

# EARTHOTERIC™

YOUR EARTH - YOUR MUSIC - OUR PLEASURE

<https://earthoteric.com/>

**December 2018**

## In this Issue...

**December Moon Calendar**

**What is a star?**

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**What is STEM?**

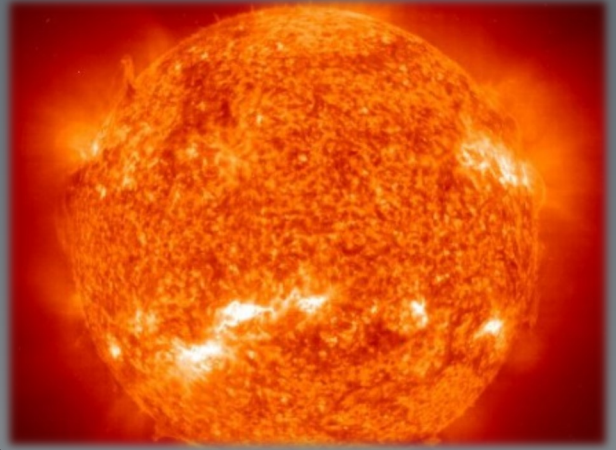
**ISS; 20 years in space**

**Did you know?**

December 2018						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
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2 	3 	4 	5 	6 	7 	8 
9 	10 	11 	12 	13 	14 	15 
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## Our Story

Earthoteric is the first American space & music television show for kids & adults alike. Our program shows stunning views of our amazing Earth, universe and our future in space, coupled with music from known and not so known artists. Whether from a cable network or from your computer, Earthoteric brings, "Your Earth, Your Music, Our Pleasure." Watch and chill out to some of the best music in the universe.



Credit: NASA

## Fun Fact; What is a Star?

A star is a luminous ball of gas, mostly hydrogen and helium, held together by its own gravity. Nuclear fusion reactions in its core support the star against gravity and produce photons and heat, as well as small amounts of heavier elements. The Sun is the closest star to Earth. According to current star formation theory, stars are born as clumps within gigantic gas clouds that collapse in on themselves. The cloud's material heats up as it falls inward under the force of its own gravity.

When the gas reaches about 10 million K (18 million °F), hydrogen nuclei begin to fuse into helium nuclei, and the star is born. Energy from nuclear fusion radiates outward from the center of the burgeoning star, and gradually halts the gas cloud's collapse.

<https://www.skyandtelescope.com/astronomy-resources/what-is-a-star/>

### Rise and Shine!

Astronauts Get Wake up Music In Space



<https://curiosity.com/topics/rise-and-shine-astronauts-get-wake-up-music-in-space-curiosity/>

### Eye to Universe, Universe to Eye

Check out this mind—blowing video ! It starts with the close up of the human eye, then zooms out into the sky, past the outer planets, past Voyager 1, past the outer Oort Cloud, into and out of our galaxy; The Milky Way, to the Uniform Universe. As it zooms back to the eye, the video goes beyond and into the workings of the eye; the pupil, retina, blood cells, chromosomes, all the way to the protons and neurons in an atom.

Follow the link here!

<https://youtu.be/CWGW02thgqw>





## NASA Astronaut Scott Kelly



One of many beautiful photos Kelly had taken on the ISS during his year in space.

American Astronaut, Scott Kelly was born on February 21, 1964 in Orange, New Jersey. After graduating high school in 1982, he went on to earn his bachelor's degree of Science in Electrical Engineering from the University of New York Maritime College in 1997. Kelly then earned his Master's of Science in Aviation Systems from the University of Tennessee Space Institute in 1996.

After graduating from UT, Kelly was selected by NASA and has spent 520 days in space on four different missions until he retired in 2016. He served as Space Shuttle Pilot on STS—103 in 1999, Mission Commander on STS—118 in 2007, Commander of Soyuz TMA—M Space Craft in 2010, and his last flight in 2016.

His last mission was a year long; from 2015 to 2016 on the International Space Station, (ISS). His research goal was to study how the human body adapts to environments in space. There were almost 400 experiments conducted on the ISS. The data collected will help NASA learn to reduce health risks for future crew members, as they want to send them further than Earth's lowest orbit.

