NASA GAME CATALOG

Daniel Laughlin, Ph.D.
Digital Medial Learning Fellow
NASA Office of Education
GESTAR/MSU

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Executive Summary

NASA has been using games for education and communication since at least 1998, yet there has never been a thorough effort to gather information about all the games together, to analyze what kind of games NASA has, what lessons have been learned, or what assets might be shared and reused. As a co-chair for the National Science and Technology Council's Digital Game Technologies Interagency Working Group, NASA found it unable to answer questions like "how many games have you built?" or "have you created any mobile games?" None of the other twenty-four working group members could answer those questions definitively either.

This catalog details the extent of NASA's game portfolio, so that others developing new games are able to build upon the lessons learned from the past. Enclosed herein are details on fourteen individual games that have been created by or for NASA as well as two collections of hosted Flash games. Each entry has information about the game, including a screen shot, point of contact (if available), and a link to the game's site. The games are identified by genre, NASA content or contribution, and intended audience or Entertainment Software Review Board (ESRB) rating.

This catalog is a living document and will be updated over time as more games are developed or discovered. It is likely that some games have been missed. NASA is the first federal entity attempting to definitively catalog its games.

Contents

Angry Birds: Space

POC: Bob Jacobs (HQ)
bob.jacobs@nasa.gov
Release Date: 3/12/2012
Developer: Rovio
Publisher: Rovio
Platform: PC, Mac, iOS, Android, Facebook
Genre: Arcade, Puzzle
Audience: E for Everyone (ESRB rating)
URL: http://space.angrybirds.com

Game Description

Angry Birds Space features 60 interstellar levels on planets and in zero gravity, resulting in spectacular gameplay ranging from slow-motion puzzles to lightspeed destruction. With regular free updates, new in-app purchases, brand new birds, brand new superpowers, and a whole galaxy to explore, the sky is no longer the limit.

By taking the game galactic, Angry Birds Space retains the familiar elements of Angry Birds gameplay but gives them a unique twist in a variable gravity environment. From the weightlessness of space to the gravity wells of nearby planets, fans can have fun with physics as they try out new gameplay possibilities. The Angry Birds themselves have also transformed into superheroes, with new costumes and abilities.

Collaboration

NASA personnel reviewed the game before release, the game includes an image of the ISS and a link to NASA, astronaut Don Pettit is featured in a video from the ISS explaining the dynamics of the game.

Additional Material

NASA participated with Rovio on Angry Birds Space under a Space Act Agreement to share the excitement of space with the Angry Birds community, educate users on NASA's programs, and collaboratively create interactive educational experiences for the public.

In August 2012, an update containing the first 20 levels of the next level pack, entitled "Red Planet", was released, in conjunction with the landing of the Curiosity Rover, which the Space Pigs hijack for their own ends.

In March 2013, the Kennedy Space Center Visitor Complex opened the Angry Birds Space Encounter attraction. It includes six interactive games inside the 4,485-square-foot exhibit. According to Kennedy's Associate Director Kelvin Manning mastering launching the Angry Birds into the right trajectory to hit the big targets could translate to using orbital mechanics to land spacecraft on a distant planet or fast-moving asteroid in the future.

Rovio also collaborated with the National Geographic Society who published an educational book about the solar system using the popularity of the game. http://www.amazon.com/National-Geographic-Angry-Birds-Space/dp/1426209924/ref=sr_1_10?ie=UTF8&qid=1332681791&sr=8-10

Be A Martian

POC: Michelle Viotti (JPL)
michelle.a.viotti@jpl.nasa.gov
Release Date: 11/17/2009
Platform: PC, Mac, Linux
Publisher: JPL
Developer: NASA/JPL-Caltech and Microsoft
Genre: Citizen Science
Target Audience: General public (but designed with younger students in mind)
URL: http://BeAMartian.jpl.nasa.gov

Game Description

Be a Martian is website that features games that use crowdsourcing to help NASA better understand Mars. The site includes a crater identification game and an image alignment game. Both use NASA data and engage players in data analysis. Players identify surface features and report their findings through Oxford University's Galaxy Zoo program. Identification earns points and eventually badges as rewards.

By pinpointing the precise location of each Mars image, players contribute to the advancement of human knowledge about Mars and make discoveries such as surface changes over time more recognizable. Data from the Mars Orbiter Laser Altimeter (MOLA) on the Mars Global Surveyor and the Thermal Emission Imaging System (THEMIS) on the Mars Odyssey are used in the mapping activities. In the *Tag Mars* section, images from the Mars rovers Spirit and Opportunity are used.

