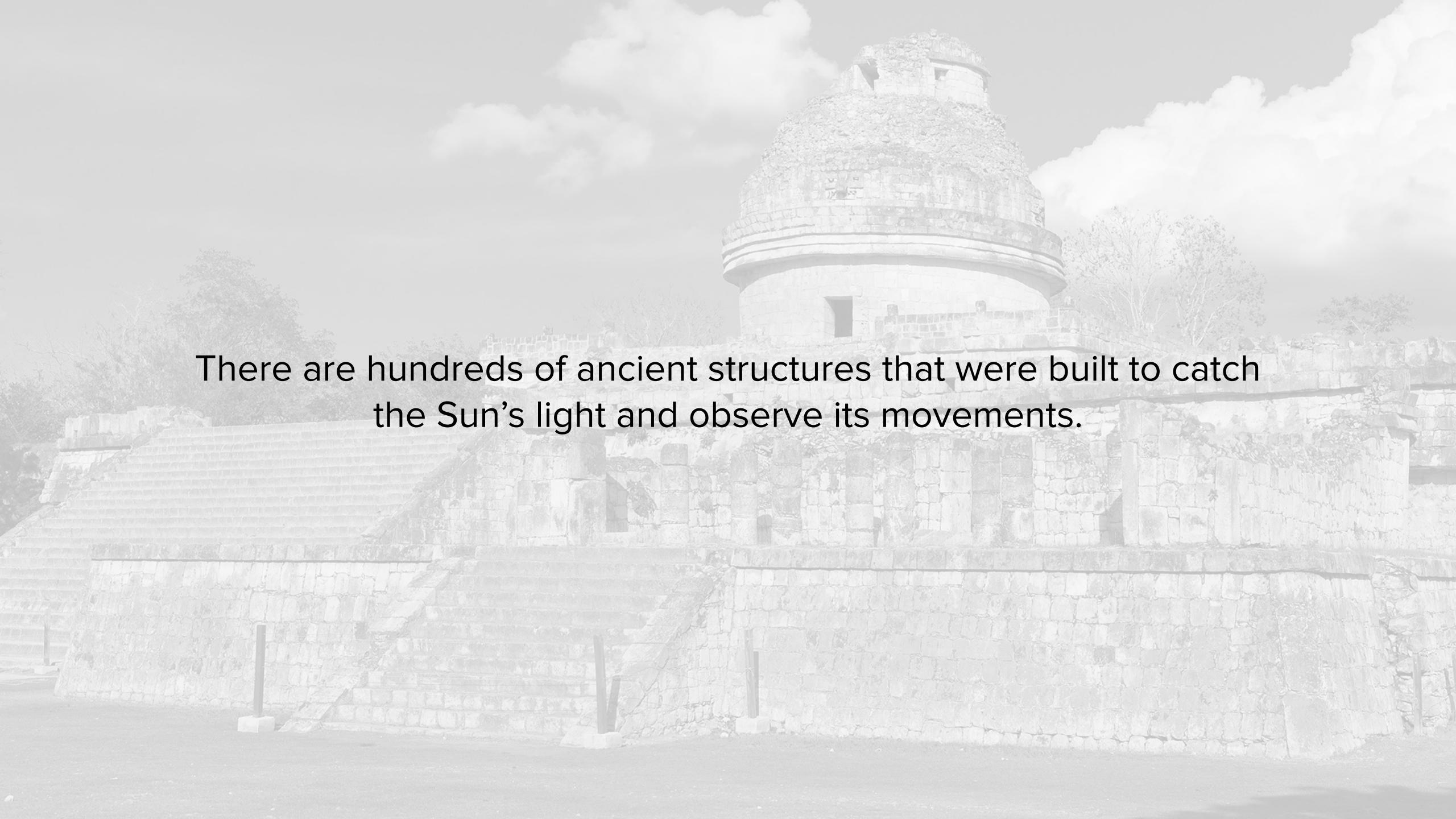
Watch this video to learn more about how the Sun's position in the sky determines the seasons.

