



CENTI ASTRO-SPACE ACTIVITIES

Christopher S. Centi, "C the Rocket Man"

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Brocton, New York 14716

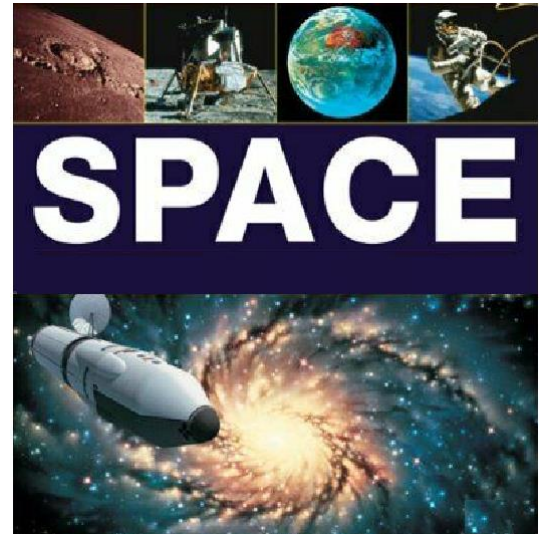
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STARS & SPACE FOR INDIVIDUALS, EDUCATIONAL GROUPS, ORGANIZATIONS

Stars & Space for Individuals, Educational Groups, Organizations is a series of space science courses, webinars and workshops for people of all ages. They are offered using an online format exploring Astronomy and Space Science concepts. Participants are engaged in hands-on sensory activities that takes them on a journey throughout the solar system and beyond. Individuals can register for scheduled courses using the **REGISTRATION** page on our website. You can find out what courses are available and when by visiting the **COURSES** page. Groups and organizations with interested students can request courses which would be **tailored** to the **needs** of the facility. **RESEARCH SHOWS** that when individuals exercise both their hands and minds, they are also developing critical problem-solving skills that benefit them for life. Educational programming that CASA offers are aligned with **STEAM - Science, Technology, Engineering, Art and Math** and are developed by Chris Centi, also known as "**C the Rocket Man**". New events occur daily, so they are updated on a regular basis. Offering these programs help in the development of positive attitudes about science, math and non-science subjects.



SOURCE: Exploring Science: SPACE An Amazing Fact File and Hands-On Project Book by Ian Graham, Geriant H. Jones M.D.

"There is No Limit to what Humans Can Do! We Went to the Moon, We Will Go Again, Then Onward to Mars and Beyond, In Our Quest to Reach for the Stars"

Eight Space Science Themes

- SURFIN' and ROCKIN' 'ROUND THE SUN
 - LUNAR MYSTERIES
 - DESTINATION MARS
 - LIFT OFF!
- EXPLORIN' SPACE 'n BEYOND
 - CRUISIN' THE COSMOS
 - EXOPLANETS 'n the SEARCH for LIFE ELSEWHERE
 - RISING STARGIRLS

"Chris came in to perform and present his fun and thrilling activities with our residents. Some of these activities included the following: Jump Height on the Moon, Balloons Away, Fizz Rocket, What is Life Discussion, and Balloon Straw Rocket. Each activity was enjoyed thoroughly by our residents and was presented with much passion and excitement. Our residents enjoyed his presentations and have asked that he comes back to do more!"

Marissa Cussins
STEL Residential Manager

COURSES & WEBINARS

Astronomy & Space Exploration is the basis for a series of space science **courses** and **webinars** for individuals of all ages, educational facilities and organizations. They explore astronomy and space science concepts using hands-on/sensory activities which takes participants on a journey as they learn about the solar system, rockets, the universe and the possibility of life elsewhere. **Courses** and **webinars** are based on the **8 Space Science Themes** listed on page 1.



Courses and **webinars** are offered **online** so they can be taken from the comfort of your own home or within an organization's facility. They can be implemented into school and afterschool programs. Included are hands-on activities, lessons and videos reinforcing important concepts. **Courses** run for **six sessions** with a variety of topics available. A typical **webinar (short course)** runs for **one session**. They are also grouped into **six sessions** with a common theme.

