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

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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 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:
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 Projects

**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](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](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 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.
Wheels on Another World

Ideas for Some Digital Story Projects

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
The Earth Seen From Space

Ideas for Some Digital Story Projects

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

Engineers, designers and artists have been thinking about what the perfect spaceship would look like since 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
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 in 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 spacewalk suits

MIT Mechanical Counter-pressure next generation suit

Russian and US lightweight Emergency pressurization suits

Russian and US moonwalk suits
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  Galileu  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

Soyuz 1

Salyut 1

Challenger

Columbia
### Space Resources on the Internet

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<td>Geography</td>
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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/nasalessonnp.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=ok
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.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://blogs.airspacemag.com/moon/
http://blogs.airspacemag.com/daily-planet/
http://collectspace.com/
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.nasa.gov/research/ceps/etp/etp.htm
http://www.nasa.gov/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://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://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://www.culturewars.org.uk/index.php/site/article/head_to_head_on_space_exploration_man_not_machine_should_explore_space/

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/Jo110163/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://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.nasa.gov/research/archive/collections/photoarchives.cfm
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 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/srs/rl/russian_space_links.html
http://www.space-video.info/
http://www.space.com/php/video/
http://www.nss.org/resources/library/
http://www.esa.int/esa-mmg/mmg.pl?collection=Space%20Science&type=Video
http://www.sciencedaily.com/videos/space_time/
http://videos.howstuffworks.com/science/space-videos.htm
http://www.cnn.com/TECH/space/archive/
http://space.about.com/od/multimediaresources/Multimedia_Resources_Astronomy_Pictures_Space_Videos_Audio_Visual.htm
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/
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
Hitchhiker’s 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

Feature films and TV programs frequently have short, exciting Sequences that can be duplicated for use in your digital story.
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.nasa.gov/audience/forkids/activities/Activities_Collection_archive_1.html)
- [http://www.ss42.com/pt-space.html](http://www.ss42.com/pt-space.html)
- [http://solarsystem.nasa.gov/kids/papermodels.cfm](http://solarsystem.nasa.gov/kids/papermodels.cfm)
- [http://www.delta7studios.com/columbia.htm](http://www.delta7studios.com/columbia.htm)
- [http://www.zili.de/paper/](http://www.zili.de/paper/)
- [http://www.currell.net/models/mod_free.htm](http://www.currell.net/models/mod_free.htm)
- [http://www.esa.int/esaSC/SEMO5T1VED_index_0.html](http://www.esa.int/esaSC/SEMO5T1VED_index_0.html)
- [http://www.esa.int/SPECIALS/Aurora/SEMXIRWO4HD_o.html](http://www.esa.int/SPECIALS/Aurora/SEMXIRWO4HD_o.html)
- [http://www.esa.int/SPECIALS/Venus_Express/index.html](http://www.esa.int/SPECIALS/Venus_Express/index.html)
- [http://einstein.stanford.edu/content/paper_model/](http://einstein.stanford.edu/content/paper_model/)
- [http://hubblesite.org/the_telescope/hand-held_hubble/](http://hubblesite.org/the_telescope/hand-held_hubble/)
- [http://esamultimedia.esa.int/docs/atv_model/ATV_2002.htm](http://esamultimedia.esa.int/docs/atv_model/ATV_2002.htm)
- [http://jleslie48.com/gallery_models.html](http://jleslie48.com/gallery_models.html)
- [http://marsairplane.larc.nasa.gov/platform.html](http://marsairplane.larc.nasa.gov/platform.html)
- [http://www.yac-j.or.jp/dl/mars/](http://www.yac-j.or.jp/dl/mars/)
- [http://ninfinger.org/models/papermercury.html](http://ninfinger.org/models/papermercury.html)
- [http://udonfact.hp.infoseek.co.jp/paper/down/down.html](http://udonfact.hp.infoseek.co.jp/paper/down/down.html)
- [http://www.mos95b.com/Moon%20Port/](http://www.mos95b.com/Moon%20Port/)
- [http://www.mos95b.com/surfduke/-Mercury/](http://www.mos95b.com/surfduke/-Mercury/)
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://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.naoj.org/staff/kumiko/MilkyWay/milkyway.html
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/ 
Oral Histories by astronauts, scientists or engineers can be used as source material, or as narration for your digital stories.

