

Winter Solstice Quiz: A Family Activity

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Who knows what the winter solstice is? Do you know when it is?

Use this Solstice Quiz to check and expand your winter solstice awareness!

There are 4 different sections, including an opportunity for each person to share how they like celebrating the winter and the “return of the light”. This quiz is a family activity for all ages.

Section 1: Basic Concepts + bonus

1. The winter solstice occurs every year around December 21st.
What defines this day?
 - A. The coldest day of the year.
 - B. The shortest day of the year.
 - C. The longest day of the year.
2. The winter solstice is the day of the year that has the most darkness. Every day since the summer the night continues to get longer. *Why is the Earth experiencing the most darkness at the winter solstice?*
 - A. The moon is farthest from the Earth.
 - B. The sun is farthest from the Earth.
 - C. The sun is at the furthest angle from the Earth.
3. The day of winter solstice is longer than the day before. There will be 3 more minutes of sunlight in Bellingham on the 21st than on the 20th. And 2 minutes more on the 22nd! *What's our guess for how many hours of light will there be on Dec 21st in Bellingham?*
4. After the winter solstice, the days continue to have longer periods of sunlight until the summer solstice on June 21st. *How many hours of light will there be on June 21st in Bellingham?*

Bonus: Kansas City is at 39 degree latitude. Washington State is at 47 degree latitude. *Does Washington state experience more or less light for the solstice than Kansas City? How much more or less?*

Section 2: Celestial Bodies + bonus

1. There are 8 major planets orbiting the sun. The Earth is the 3rd planet from the sun. *Can you name 2 other planets?*
2. The sun is made of primarily hydrogen and helium. *What are the two planets that consist of hydrogen and helium and have a similar chemical make-up as the sun (metal core)?*
3. Earth is made of $\frac{1}{3}$ rock and $\frac{2}{3}$ metal. *Name one other planet that has a similar composition.*
4. Many many moons ago, Earth suffered a gigantic collision with another planet, which knocked Earth sideways and created a large amount of debris. The debris became its own heavenly body visible from Earth. *What is the name of this heavenly body?*

Bonus: When Earth got knocked, it settled in on a tilt. Earth now sits at _____ angle through its North and South poles.

Section 3: Seasons

We humans are tuned into the sun because our position in orbit around the sun determines our food survival. Many of us no longer need to pay attention to the sun and the solstice because our lives and roles are less set by the sun than our ancestors. Still, all of us know a farmer or gardener who schedules their lives by the seasons. Or, at least we eat the food they grow!

1. The seasons we experience on Earth are caused by changes in Earth's relationship to the sun. *Which of these relationships is NOT responsible for seasons?*
 - A. Direction of Earth's axis
 - B. Distance of the sun from Earth
 - C. Amount of atmosphere the sun rays pass through.
2. *In 2020, on which special holiday was the Earth farthest from the Sun?*
3. *Which of the seasons do farmers plant the crops? And harvest the crops?*

4. *In which of the seasons do the plants die or go dormant?*

Section 4: The Celebration

In winter, plants are dying and going dormant. Humans often think that winter is a difficult season because it is colder and darker. Many people suffer from seasonal depression. The winter time is a time for staying close to loved ones. All around the world, people have celebrated the solstice by honoring the holiness of light returning within the darkness.

Although the days will start to have more light, the darkness will continue and Earth will get colder and colder until there is enough light to warm the ground and water. Humans have been living with this pattern of seasons for many years. We have learned many ways to revel in the darkness and celebrate the light.

1. *What are 2 things that you enjoy doing in the winter that you don't do as much in the summer?*

2. I will describe 4 different solstice celebrations I learned about from [History.com](https://www.history.com). As I share the basic descriptions of these celebrations, imagine which might be your style if you were to start celebrating solstice. *Which celebration might you like to attend?*
 - A. Landscape / Stone Crafting: The Hopi (from the land now called Northern Arizona) spend time crafting landscape art with large stones. When you watch the shadows cast by the stones, you can observe that after the solstice, the angle of the shadows change.
 - B. Bath & Spa: There is a Japanese tradition of taking a warm bath to prepare for the winter solstice. The hot bath is scented with citrus. And, you can add in a warm slice of pumpkin pie.
 - C. Costume Dance Party: The Zuni (from the land now called New Mexico) celebrate the rebirth of the sun with elaborate costumes and masks and dancing for days.

D. Mega Party: The Roman tradition of Saturnalia is a solstice-time celebration for Saturn, the god of agriculture and time. This celebration sounds a bit like vegas with gambling, drinking, feasting and giving of gifts.

Share your answers together.

Now, let us light a candle together.

Each of us might have a different reason to light a candle.

We might make a prayer for this winter solstice- for some special magic or support we want to invite into our life.... Or something heavy on our shoulders we are ready to meet in the darkness.

Hold in your heart your intention.

Take a breath to give it life.

And light your candle to be your witness.

Take a moment to watch the flame and the shadows dance.

If you feel inspired, I would love to hear any questions or comments regarding the winter solstice and your personal experience. Please share this quiz with your friends and family!

Love,

Dr. Sunshine