The **six session webinars** include "**Cosmic Tidbits**" and "**Space Science Spinoffs**". Each session module is about **30 - 45 minutes** in length and are structured in a flexible manner. Students can work individually, with a friend, a family member or a group of friends and family. To find out about current and future courses visit the **COURSES** page of our website. **Courses, Webinars and Workshops (see next page)** are available for a variety of settings, listed below, anytime during the year for:

- **General Public**
- **Schools (Public, Charter, Parochial)**
- **Home Schoolers**
- **Continuing Education Programs**
- **Kids College**
- **After School Programs**
- **Youth Groups / Camps**
- **Boys & Girls Clubs**
- **YMCA / YWCA Programs**
- **Scout Groups**
- **Recreation & Playground Programs**
- **Summer / Winter Camps**
- **Libraries**
- **Adult Groups**
- **Adult day Care**
- **Assisted Care Facilities**
- **Correctional Facilities**
- **Community Events**
- **Museums**
- **Science Centers**
- **Observatories**
- **Planetariums**

"Being able to have Christopher "C the Rocket Man" Centi talk with my students was a great experience. The students were able to ask questions and learn about space from a professional which was the highlight of the unit."

Patrick Goff, 8th Grade Science Teacher
Beumont Middle School

WORKSHOPS

The **8 Space Science Themed Courses and Webinars** are also offered as more extensive **Workshops**. They are available for **10 Sessions (60 Minutes per Session)**. The first **7 workshops** were developed by **CASA** and the **8th** was developed by an Astrophysicist in California. These workshops cover specifics and are ideal for participants who want to delve into the subject matter deeper and for teachers, informal educators, etc. who will use it to educate and motivate their students. Each of the workshops Include a workbook with all the information that will be covered including hands-on activities, videos, roll playing, theater exercises, journaling and kinesthetic activities.

SURFIN' and ROCKIN' 'ROUND THE SUN The solar system is the main area



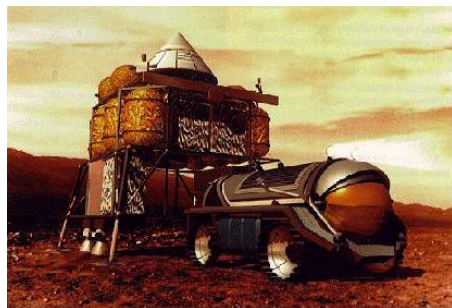
of emphasis involving size, distance and characteristics of the Sun, planets, dwarf planets, asteroids and comets. Participants will begin to understand and appreciate the inter-workings of all the components that make up our solar system family. We will also delve into the many space craft that have sent back information which led scientists to answer many questions and come up with more.

LUNAR MYSTERIES The Moon has

fascinated people of different races and cultures for many centuries. During that time many myths arose. As time went on it began to be studied scientifically and questions about the origin and characteristics began to be answered. When humans landed and were able to bring back lunar samples more questions were answered along with new questions. This workshop will give participants a better understanding of the relationship between the Earth and Moon. Plans to go back to set up outposts and study it will prepare for further exploration beyond.



DESTINATION MARS Mars just like the Moon has fascinated different races and



cultures. It was once thought to be inhabited by intelligent beings. In fact, Giovanni Schiaparelli, an astronomer studied Mars and thought he observed canals. He called them "**canali**" which he felt was indicative of something intelligent there. Further studies proved that these were not canals, but dust features that change over time. Participants will be involved with the mythology behind Mars and the current understanding of this fascinating planet. The culminating activity will be the building of a miniature Mars habitation depicting what it would take to live and work there.

LIFT OFF! How does one get into outer space? Rockets of

course! Do you understand the principles behind how a rocket works and gets astronauts to the International Space Station? What about getting probes to other parts of the solar system? Participants will learn these principles and build various types of rockets. We will also discuss the many types of propulsion, the future of rocketry and advanced propulsion which will get us to destinations faster and eventually to other star systems.



EXPLORIN' SPACE 'n BEYOND



Space exploration has been the result of hard work and determination. During the Cold War between the United States and the Soviet Union there was a space race that the United States won by landing the first humans on the Moon. The exploration of space is currently done mostly with robotic craft, but this is setting the stage for humans to venture back to the Moon, then Mars and beyond. Participants will learn about past exploration, what we have achieved and the future of space travel.

