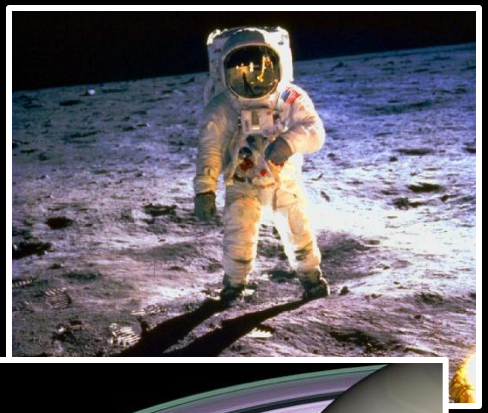
An Educator's Guide to the Development of Digital Stories on Spaceflight

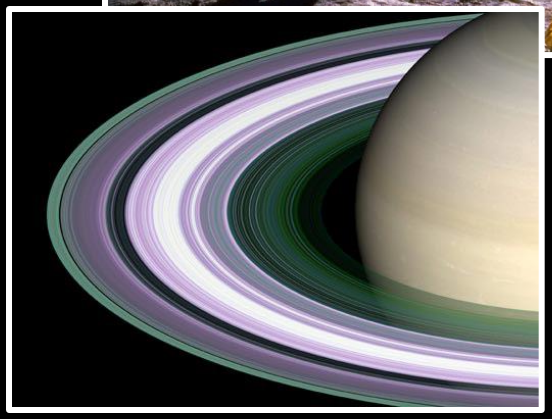
Gary H. Kitmacher

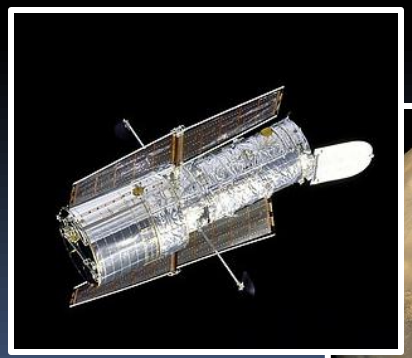
Digital stories weave images, video, narrative and music.

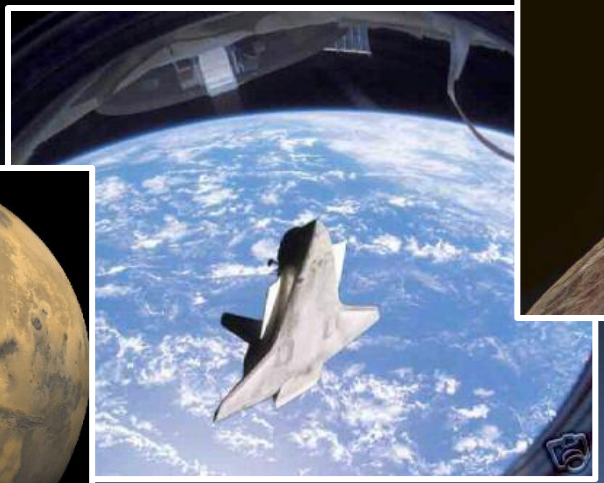
Space flight has been a source for new knowledge. On a daily basis new information and new images comes in from astronauts in earth orbit and from robots on and near the planets.

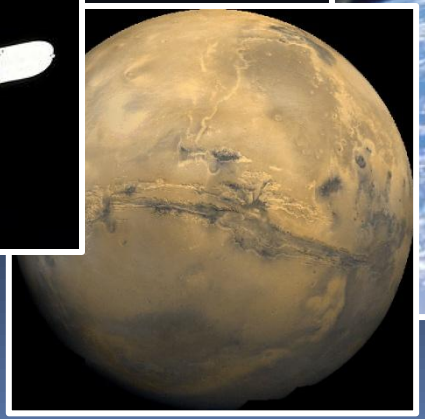
Space imagery and information has been collected now for more than fifty years. Much of it is available on the internet. Imagery and data created by NASA is in the public domain. NASA material is not normally protected by copyright and so is readily available for incorporation in digital storytelling.

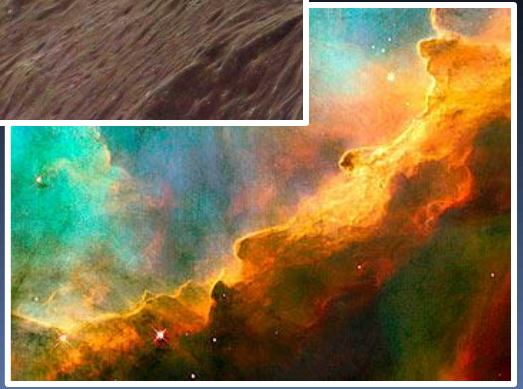










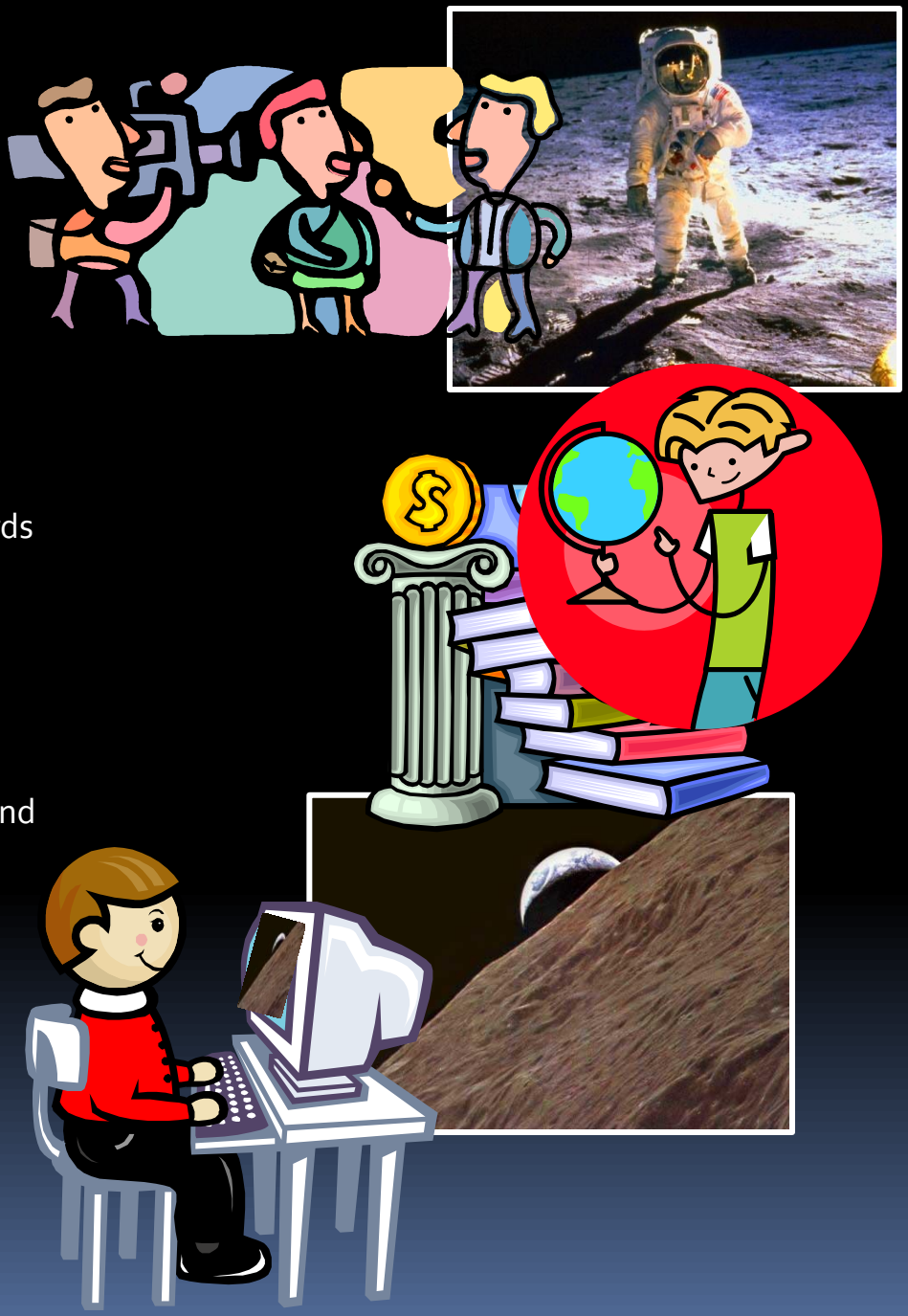


Space stories of exploration, research, travels to the planets, aeronautics and science, when combined with the learning power of digital storytelling can motivate and energize students.

Space projects enhance learning about space, the universe, planets, the earth, science, technology, exploration and space missions and aviation.

The 2007 National Education Technology Standards (NETS) for students are addressed by digital storytelling:

1. Encourages creativity and innovation.
2. Encourages students to communicate and collaborate effectively.
3. Encourages student led research Research and information fluency by engaging them in dynamic, interactive learning processes.
4. Encourages and provides practice in critical thinking, problem-solving, decision-making and **writing**
5. Promotes digital literacy and citizenship
6. Provides practical experience in operating technology



What Kind of a Story Do You Want to Create ?

Stories can be composed of narrative and or background music only.

Stories can use artwork, drawings and sketches, photographs, animations, simulations, movie footage, videos, or combinations of any of these.

Stories can be captioned by themes, titles, slide subject, or the full text of the narrative.

Narratives can be done by yourself and your friends, interviews with others, especially principals in the story, or by professionally hired narrators.

Stories can be about yourself, others or people who have had special experiences. They can be told in the first person or third person.

Stories can be about famous events, important activities, things we care about or find interesting, things that happened in the past or things that might happen in the future

What Your Story Should Consist Of

Title

Introduction

Should identify what the story is about. Does it answer a question, discuss a dilemma or a controversy, or tell about an event?

The Middle

What happened? It can be talked about as a series of events or different aspects of the same event.

Conclusion

Summarize. How did it turn out. Did it have important implications for the future? Did it have special meaning?

Credits Identify your sources for images, videos and audio.

Length

Digital stories are usually brief. 3 minutes to 7 minutes is not unusual. This depends in large measure about who your audience is. Young children often will not focus for more than a few minutes. Adults generally won't focus on a story for more than 15 to 20 minutes.

If you digital story is going to be broadcast, does it need to fit within a specific timeframe? Does it need breaks within the story ?

Many websites, books and written accounts of space projects are readily available.

There are many current projects. Even more are in the historical record.

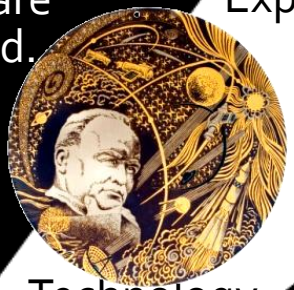
There are many aspects to the space stories:

Exploration

People

Robotics

Biology



Technology

Culture

History

Photography

Aeronautic

Business

Geology

Astronomy

Ecology

Geography

Chemistry

Science

Physics

An Example Digital Story on Space Flight

This digital story by a long-time NASA engineer, designer, manager and educator is autobiographical, but also retells the story of aviation and space flight which spurred the author's and producer's professional interests, and which also tells of the design process for the International Space Station, about life on board, and about its potential usefulness.

In addition to the Digital Story, which was originally created for a college course in educational video, an annotated storyboard provides detailed background on the sources of the imagery, some of the modifications to each, the thought process which went into the production, and the editing process which created the digital story.

Some Digital Story Pojects

Explore the Solar System

exercises associated with this digital story can be found in the Microsoft World Wide Telescope lessons: http://www.worldwidetelescope.org/Home.aspx

C:\Program Files (x86)\Microsoft Research\Microsoft WorldWide Telescope\Help\UserGuidePages\WorldWideTelescopeUserGuide.html

Research the sun, a planet, a moon, or an asteroid
- gather information, data, images and video from a variety of sources
- select some of the best images and video
- write a narrative that described the world you are researching
- compare the world you are researching with others; how large, what color, what surface features, have any spacecraft gone there ?
- have people traveled there ? Will they in the future ?

