Discovery Theater

SEASONS OF LIGHT

Recommended for Ages 5 to 10
Grades K-5

A Reproducible Learning Guide for Educators

This guide is designed to help educators prepare for, enjoy, and discuss ***Seasons of Light.***
It contains background, discussion questions and activities appropriate for Ages 3-7.

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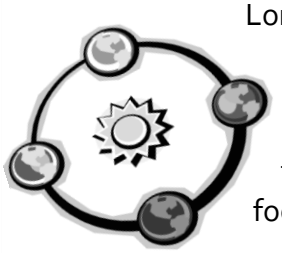
CELEBRATING LIGHT IN THE DARKNESS: THE SOLSTICE SEASON

People all over the world celebrate holidays at this time of year. Many of these holidays honor the harvest, signal the New Year, or bring families together to remember the past and look forward to the future. Many holidays are also rooted in the coming of the **shortest day of the year—the Winter Solstice.**

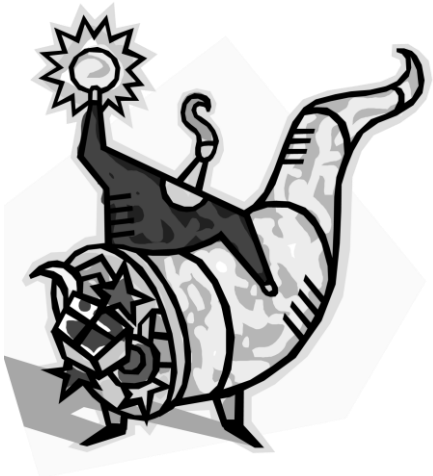
Today, we often enjoy holiday traditions without knowing where they came from. We sing songs, display colored lights, and repeat special activities with friends and family. Holly wreaths, chocolate coins, sharing special foods, giving gifts, candles lit in a row—these traditions all herald the ending of one year, and the renewal and hope of looking ahead to the next.

If we look deeper, we see that these holidays carry echoes of earlier times, hundreds or thousands of years ago. At some point, the warmth of light burning in the dark plays a central role. **Why?**

SEASONS OF THE SUN



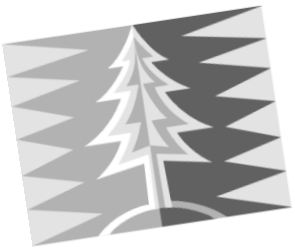
Long before the discovery of electricity, people depended on the sun, on fire, and on candles and torches for light. Their lives were ruled by the seasons as they planted seeds, harvested crops, and then were forced indoors during the long, cold winter. They watched the sun and its patterns to plan when to do each of the tasks needed to grow and store enough food to carry them through until spring.



Winter days aren't just cold--they are short! There are fewer hours of daylight than in summer, and more hours of darkness. Why? Because the movement of the earth around the sun causes the number of minutes of light received in any one place to change gradually day by day. In the fall, days get shorter and the nights get longer until the longest night of the year is reached, around December 22nd. Astronomers call this shortest day the **Winter Solstice (SOUL-stiss).**

Afterwards, luckily, days gradually get **longer** (and the nights shorter) until **the longest day—the Summer Solstice**—is reached around June 22nd. Then the days start to shorten and the cycle begins again. The earth takes a full year to travel all the way around the sun, so the circle of the seasons, marked by the two solstices, repeats year after year after year.

AFRAID OF THE DARK?



The Winter Solstice was a source of wonder and fear for primitive peoples. What if the days got shorter and shorter until warmth and daylight disappeared forever? What if the sun, the great fire in the sky that made the crops grow, vanished and never came back? What if the earth never recovered from the dark season?

All over the world, in almost every culture, **ceremonies evolved to keep the sun alive at this dangerous time of the year**. People built huge fires that were kept burning through the night. They hung branches of evergreens—miracle plants that stayed alive all year—inside their homes. And they gathered together to **renew their commitment to each other and their communities**, to ask the unseen forces of the spirit for blessings and protection, and to tell stories, sing songs, eat festive food, and perform the special rituals that had been handed down from their parents and grandparents.