Consider or talk with a friend:

• In your own words, why do the seasons change? What is the relationship between sunlight and the seasons?

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 How long do you think people have understood this relationship between the Sun and the seasons? Is it a recent discovery?



Located in England, Stonehenge is one of the most famous ancient monuments. It was built 4000-5000 years ago. While scientists remain uncertain of its purpose, the stones are aligned with the movement of the Sun throughout the year.



Located in Mexico, the pyramid of Chichen Itza was constructed by the Mayans around 600-900 CE. It was designed with the Sun in mind: during equinoxes, the Sun casts triangular shadows along the northern stairway.



Chankillo, in Peru, is one of the earliest known observatories in the Western Hemisphere. Constructed in the 4th century BCE, the thirteen towers of Chakillo mark the rising and setting of the Sun throughout the year.



On the Mediterranean island of Malta, the 5,000 year-old Mnajdra temple complex was built specifically to track the Sun. During the equinoxes, sunlight passes through the main doorway of the temple, and during the solstices the Sun illuminates the edges of the stones to the left and right of the doorway.



Built in the 12th Century CE, Angkor Wat in Cambodia is the largest religious monument in the world. On the equinoxes, the Sun appears directly above the peak of the main tower.



Older than Stonehenge and the Egyptian pyramids, the Newgrange monument in Ireland was constructed around 3200 BCE. It was constructed so that during the winter solstice the Sun would appear over a "roofbox" and flood the inner chamber with light. Other chambers are illuminated during the equinoxes and solstices as well.



For millennia, people have celebrated the position of the Sun, because it is closely related to planting and harvesting times.

Celebrations often took place during the solstices, when the day is either at its longest or shortest in the year, and the equinoxes, when the day and night are equal.

The two **solstices** happen on June 20 or 21, and December 21 or 22. The **equinoxes** happen around March and September.

Consider or ask a friend:

 Can you think of any holidays that are celebrated today around the solstices and equinoxes? What are they?

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 Are these holidays at all related to the Sun, planting, or harvesting crops? In what way?

Artists have been inspired by the Sun for thousands of years. We see the Sun represented in many ways in ancient art.



