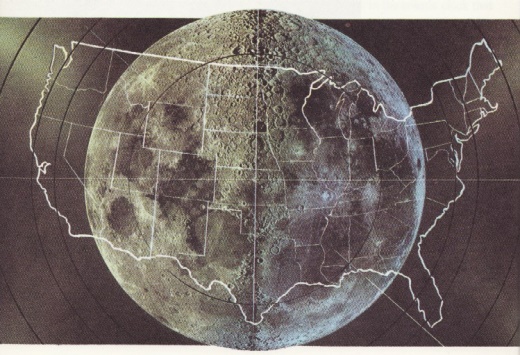
Fun Facts:

**MOON**

* **Fun Little Tidbits:**
  + In a survey conducted in 1988, 13% of those surveyed believed that the moon is made of cheese.
  + It is possible to have a month without a full moon. It would have to occur in February, but then either January or March would have two full moons.
  + In China, the dark shadows that are on the moon are called "the toad in the moon".
  + Due to the Moon’s rotation & orbit around earth being identical, the same side of the moon always faces the earth. From Earth, we have ever only seen 59% of the moon’s surface.
    - The dark side of the moon is a myth however. In reality both sides of the Moon see the same amount of sunlight however only one face of the Moon is ever seen from Earth. The side facing away from Earth has only been seen by the human eye from spacecraft.
  + When a month has two full moons, the second full moon is called a [blue moon](http://www.moonconnection.com/blue_moon.phtml).
  + The moon is the only extraterrestrial body that has ever been visited by humans.
  + The Moon is the reason that we have tides.
  + The moon has no global magnetic field, so a compass would be worthless on its surface.
  + The moon has no atmosphere. This means that the surface of the Moon is unprotected from cosmic rays, meteorites and solar winds, and has huge temperature variations. The lack of atmosphere means no sound can be heard on the Moon, and the sky always appears black.
  + The Moon has quakes. These are caused by the gravitational pull of the Earth. Lunar astronauts used seismographs on their visits to the Moon, and found that small moonquakes occurred several kilometres beneath the surface, causing ruptures and cracks. Scientists think the Moon has a molten core, just like Earth.
  + A lunar eclipse occurs when the Earth is between the [Sun](http://www.sciencekids.co.nz/sciencefacts/space/sun.html) and the Moon.
  + The phases of the Moon are: New Moon, Crescent, First Quarter, Waxing Gibbous, Full Moon, Waning Gibbous, Last Quarter, Crescent, New Moon.
* **Facts, Figures & Characteristics:**
  + Diameter is 2,159 miles (Kansas is 400 x 200 miles)
  + Orbit Distance is 238,855 miles
  + Orbit Period is 27.3 days
  + Surface Temperature ranges between -387⁰ to 253⁰ F
  + The surface area of the Moon is 14,658,000 square miles or 9.4 billion acres
  + The Moon rotates at 10 miles per hour compared to the Earth's rotation of 1000 miles per hour.
  + The smooth parts are called “maria”, which is Latin for “seas.”
    - A mare is formed when:
      * There is in impact from an asteroid, forming a crater.
      * The impact cracks the underlying rock layers.
      * Hundreds of millions of years later, magma travels up the fractures, filling in the crater basin with basalt, smoothing it out. Basalt is a very dense material.
    - There are very little maria on the far side of the Moon…but we don’t really know why that is.
  + The Moon's diameter is about 1/4 the diameter of the Earth. About 49 moons would fit inside the Earth.
  + The Moon is drifting away from the Earth. The Moon is moving approximately 3.8 cm away from our planet every year. It is estimated that it will continue to do so for around 50 billion years. By the time that happens, the Moon will be taking around 47 days to orbit the Earth instead of the current 27.3 days.
  + A person would weigh much less on the Moon. The Moon has much weaker gravity than Earth, due to its smaller mass, so you would weigh about one sixth (16.5%) of your weight on Earth. This is why the lunar astronauts could leap and bound so high in the air.
  + Mons Huygens is the tallest mountain on the Moon, it is 4700 metres tall (15,419 ft), just over half the height of Mt Everest (8848m or 29,000ft).
  + The Moon is the fifth largest natural satellite in the Solar System. Biggest to smallest objects:
    - Ganymede (Jupiter)
    - Titan (Saturn)
    - Mercury
    - Callisto (Jupiter)
    - Io (Jupiter)
    - Moon (Earth)
    - Europa (Jupiter)
    - Triton (Neptune)
    - Pluto
* **Explorations:**
  + **Luna Missions (Soviets):**
    - **Luna 1** – January 1959 - The first spacecraft to kind of reach the Moon. This was a Soviet craft, which was launched from the USSR. It passed within 3,700 miles of the surface of the Moon before going into orbit around the Sun.
    - **Luna 2** – September 1959 – First manmade object to hit the Moon’s surface. It crashed into it.
    - **Luna 3** – October 1959 – The first photos of the far side of the Moon were taken.
    - **Luna 9** – February 1966 – The first unmanned craft to make a soft landing on the Moon. It sent back 5 black & white panoramic pictures of the Moon’s surface.
    - **Luna 15** – July 1969 – Crash landed into the Moon at the same time Neil Armstrong & Buzz Aldrin were on the Moon’s surface.
    - **Luna 16** (1970), **20** (1972) & **24** (1976) brought back samples of lunar soil…about ¾ of a pound total.
  + **Apollo Missions:**
    - **Apollo 8** – December 1968 – First humans to see the far side of the Moon.
    - **Apollo 11** – July 20, 1969 – Neil Armstrong becomes first human to set foot on the Moon. Buzz Aldrin soon joined him. They landed in the Sea of Tranquility. Michael Collins stayed in the orbiter. They only had 20 seconds of fuel left when they landed on the Moon…cutting it pretty close.
      * Armstrong’s first words were famously, “One small step for (a) man, one giant leap for mankind.” The “a” wasn’t picked up in the broadcast, but modern audio analysis has proven he did say it. There is some debate about whether he ad-libbed this famous line or had it pre-planned.
    - **Apollo 12** – November 1969 – landed in the Oceans of Storms and picked up pieces of the Surveyor 3 probe.
    - **Apollo 13** – Never landed on the Moon due to mechanical failures.
    - **Apollo 14** – January 1971 – Landed in Fra Mauro, where Apollo 13 was supposed to land. They sent back the first color video images of the Moon’s surface. This is also when Alan Sheppard hit is golf ball over 2,400 ft, nearly ½ mile.
    - **Apollo 15** – July 1971 – Stayed on Moon for 3 days and were the first to use the Lunar Rover Vehicle. They drove about 17 miles away from camp with a top speed of 10.5mph.
    - **Apollo 16** – April 1972
    - **Apollo 17** – December 1972 – Last manned mission to the Moon. Eugene Cernan becomes the last human to leave a footprint on the Moon.
  + **Notes about missions:**
    - The Moon has only been walked on by 12 people; all American males.
    - The multi-layer space suits worn by the astronauts to the Moon weighed 180 pounds on earth, but thirty pounds on the Moon due to the lower gravity.
    - The Apollo missions brought back 2196 rock samples weighing about 840 lbs. in total.