The joy, warmth, and safety that came from these traditional gatherings kept the dark and cold at bay. They helped people understand that the sun would return and bring the promise of spring and a new year.

"OBSERVING" THE SOLSTICE

Since ancient peoples knew that food, warmth, light—life itself—depended on the sun, they also knew that it was important **to track the movement of the sun** and the length of the days. They took their calendar from these measurements—just as we do today! That way, they knew when to celebrate Solstice rituals and could be sure that the light was returning.

Ancient cultures came up with many ingenious ways to measure the progress of the sunlight. They made observatories from **circles of stone or wooden markers**, and built temples or tombs with passageways or windows that caught the light only at the Solstice. The pyramids of Egypt and the great stone circle called Stonehenge in England are examples of accurate observatories that are thousands of years old. When people "observed" the sun striking just the right spot, they knew it was time to "observe" the Solstice with feasting and special ceremonies. A new year had been born. It was time to party!

THE SOLSTICE IN THE AMERICAS

For the native people of **Peru, t**he Winter Solstice was the most important **sun festival** of the year. For three days, the people didn't eat. Before dawn on the fourth day they gathered to await the dawn. When the sun appeared, they shouted in greeting. Priests **focused the rays of the sun** with a mirror to start a fire. This fire was shared among all the temples and kept burning through the year.

In the **American southwest,** native cultures took advantage of places where natural rock formations let slivers of sunlight shine through. They made **paintings on rock** (*petroglyphs*) to mark where the shaft of Solstice sun fell. **Hopi priests** marked the return of the sun by dressing in animal skins, with headdresses of feathers that were meant to represent the rays of the sun. In some Native American cultures, the solstice may have been the signal for tribal chiefs to meet and divide up hunting lands for the coming year.

WHEN TIME STANDS STILL

The shamans of the **Chumash Indians** of Southern California were highly-trained astronomers. Using their measurements of the sun, moon, and stars, they predicted the tribe's future and selected the proper names for babies—a very important task! They considered the four days around the Winter Solstice to be part of a **sacred thirteenth month** when time stood still.

From Past to Present

Fire and candlelight continue to be symbols of hope for us even today. From India to Sweden to the United States, families share ancient traditions, molded by passing years to fit current ways of life. Their festivals have many things in common: **candles and colored lights, making sweet treats to share with loved ones, giving gifts and decorating the home**. As times change, new inventions like electric lighting help new traditions evolve from the old.

The important parts remain, as we draw near to friends, family, and community to mark the end of one year and the beginning of the new.

VOCABULARY WORDS:

Calendar – a system for dividing up a period of time (usually a year)
Culture – the art, customs, beliefs and so on shared by a particular group of people
Fast – to refrain from eating
Miracle – something that is impossible, but happens anyway
Observe – 1. to watch closely 2. to mark an occasion
Ritual – a special, ceremonial action
Symbol – something that stands for something else
Tradition – a custom, belief, etc. handed down from one generation to another

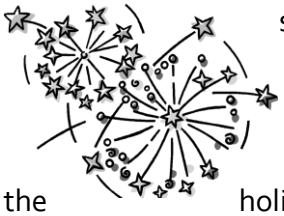
FESTIVALS OF LIGHT AROUND THE WORLD

DEVALI *(Dee-wah-lee)*

Who: Hindus in India, Indian communities worldwide

When: 5 days in late October or early November

Why: To mark the New Year and commemorate the ancient story of **King Rama and his wife, Sita**, who was kidnapped and taken to a faraway island. Rama fought for fourteen years to rescue his wife. The night they returned was very dark, with no moonlight, so the people lit their houses and streets with candles to show the couple the way home. The word **"Devali"** actually means **"rows of lighted lamps."**



How: To celebrate this happy holiday, people clean their houses, wear colorful new clothes, eat delicious food and sweets, and set off **fireworks**! Since the holiday is also the beginning of the New Year, everyone hopes for luck and success in their lives and businesses. Some people illuminate their houses with oil lamps and electric lights to welcome Lakshmi, the goddess of prosperity. Women and children decorate the ground outside their homes with colorful painted patterns, which are said to represent the goddess's footsteps.

