

Thomas Foltz

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Summary:

Creative and detail-oriented Education program leader with a demonstrated history in education, content creation and executive-level management. Previous experience includes all aspects of informal STEM education, including Executive Director of all four DoD STARBASE Academies across the state of Indiana, Education Director at Science Central, Space Camp counselor, and Challenger Center Lead Flight Director. Tech-savvy and proficient in many software packages including Microsoft Office Suite, Google Suite, CAD (Creo and OnShape) and Adobe Creative Cloud. Educational background in Planetary Geology and Astrobiology, and freelance graphic artist.

Work Experience:

NearSpace Education, 79 Railroad St., Upland, IN 46989

Director of Education and Training: April 2024 - present

Duties, Accomplishments and Related Skills:

- Oversee the creation of engaging instructional materials, resources, programs, and assessments to support curriculum delivery for small satellite and high-altitude balloon educational programs.
- Conduct regular reviews and updates of curriculum content to reflect advancements in educational research and emerging trends.
- Provide professional development for teachers and other individuals to properly implement satellite and balloon programs.
- Design and run summer space camps and space clubs that meet throughout the year
- Identify and evaluate new technologies and resources that should be included in NSE's curriculum.
- Help design and then run the Makerspace in the new NSE office space.
- Develop grant proposals, applications, and supporting documents in collaboration with program staff and stakeholders. Current grant proposals with NASA, the National Science Foundation, the US Department of Education and other groups total over \$8 million. Serve as Principal Investigator or Key Staff as necessary.
- Represent NSE at conferences and network with other education stakeholders.

International Institute for Astronautical Sciences, 1830 22nd St., Suite 6, Boulder, CO

IIAS student & Graphic Designer (volunteer): May 2016 – present

Duties, Accomplishments and Related Skills:

- Training in the IIAS/Project PoSSUM Scientist-Astronaut Qualification program, including high-, low- and negative-g aerobatic flights, hypobaric chamber conditioning and spacesuit and simulator training – Class 1601
- PADI Open Water SCUBA certification
- Flying in a microgravity spacesuit testing program with Final Frontier Design, Project PoSSUM and the Canadian National Research Council
- Organizing educational outreach initiatives including a high-altitude balloon flight with Possum13
- Designed the official mission patch for IIAS-01, Kellie Gerardi's spaceflight on Virgin Galactic 05, the IIAS corporate logo and several other program graphics, including Project PoSSUM, PoSSUM13, OutAstronaut, Space For All Nations and more. Examples can be viewed at: <https://www.tomfoltzart.com/logos>

Science Central, 1950 N. Clinton St., Fort Wayne, IN

Education Director: February 2023 – February 2024

- Education Department management of 6 full-time and 8-12 part-time staff
- Supported a cross-organizational team, working closely with the Executive Director and Development, Exhibits, Visitor Services, and Finance groups
- Created, modified and presented educational programming
- Collected and analyzed program effectiveness and participant data
- HR functions: writing job descriptions and job postings, reviewing candidates, conducting interviews, training, approving timesheets, maintaining private files, taking corrective or disciplinary actions and employee termination

Starbase Indiana, Inc., 3005 Ferguson Rd., Fort Wayne, IN

Executive Director: July 2018 - January 2023

Director - Fort Wayne Academy: July 2015 - July 2018

Program Instructor - Fort Wayne Academy: January 2012 - July 2015

Duties, Accomplishments and Related Skills:

- 501(c)3 nonprofit management of Starbase Indiana, Inc., providing hands-on/minds-on STEM education to at-risk and underserved students
 - Setting, tracking, and reporting budgets, income, and expenditures across 4 Academies and 6 separate program accounts
 - Ensure compliance with all contracts, grants, agreements and other laws and regulations

- Hiring and termination of employees
- Staff training and professional development
- Forming and growing community partnerships
- Organizing and leading quarterly Board meetings
- Filing all required taxes and documentation for our 501(c)3
- Writing and submitting grant applications and donation proposals
- Streamlined the invoicing system resulting in a 15% reduction in paperwork
- Teaching and Curriculum Development
 - Designed and led a variety of hands-on STEM-centered lessons in our 5-day/25-hour program, including PTC Creo CAD design, Newton's Laws, the Engineering Design Process, Bernoulli's Principle, endothermic and exothermic reactions, flight and rocketry basics, GPS navigation, LEGO robotics programming and much more, reaching over 1,600 students annually
 - Developed and taught programs in our 10-week, Junior High after-school STARBASE 2.0 program, including 3D design and printing, Mars colony simulations and over a dozen high altitude balloon launches sending student experiments into the stratosphere
 - Organized logistics, created content and taught the activities for our summer camp programs
 - Presented community outreach programs for organizations including EAA Young Eagles, Big Brothers/Big Sisters, Fort Wayne Urban League, Operation Military Kids and Lutheran Children's Hospital

Foellinger-Freimann Botanical Conservatory, 1100 S. Calhoun St., Fort Wayne, IN

Education Coordinator: October 2007 - January 2012

Duties, Accomplishments and Related Skills:

- Taught, maintained, and evaluated all Conservatory field trip programs focusing on botany, ecology, and life science topics for over 4,500 students annually, ranging from pre-K through college
- Created, budgeted, trained additional staff and taught 7 uniquely-themed summer camp weeks each summer
- Developed and led over 30 different family friendly monthly science demonstration programs, covering topics as diverse as DNA extraction, Life on Mars, and Reindeer Aerodynamics (a holiday program), reaching over 1,200 visitors
- Designed interactive visitor experiences for our seasonal Showcase Garden, including writing 6 different murder mystery stories for our Clue showcase and building 4 self-reading audio storybooks for the Night Before Christmas showcase that would play when the pages were turned
- Hired speakers, coordinated supplies, and evaluated customer feedback for our public classes, lectures, workshops and wellness programs
- Trained and managed the activities of our education volunteers
- Graduated from the Mayor's Leadership Development Roundtable program, as presented by the City of Fort Wayne