Create a model or globe of the world you are researching
Make a model of a spacecraft that has explored there
Create a video of the spacecraft exploring this world
Using PowerPoint, Photo Story, Movie Maker, or another image/video editing program, assemble an overview of the world you have researched.
Prepare and record a script for your video.
Add background music. For the planets an orchestral suite has been composed.
An on-line version can be found here:
http://www.aquarianage.org/lore/holst.html

Ideas for Some Digital Story Projects

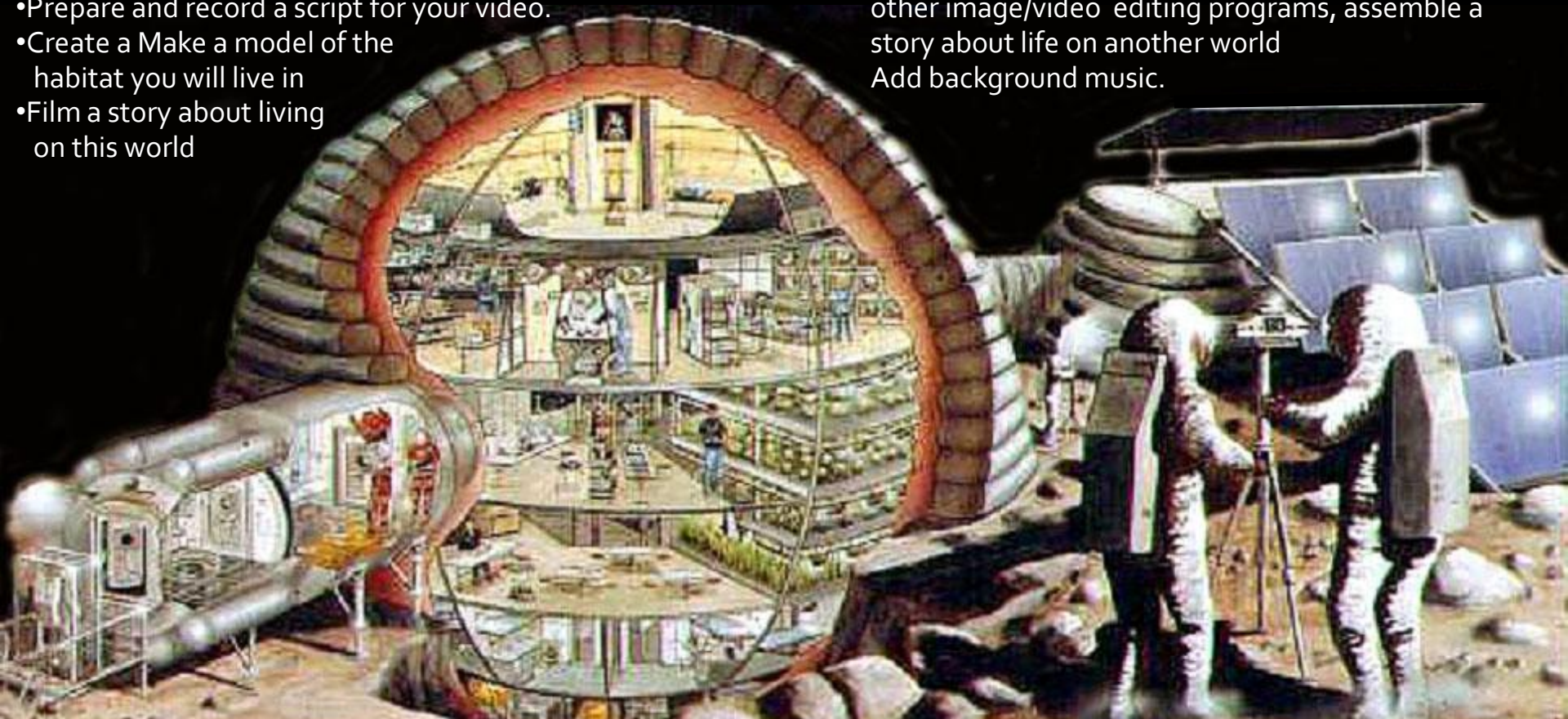
Living on Another World

Research the kinds of activities astronauts do in space and on the International Space Station.
Research the kinds of activities the Apollo astronauts did when they explored the moon.

- gather information, data, images and video from a variety of sources
- what would your habitat look like ? What kinds of systems would be required to keep you alive ?
- select some of the best images and video of astronauts living in space or working on the moon
- create a full size habitat; write a skit and act out life on another world. Film the skit.
- write a narrative that describes what it might be like to live in an outpost on the moon or another world
- what would everyday life be like: eating, sleeping, going to the bathroom
- what kind of work would you do if you lived on another world

• Create a 3D model or globe of the world you are researching
•Prepare and record a script for your video.
•Create a Make a model of the habitat you will live in
•Film a story about living on this world

Using PowerPoint, Photo Story, Movie Maker, and/or other image/video editing programs, assemble a story about life on another world
Add background music.



Ideas for Some Digital Story Projects

Landing on an Asteroid

One of the missions President Obama has said astronauts will pursue in the next decade is a trip to an asteroid.

- Research how far away the asteroids are and how long a trip might take.
- Research how many asteroids there are and the different kinds. Which come closest to earth?
- Research the kinds of activities the astronauts might do when they land on an asteroid.
  - gather information, data, images and video from a variety of sources
  - what might the spacecraft look like ?
  - create a simulated model or drawing on the computer and superimpose it on images of asteroids, as though you are on the mission.
  - write a narrative that describes what a mission might be like

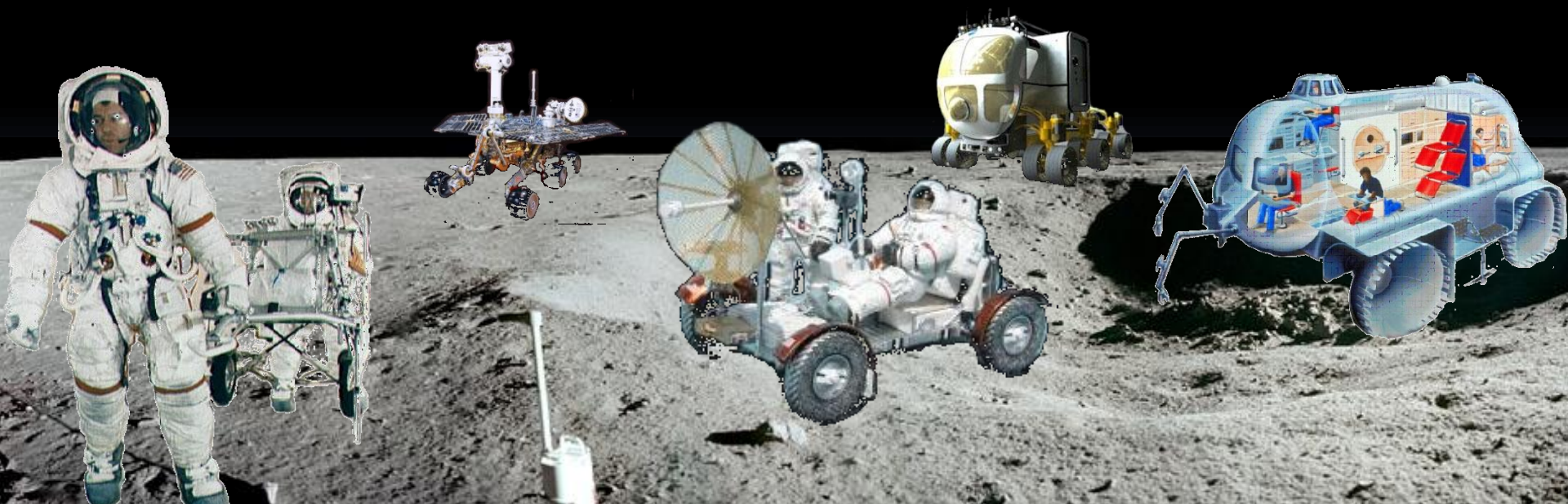
- Create a model of the spacecraft and the
- Create a story about a mission to this world using PowerPoint, Photo Story, Movie Maker, and/or other image/video editing programs.
- Prepare and record a script for your video.
  - Add background music.

Ideas for Some Digital Story Projects

Wheels on Another World

Wheeled vehicles have been used on the Moon and Mars since the early 1970s. The first wheeled vehicle resembled a wheelbarrow and was used to carry samples and equipment on Apollo 14. Some roving vehicles like the Apollo Lunar Roving Vehicle carried people and others like the Mars Exploration Rover were unmanned robots. NASA has designed large rovers that could serve as habitats for weeks at a time.

- Research the different rovers. What kinds. Where did they go or are they planned for the future?
  - gather information, data, images and video from a variety of sources
  - what do they look like
  - how large are they
  - create a computer model or an actual 3D model of a past rover or a future one
  - try powering it using electric motors
  - see if it can be remote controlled
  - film it
  - write a narrative that describes what a mission might be like

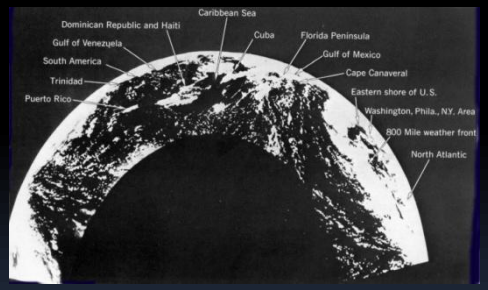


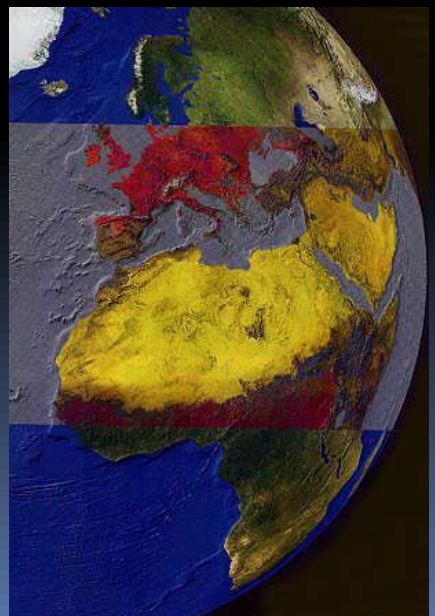
Ideas for Some Digital Story Projects

The Earth Seen From Space

Pictures of the earth have been taken from space since the 1940s.

- Research the different kinds of pictures that have been taken
- How are pictures of the earth used: weather, research, crop inventory, disaster images, urban sprawl
- Gather a variety of pictures and videos of the earth taken from space
- How they were taken
- How they are used
- What significant features can be seen



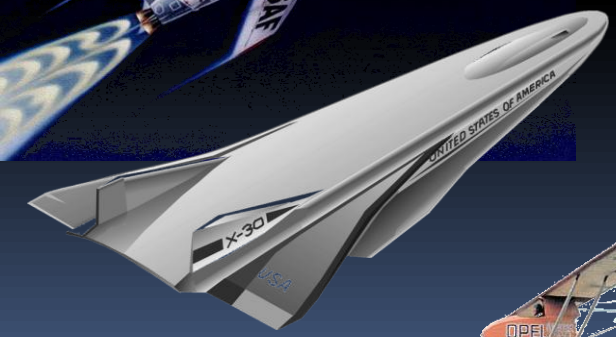


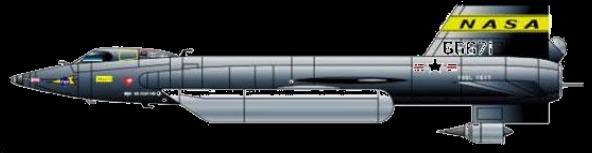
Ideas for Some Digital Story Projects

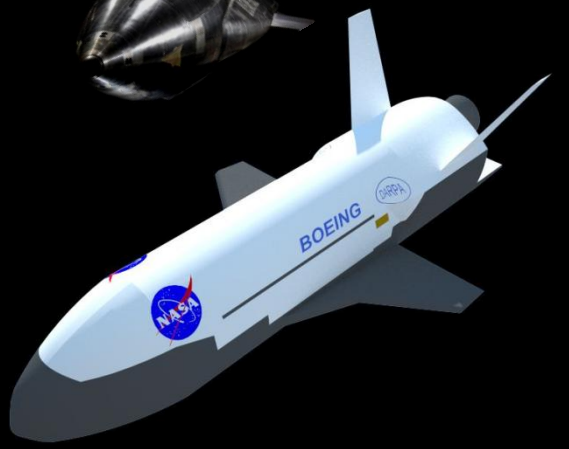
Rocket Planes

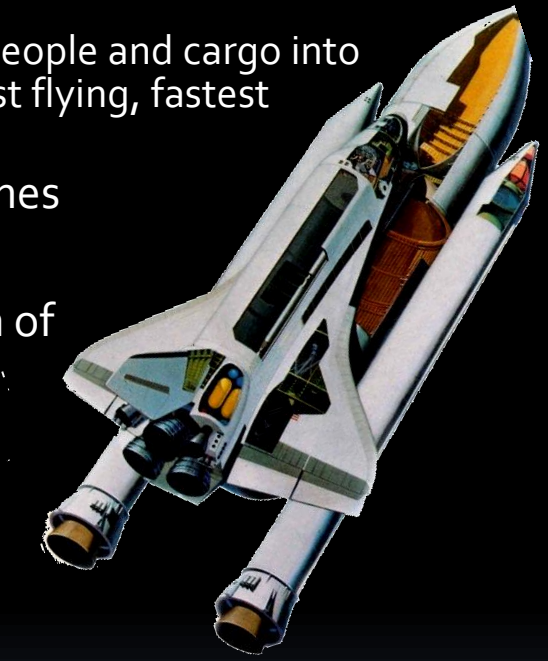
The first rocket plane were built and flown before WWII. Others were designed as interceptors for use in WWII.
Some , like the Space Shuttle have carried people and cargo into space. Rocket planes are some of the highest flying, fastest vehicles of any kind.