CRUISIN' THE COSMOS

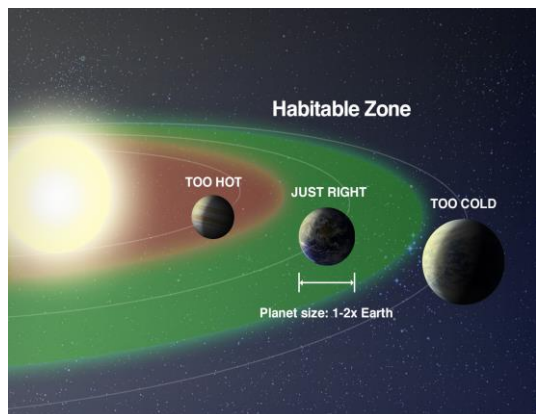
The cosmos encompasses everything in the Universe. From stars to black holes, from galaxies to super galaxies and everything in between. Participants will begin to understand the vastness and how we as humans are but a speck in the scheme of things. It is hoped by the end of this workshop that an appreciation will be developed regarding the intrinsic value in studying the components of the universe. An understanding of the universe will bring humans closer to appreciating our place in it.



Witch's Broom Nebula Black Mountain Lemmon Sky Center/University of Arizona

EXOPLANETS 'n the SEARCH for LIFE ELSEWHERE

Are we alone in this vast sea of stars and galaxies? This has been a question we have been trying to answer, but still no conclusive evidence. Some say we are alone. Others say the universe is teeming with life. Although through SETI the SEARCH for EXTRATERRESTRIAL INTELLIGENCE there have been no intelligent signals from other civilizations. This does not mean they don't exist. Or maybe we need a different method of trying to detect signals. Another question is, are the life forms of a lower form that can't communicate with us? Through the discovery of other planets, there has been a renewed passion to find out the haunting question. **Are we alone?** We are on the threshold of finding other life elsewhere. Will it be microbial organisms under the surface of Mars? Or on some of the moons of Jupiter? Maybe some of the moons of Saturn? And beyond this we may be very close to finding possible signs of intelligent life on some of the planets orbiting other stars.



RISING STARGIRLS

Rising Stargirls, was created by Dr. Aomawa Shields Founder and Director of the Rising Stargirls organization. She is also an Astrophysicist at the University of California in Irvine and a former TED Talk Speaker. Dr. Shields is committed to the idea that **there is no one way to be a scientist**. The emphasis is on involving middle-school girls of color, Hispanic or other minority populations, ages 10-15. By integrating creative strategies such as free writing, visual arts, roll playing and theater exercises, a new, innovative astronomy curriculum that addresses each girl as a whole person provides an avenue for individual self-expression and personal exploration. This is interwoven with scientific engagement and discovery. Many of the activities come from other programs and are reprinted in the accompanying workbook with permission from those programs. Others were created by the Rising Stargirls organization. Although this workshop was created for middle-school girls, ages 10-15 it can also be adapted for the male population, high school age students and educators. Educators can then bring it into their classroom.



Stars & Space **UNCORKED** and on **TAP**

▶ ▶ ▶ Space Science Program for Adults ◀ ◀ ◀

Children and teenagers aren't the only ones who can benefit from Space Science Education. Andy Newman, professor of Astronomy Education and Engagement at the Astrophysics Research Institute says, "Anyone who wants to learn should be able to, and anything we can do to make that happen is important."

Probably the biggest influence on children and teenagers are their family and relatives. So, if we can get them interested in science it may have an important impact on children to become excited about science.

Although outreach to adults has occurred in libraries, museums, schools and other places it was found that the adult market still hadn't been successfully tapped into. In the past few years new and interesting attempts have been made to create something more adult friendly. These have been highly successful.

These new attempts, to reach adults, have emerged in several of the larger cities from New York City to Seattle and worldwide. One of the ways is through Science Cafes, which are presentations on different areas of science. The unique aspect here is that they are offered at establishments that serve beer, cocktails and/or wine. Specifically, Astronomy and Space Exploration presentations, for adults, has become very popular within these establishments as well. The benefit of doing presentations within a bar or pub is because of the more relaxed and casual atmosphere where learning is fun and interactive.

Therefore, if it has been successful in a bar and pub-setting, it would be equally successful for microbreweries and wineries.