EID-AL-ADHA *(id al-adha)*

Who: Followers of Islam (Muslims)

When: The entire month of Dhu al-Hijjah in the Islamic calendar. Since this calendar is based on the moon rather than the sun, the holiday "travels" and may occur in winter, spring, summer or fall.

Why: Known as the Feast of Sacrifice, this celebration commemorates Abraham's willingness to sacrifice his son to God.

How: During this time, many Muslims celebrate with prayers and social gatherings. Traditional clothing is worn and national dishes shared. This is a time of prayer, sharing meals, handing out gifts and wishing one another well.

SANKTA LUCIA DAY (Sahnk-tah Loo-see-ah Day)

Who: Scandinavians

When: December 13 (one of the coldest, darkest days of the year)

Why: Commemorates **Saint Lucia,** patron saint of light, who was said to have risen out of frozen lake to bring sweets to people working through a long, cold winter.

How: Early in the morning, a family's oldest daughter puts on a crown of lighted candles and gathers her sisters. In a procession, they take **sweet saffron buns** to their parents, while singing traditional carols.

CHANUKAH *(Hah-noo-kah)*

Who: Members of the Jewish religion

When: Eight days in December.

Why: Commemorates an ancient **miracle of light**. Jewish tradition tells that more than 2000 years ago, in 165 BCE, the holy temple was rescued from an intolerant Greek leader. The temple lights had only enough oil left to burn for one day. The people hurried to make more oil, a process that took them eight days. Yet, when they returned, they were astounded to find the lamps had stayed lit, even though there had not been enough oil.

How: Today, Jews remember this miracle by lighting candles in a **special candelabra called a menorah,** which holds eight candles, with a ninth one in the middle. They gather family and friends to share special meals and gifts, sing songs, and play special games.

CHRISTMAS / LAS POSADAS *(Lahs Poh-sah-dahs)*

Who: Christians and others around the world

When: Around December 25th. In some countries the holiday lasts for many days.

Why: Celebrates the Christian anniversary of the birth of the baby Jesus Christ.

How: People gather their family and friends for **feasting,** singing of **carols, gift-giving,** and to decorate the **Christmas tree**.

In our show, we present ***Las Posadas***, a Mexican celebration that marks the travels of Jesus' parents, Mary and Joseph, who searched in the night looking for a place to stay. On December 16th, friends and families re-enact this journey by knocking on their neighbor's doors and asking, "Do you have lodging?" The neighbors tell them, "Go away, there's no room." In the end, the neighbors realize this is the Holy Family and invite them in. Children receive little bags filled with treats and toys, and adults sip fruit drinks mixed with brandy or rum. Traditionally, the celebration ends with more food, drink, dancing, and the breaking of a **piñata**.

HOW DO YOU PLAY PIÑATA?

A piñata is a decorated hollow box with a surprise inside—**candy and treats!** (The traditional piñata for Las Posadas was shaped like a star with seven points, although now piñatas come in many shapes.) The piñata is hung up high and children take turns trying to **break it open** with a stick—while wearing a blindfold. When the piñata breaks, **candy showers out** and everyone **scrambles** to get some!

KWANZAA *(Kwahn-zah)*

Who: African-Americans

When: Seven days beginning December 26th.

Why: Kwanzaa is **non-religious celebration** of **family, community,** and **seven ethical principles** to live by, much like the Christian Ten Commandments. Invented in the 1960s, Kwanzaa is rooted in harvest celebrations practiced in various cultures in Africa.

Kwanzaa is a week to remember and recommit to seven principles:

- **unity**
- **self-determination**
- **collective responsibility**
- **cooperation**
- **purpose**
- **creativity**
- **faith**

To help do this, families **light candles, sing, feast, and give thanks** for a bountiful harvest. Objects such as an ear of corn and a libation cup are used during Kwanzaa to symbolize the seven principles. For instance, each of the seven candles stands for a principle. A new one is lighted each day; the person who lights the candle explains what the principle is, and that becomes the topic of discussion for that day. All of the special objects are arranged on a **Mkeka** *(M-kay-kah)*, or Kwanzaa mat. (To make your own Mkeka, see the *Activities* section!)