- Research the history of the rocket planes
- How have they been used
- Gather a variety of rocket planes
- Develop or use a computer simulation of a rocket plane or a scale model
- Show how they fly









Ideas for Some Digital Story Projects

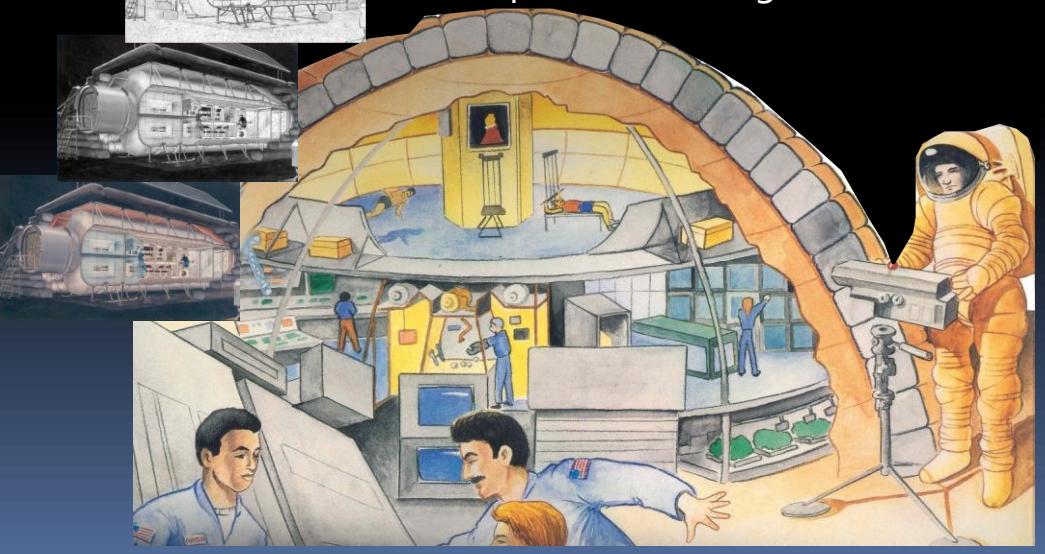
Design a Spaceship/Spacesuit/Space Base/Rover/Lander

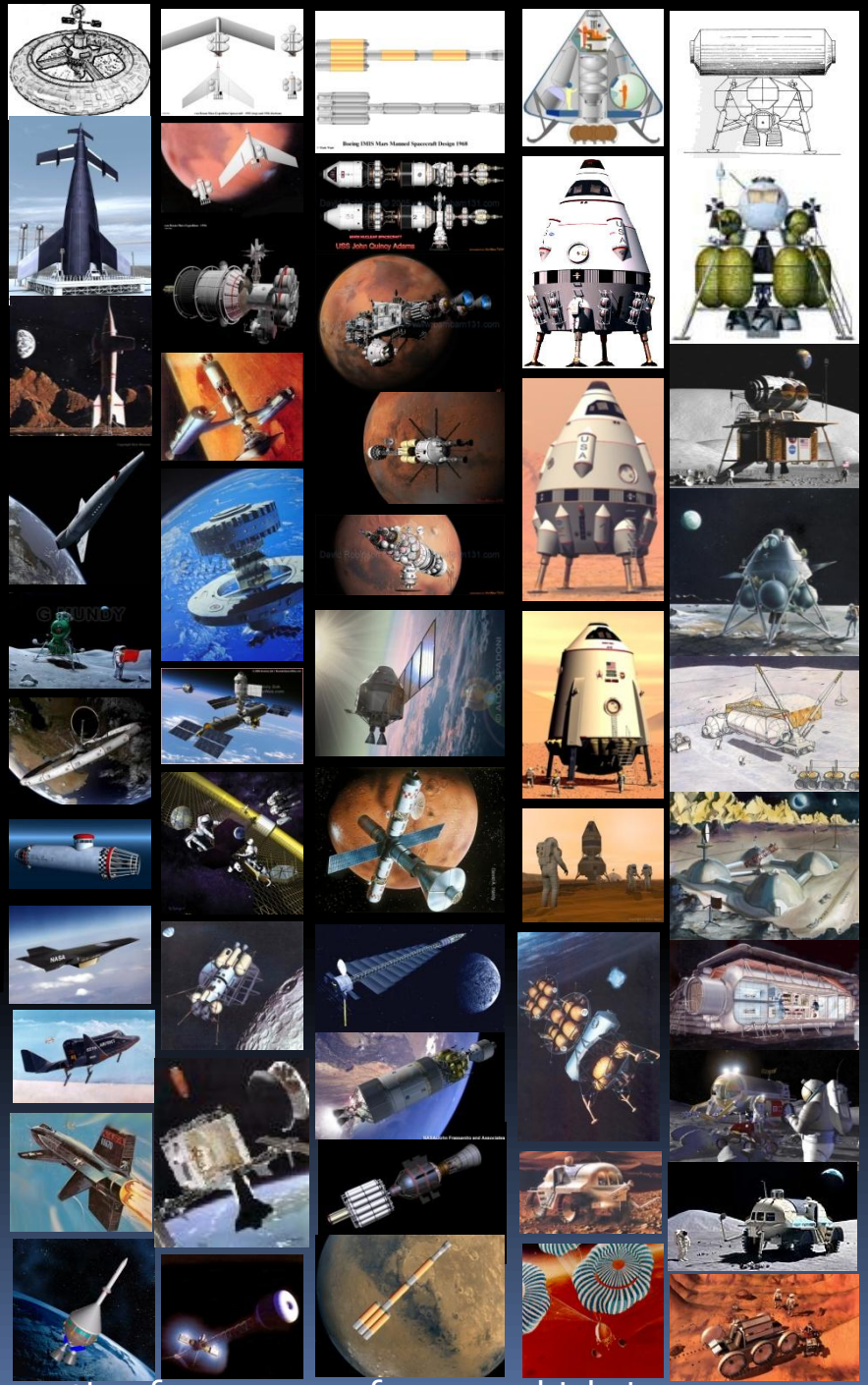
Engineers, designers and artists have been thinking about what the perfect spaceship would look like sionve the mid-1800s. Different vehicles and facilities are needed for a variety of purposes.

Research some different designs. What kinds are there? What capabilities and functions must each support ? What supplies are required? Who does the crew consist of?

- gather information, data, from a variety of sources
- come up with your own ideas; sketch them; render them as art or on the computer; build a simulation; build a scale model or mock-up; can it fly ?
- film and animate it
- write a narrative that describes what a mission might be like

Now you are doing exactly what a real spacecraft designer does





See the Space Art website listing in the resources section for sources of many vehicle images

Ideas for Some Digital Story Projects

Spacesuits

Engineers, designers and artists have been designing spacesuits since the first world war. Suits are used for different purposes. Some are for spacewalking; some for moon-walking; some for emergency pressurization ion case the cabin loses air. .

Research some different designs. What kinds are there? Which countries have designed them? What capabilities and functions must each support ?

-gather information, data, from a variety of sources

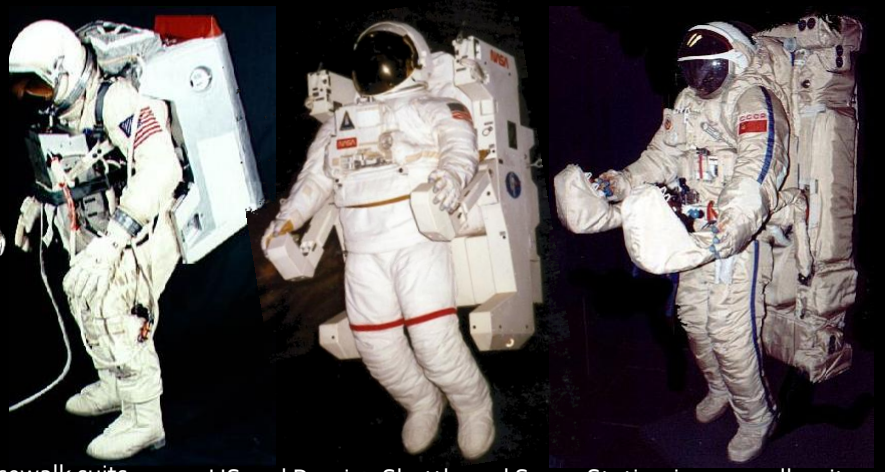
-come up with your own ideas; sketch them; render them as art or on the computer; build a simulation; make a mock-up.

