



# SOLAR ECLIPSE



Saturday  
October 14th



A solar eclipse occurs when the Moon passes between Earth and the Sun, obscuring the view of the Sun from a small part of the Earth, totally or partially. This alignment occurs approximately every six months, during the eclipse season in its new moon phase, when the Moon's orbital plane is closest to the plane of the Earth's orbit. In a total eclipse, the disk of the Sun is fully obscured by the Moon. In partial and annular eclipses, only part of the Sun is obscured. Unlike a lunar eclipse, which may be viewed from anywhere on the night side of Earth, a solar eclipse can only be viewed from a relatively small area of the world. As such, although total solar eclipses occur somewhere on Earth every 18 months on average, they recur at any given place only once every 360 to 410 years.

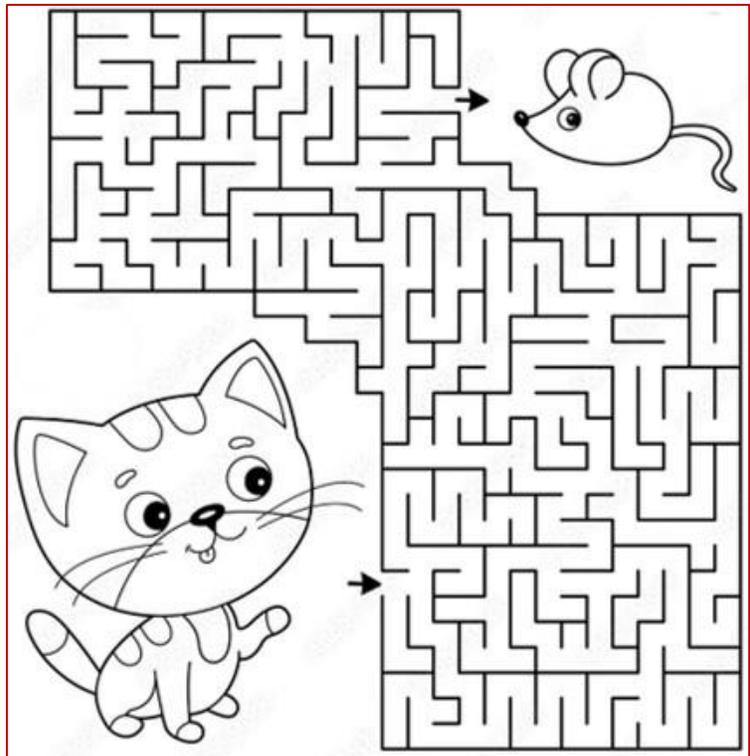
Viewing the Sun during partial and annular eclipses (and during total eclipses outside the brief period of totality) **requires special eye protection**, or indirect viewing methods if eye damage is to be avoided. The Sun's disk can be viewed using appropriate filtration to block the harmful part of the Sun's radiation. **Sunglasses do not make viewing the Sun safe.** Only properly designed and certified solar filters should be used for direct viewing of the Sun's disk



FIND 7 DIFFERENCES



Jumble answers: BRWL, THYME, FINITE, PAUNCH  
HATCH ET



## **Thirteen (cont'd)**

### **Full moons**

A year with 13 full moons instead of 12 posed problems for the monks in charge of the calendars. "This was considered a very unfortunate circumstance, especially by the monks who had charge of the calendar of thirteen months for that year, and it upset the regular arrangement of church festivals. For this reason, thirteen came to be considered an unlucky number. However, a typical century has about 37 years that have 13 full moons, compared to 63 years with 12 full moons, and typically every third or fourth year has 13 full moons.

### **A suppressed lunar cult**

In ancient cultures, the number 13 represented femininity, because it corresponded to the number of lunar (menstrual) cycles in a year ( $13 \times 28 = 364$  days). The theory is that, as the solar calendar triumphed over the lunar, the number thirteen became anathema.

### **Good or Lucky Thirteen**

France: 13 was traditionally considered a lucky number in France prior to the First World War, and was used in numerical form as a good luck symbol on postcards and charms.

Italy: 13 was the lucky number in the Italian football pools .

United States: Colgate University also considers 13 a lucky number. They were founded in 1819 by 13 men with 13 dollars, 13 prayers and 13 articles. (To this day, members of the Colgate community consider the number 13 a good omen.) The campus address is 13 Oak Drive in Hamilton, New York.

Other

In the Mayan calendar, trecenas mark cycles of 13-day periods. The pyramids are also set up in 9 steps divided into 7 days and 6 nights, 13 days total.

