

## GLOBAL FRIENDSHIP THROUGH SPACE EDUCATION

Year 08 - Vol. 03 - January 15, 2015

# ASTRO NEWSLETTER

## Digital Learning Center -

### Ready for First Round of Videoconferences

Now that all of the construction, expansion, and renovations are complete for 2014 - its back to business with a brand new vibe and feel at Space Camp Turkey and GFTSE. We are very excited about our upcoming videoconference season with our veteran PSSP Partner Schools and our newcomers in the Future Explorers Program. There is a lot of space out there to teach about, but space on our videoconference calendar is quickly filling up. As we brace ourselves to take on our busiest videoconference season we have ever had here at GFTSE, we stand ready, refreshed and highly motivated - looking forward towards all of the new opportunities and new partners that are surfacing weekly.

Joe Payne our new Distance Learning Specialist says best, "We have been working hard and really coming together as a dynamic and very capable team." He continued, "All of this hard work, working weekends and long hours is beginning to pay off... I feel like we are more than prepared and I can't wait to begin really working with children again, they are my entire motivation for waking up at 5:15am every morning, to come here to bring smiles to their faces and see the excitement in their eyes."

Be sure to become a part of the exciting things we have going on here at GFTSE and Space Camp Turkey. We are waiting for you to schedule your videoconferences today!

**Below: Kepler Space Telescope** - The "Exoplanet Hunter" in all its full glory! This is the most powerful "photometer" ever sent to space. It can detect slight differences in light outputs, allowing the telescope to be able to detect the shadows of Exoplanets thousands of light-years away as they cross in front of their host star.



## Search for Earth-like Exoplanets With the Kepler Space Telescope

What Sounds like something out of a Sci-fi movie, is more real than you can ever imagine. The word **Exoplanet** comes from Extra Solar Planet, which means a planet orbiting a star outside of our own Solar System. Of course there are countless numbers of Exoplanets out there in the universe - actually there are more planets in the universe than the number of words or sounds that have been made by human beings during the whole time of our existence on Earth. This intriguing fact leaves us with the question, could there be another planet just like Earth out there? If not already hosting intelligent life - would it be possible for humans to eventually live on this other "Earth"? Questions such as these have been asked by Scientists and space enthusiasts alike since the early days of Astronomy, **hundreds of years ago**.

### KEPLER SPACE TELESCOPE - 1000 EARTH'S LATER

Named after the 16th Century German Astronomer Johannes Kepler and launched in 2009, the Kepler Space Telescope verified its 1000th **Earth-like Exoplanet** orbiting a star the first week of January 2015. What we mean by Earth-like is the Exoplanet orbits it's star in a region of that star's system known as the **habitable-zone** or "Goldie-Locks" zone. This is the area where the planet is believed to be warm enough and close enough to the star, that water is not frozen - yet far enough away that not all of that liquid water would be vaporized and turned to gas. (cont. next page)

(continued from previous) Since all life that we know of, depends on water to stay alive - NASA Scientists think its pretty safe to start looking for life on other planets where liquid water could possibly exist. [The Kepler Space Telescope's Mission](#) is doing just that, the 0.95 Meter Diameter Telescope has a very [large field of view](#) of the Milky Way Galaxy - approximately the same as if you held your hand open at arm's length and held it up to the sky. With this large "window" to look through and a very sensitive photometer at its core, the Kepler Space Telescope will hopefully be operating for years to come and discover thousands of new Earth-like Exoplanets in our Milky Way Galaxy!

Stay up-to-date with exciting Kepler Space Telescope News by clicking on this link from NASA's Ames Research Center's Official Website: <http://kepler.nasa.gov> Also - Please click on this **Amazing Link to Show you how big our Solar System really is:** <http://www.bbc.com/future/ bespoke/20140304-how-big-is-space-interactive/index.html>



[Click Here](#) to Turn Above Graphic Into Interactive Activity Explaining How Kepler Telescope Finds Exoplanets



## CALLING ALL STARS!!

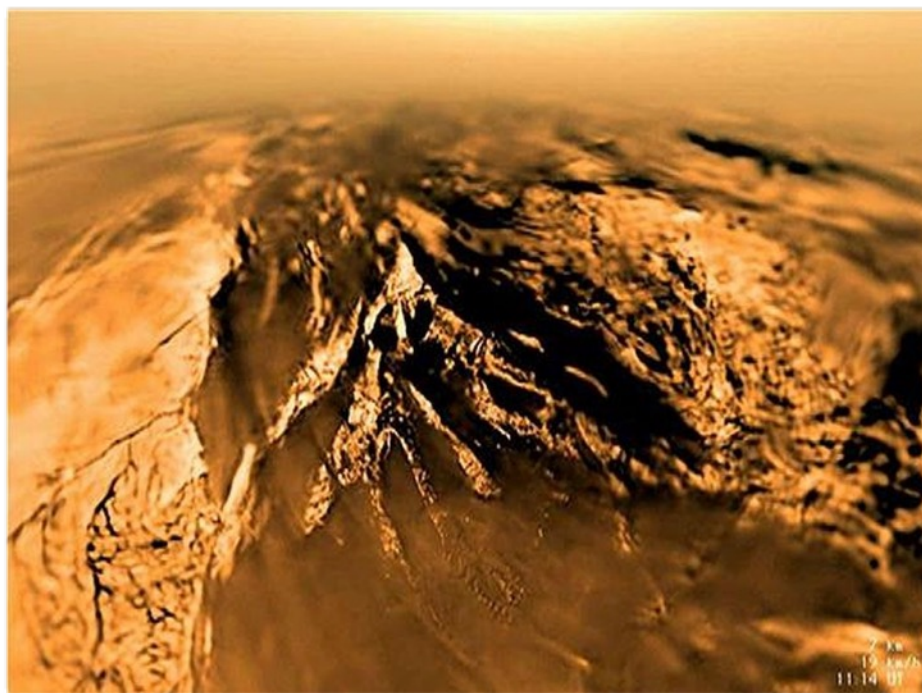
We want to see what you're **TEAM** is made of!  
Please Email us a photo of your Team (School) working on your **PSSP or FEP Projects - The Photo That Best Represents Teamwork Will Be Published in our Astro Newsletter in Mid-March.**

Deadline for Submission is **February 15, 2015.**  
Email Address: [jpayne@spacecampturkey.com](mailto:jpayne@spacecampturkey.com)

**Please Submit Photo With the Phrase - "FRIENDSHIP STARS PHOTO CONTEST" in the Subject Line of the Email**

**Also**

Be Sure to Write a Brief One Paragraph Explanation of the Picture - **Include, School's Name and City/Country Etc.**



### Photo of the Week -

One decade ago - on January 14, 2005 - The Huygens Probe (Part of the [Cassini/Huygens Mission](#) to Saturn) landed on Saturn's largest moon Titan and snapped this photo just before landing on the surface. This was the first probe to ever land on a moon in the outer planets - as Titan is an amazing 1.2 Billion Kilometers from Earth! Titan was also once thought to be the most Earth-like object in our Solar System, because of size, atmosphere, and evidence of running liquids on the surface - this theory has been proven false because of the probe Huygens and it's sister orbiting satellite Cassini sending data and photos back from the other side of the Solar System!