- film and animate it

-write a narrative that describes how it would be used

Now you are doing exactly what a real spacesuit designer does

Gemini spacewalk suits



US and Russian Shuttle and Space Station i spacewalk suits

MIT Mechanical Counter-pressure next generation suit

Russian and US lightweight Emergency pressurization suits

Russian and US moonwalk suits

Ideas for Some Digital Story Projects

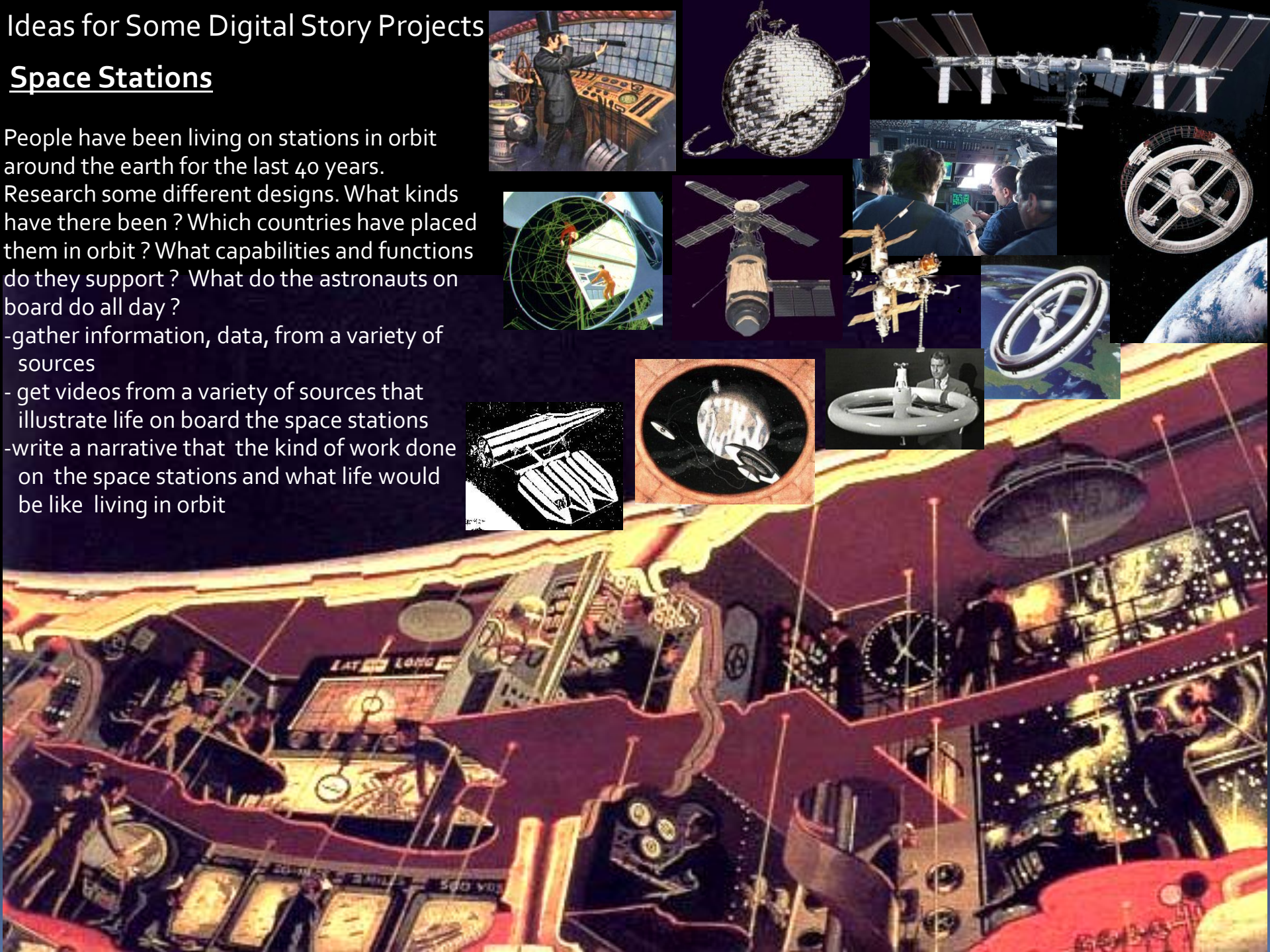
Space Stations

People have been living on stations in orbit around the earth for the last 40 years. Research some different designs. What kinds have there been ? Which countries have placed them in orbit ? What capabilities and functions do they support ? What do the astronauts on board do all day ?

-gather information, data, from a variety of sources

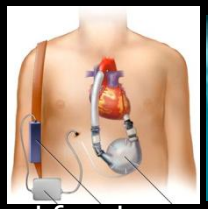
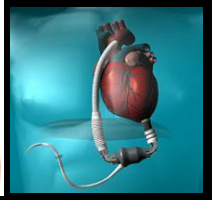
- get videos from a variety of sources that illustrate life on board the space stations

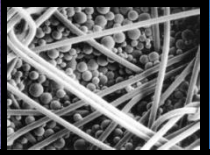
-write a narrative that the kind of work done on the space stations and what life would be like living in orbit



Ideas for Some Digital Story Projects

Benefits From Space


Research some of the ways in which technology developed for the space program has been used to make life better here on earth. Here are some ideas:

- thin films used for balloons and insulation
- image processes developed for space and now used for MRIs
- computer enhancement used for medical images
- insulations used for high heat
- coatings used for protection like on the Golden Gate Bridge and Statue of Liberty
- filters used in sunglasses and sunscreens
- miniaturized electronics used in heart pumps, diabetes pumps, and artificial limbs
- portable water processing and purification systems
- plastics and composites used in sporting equipment













Gather information from a variety of sources write a narrative that describes How the space developed technology is used to improve life; how has it effected culture, industries, or activities here on earth ?


Some More Ideas for Your Space Story

Tell the story of the training of the first astronauts

Tell the story of the rocket planes

Tell the story of the first mission to the moon

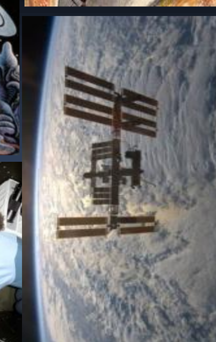
Tell the story of science fiction before the space age

Tell the story of the explosion of Apollo 13

Tell the story of planetary exploration

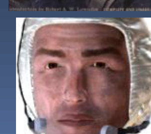
Tell the story of a future trip to an asteroid

Tell the story of a future landing on Mars



Tell the story of a future discovery of life in space

Tell the story of life on a space station

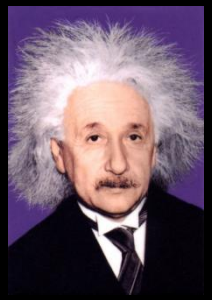


Tell your story of a future exciting space mission

Some Famous Figures Associated with Space

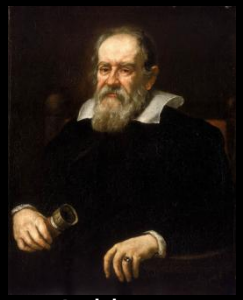

Armstrong


Copernicus


Einstein


Faget

Gagarin

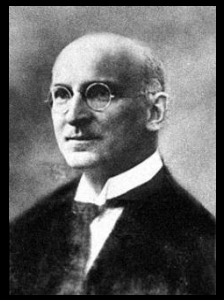

Galileo


Gilruth


Glenn


Goddard


HAM


Hohmann


Hubble


Kennedy

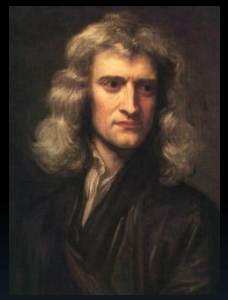

Kepler


Korolev


Laika

Leonov


McAuliffe

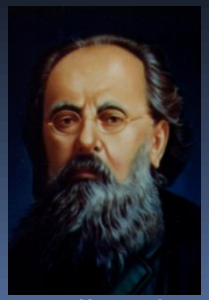

Newton


Post


Ramon


Ride

Tereshkova


Tsiolkovski


Von Braun


White

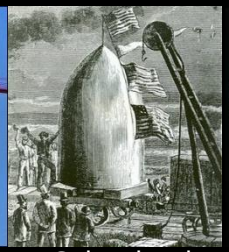

Young

Some Famous Spaceships


Agena with Gemini

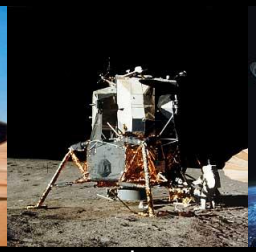

Altair


Apollo


Columbiad


Columbia


Columbia


Eagle


Enterprise


Explorer 1


Falcon


Falcon (Millenium)

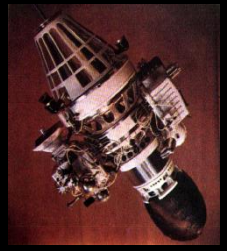

Freedom (ISS)

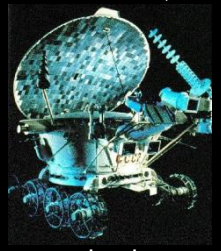

Freedom 7

Friendship 7


Gemini


Hubble


Luna


Lunachod


Lunar Module


Lunar Orbiter


Lunar Roving Vehicle


Mars Exploration Rover


Mars Recon Orbiter


Mariner

Mercury


Mir


Molly Brown

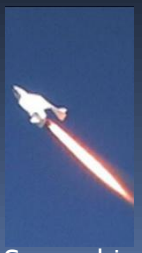

Pioneer

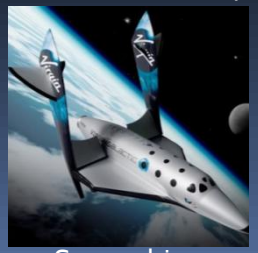

Ranger

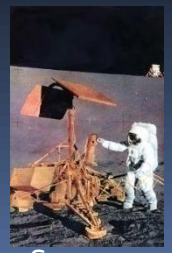

Skylab


Sputnik

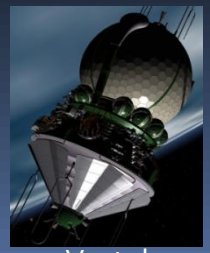

Soyuz

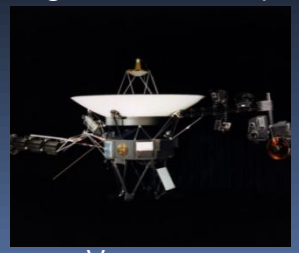

Spaceship 1


Spaceship 2

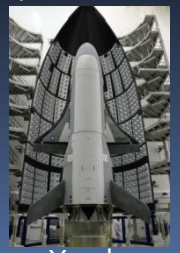

Surveyor


Viking


Vostok


Voyager


X-15


X-37b

Zond

Some Famous Missions of Space Exploration

Walker pilots the X-15 rocketplane into space

Kittinger jumps from the edge of space

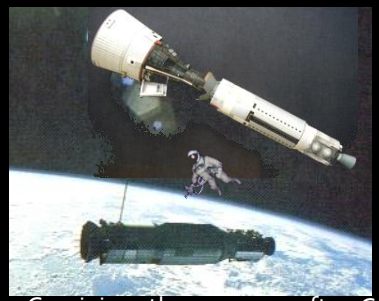
Gagarin, first in orbit

Tereshkova, first woman in space

Leonov, first to walk in space

Gemini 6 and 7, first spacecraft to meet in space

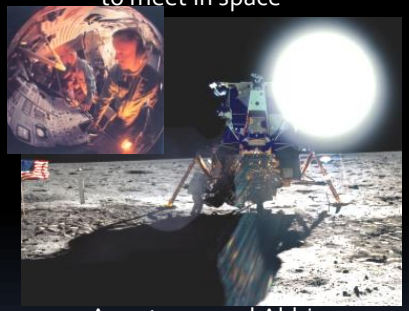
Gemini 8, first space rescue



Gemini 10, three spacecraft and a spacewalk

Gemini 11, highest altitude in orbit

Borman, Lovell and Anders reach the moon



Armstrong and Aldrin, first men on another world

Apollo 15, first to drive on another world

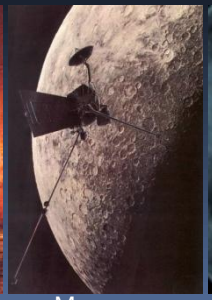
STS-1 first Shuttle test flight

Bruce McCandless, first to fly free in space

Hubble Telescope views the universe

Mars Exploration

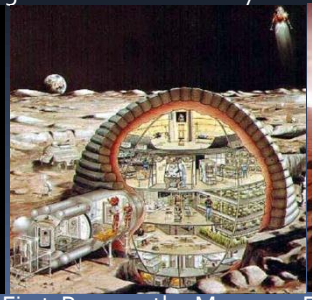
Venus Exploration



Mercury Exploration

Exploration of the Outer Planets and beyond our Solar System

First Base on the Moon



First People on Mars

First to the Asteroids

Space Story Ideas and Themes

Memorials

Apollo 1

Challenger

Columbia

Soyuz 1

Salyut 1

Space Resources on the Internet

Space Encyclopedia

Space News and Blogs
Space Exploration

Space Photography and Images
Space Videos
Feature Films and TV Programs

NASA History
Space Exploration and Culture
Space and People
Business
Geography
Space History
Space Oral Histories

Space Lesson Plans

Downloadable Scale Models
Assemble-able Paper Globes of Planets

NASA Multimedia
Spaceflight Simulators

Private Human Spaceflight
Space Commercialization

3D Resources

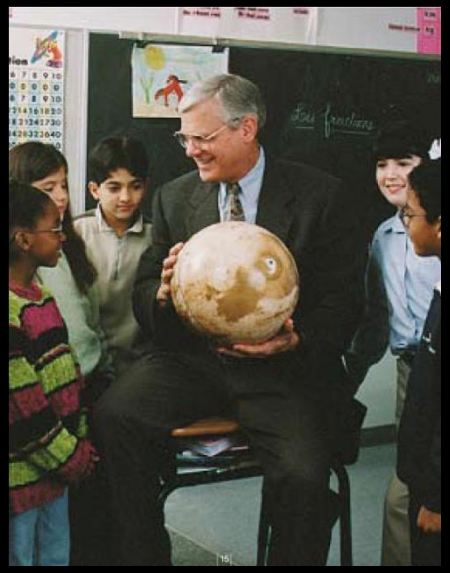
International Space Programs
Chinese Space Program
European Space Program
Russian Space Exploration
NASA Images
Space Art

