Astronomy Final Project

Look over the list below and choose one topic for your final astronomy project

**Arts-Based Assessments**

- Collage
  - Create a collage of nebulae
  - Create a collage of galaxies
  - Create a collage of the history of space flight
- Docudrama
- Storyboard
  - Create a commercial advertising the latest space mission
  - Create a commercial advertising a space/moon hotel for tourists
- Tableau
- Brochure
- Poster
  - Create and educational poster on a given topic
- Bulletin board design
  - Design and create a bulletin board for the classroom
  - Design and create a public bulletin board for Astronomy Week
- Scrapbook
  - Choose a topic and create a scrapbook of articles, pictures and commentary on that topic
- Encyclopedia
  - Create an astronomy encyclopedia, including definitions, historical references and images
- Model-making
  - Build a scale model of the solar system
  - Build a scale model of a cross-section of the Sun or Earth
- Music
  - Compose a piece of music based on the characteristics of the planets
  - Design and create a CD (choose music and design the CD cover) of astronomy music

**Activity-Based Assessments**

- Debate
  - Recreate a historical debate
  - Debate whether Pluto is a real planet
  - Debate whether there is life on Mars
  - Debate the existence of extra-terrestrial life
- Observing
  - Complete a level of the Canadian Junior Astronomer Program
- Build a telescope

**Thinking Skills Assessments**

- Case study
- Concept mapping
  - Create a concept map of the terms and concepts learned in this unit
- Map making
  - Create a map of the solar system for an interstellar traveller; use city maps as a source of ideas
- Media analysis
  - Comment on the portrayal of astronomy in the media (articles, advertisements)
- Visual/Graphics organizer
- Creative writing
  - Write a work of fiction on the first human trip to Mars
  - Create a poetry anthology on the planets in the solar system
• Reading response
  o Read a scientific article on a given topic and write a response
• Response journal
  o Write a daily response journal on the Astronomy Picture of the Day
  o Write a daily response journal on the Earth and Space Science Picture of the Day

Technology & Media-Based Assessments

• Internet technologies
  o Create a webpage
  o Complete a webquest based on a previously-made webpage
• Multi-media presentation
  o Create a powerpoint presentation based on research topic
  o Create a presentation which includes visual effects, audio effects and a physical demonstration
• Media production
  o Create an instructional video on a topic for younger grades
• Graphic applications
  o Design the next space station
  o Design the next space shuttle
  o Create a Flash animation of an astronomical process (ie. planets orbiting the Sun)

Inquiry & Research Assessments

• Historical
  o Research the biography of an astronomer or astronaut
• Mathematical problem solving
  o Testing the General Theory of Relativity
• Problem-based models
  o Can we live on Mars? The Moon?
  o Can we travel to other star systems?
  o Can people be born in space?
  o Can we grow food in space?

Possible Topics:

Canadiana:

• 🌟 Canadian astronomer biography
• 🇨🇦 Canadian astronaut biography
• 🌟 Canadian contributions to astronomy
• 🌟 Canadian contributions to space exploration technology
• 🌟 Canadian observatories

Historical:

• Great debate of 1920 on the scale of the universe
• Copernicus' contributions to the field
• Galileo's contributions to the field
• Kepler's contributions to the field
• Einstein's contributions to the field
• Hubble's contributions to the field
• Astronomer biography
• The history of space exploration
• The history of the telescope
Components of the universe:

- Components of the solar system
- Compare terrestrial planets to gas planets
- Life cycle of stars
- Unusual stars: binaries, pulsars, white dwarfs, variable stars
- Eclipses: fact and myth
- Galaxies: classification, morphology
- Our place in the Milky Way Galaxy
- Extra-solar planets
- Measuring the universe

Formation Processes:

- Formation of the solar system
- Formation of the Earth
- Formation of the universe
- Comparing theories on the formation of the Earth
- The fate of the universe

Earth and Space Science:

- Impact of space debris on the Earth
- Impact of meteors and comets on the Earth
- The fate of our solar system
- A day in the life of an astronaut in orbit
- Space experiments
- The effects of solar activity on the Earth (sunspots, radiation, etc.)
- The effects of the Moon on the Earth
- The importance of seasons on the Earth
- The formation of aurorae

Miscellaneous:

- Extra-Terrestrial Life (see SETI.org)
- The science of Star Trek