Stars and Space UNCORKED and on TAP offers mature audiences the chance to become involved with accessible and fun presentations in various areas of Astronomy and Space Exploration. Typically, they are **90 minutes** in length, presented by "**C the Rocket Man**". Topics are based on the **8 Space Science Themes** listed on the first page. These presentations are interspersed with a take home activity which is either a painting of planets or something else galactic, hands-on activities, Space Science scavenger hunts & trivia and videos. Its uniqueness is that the presentations are done at **wineries** where the audience taste their favorite wines and in **microbreweries** over a bottle or glass of beer.



One might ask, **Why offer Astronomy and Space Exploration at these establishments?** As stated above, Astronomy and Space Exploration presentations, for adults, has become very popular within bars and pubs and have spread across the nation and worldwide. The atmosphere is more relaxed and conducive to learning while having fun. In the planetarium field a term is often used called "**edutainment**", which is a combination of education and entertainment to attract and enhance learning.

Another reason which many people don't realize, is that NASA has been working with companies that produce and sell wine and beer. A wine glass has been developed that works in microgravity. As we venture further outside our home planet and humans begin settling other celestial bodies, they will want the comforts of home. Research is currently being done to learn the conditions and what is needed to manufacture these beverages elsewhere. Also, the space theme is common at many wineries and microbreweries across the globe. Many beers and wines have been named after planets and other celestial objects.



WHO IS "C the ROCKET MAN"?

Christopher (Chris) Centi, also known as "**C the Rocket Man**", is on a continuing mission to motivate and excite kids and adults about the cool wonders of science. He uses **Astronomy, Space Exploration** and **hands-on sensory interactions**. For over 37 years, Chris has presented entertaining, educational and empowering space science programs to diverse audiences ranging from ages 5 to 95.



Chris has also presented workshops and in-services for teachers, other professionals and parents. As a speaker, author and science advocate, Chris weaves his hands-on approach and interaction with audiences into a presentation encouraging an appreciation of the importance of science, its usefulness in everyday life and Outer Space as one of our new frontiers.

Chris is an Astronomy & Space Science Educator and CEO of Centi Astro-Space Activities (**CASA**). In 1985 he formed CASA to help improve science literacy. He was instrumental in developing and building the planetarium for the Lucile M. Wright Air Museum in Jamestown, NY. and served as the Planetarium Director and Space Science Coordinator from November 2012 to December 2016.

"I visited the planetarium exhibit when I was in elementary and it really excited my curiosity about space. There is so much left to explore and exhibits like this one can inspire future generations to be the next astro-enthusiasts."- Sophia C.

"I took my daughter to the planetarium exhibit when it was housed at the Lucille Wright Air Museum because I saw how curious my daughter was about space and our solar system. She enjoyed the experience very much My daughter is still interested in science fields and looks to the night sky with great interest. I would recommend the programs to anyone who wants an accessible means to have a greater understanding of our solar system."- Laura S.

Chris has many research interests which include studying exoplanets and the search for life elsewhere, Mars exploration, categorizing and researching various projects for Zooniverse, psychological implications of long-term space travel, and developing useful hands-on activities to teach science. He is an author of various articles and actively gives hands-on presentations to civic/social organizations and other groups. All programs and courses are offered online. Stars and Space UNCORKED and on TAP is available in person.

Using the hands-on approach, Chris has taught various kids college courses in Astronomy and Space Science at Jamestown Community College, SUNY Fredonia and Penn State Behrend College. He has also appeared on TV advocating hands-on science with appearances on WKBW-TV's AM Buffalo in Buffalo, NY, WICU-TV's Evening News Eye on Education and WSEE News in Erie, PA and Cable 8 in Jamestown, NY.

**LET'S DISCUSS YOUR NEEDS!
LET'S WORK TOGETHER!
and ANSWER ANY QUESTIONS!**

"Chris was such a help to my middle school students! He was able to answer all of their questions in great detail and with clear enthusiasm."

*Marcy Hartzler, Middle School Teacher
ZQuest Public Schools*



CONTACT:

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YOU CAN ALSO FIND CASA ON SOCIAL MEDIA



On my Website



"COSMIC DIMENSIONS"
Monthly Newsletter



THANK YOU FOR YOUR TIME!