US Manned Space Projects
Russian Manned Space Projects
Astronomy Space Satellites /Probes
Planets and Solar System
Earth Satellites
Experimental Rocket Aircraft
Rocket Planes , Experimental Aircraft
Rocketry

Space Science
Astronomy
Astronomy Resources
Astronomical Images
Biology
Chemistry
Ecology
Geology
Physics

Robotics
Technology

Space Resources on the Internet



Space Lesson Plans

http://www.worldwidetelescope.org/Home.aspx
C:\Program Files (x86)\Microsoft Research\Microsoft WorldWide Telescope\Help\UserGuidePages\WorldWideTelescopeUserGuide.html

http://www.angelo.edu/services/library/govdocs/lesson.html
http://imagine.gsfc.nasa.gov/docs/teachers/teachers_corner.html
http://imagine.gsfc.nasa.gov/docs/teachers/lesson_plans.html
http://school.discoveryeducation.com/lessonplans/programs/understanding-spacetravel/
http://school.discoveryeducation.com/lessonplans/programs/spacemilestones/
http://www.esa.int/esaHS/SEMEZ43VRRE_education_0.html
http://www.endeavours.org/sec/teachers/nasalessonp.htm
http://alex.state.al.us/lesson_view.php?id=12789
http://ritter.tea.state.tx.us/rules/tac/chapter112/index.html
http://www.dlese.org/library/query.do?q=space+shuttle+&s=0&re=0k
http://www.compadre.org/precollege/items/detail.cfm?ID=1461
http://www.phy6.org/stargaze/Sintro.htm
http://www.lessonplanspage.com/ScienceExploreSpace45.htm
http://www.nationalmuseum.af.mil/shared/media/document/AFD-090710-011.pdf

http://www.lessonplanet.com/search?grade=Select+Grade&keywords=space+flight&media=lesson&rating=3.0&search_type=narrow

http://www.thegateway.org/browse/makesearch?isliteral=yes&operator=contains&model=gem&searchType=new&value=spaceflight&dimension=fulltext&ss=FIND+RESOURCES

Space Resources on the Internet

Space News and Blogs

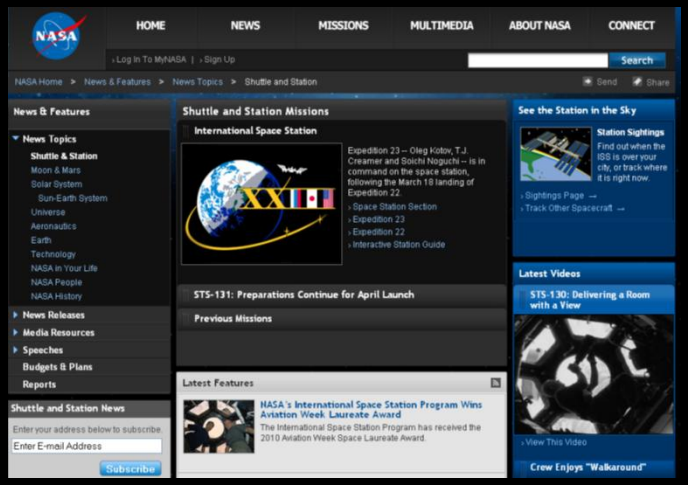
http://www.space.com/
http://www.thespacereview.com/
http://www.spacepolitics.com/
http://spaceflightnow.com/
http://spaceref.com/
http://www.spacecenterlectureseries.com/
http://nasawatch.com/
http://blogs.discovermagazine.com/badastronomy/
http://www.msnbc.msn.com/id/3217961/
http://www.strudel.org.uk/blog/astro/index.shtml
http://www.slackerastronomy.org/wordpress/
http://thespacewriter.com/wp/
http://tomsastroblog.com/
http://hobbyspace.com/nucleus/HSblog.php
http://www.cbsnews.com/stories/2000/02/16/tech/main161238.shtml
http://blogs.airspacemag.com/moon/
http://blogs.airspacemag.com/daily-planet/
http://collectspace.com/

collectSPACE

Space Resources on the Internet

Space Exploration

http://www.astronautix.com/
http://www.aerospaceguide.net/
http://www.nasa.gov/
http://www.nasa.gov/worldbook/space_exploration_worldbook.html
http://www.seasky.org/space-exploration.html \
http://science.nationalgeographic.com/science/space/space-exploration/
http://www.sciencedaily.com/news/space_time/space_exploration/
http://www.britannica.com/EBchecked/topic/557348/space-exploration
http://seds.org/
http://www.physorg.com/space-news/space-exploration/
http://www.astrodigital.org/space/
http://www.astronomytoday.com/exploration.html
http://library.thinkquest.org/J002762/
http://www.bbc.co.uk/science/space/
http://www.nasm.si.edu/research/ceps/etp/etp.htm
http://www.nasm.si.edu/exhibitions/gal210/enter.html
http://www.150.si.edu/150trav/discover/spaceexp.htm
http://ser.sese.asu.edu/
http://www.thespaceplace.com/
http://www.aerospaceguide.net/spaceexploration/index.html
http://www.idebate.org/debatabase/topic_details.php?topicID=91
http://science.howstuffworks.com/space-exploration-channel.htm
http://www.spaceflightnews.net/
http://www.russianspaceweb.com/



Chinese Space Program http://www.cnsa.gov.cn/n615709/cindex.html
European Space Program http://www.esa.int/esaCP/index.html
Russian Space Exploration http://www.russianspaceweb.com/
Space Commercialization http://www.space.commerce.gov/

Private Human Spaceflight

http://www.faa.gov/about/office_org/headquarters_offices/ast/human_space_flight_reqs/

Space Resources on the Internet

Space Exploration and Culture

http://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/20090013351_2009012002.pdf
http://www.vam.ac.uk/moc/whats_on/past/space_age/index.html
http://www.metacafe.com/watch/3376202/the_truth_and_legends_of_space_exploration/
http://askmagazine.nasa.gov/pdf/pdf32/NASA_APPEL_ASK_32i_societal_impact.pdf
http://history.nasa.gov/sp4801-part1.pdf
http://cmex.ihmc.us/CMEX/data/vse/session6.html
http://www.astronomytop100.com/Astronomy_and_Popular_Culture.html
http://blogs.smithsonianmag.com/science/2008/12/18/lessons-in-space-exploration-from-lewis-and-clark/
http://portal.unesco.org/shs/en/files/8460/11223752131RationalesSpaceExplor.pdf/RationalesSpaceExplor.pdf
http://www.culturewars.org.uk/index.php/site/article/head_to_head_on_space_exploration_man_not_machine_should_explore_space/
http://www.energia.ru/english/index.html

Space and People

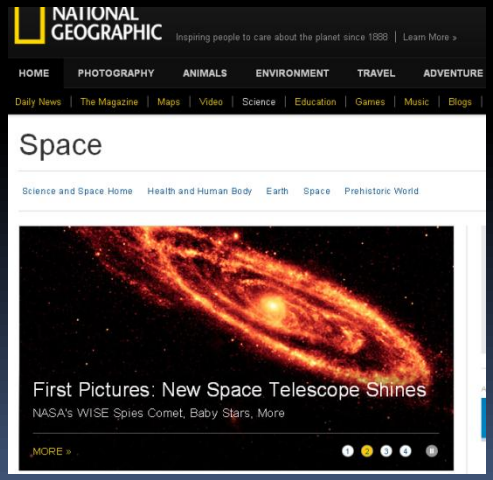
http://www.solarviews.com/eng/people.htm
http://en.allexperts.com/q/Space-Exploration-2540/people-space-1.htm
http://library.thinkquest.org/J0110163/famous_space_explorers.htm
http://space.about.com/od/peopleinastronomyspace/People_in_the_Fields_of_Astronomy_and_Space_Exploration.htm

Space Resources on the Internet

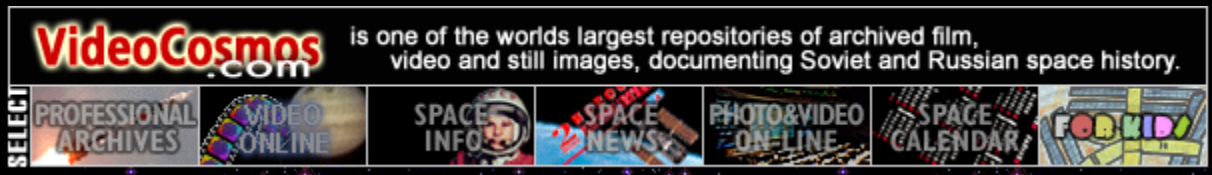
Space Photography and Images

Images can be found in many places on the internet. NASA and other space agencies have a variety of sources, many listed here. Below you'll find some interesting gateways to larger image collections. NASA images are not copyrighted.

http://nssdc.gsfc.nasa.gov/photo_gallery/photogallery-spacecraft.html
http://www.nasaimages.org/,
http://www.nasa.gov/multimedia/imagegallery/index.html
http://www.space-exploration.org/
http://hubblesite.org/gallery/
http://www.nasa.gov/multimedia/
http://grin.hq.nasa.gov/
http://nix.nasa.gov/
http://images.jsc.nasa.gov/
http://eol.jsc.nasa.gov/
http://www.nasaimages.org/
http://spaceflight.nasa.gov/gallery/
http://visibleearth.nasa.gov/
http://antwrp.gsfc.nasa.gov/apod/
http://photojournal.jpl.nasa.gov/index.html
http://mediaarchive.ksc.nasa.gov/
http://www.nasa.gov/centers/dryden/multimedia/imagegallery/index.html
http://science.nationalgeographic.com/science/space/
http://www.fotosearch.com/illustration/space-flight.html
http://www.nasm.si.edu/research/arch/collections/photoarchives.cfm
http://www.airspacemag.com/space-exploration/Top_NASA_Photos_of_All_Time.html
http://www.pixcetera.com/all-galleries/nasa/search
http://wanderingspace.net/category/manned-spaceflight/
http://beacon.jpl.nasa.gov/Find/Archives.html#oh
http://images.search.yahoo.com/
http://images.google.com/



Space Resources on the Internet



Space Videos

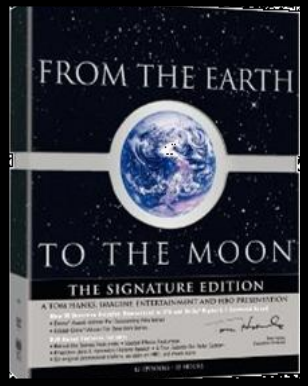
http://www.youtube.com/
http://video.google.com/
http://vimeo.com/
http://rutube.ru/
http://www.nasa.gov/multimedia/
http://www.nasa.gov/multimedia/videogallery/index.html
http://settlement.arc.nasa.gov/Video/
http://history.nasa.gov/40thann/videos.htm
http://spaceflight.nasa.gov/history/shuttle-mir/history/h-t-video.htm
http://video.google.com/nara.html
http://www.videocosmos.com/
http://www.russianspaceweb.com/video.html
http://faculty.fordham.edu/siddiqi/sws/rsl/russian_space_links.html
http://www.space-video.info/
http://www.space.com/php/video/
http://video.nationalgeographic.com/video/player/science/index.html
http://news.discovery.com/videos/discovery-news-space/
http://www.nss.org/resources/library/
http://www.esa.int/esa-mmg/mmg.pl?collection=Space%20Science&type=V
http://www.sciencedaily.com/videos/space_time/
http://videos.howstuffworks.com/science/space-videos.htm
http://www.cnn.com/TECH/space/archive/
http://www.boeing.com/news/feature/iss/index.html
http://space.about.com/od/multimediaresources/Multimedia_Resources_Astronomy_Pictures_Space_Videos_Audio_Visual.htm
http://www.flightglobal.com/blogs/hyperbola/2010/01/video-space-exploration-videos.html
http://www.shuttlesource.com/video/
http://malyszp.tripod.com/videos.html
http://www.space-multimedia.nl.eu.org/
http://digg.com/space
http://www.hobbyspace.com/MultiMedia/mm2.html
http://www.britannica.com/EBchecked/topic-video/557348/83530/The-Soviet-Union-was-the-first-country-to-launch-a
http://www.searchforvideo.com/science/space/
http://www.searchforvideo.com/science/space/space-shuttle/
http://www.cbsnews.com/stories/2007/09/28/in_depth_scitech/main3309433.shtml
\http://www.britannica.com/EBchecked/topic-video/557348/128362/The-dog-Laika-the-first-living-creature-to-be-put
http://www.britannica.com/EBchecked/topic-video/754867/8518/This-video-shows-an-Apollo-mission-taking-off-from-the
http://www.britannica.com/EBchecked/topic-video/754867/60066/This-video-shows-the-liftoff-of-a-Gemini-spacecraft-atop

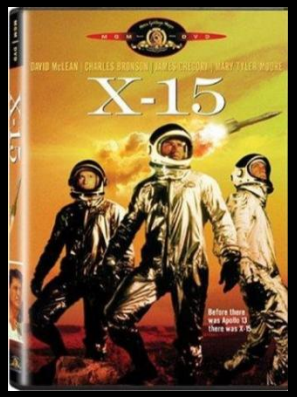
Space Resources on the Internet

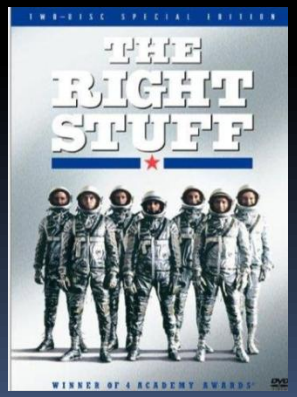
Feature Films and TV Programs

Feature films and TV programs frequently have short, exciting Sequences that can be duplicated for use in your digital story.