In the standard 52-card deck of playing cards there are four suits, each of 13 ranks.

A baker's dozen, devil's dozen, long dozen, or long measure is 13, one more than a standard dozen. The thirteenth loaf is called the vantage loaf because it is considered advantageous overall to get 13 loaves for the price of 12.

In Arthurian legend, which was recorded in Medieval texts, King Arthur is resting in Avalon with the twelve greatest knights of the Round Table, totaling 13, and will return when his country is in peril.

The Thirteen Treasures of Britain are a series of magical items listed in late Medieval texts.

The Thirteen Postures of Tai Chi are thirteen postures (consisting of Eight Gates and Five Steps) which are considered to be of fundamental importance in the practice of Tai Chi.

In astronomy there are 13 star constellations in the zodiac (including Ophiuchus); this can be compared with astrology where there are 12 signs of the zodiac.

In Judaism, 13 signifies the age at which a boy matures. 13 is the number of principles of Jewish faith according to Maimonides. According to Rabbinic commentary on the Torah, God has 13 Attributes of Mercy.

In a tarot card deck, XIII is the card of Death, usually picturing the Pale Horse with its rider.

(cont'd on page 4)

## **Age 13**

In Judaism, thirteen signifies the age at which a boy matures and becomes a Bar Mitzvah, i.e., a full member of the Jewish faith.

Thirteen is the minimum age of consent in Argentina, Burkina Faso, Japan, Niger, and two Mexican states.

On many social media platforms in the United States, 13 is the standard minimum age to be allowed to create an account in compliance with the Children's Online Privacy Protection Act (COPPA).

This is the age at which the Entertainment Software Rating Board (ESRB) assesses for T-rated games and the Motion Picture Association recommends movies with a PG-13 rating.

## **History**

The Great Seal of the United States features several groupings which consist of 13 things of the same type e.g. 13 olive leaves, 13 stars, 13 arrows.

The United States of America was created from thirteen British colonies and the number thirteen is a commonly recurring motif in American heraldry. For example, there are thirteen stars on the Great Seal of the United States and there are thirteen stripes on the American flag.

The first flag of the United States bore thirteen stripes, alternating red and white, and thirteen white stars in the blue union. The thirteen stripes represented the Thirteen Colonies from which the United States was created, and the thirteen stars represented the number of states in the new nation. When two new states were added to the Union in 1795, the flag bore fifteen stars and fifteen stripes. With the addition of five new states in 1818, the number of stripes was re-set and permanently fixed at thirteen.

The Great Seal of the United States bears many images of the number thirteen, representing the Thirteen Colonies from which the United States was created. On the Seal's obverse, the overhead glory bears thirteen stars. The chest shield in front of the spread eagle bears thirteen stripes (seven white and six red). The eagle's right talon holds the Olive Branch of Peace, bearing thirteen olives and thirteen olive leaves. The eagle's left talon holds the Weapons of War, consisting of thirteen arrows. The eagle's mouth holds a scroll bearing the national motto "E Pluribus Unum" (which consists of thirteen letters). On the Seal's reverse, the unfinished pyramid consists of thirteen levels.

The Thirteenth Amendment to the United States Constitution abolished slavery and involuntary servitude . Apollo 13 was a NASA Moon mission famous for being a "successful failure" in 1970.

## **In sports**

The number 13 was not used in the Indianapolis 500 from 1915 to 2002. It was not permitted for use between 1926 and 2002. In 2009, E. J. Viso, driving for HVM Racing in the 2009 IndyCar Series season, drove a green number 13 car full-time, despite terrible superstitions about it in motorsports.

The number 13 was not used in Formula One from 1977 to 2013.

### **In rugby league:**

Each side has 13 players on the field at any given time.

The jersey number 13 is worn by the starting loose forward in most competitions.

In triathlon, the number 13 is not used. As such, the numbering goes 11, 12, 14, 15 under the current numbering system.

Effective with the 2020 season, Major League Baseball teams are allowed no more than 13 pitchers on their active rosters at any time during the season. The main exception is from September 1 to the end of the regular season, when this number increases to 14.

In NCAA Division I men's college basketball, teams are allowed to provide scholarships to no more than 13 players at any given time.

## **Other**

In The Hobbit, the Company of Thorin Oakenshield consists of 13 Dwarves trying to reclaim their homeland from the dragon Smaug (Thorin Oakenshield, Fili, Kíli, Óin, Glóin, Balin, Dwalin, Bifur, Bofur, Bombur, Dori, Nori and Ori).