Bio and photos from NASA

**7**  
**S**  
**Science**  
both a body of knowledge and a process for acquiring that knowledge, known as the scientific method

/ˈsiəns/  
from Latin *scientia*  
meaning "knowledge"

**10**  
**T**  
**Technology**  
the application of scientific knowledge for practical purposes

/tekˈnələʒi/  
from Greek *tekhnologia*  
meaning "systematic treatment"

**11**  
**E**  
**Engineering**  
the action of working artfully to bring something about

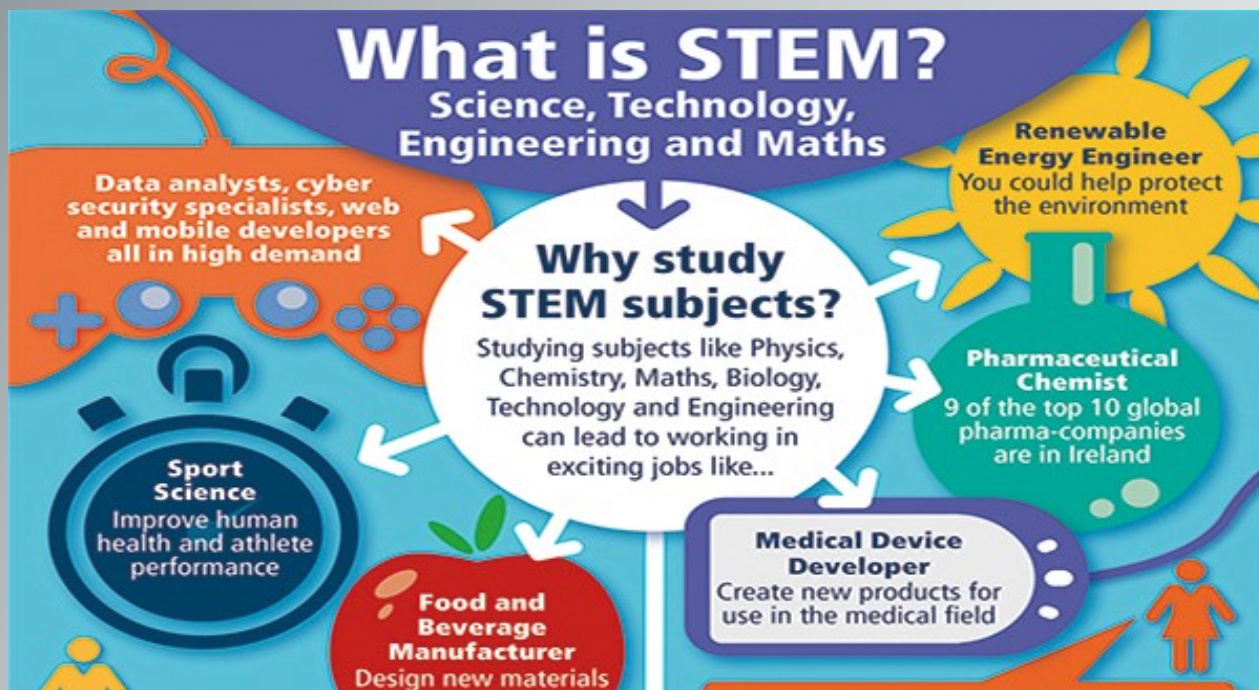
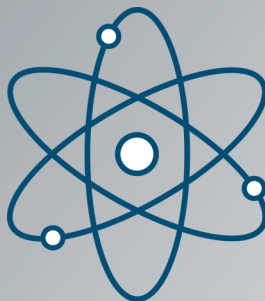
/enjəˈni(ə)rɪŋ/  
from Latin *ingeniare*  
meaning "conceive, devise"

**11**  
**M**  
**Mathematics**  
the abstract science of number, quantity, and space

/maTH(ə)ˈmatiks/  
from Greek *mathēmatikē*  
meaning "learn"

STEM jobs will expand to more than 9 million by 2022 and are often thought of as high-tech and unrealistic to obtain. Surprisingly though, most jobs in STEM related fields are very diverse because these principles are more commonly used than people realize. Just a few of many jobs in STEM are; a geographer, scientists in materials and forensics, computer support and systems, biomedical and mechanical engineer, and even psychologists. In most of these jobs, a bachelor's degree is sufficient to start a career but a master's or PhD is sure to help even more. Salaries range from 52K to 100K a year. Because of the popularity and necessity of STEM jobs; industry, commercial, and government are expanding and adapting to fit the needs of the highly demanded STEM jobs.