2001: A Space Odyssey
Above and Beyond
Apollo 13
Armageddon
Assignment Outer Space
Astronaut Farmer
Avatar
Capricorn One
Conquest of Space
Cosmos
Countdown
Dish
Dreams of Flight
ET: The Extraterrestrial
For All Mankind
From the Earth to the Moon
Hitchhiklers Guide to the Galaxy
I Aim at the Stars
IMAX Blue Planet
IMAX Destiny in Space
IMAX Dream Is Alive
IMAX Hail Columbia
IMAX Hubble
IMAX Mission to Mir
IMAX Space Station
In the Shadow of the Moon
Journey to the Moon
Lost in Space
Magnificent Desolation
Marooned
Michener's Space
Mission to Mars
Moon
Moon Machines
Moonraker
Moonshot
October Sky
Race to Space
Reluctant Astronaut
Right Stuff
Spaceballs
Space Camp
Space Chimps
Space Cowboys
Star Trek
Star Wars
Toward the Unknown
Ultimate Space Experience
Universe
When We Left Earth
X-15
Nova
Modern Marvels





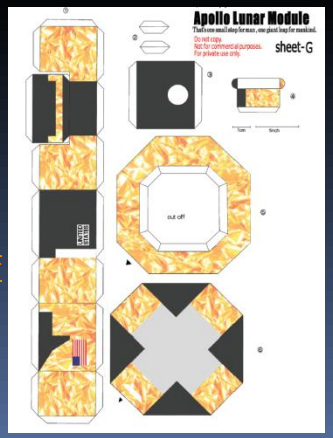


Space Resources on the Internet

Scale models of many different spacecraft are available on-line and can be printed for use as props or to create particular scenes for use in your digital story.

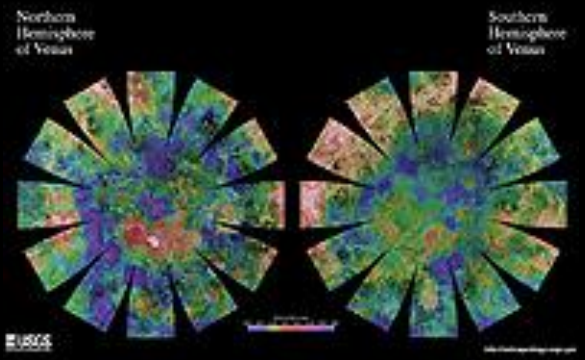
Downloadable Scale models of Spacecraft, Rockets

http://www.nasa.gov/audience/forkids/activities/Activities_Collection_archive_1.html
http://www.ss42.com/pt-space.html
http://solarsystem.nasa.gov/kids/papermodels.cfm
http://cp.c-ij.com/en/contents/2024/list_15_1.html
http://www.delta7studios.com/columbia.htm
http://www.zili.de/paper/
http://www.currell.net/models/mod_free.htm
http://www.esa.int/esaSC/SEMEO5T1VED_index_0.html
http://www.esa.int/SPECIALS/Aurora/SEMXIRWO4HD_0.html
http://www.esa.int/SPECIALS/Venus_Express/index.html
http://einstein.stanford.edu/content/paper_model/
http://hubblesite.org/the_telescope/hand-held_hubble/
http://www.csiro.au/resources/InternationalSpaceStation.html
http://esamultimedia.esa.int/docs/atv_model/ATV_2002.htm
http://www.jpl.nasa.gov/scalemodels/
http://jleslie48.com/gallery_models.html
http://marsairplane.larc.nasa.gov/platform.html
http://www.yac-j.or.jp/dl/mars/
http://mars.jpl.nasa.gov/msp98/model.html
http://mars.jpl.nasa.gov/msp98/mplmodel.html
http://ninfinger.org/models/papermercury.html
http://www.axmpaperspacescalemodels.com/
http://udonfact.hp.infoseek.co.jp/paper/down/down.html
http://www.mos95b.com/Moon%20Port/
http://www.mos95b.com/surfduke/-Mercury/
http://www.mos95b.com/surfduke/Goddard%20Rocket%20Rev1.pdf



Assemble-able Paper Globes of Planets

Globes of most of the planets of our solar system are available on-line and can be printed for use as props or to create particular scenes for use in your digital story.



http://www.vendian.org/mncharity/dir3/planet_globes/
http://www.exploratorium.edu/mars/links.html
http://www.solarviews.com/eng/ico.htm
http://www.nso.edu/staff/dooling/solar_system/ornaments/SSSM-ornaments3.html
http://astrogeology.usgs.gov/Gallery/MapsAndGlobes/
http://astrogeology.usgs.gov/Gallery/MapsAndGlobes/large/mars_mini_globes_6inch.pdf
http://www.vendian.org/mncharity/dir3/planet_globes/
http://astrogeology.usgs.gov/Gallery/MapsAndGlobes/
http://www.bruno.postle.net/neatstuff/ip-slicer/paper-planets/
http://www.vendian.org/mncharity/dir3/solarsystem/
http://www.nao.ac.jp/download/index.html#papercraft
http://www.solarviews.com/span/ico.htm
http://cp.c-ij.com/ja/papercraft/s-museum/index2.html
http://www.biomatrix2000.com/models/earth2_e_ltr.pdf
http://www.naoj.org/staff/kumiko/MilkyWay/milkyway.html

Space Resources on the Internet

NASA Multimedia

http://www.nasa.gov/mission_pages/mercury/multimedia/index.html
http://www.nasa.gov/mission_pages/messenger/multimedia/index.html
http://www.nasa.gov/news/media/audiofile/index.html
http://www.nasa.gov/multimedia/hd/index.html
http://www.nasa.gov/multimedia/index.html
http://www.nasa.gov/multimedia/3d_resources/index.html

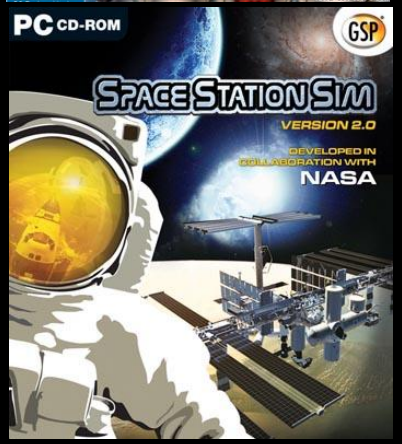
Experimental Rocket Aircraft

http://video.google.com/videoplay?docid=-3826014298405162592#
http://www.airspacemag.com/video/The-Bell-X-1.html
http://vimeo.com/3062153

Simulators of spacecraft can be used to create specific mission scenarios or to recreate scenes for your digital stories/

Spaceflight Simulators

http://www.spacestationsim.com/
http://www.hobbyspace.com/Simulators/
http://eaglelander3d.com/
http://www.aokwom.com/
http://marsairplane.larc.nasa.gov/platform.html
http://orbit.medphys.ucl.ac.uk/
http://www.space-shuttle-mission.com/
http://itunes.apple.com/us/app/nasa-lunar-electric-rover/id355542143?mt=8&ign-mpt=u0%3D6

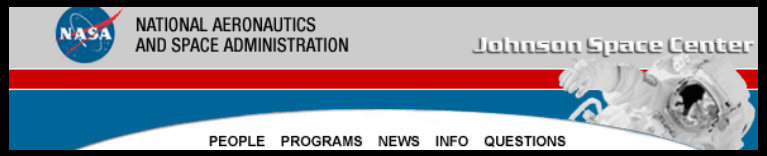


Space Resources on the Internet

Oral Histories

http://www.jsc.nasa.gov/history/oral_histories/oral_histories.htm
http://www.jsc.nasa.gov/history/oral_histories/admin.htm
http://lib.uah.edu/researchassistance/oralhistories.html
http://beacon.jpl.nasa.gov/Find/Archives.html#oh
http://www.nasm.si.edu/research/dsh/ohp-introduction.html
http://www.ksc.nasa.gov/kscoralhistory/
http://www.vor.ru/Space_now/Space_today/
http://english.ruvr.ru/tag_5371326/

Oral histories by astronauts, scientists or engineers can be used as source material, or as narration for your digital stories.



Astronomy Resources http://www.kidscosmos.org/
http://www.nsf.gov/news/classroom/astronomy.jsp

Astronomical Images http://antwrp.gsfc.nasa.gov/apod/archivepix.html

Chinese Space Program http://www.cnsa.gov.cn/n615709/cindex.html

European Space Program http://www.esa.int/esaCP/index.html

NASA Images http://www.nasaimages.org/,
http://www.nasa.gov/multimedia/imagegallery/index.html

NASA History http://history.nasa.gov/

Private Human Spaceflight http://www.faa.gov/about/office_org/headquarters_offices/ast/human_space_flight_reqs/

Russian Space Exploration http://www.russianspaceweb.com/

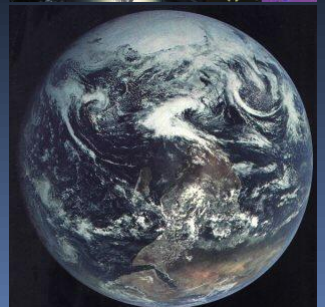
Space Commercialization http://www.space.commerce.gov/

Space Encyclopedia http://www.astronautix.com/
http://www.aerospaceguide.net/

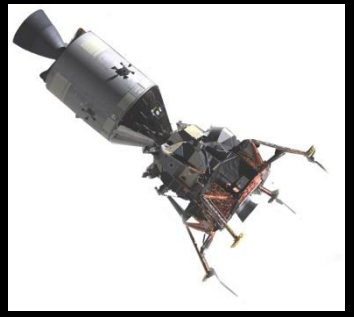
3D Resources http://www.nasa.gov/multimedia/3d_resources/index.html

Space Resources on the Internet

Business	http://www.aerospaceguide.net/spacebusiness/index.html
	http://www.spacefuture.com/archive/the_business_of_commercializing_space.shtml
Geography	http://www.nasm.si.edu/ceps/gaw/
	http://er.jsc.nasa.gov/seh/Geography_From_Space.pdf
	http://quest.nasa.gov/space/teachers/liftoff/geography.html
History	http://www.history.com/topics/space
	http://osr.org/en-us/articles/the-history-of-space-exploration/
	http://english.peopledaily.com.cn/90001/90780/6290793.html
	http://spaceflight.nasa.gov/history/
	http://www.aerospaceguide.net/spacehistory/index.html
Robotics	http://www.cs.cmu.edu/~illah/PAPERS/ISAIRAS03.pdf
	http://ranier.hq.nasa.gov/telerobotics_page/telerobotics.shtm
	http://www.asc-csa.gc.ca/eng/publications/success10.asp
Technology	http://www.aerospace-technology.com/
Science	http://www.spacescience.org/index.php
	http://spacescience.nasa.gov/
	http://www.esa.int/esaSC/index.html
Biology	http://www.astrobio.net/
	http://academicearth.org/courses/astrobiology-and-space-exploration
	http://astrobiology.arc.nasa.gov/
	http://nai.arc.nasa.gov/
Chemistry	http://archive.ncsa.illinois.edu/Cyberia/Bima/astrochem.html
	http://www.uwsp.edu/geo/projects/geoweb/participants/dutch/planets/chemss.htm
Ecology	http://earthshots.usgs.gov/
	http://www.space-ecology.com/
	http://www.scientainment.com/spaceecology.pdf
Geology	http://www.spacegrant.hawaii.edu/class_acts/
	http://www.lpi.usra.edu/publications/slidesets/geology/
Physics	http://funphysics.jpl.nasa.gov/
	http://space.umd.edu/iacg_c4/c4_tutorials.html