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.nasa.ms.edu/research/dsh/ohp-introduction.html
http://www.ksc.nasa.gov/kscoralhistory/
http://www.vor.ru/Spece_now/Space_today/
http://english.ruvr.ru/tag_5371326/

Astronomy Resources
http://www.kidscosmos.org/

Astronomical Images

Chinese Space Program
http://www.cnnsa.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
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<td>Robotics</td>
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<td><a href="http://ranier.hq.nasa.gov/telerobotics_page/telerobotics.shtm">http://ranier.hq.nasa.gov/telerobotics_page/telerobotics.shtm</a></td>
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<td><a href="http://www.howstuffworks.com/space-shuttle.htm">http://www.howstuffworks.com/space-shuttle.htm</a></td>
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Russian Manned Space Projects
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
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
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http://www.aerospaceguide.net/humansinspace/voskhod.html
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http://www.svengrahn.pp.se/trackind/voskhod1/voskhod1.html
http://www.friends-partners.org/partners/mwade/craft/vosod3kv.htm

Voskhod
http://www.aerospaceguide.net/soyuzspacecraft.html
http://www.astronautix.com/craftfam/soyuz.htm

Soyuz
http://www.russianspaceweb.com/spacecraft_manned_lunar.html
http://www.videocosmos.com/mir.shtm

Russian Lunar Program
http://www.fas.org/spp/eprint/lindroos_moon1.htm
http://library.thinkquest.org/03oct/02144/spacest/salyut.htm
http://www.astronautix.com/flights/sovnding.htm
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http://www.daviddarling.info/encyclopedia/R/Russian_manned_Moon.html
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Salyut
http://library.thinkquest.org/03oct/02144/spacest/salyut.htm

Mir
http://www.russianspaceweb.com/mir.html
http://spaceflight.nasa.gov/history/shuttle-mir/
http://www.aerospaceguide.net/mir/index.html
http://msl.jpl.nasa.gov/Programs/mir.html
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<td>WISE</td>
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Planets and Solar System
http://www.lpi.usra.edu/

Sun
Advanced Composition Explorer (ACE)
http://www.srl.caltech.edu/ACE/
Active Cavity Irradiance Monitor Satellite
Hinode
SDO
SOHO
SAMPEX
http://sunland.gsfc.nasa.gov/smex/sampex/
STEREO
TRACE
http://trace.lmsal.com/
Ulysses
http://solarsystem.nasa.gov/missions/profile.cfm?MCode=Ulysses

Mercury
Mariner 10
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
Mariner 10
Pioneer Venus
http://nssdc.gsfc.nasa.gov/planetary/pioneer_venus.html
Venera
http://nssdc.gsfc.nasa.gov/planetary/venera.html
Earth's Moon
Apollo

http://www.hq.nasa.gov/alsj/  
http://nssdc.gsfc.nasa.gov/planetary/lunar/apollo.html  
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Chandrayan-1
Clementine

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http://discovery.nasa.gov/graill.html

Kaguya
LCROSS
LRO
Luna
Lunochod

http://www.jaxa.jp/projects/sat/selene/index_e.html
http://www.russianspaceweb.com/spacercraft_planetary_lunar.html
http://www.astronautix.com/craft/lunokhad.htm
http://www.zyra.tv/lunokhad.htm

Lunar Orbiter
Lunar Prospector
Lunik

http://nssdc.gsfc.nasa.gov/planetary/lunar/lunarorb.html
http://discovery.nasa.gov/prospector.html
http://bdaghterty.tripod.com/moon/exploration.html
http://nssdc.gsfc.nasa.gov/planetary/lunar/ranger.html

Ranger
Selene
Surveyor

http://www.jaxa.jp/projects/sat/selene/index_e.html
http://nssdc.gsfc.nasa.gov/planetary/lunar/surveyor.html
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<td>NEAR</td>
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Uranus
Voyager 2
http://voyager.jpl.nasa.gov/

Neptune
Voyager 2
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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/
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http://www.costelloinspaceart.com/
http://www.boulder.swri.edu/~durda/paintings.html
http://www.plan59.com/galleries/space_art/space_art.htm
http://iaaa.org/
http://www.johnstonsarchive.net/spaceart/
http://www.callespaceart.com/Home.html
http://www.psi.edu/~hartmann/
http://www.alanbeangallery.com/
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http://www.arcadiastreet.com/cgvistas/ab_menu_mars.htm
http://www.hardyart.demon.co.uk/html/main.html
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http://spaceart1.ning.com/profile/gavinMundy?xg_source=activity
http://www.russianspaceweb.com/
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<td>US Navajo Missile</td>
<td><a href="http://www.fas.org/nuke/guide/usa/icbm/sm-64.htm">http://www.fas.org/nuke/guide/usa/icbm/sm-64.htm</a></td>
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