

National Workshop on Astronomy for Teachers Presentations with respect to S.T.E.M. topics:

Where is outer space?

Section 1

Sciences: physics of the velocity of light
Technology: computer program simulations of outer space
Engineering: devices for measuring the velocity of light
Mathematics: calculations of the distances in outer space

What is in outer space?

Sciences: geology and chemistry of planets stars compared to Earth, sun compared to stars
Technology: computer program simulations of the solar system
Engineering: instruments that can determine chemical composition
Mathematics: calculations of planetary orbits, equations of stellar and galactic motion

How can we view outer space from the Earth?

Section 2

Sciences: optics
Technology: data analysis instruments
Engineering: telescopes, satellites
Mathematics: equations from optics

How do we get to outer space?

Sciences: physics, chemistry of rocket fuel
Technology: computer program simulations of rocket trajectories
Engineering: satellites, rockets,
Mathematics: orbital and interplanetary trajectory equations

How does the environment of outer space differ from the one on Earth?

Section 3

Sciences: physics and chemistry of outer space
Technology: instruments that remotely determine atmospheric content
Engineering: microgravity devices, centrifuges, vacuum chambers
Mathematics: equations of gravity