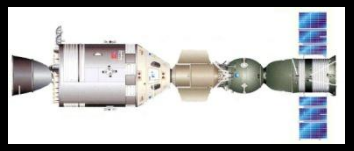


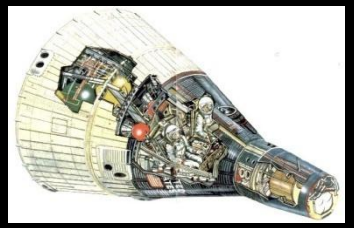
Space Resources on the Internet

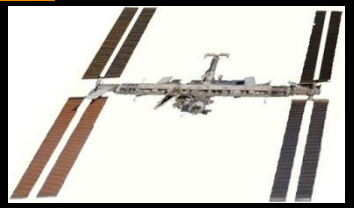


US Manned Space Projects

Humans in Space	http://library.thinkquest.org/C003763/index.php?page=human01
Apollo	http://www.hq.nasa.gov/alsj/, http://www.nasa.gov/mission_pages/apollo/index.html
	http://nssdc.gsfc.nasa.gov/planetary/lunar/apollo.html
	http://www.nasa.gov/mission_pages/apollo/index.html
	http://www.lpi.usra.edu/lunar/missions/apollo/
	http://www.lpi.usra.edu/expmoon/apollo_landings.html
	http://www.nasm.si.edu/collections/imagery/apollo/apollo.htm
	http://www.spacearium.com/special/spaceline/spaceline.org/apollo
	http://www.panoramas.dk/moon/mission-apollo.html
	http://www.thespaceplace.com/history/apollo2.html
	http://www.historyplace.com/unitedstates/apollo11/index.html
	http://www.apolloarchive.com/apollo_gallery.html
	http://www.aerospaceguide.net/apollo/index.html
	http://www.astronomytoday.com/exploration/apollo.html
	http://www.kidscosmos.org/kid-stuff/moon-landing.html
	http://www.universetoday.com/guide-to-space/missions/apollo-missions/
Apollo-Soyuz	http://history.nasa.gov/astp/ , http://www.nasa.gov/mission_pages/apollo-soyuz/index.html
Gemini	http://www.nasa.gov/mission_pages/gemini/index.html
	http://www-pao.ksc.nasa.gov/history/gemini/gemini.htm
	http://www.thespaceplace.com/history/gemini2.html
	http://www.spacearium.com/special/spaceline/spaceline.org/gemini.html
International Space Station	http://www.nasa.gov/mission_pages/station/main/index.html
	http://www.emints.org/ethemes/resources/S00001287.shtml
	http://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/20090029998_2009030907.pdf
	http://www.nasa.gov/mission_pages/mercury/index.html
	http://www-pao.ksc.nasa.gov/history/mercury/mercury.htm
	http://www.thespaceplace.com/history/mercury2.html
	http://www.spacearium.com/special/spaceline/spaceline.org/mercury
Mercury	http://www-pao.ksc.nasa.gov/history/mercury/mercury.htm
	http://www.nasa.gov/mission_pages/mercury/index.html
Skylab	http://www.nasa.gov/mission_pages/skylab/index.html
	http://www-pao.ksc.nasa.gov/history/skylab/skylab.htm
	http://www.spaceflighthistory.com/skylabprogram.htm
Space Shuttle	http://www.nasa.gov/mission_pages/shuttle/main/index.html
	http://www.howstuffworks.com/space-shuttle.htm







Space Resources on the Internet

Russian Manned Space Projects
http://www.centennialofflight.gov/essay/SPACEFLIGHT/soviet_human/SP20.htm
http://www.russianspaceweb.com/spacecraft_manned_first.html

Vostok
http://www.russianspaceweb.com/vostok1.html
http://www.daviddarling.info/encyclopedia/V/Vostok.html
http://www.spacefacts.de/mission/english/vostok-1.htm
http://www.astronautix.com/flights/vostok1.htm

Voskhod
http://www.nasm.si.edu/exhibitions/gal114/SpaceRace/sec300/sec330.htm
http://www.astronautix.com/flights/voskhod1.htm
http://www.zarya.info/Diaries/Voskhod/Voskhod1.php
http://www.airspacemag.com/space-exploration/voskhod.html
http://www.aerospaceguide.net/humansinspace/voskhod.html
http://www.vor.ru/Space_now/Space_today/Space_7.html
http://www.svengrahn.pp.se/trackind/voskhod1/voskhod1.html
http://www.friends-partners.org/partners/mwade/craft/vosod3kv.htm

Soyuz
http://www.russianspaceweb.com/soyuz.html
http://www.nasa.gov/mission_pages/station/structure/elements/soyuz/index.html
http://www.aerospaceguide.net/soyuzspacecraft.html
http://www.astronautix.com/craftfam/soyuz.htm
http://www.nytimes.com/interactive/2008/10/13/science/space/20081013_SOYUZ_GRAPHIC.html

Russian Lunar Program
http://www.fas.org/spp/eprint/lindroos_moon1.htm
http://www.astronautix.com/flights/sovnding.htm
http://www.astronautix.com/articles/theghoax.htm
http://www.daviddarling.info/encyclopedia/R/Russian_manned_Moon.html
http://www.russianspaceweb.com/spacecraft_manned_lunar.html

Salyut
http://www.zarya.info/Diaries/StationsDOS/Salyut1.php
http://library.thinkquest.org/03oct/02144/spacest/salyut.htm
http://www.pbs.org/spacestation/station/russian.htm
http://www.aerospaceguide.net/spacestation/salyut1.html
http://www.spacestation-international.com/articles/manned-space-stations/salyut.php

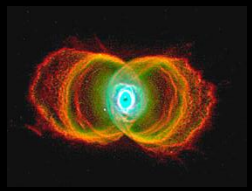
Mir
http://www.russianspaceweb.com/mir.html
http://www.energia.ru/english/energia/mir/mir.html
http://www.videocosmos.com/mir.shtm
http://spaceflight.nasa.gov/history/shuttle-mir/
http://www.aerospaceguide.net/mir/index.html
http://msl.jpl.nasa.gov/Programs/mir.html

Space Resources on the Internet

Astronomy and Astronomical Space Satellites or Probes

http://www.nsf.gov/news/classroom/astronomy.jsp
http://antwrp.gsfc.nasa.gov/apod/archivepix.html
http://www.kidsastronomy.com/explore_index.htm
http://www.kidscosmos.org/
http://www.universetoday.com/
http://www.emints.org/ethemes/resources/S00000002.shtml
http://hubblesite.org/newscenter/
http://www.cosmos4kids.com/files/explore_intro.html

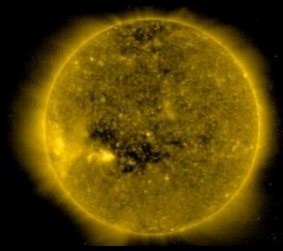
Deep Space	http://nmp.nasa.gov/ds1/
Chandra	http://chandra.nasa.gov/, http://chandra.harvard.edu/photo/category.html
COBE	http://nssdc.gsfc.nasa.gov/nmc/masterCatalog.do?sc=1989-089A
Compton	http://heasarc.gsfc.nasa.gov/docs/cgro/cossc/
Deep Space 1	http://www.jpl.nasa.gov/missions/missiondetails.cfm?mission=DeepSpace1
EUVE	http://www.ssl.berkeley.edu/euve/sci/EUVE.html
Fermi	http://www.nasa.gov/mission_pages/GLAST/main/index.html
FUSE	http://fuse.pha.jhu.edu/
GALEX	http://www.nasa.gov/mission_pages/galex/index.html
Gravity Probe B	http://www.nasa.gov/mission_pages/gpb/index.html
HETE	http://space.mit.edu/HETE/
Hubble Space Telescope	http://hubblesite.org/gallery/album/ , http://www.nasa.gov/mission_pages/hubble/main/index.html
	http://www.nasa.gov/audience/foreducators/hubble-index.html
	www.imax.com/hubble
IBEX	http://www.nasa.gov/mission_pages/ibex/index.html
Kepler	http://discovery.nasa.gov/kepler.html
ROSAT	http://heasarc.gsfc.nasa.gov/docs/rosat/rosgof.html
RXTE Explorer	http://heasarc.gsfc.nasa.gov/docs/xte/xte_1st.html
Spitzer	http://www.nasa.gov/mission_pages/spitzer/main/index.html
SWAS	http://www.cfa.harvard.edu/swas/
Voyager 1, 2	http://voyager.jpl.nasa.gov/
Webb	http://www.jwst.nasa.gov/
WIRE	http://sunland.gsfc.nasa.gov/smex/wire/index.html
WISE	http://www.nasa.gov/mission_pages/WISE/main/index.html



SPACE PROJECT RESOURCES ON THE INTERNET

Planets and Solar System http://discovery.nasa.gov/, http://photojournal.jpl.nasa.gov/index.html http://www.lpi.usra.edu/

Sun

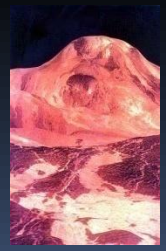


Advanced Composition Explorer (ACE)	http://www.srl.caltech.edu/ACE/
Active Cavity Irradiance Monitor Satellite	http://www.jpl.nasa.gov/missions/missiondetails.cfm?mission=AcrimSat
Hinode	http://www.nasa.gov/mission_pages/hinode/index.html
SDO	http://www.nasa.gov/mission_pages/sdo/main/index.html
SOHO	http://www.nasa.gov/mission_pages/soho/index.html
SAMPEX	http://sunland.gsfc.nasa.gov/smex/sampex/
STEREO	http://www.nasa.gov/mission_pages/stereo/main/index.html
TRACE	http://trace.lmsal.com/
Ulysses	http://solarsystem.nasa.gov/missions/profile.cfm?MCode=Ulysses

Mercury

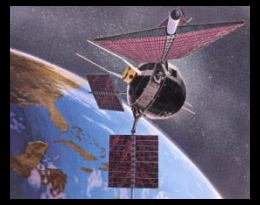
Mariner 10	http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1973-085A
Messenger	http://messenger.jhuapl.edu/

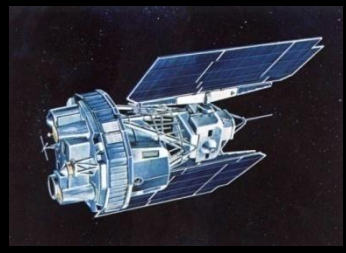
Venus

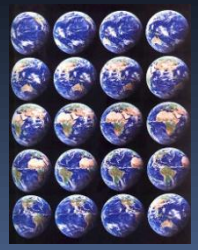


Magellan	http://www2.jpl.nasa.gov/magellan/
Mariner II	http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1962-041A
Mariner 5	http://www.jpl.nasa.gov/missions/missiondetails.cfm?mission=Mariner5
Mariner 10	http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1973-085A
Pioneer Venus	http://nssdc.gsfc.nasa.gov/planetary/pioneer_venus.html
Venera	http://nssdc.gsfc.nasa.gov/planetary/venera.html