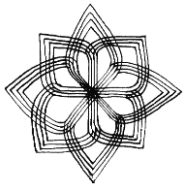
THREE CRAFT ACTIVITIES

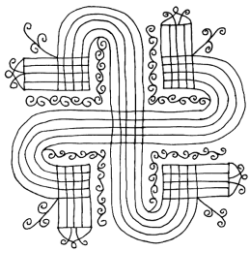
MAKE A DEVALI RONGOLI—SIDEWALK ART

In some parts of India, during Devali, women and children make **beautiful patterns on the ground**, called **rongoli,** to represent the **footsteps** of the goddess of good fortune.

MATERIALS NEEDED:

- Construction paper
- Tape
- Chalk or crayons





DIRECTIONS:

1. Tape construction paper to the floor.
2. Draw your own lucky patterns!

MAKE A KWANZAA MAT

(It's called a Mkeka!)

MATERIALS NEEDED:

- Black, red, and green construction paper
- Scissors
- Ruler
- tape or glue.

DIRECTIONS:

1. **Cut** several one-inch **strips** of red and green paper.
2. **Cut seven lines**, like slits, an inch apart across the black paper, **leaving a one-inch margin** all around the edges.
3. **Weave** alternating red and green strips through the sheet of black paper.
4. Secure the ends with tape or glue.

Kwanzaa Colors

Do you know what the colors of Kwanzaa **stand for?**

♦ **black** for the people of Africa ♦ **red** for their struggle

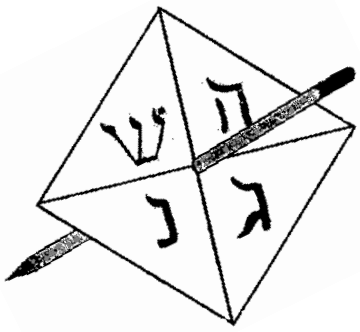
♦ **green** for the future and hope that comes from their struggle.

MAKE A PENCIL DREIDEL

During **Chanukkah**, Jewish children play a game by spinning a **dreidel** (dray-dul). You can, too!

MATERIALS NEEDED:

- Paper
- Markers
- Scissors
- Pencil



DIRECTIONS:

1. Cut a **square of paper** and fold it into **four triangular quarters.** Use markers to draw lines along the folds and mark the four Hebrew letters, as shown.
2. Poke a pencil through the center of the square.
3. **Spin** the dreidel! Play the Dreidel Game! (See next page for directions.)

PLAYING THE DREIDEL GAME

This is one version of the game that has been played by millions of children all over the world*!*

Needed: tokens (buttons, pennies, candies, etc.) and a dreidel

Have **as many players as you want.** Give each one the same number of tokens (about 15 or 20) and put the identical number in the center.

Players take **turns spinning the dreidel**. If it lands on…

נ **Hey (half)**—the spinner takes half the center pile (plus one if there's an odd number).

ש **Shin (give)**—the spinner gives away half of his pile to the center.

נ **Nun (nothing)**—the spinner gets nothing and takes nothing.

ג **Gimel (everything)**—the spinner takes the whole center pile (leaving just one token) and everyone else puts in a token.

Whenever the center pile gets down to one token, everyone puts in one to keep the game going. The player who collects **all** the tokens **wins!**

MORE ACTIVITIES

BE A SOLSTICE ASTRONOMER:

"Mark" the solstice—just like a Native American astronomer!

Cut out **three special solstice markers** from construction paper. Each should be a circle or star about the size of your hand. Decorate them anyway you'd like, but be sure to put a large dot in the center of each one.

Look up the date of this year's **Winter Solstice**. On that date, find a place where the sunlight falls on the wall, floor, etc. Using tape, attach one of the markers so that the edge of the patch of light hits it right in the center. Important: Remember what time of day it is!

Wait a few days. Then, at the same time of day as before, **mark the edge of the sunlight with the center of another marker**. Does the sun look like it has moved?

Repeat one more time—or do it all year long like the ancient astronomers did!

OH, NO! THE SKY IS FALLING!