<https://www.bestcollegereviews.org/features/top-30-stem-jobs/> ; <https://www.mindresearch.org/stem-education?>





# ISS; 20 Years in Space

Nov. 20, 2018



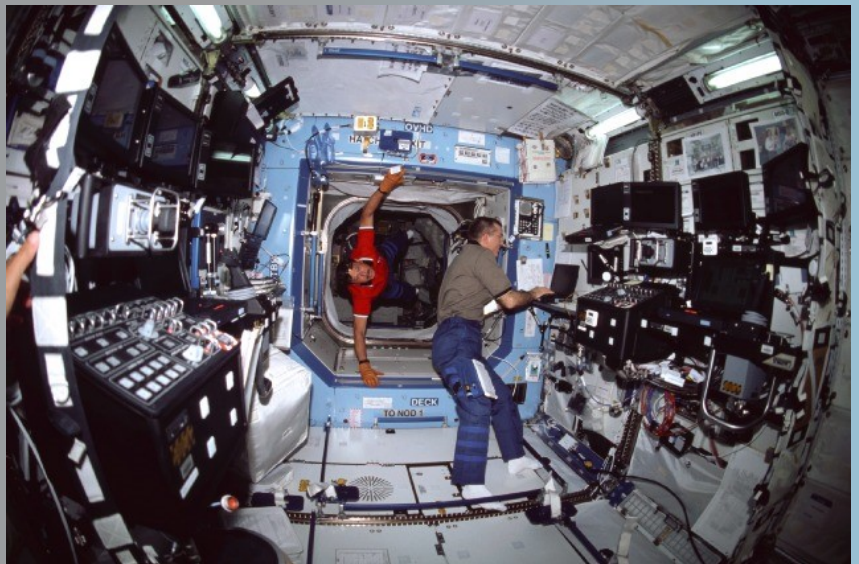
The crew of Soyuz MS-08 Spacecraft took this image of the International Space Station in October of 2018 by Russian Space Agency Roscosmos to celebrate the 20th anniversary. Credit: Roscosmos/NASA/[Flickr](#)

**Science and engineering collaboration reached new heights  
to make the dream of the ISS a reality.**

- \* 10 years and 30 missions to assemble
- \* Size of a football field weighing 460 tons
- \* 240 miles above Earth
- \* 1st segment launch—Nov. 20, 1998
- \* 1st crew to stay—Nov. 2, 2000
- \* U.S. lab added—Feb. 7, 2001
- \* European lab added—Feb. 7, 2001
- \* Japanese lab March 11, 2008

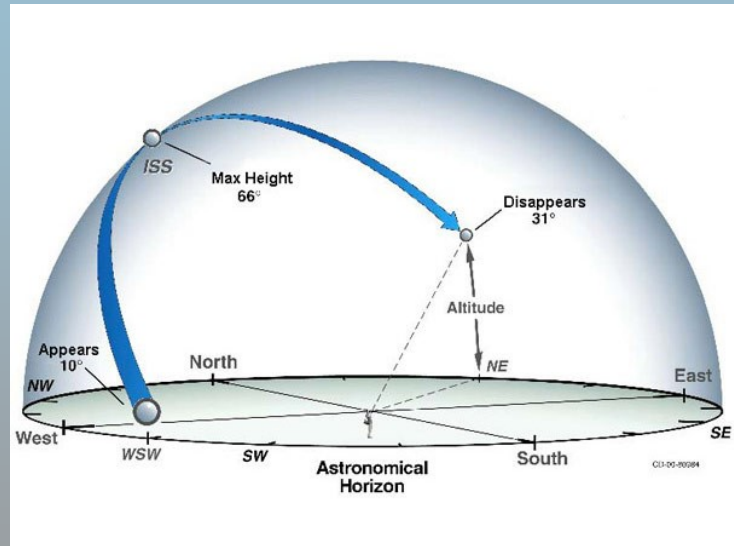
Can be seen in over 6,700 locations

<https://www.iss-casis.org/about/iss-timeline/>





The International Space Station can be seen in over 6,700 locations!



The ISS is the 3rd brightest object in the sky....if you know where to look.

Go to; <https://spotthestation.nasa.gov/> to see when the Space station will be in your view! Just type in your location and a schedule will pop up with the dates you can view the station in your town! From Earth, it looks like a plane flying fast but is traveling much faster and thousands of miles an hour faster. The space station is used for research, in science and engineering, and is beneficial for life on Earth and for future exploration.

## Did you Know?

### Space is Completely Silent.

There is no atmosphere in space, which means that sound has no medium or way to travel to be heard. Astronauts use radios to communicate while in space, since radio waves can still be sent and received.

### There is Floating Water in Space

Astronomers have found a massive water vapor cloud which holds 140 trillion times the mass of water in Earth's oceans somewhere around 10 billion light years away—making it the largest discovery of water ever found.

<https://theplanets.org/space-facts/>





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Earthoteric is now on Amazon Prime!!

Stay tuned for more space news!

Press Secretary; Meghan Morris

November 27, 2018