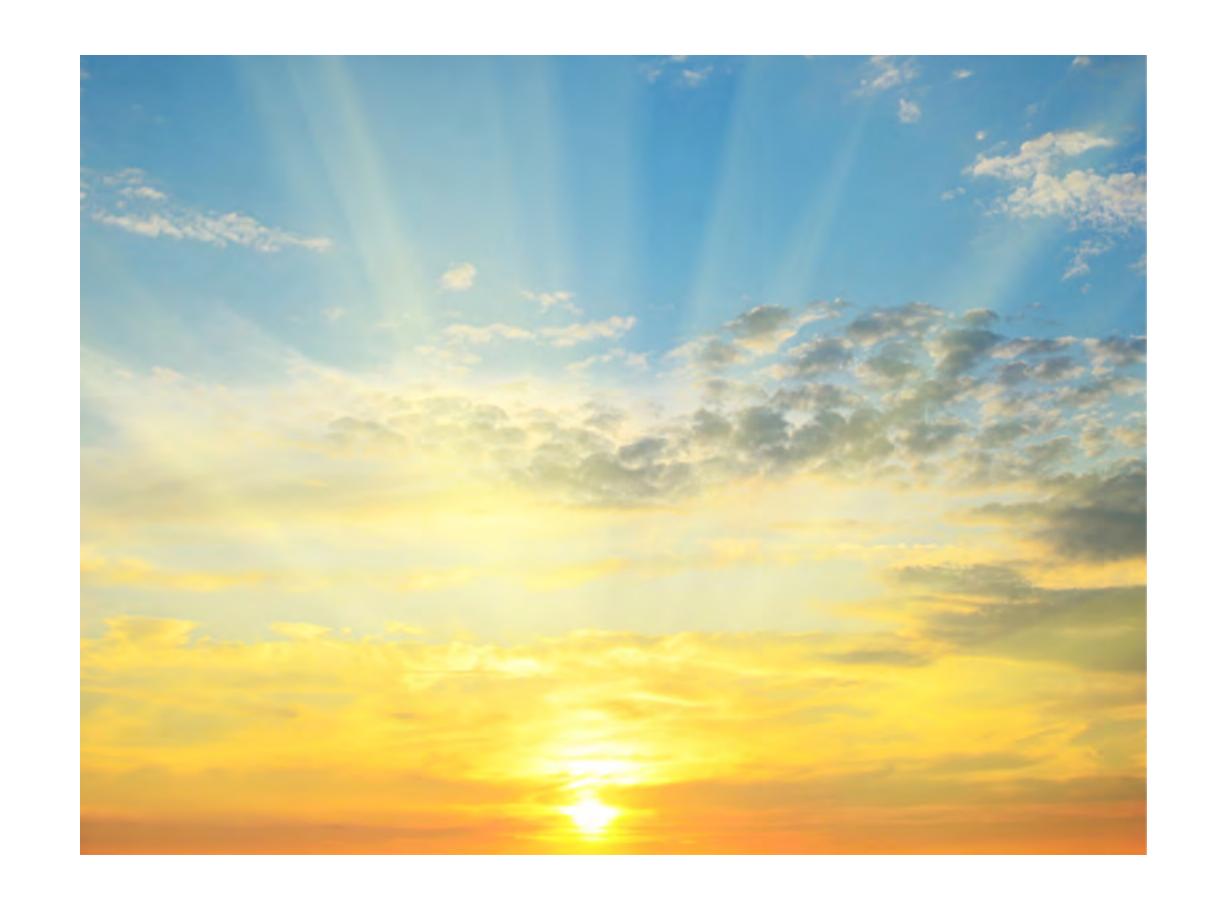
Consider or talk with a friend:

 How would you draw the Sun? What colors would you use, and how would you depict the Sun's warmth?

Do you think that ancient people composed songs about the Sun?

Like the change of seasons, "Here Comes the Sun" is a song of new beginnings and inspiration.

Though it never reached #1 on the charts, it is the Beatles most requested song on Spotify. It has been covered by over 200 artists and has been played in concert thousands of times.



Consider or talk with a friend:

- Why do you think this song has been performed so many times?
- What do you think it is about this song that has made it so popular for over 50 years?

SUMMARY

- The Sun has been a source of inspiration and celebration since ancient times and many cultures around the world built structures aligned to the Sun's path across the sky throughout the year
- The Sun's movement across the sky changes throughout the year and causes the seasons
- For millennia people have studied and drawn inspiration from the Sun
- "Here Comes the Sun" is a song of hope written by George Harrison and first recorded by the Beatles in 1969

BE CREATIVE

Create your own drawing of the Sun using the colors and patterns that you think best represent the Sun's warmth, as well as the symbolism of hope and resilience.

Use the lyrics to "Here Comes the Sun" to create a beautiful poster using colors, lettering, and pictures that show the way you feel about this song.

BE CREATIVE

Did you know that the number of people who have walked on the moon is greater than the number of people who have successfully captured an analemma? Would you like to capture an analemma? Follow these directions.

BE CURIOUS

Learn more about Ancient Solar Observatories here.

Learn more about the Sun's path across the sky here.

Watch this if you'd like to take a deep dive into George Harrison's "Here Comes The Sun."

CONNECT

Share with us! Either you or an adult in your life can share your **Drawing of** the Sun, Here Comes the Sun Poster, or Analemma composite photograph with TeachRock on Instagram or Facebook, email to info@teachrock.org, or Tweet it to us @TeachRock