If you knew nothing about the science behind them, what would the seasonal lengthening and shortening of days look like to you? Imagine how you and your friends would feel. What explanations might you come up with? Write a legend explaining the winter solstice in non-scientific terms.

"ORANGE" YOU GLAD THERE'S A SUN?

Why are there seasons? It's because of the **positions** of the Sun and the Earth.

Needed: an orange, 2 toothpicks, a flashlight, a permanent marker

To see why, stick one toothpick in the top of the orange and one directly opposite in the bottom. Draw a line with the marker around the middle of the orange, and make a dot halfway between the line and the top toothpick. Turn on the flashlight and turn out the lights. Shine the flashlight straight at the middle line.

The orange is the **Earth**, the flashlight is the **sun**, and the top toothpick is the **North Pole**. The line around the middle is the **equator. Washington, DC is the dot!** It is in the **Northern Hemisphere**, between the equator and the North Pole.

Now, **tilt** the North Pole toothpick slightly **toward** the light. **Where** does most of the light shine? On DC and the top half of the orange! This is the position of the Earth in the **summer**.

Next, tilt the North Pole **away** from the light. Where does the light mostly fall? **On the Southern Hemisphere,** between the equator and the South Pole toothpick. This is the position of the Earth when DC is experiencing the Winter Solstice.

What's happening **at the middle?** The amount of **light stays about the same** all year round. For people who live near the **equator**, the days stay warm and about the same length all year long.

CHALLENGE QUESTION!

In the Southern Hemisphere, the Winter Solstice doesn't come in December. ***Why?***

Check the library or internet to see if you're right!

MAKE A HOLIDAY QUILT!

What holiday are you? What winter holidays do you and your family celebrate?
What **traditions** of your holiday do you **like best**?
How are the holidays celebrated by the kids in your class **alike?** What do they have **in common?**

On a square of construction paper, **draw your favorite part** of your holiday. (If lots of kids in your class celebrate the same holiday, each should draw a different tradition from that holiday.)

Put all the squares together to show all the different traditions celebrated by your class.

RELATED RESOURCES

- **The Winter Solstice**, by Ellen Jackson. The science behind the solstice and how it was and is celebrated in cultures around the world. (Ages 4-8.)
- **The Winter Solstice**, by John Matthews. Quest Books, 1998. A comprehensive reference for solstice folklore, recipes, games, songs and other resources. (Older readers.)
- **The Return of the Light: Twelve Tales from Around the World for the Winter Solstice** by Carolyn McVickar Edwards. Marlowe & Co., 2000. A dozen traditional stories from Polynesia to Scandinavia, retold for all ages.
- **Celebrations!** by Barnabas and Anabel Kindersley. DK Publishing, 1997. A UNICEF look at children celebrating holidays in 18 countries. (Ages 8-12.)
- **Celebrate the Winter,** by John Langstaff, George Emlen, and Patrick Swanson. Revels, Inc. Publications, 2001. A guide to creating participatory multicultural winter solstice celebrations. (Teachers, parents, and older readers.)
- **Festivals Together: A Guide to Multi-Cultural Celebration**. Hawthorne Press, 1996.
- ***www.officialkwanzaawebsite.org/*** - All about Kwanzaa.

The mission of the Smithsonian Institution is "The increase and diffusion of knowledge."

Smithsonian Associates advances the Institution's mission through life-enriching educational and cultural experiences inspired by the Smithsonian's research and collections for DC-region students, families, and adults, and for learning communities nationwide.

Discovery Theater has been presenting DC-area children with live educational performances for more than 30 years. With programs that enrich the Smithsonian experience for nearly 50,000 children annually, Discovery Theater is a gateway to the exhibits, collections, and themes contained in the museums and galleries on the National Mall and beyond. We explore American history and cultures, folk tales from around the world, and exciting, accessible science and math programs in the company of puppeteers, storytellers, dancers, actors, and musicians. Discovery Theater performances unite ideologies, enact themes that reflect the diversity of its audiences, open avenues of self-reflection, and offer an enjoyable means for parents and teachers to demonstrate life's lessons. There's so much to do and explore at the Smithsonian—and Discovery Theater is the ideal place to begin! For more information, please visit our website www.discoverytheater.org.

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