Challenger Space Center of Arizona, 21170 N. 83rd Ave., Peoria, AZ

Lead Education Flight Director: June 2002 - July 2007

Duties, Accomplishments and Related Skills:

- Led over 600 on-site simulated space missions for more than 15,000 students, educators, and members of the general public from around the greater Phoenix metropolitan area
- Awarded the 1,000 Mission Patch for missions conducted while in Phoenix and Seattle
- Conducted the distance learning simulation “e-Mission: Operation Montserrat” via Internet videoconferencing with schools and corporate groups across the United States and as far away as Northern Ireland and South Africa
- Created, maintained, and taught all other field trip programs at the Challenger Center, including “Spaced Out” (human physiology in microgravity), “Moonbase 2020” (skills and challenges associated with living and working on the moon), and “Astrobiology Adventure” (simulating a robotic landing on Mars and subsequent search for biosignatures)
- Managed and trained a staff of part-time Flight Directors and volunteers
- Maintained the simulator technology, including 18 networked computers, projectors, stereo systems, DVD and Laserdisk players, robotic arms, and other hardware
- Represented the Challenger Center in the community and maintained relationships with organizations including Lockheed Martin, Honeywell, General Dynamics, the Rocket Racing League, and Teachers in Space
- Coordinated the judging and scoring of the Honeywell Fiesta Bowl Aerospace Challenge space station design competition
- Served as the Informal Educator with the Arrowhead Elementary NASA Explorer School team

The Museum of Flight, 9404 E. Marginal Way S., Seattle, WA

Outreach and Summer Programs Coordinator: October 1996 - August 1999

Duties, Accomplishments and Related Skills:

- Developed curriculum, trained, and managed a staff of about 6 educators
- Traveled across the Pacific Northwest presenting off-site educational programs about the basics of flight with a portable hydraulic flight simulator and astronomy with a Starlab portable planetarium
- Led over 400 simulated space missions as a Flight Director at the Museum's Challenger Learning Center
- Designed, scheduled, and taught the Aerospace Camp Experience summer camp programs
- Taught other on-site aviation and science field trip programs as required
- I was selected as a NASA/JPL Educator Fellow for the Galileo Europa Mission. I received training about the mission at JPL and led several informational seminars for teachers and the general public after returning.

U. S. Space and Rocket Center, One Tranquility Base, Huntsville, AL

Space Camp Counselor: February 1995 - September 1996

Duties, Accomplishments and Related Skills:

- Coordinated team activities, meals, lectures, movies and simulators for trainees ranging from elementary-aged through adult, including international and differently-abled campers
 - Taught lessons in topics such as space history, space science, Shuttle systems and rocketry
 - Certified to operate the Center's simulators, including the lunar gravity chair, the multi-axis trainer, the fixed- and hydraulic-based Orbiter cockpit simulators and the 30-foot long hydraulic arm simulating the shuttle's robot arm
 - Ran the 2-hour and 12-hour simulated space missions in all areas, including flight deck, mid-deck, cargo bay, space station and Mission Control
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Education:

Earlham College, Richmond, IN

Bachelor's degree – December 1994

Major: Geology

Relevant Coursework, Licenses and Certifications:

- Astronomy, Physics (Mechanics and Electricity and Magnetism), Chemistry, Biology, Calculus, Linear Algebra, Structural Geology, Igneous and Metamorphic Petrology, Sedimentology, Stratigraphy, Geophysics, Mineralogy, Optical Mineralogy, Geomorphology, Senior Research, Introduction to Education.
- My senior project required me to learn how to operate and interpret the data from the department's new earth resistivity meter.

Arizona State University, Tempe, AZ

Biology - Undergraduate studies (no degree) - September 1999-May 2000

Planetary Geology/Astrobiology - Master's Program (no degree) -June 2000-June 2002

Relevant Coursework, Licenses and Certifications:

- Left after completing most coursework but before graduating to pursue a job opportunity and start a family
- Relevant graduate classes at ASU include: Making of a Mars Scout Mission, Planetary Mission Design (featuring a trip to JPL to work with their advanced mission planning team, "Team X"), Astrobiology, Planetary Geology, Isotope Geochemistry,

Geomicrobiology, Volcanology, Paleontology, Advanced Sedimentology, Field Research and Public Speaking.

- Taught and graded six sessions of Introductory Geology labs
- Served as a Teaching Assistant for Geology 101 and Geology of Natural Disasters
- My research focused on biosignature preservation in caliche deposits. It was thought that these calcium carbonate deposits could be analogous to minerals deposited in an aqueous environment on Mars.
- I was also trained in the use of a stable isotope mass spectrometer, X-Ray diffraction equipment, various microscopes and other assorted geology tools.

Other Skills and Accomplishments:

- Launched and successfully retrieved 30 high-altitude balloons carrying student payloads
- Teacher of the Year (K-8) – Air Force Association, Fort Wayne Chapter
- Science K-12 Education Award – Greater Fort Wayne Business Weekly
- Software & hardware proficiency: Microsoft Office Suite (Word, Excel, PowerPoint, Outlook, Teams, etc.); Google Suite; Adobe Photoshop, Illustrator, After Effects, Acrobat; PTC Creo and Onshape; Zoom; Procreate; 3D printing; Lego Mindstorms/EV3; Scratch; Raspberry Pi, Mac, Windows, Linux and many more
- I am a U.S. Citizen, am authorized to work in the US and have passed multiple background checks