Earth	http://www.jpl.nasa.gov/earth/
	http://earthobservatory.nasa.gov/
AIM	http://www.nasa.gov/mission_pages/aim/index.html
Aqua	http://www.nasa.gov/mission_pages/aqua/index.html
Aquarius	http://aquarius.nasa.gov/
ARCTAS	http://www.nasa.gov/mission_pages/arctas/
Aura	http://aura.gsfc.nasa.gov/
CALIPSO	http://www.nasa.gov/mission_pages/calipso/main/index.html
CINDI-C/NOFS	http://www.nasa.gov/mission_pages/cindi/
CloudSat	http://www.jpl.nasa.gov/missions/missiondetails.cfm?mission=CloudSat
DESDynI	http://desdyni.jpl.nasa.gov/technology/
ERBS	http://nasascience.nasa.gov/missions/erbs
Explorer	http://www.nasa.gov/mission_pages/explorer/index.html
FAST	http://sprg.ssl.berkeley.edu/fast/
Geotail	http://pwg.gsfc.nasa.gov/geotail.shtml
Glory	http://glory.gsfc.nasa.gov/
GOES	http://goespoes.gsfc.nasa.gov/goes/index.html
	http://www.nasa.gov/mission_pages/GOES-O/main/index.html
	http://www.nasa.gov/mission_pages/GOES-P/main/index.html
GRACE	http://www.csr.utexas.edu/grace/
ICESat	http://icesat.gsfc.nasa.gov/
IMAGE	http://pluto.space.swri.edu/IMAGE/
JASON	http://www.nasa.gov/mission_pages/ostm/main/index.html
LAGEOS	http://ilrs.gsfc.nasa.gov/satellite_missions/list_of_satellites/lag1_general.html
LANDSAT	http://landsat.gsfc.nasa.gov/
Nimbus	http://earth.esa.int/ers/sysutil/NIMBUS.DES.html
Polar	http://pwg.gsfc.nasa.gov/polar/
SORCE	http://lasp.colorado.edu/sorce/index.htm
Sputnik	http://history.nasa.gov/sputnik/
SRTM	http://www2.jpl.nasa.gov/srtm/
Tiros/NOAA	http://www.nasa.gov/mission_pages/noaa-n/main/index.html
Terra	http://www.nasa.gov/mission_pages/terra/index.html
	http://www.nasa.gov/mission_pages/fires/main/index.html
UARS	http://solarsystem.nasa.gov/missions/profile.cfm?MCode=Ulysses
WIND	http://www-spof.gsfc.nasa.gov/istp/wind/wind.html

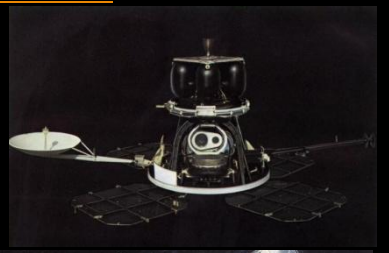






Earth's Moon

Apollo	http://astrogeology.usgs.gov/Projects/LunarAtlas/maps/
	http://www.hq.nasa.gov/alsj/, http://www.nasa.gov/mission_pages/apollo/index.html
	http://nssdc.gsfc.nasa.gov/planetary/lunar/apollo.html
	http://www.nasa.gov/mission_pages/apollo/index.html
	http://www.lpi.usra.edu/lunar/missions/apollo/
	http://www.lpi.usra.edu/expmoon/apollo_landings.html
	http://www.nasm.si.edu/collections/imagery/apollo/apollo.htm
	http://www.spacearium.com/special/spaceline/spaceline.org/apollo
	http://www.panoramas.dk/moon/mission-apollo.html
	http://www.thespaceplace.com/history/apollo2.html
	http://www.historyplace.com/unitedstates/apollo11/index.html
	http://www.apolloarchive.com/apollo_gallery.html
	http://www.aerospaceguide.net/apollo/index.html
	http://www.astronomytoday.com/exploration/apollo.html
	http://www.kidscosmos.org/kid-stuff/moon-landing.html
	http://www.universetoday.com/guide-to-space/missions/apollo-missions/
	http://www.hq.nasa.gov/alsj/, http://www.nasa.gov/mission_pages/apollo/index.html
Chandrayan-1	http://www.isro.org/Chandrayaan/htmls/home.htm
Clementine	http://www.nrl.navy.mil/clementine/ , http://nssdc.gsfc.nasa.gov/planetary/clementine.html
GRAIL	http://discovery.nasa.gov/grail.html
Kaguya	http://www.jaxa.jp/projects/sat/selene/index_e.html
LCROSS	http://www.nasa.gov/mission_pages/LCROSS/main/
LRO	http://www.nasa.gov/mission_pages/LRO/main/index.html
Luna	http://www.russianspaceweb.com/spacecraft_planetary_lunar.html
Lunochod	http://www.astronautix.com/craft/lunokhod.htm
	http://www.zyra.tv/lunokhod.htm
Lunar Orbiter	http://nssdc.gsfc.nasa.gov/planetary/lunar/lunarorb.html
Lunar Prospector	http://discovery.nasa.gov/prospector.html
Lunik	http://bdaugherty.tripod.com/moon/exploration.html
	http://solarsystem.jpl.nasa.gov/missions/profile.cfm?Sort=Alpha&Letter=L&Alias=Lunik%207
Ranger	http://nssdc.gsfc.nasa.gov/planetary/lunar/ranger.html
Selene	http://www.jaxa.jp/projects/sat/selene/index_e.html
Surveyor	http://nssdc.gsfc.nasa.gov/planetary/lunar/surveyor.html



Mars http://marsprogram.jpl.nasa.gov/

Mariner IV, VI, VII, IX	http://nssdc.gsfc.nasa.gov/planetary/mars/mariner.html
Mars Express	http://www.esa.int/SPECIALS/Mars_Express/
MER	http://www.nasa.gov/mission_pages/mer/index.html
MGS	http://www.nasa.gov/mission_pages/mgs/index.html
MRO	http://www.nasa.gov/mission_pages/MRO/main/index.html
MSL	http://marsprogram.jpl.nasa.gov/msl/
Odyssey	http://www.nasa.gov/mission_pages/odyssey/index.html
Pathfinder	http://www.nasa.gov/mission_pages/mars-pathfinder/index.html
Phoenix	http://www.nasa.gov/mission_pages/phoenix/main/index.html
Viking	http://www.nasa.gov/mission_pages/viking/
	http://solarsystem.nasa.gov/missions/profile.cfm?Sort=Alpha&Letter=V&Alias=Viking%2001

asteroids and comets

Contour	http://discovery.nasa.gov/contour.html
Dawn	http://discovery.nasa.gov/dawn.html
Deep Impact	http://deepimpact.jpl.nasa.gov/
EPOXI	http://www.nasa.gov/mission_pages/epoxi/index.html
Genesis	http://discovery.nasa.gov/genesis.html , http://www.nasa.gov/mission_pages/genesis/main/
NEAR	http://discovery.nasa.gov/near.html
Stardust	http://discovery.nasa.gov/stardust.html, http://discovery.nasa.gov/stardustNExT.html

Jupiter

Galileo	http://www2.jpl.nasa.gov/galileo/
Juno	http://newfrontiers.msfc.nasa.gov/missions_juno.html,
	http://www.nasa.gov/mission_pages/juno/main/index.html
Pioneer 10, 11	http://www.nasa.gov/centers/ames/missions/archive/pioneer10-11.html
Voyager 1, 2	http://voyager.jpl.nasa.gov/
	http://www.nasa.gov/mission_pages/voyager/index.html
	http://www.northern-stars.com/Voyager_&_Galileo.pdf

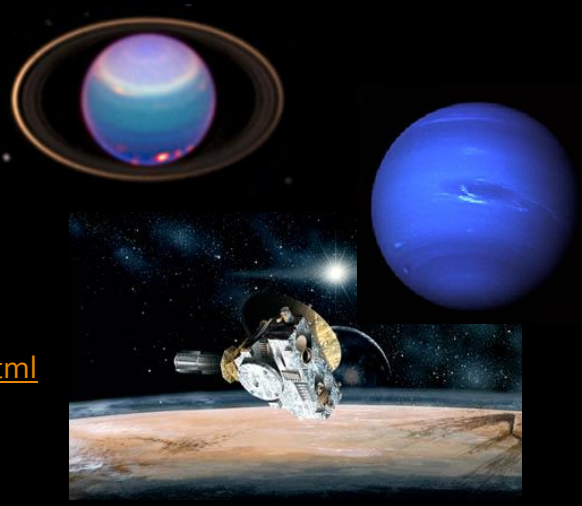
Saturn

Pioneer 10	http://www.nasa.gov/centers/ames/missions/archive/pioneer10-11.html
Cassini	http://saturn.jpl.nasa.gov
Huygens	http://www.esa.int/SPECIALS/Cassini-Huygens/index.html
Voyager 1, 2	http://voyager.jpl.nasa.gov/

Uranus
Voyager 2 http://voyager.jpl.nasa.gov/

Neptune
Voyager 2 http://voyager.jpl.nasa.gov/

Pluto
New Horizons http://newfrontiers.msfc.nasa.gov/missions_nh.html

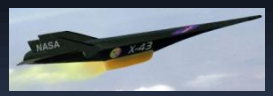


Space Art Websites

http://www.hobbyspace.com/Art/art2.html
http://www.cosmographica.com/gallery/index_main.html
www.outer-space-art-gallery.com/
http://spaceart.org/
http://www.novaspace.com/
http://www.space-art.co.uk/index.php
http://imperialearth.com/
http://www.solarvoyager.com/default.asp
http://novacelestia.com/
http://www.bonestell.org/
http://www.costellospaceart.com/
http://www.boulder.swri.edu/~durda/paintings.html
http://www.plan59.com/galleries/space_art/space_art.htm
http://www.mccallstudios.com/news.html
http://iaaa.org/
http://www.johnstonsarchive.net/spaceart/
http://www.callespaceart.com/Home.html
http://www.psi.edu/~hartmann/
http://www.alanbeangallery.com/
http://www.planetscapes.com/
http://www.marssociety.org/portal/c/society-tools/mars_art/david_robinson_art
http://www.arcadiastreet.com/cgvistas/ab_menu_mars.htm
http://www.hardyart.demon.co.uk/html/main.html
http://www.starbase1.co.uk/galleries/index_en.html
http://spaceart1.ning.com/profile/gavinMundy?xg_source=activity
http://www.russianspaceweb.com/

Rocket Planes and Experimental Aircraft

Winnie Mae	http://www.centennialofflight.gov/essay/Explorers_Record_Setters_and_Daredevils/Wiley_Post/EX27.htm
Russian BI-1	http://www.astronautix.com/craft/bi1.htm
Bachem Natter	http://www.militaryfactory.com/aircraft/detail.asp?aircraft_id=103
ME-163	http://www.aviastar.org/air/germany/me-163.php
Bell X-1	http://www.nasm.si.edu/exhibitions/GAL100/bellX1.html
Douglas D-558-2	http://www.nasm.si.edu/collections/artifact.cfm?id=A19610108000
Bell X-2	http://www.bellx-2.com/ http://mynasa1.nasa.gov/centers/dryden/news/FactSheets/FS-079-DFRC.html
North American X-15	http://mynasa1.nasa.gov/centers/dryden/news/FactSheets/FS-052-DFRC.html
X-37	http://www.msfc.nasa.gov/news/x37news/index.html
X-43	http://mynasa1.nasa.gov/centers/dryden/news/FactSheets/FS-040-DFRC.html
Space Shuttle	http://www.nasa.gov/mission_pages/shuttle/main/index.html
Russian Shuttle	http://www.buran-energia.com/



Rocketry

Early Chinese Rockets	http://inventors.about.com/library/inventors/blrockethistory.htm
Congreve Rockets	http://www.scienceandsociety.co.uk/results.asp?image=10278259
Konstantin Tsiolkovsky	http://www.informatics.org/museum/tsiol.html
Robert Goddard	http://www.nasa.gov/centers/goddard/about/dr_goddard.html
V-2 Rocket	http://www.v2rocket.com/
Russian R-7	http://www.fas.org/nuke/guide/russia/icbm/r-7.htm
US Atlas ICBM	http://www.fas.org/nuke/guide/usa/icbm/sm-65.htm
US Jupiter IRBM	http://www.astronautix.com/lvs/jupiter.htm
US Redstone IRBM	http://www.redstone.army.mil/history/systems/jupiter/chapter1.html
US Navajo Missile	http://www.fas.org/nuke/guide/usa/icbm/sm-64.htm
US Titan ICBM	http://www.titan2icbm.org/
Saturn Rocket	http://www.centennialofflight.gov/essay/Dictionary/SATURN/DI162.htm