Collaboration

Be A Martian was created under an agreement between NASA/JPL Caltech and Microsoft and with contributions from Arizona State University and Galaxy Zoo. It uses MOLA and THEMIS data and images from Spirit and Opportunity.

Additional Material

The two games at the Be A Martian site are gamified versions of citizen science programs from the Zooniverse (originally Galaxy Zoo). They are not traditional games developed through a traditional game design process. They are citizen science projects with features of games overlaid on them.

The NASA Be A Martian app available for iOS, Android and Windows Phone does not include the mapping games.

BLiSS Sim

POC: Bob Starr (LARC)
robert.m.starr@nasa.gov
Release Date: 3/15/2012
Developer: Center for Educational Technology
Publisher: Center for Educational Technology
Platform: iOS
Genre: Education, Simulation, Role Playing Game
Audience: Educators, Students (Grades 3-5)
URL: http://bliss-sim.cet.edu/

Game Description

When humans eventually spend long stretches of time living on the Moon or Mars, they will need the same basics we need on Earth: food, water, air and shelter. NASA scientists and engineers are studying how plants can be grown to meet those needs. The Bioregenerative Life Support System Simulator, or BLiSS Sim, is based on that advanced life support research. In BLiSS Sim, the player steps into the space suit of an inhabitant of an outpost on the Moon or Mars responsible for growing plants. Plants are a vital, renewable resource for the outpost that provides food, oxygen and water, and absorb carbon dioxide. The player must make decisions about which plants to grow. Players learn how lettuce, soybeans, potatoes and wheat can be grown and harvested to supply oxygen, water and food.

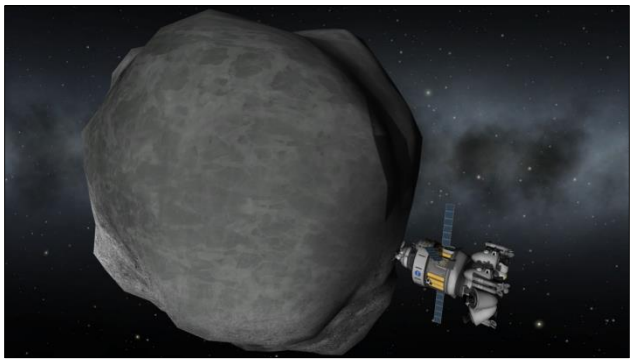
Collaboration

BLiSS Sim was created by the NASA-sponsored Classroom of the Future (COTF). It is based on the award winning biology education program, BioBlast, which was also developed by COTF. Both instances are based on investigations conducted by NASA scientists and engineers to explore how plants can be grown to provide air, water, and food for astronauts at a lunar base.

Additional Material

A companion educators guide, called Habitat, for grades 3-5 can be found at http://bliss-wiki.wikispaces.com/file/detail/habitat_full.pdf

Kerbal Space Program: Asteroid Redirect Mission



POC: Bob Jacobs (HQ)
Bob.jacobs@nasa.gov
ORIGINAL RELEASE DATE: 3/30/2013
DEVELOPER: Squad
PUBLISHER: Squad
PLATFORM: PC, Mac, Linux
GENRE: Simulation, Single Player
AUDIENCE: general public
URL: http://kerbalspaceprogram.com

Game Description

Kerbal Space Program (KSP) is a multi-genre sandbox game that allows players to design, build and fly their own rockets and run their own space agency. In KSP, players must build space-worthy craft, capable of flying a crew into space successfully. At the player's disposal is a collection of parts from which they must select a combination of components that can meet their mission needs. Each part has its own function and will affect the way a ship flies or if it flies at all.

The game is being built first as an open sandbox. Players are free to build anything they can think of, and fly it wherever they want, even into orbit and out to other planets and moons throughout the Kerbal Solar System. Currently KSP is in stable, playable form, but is still in development.

The Asteroid Redirect Mission adds asteroids to the Kerbal universe. The rocket parts inventory has swelled to over 180, including several new super-heavy lifters and enormous fuel tanks. The NASA logo is now officially included in the game and the new rockets have it painted on them.

The primary goal of the Asteroid Redirect Mission (ARM) is to capture an asteroid and put it in a stable orbit around the Kerbal home world. Players must first locate and track an asteroid before planning a mission to rendezvous with it and guide it into orbit. The mission mirrors NASA's real operation in many ways. Namely, players will tackle the same three steps as NASA:

- Identify: Detect, target, distinguish and select the asteroids that you want to move
- Redirect: Build a rocket ship and set course to intercept the moving asteroid, then position your ship to redirect the asteroid's trajectory
- Research: Send your Kerbals on EVA (extravehicular activity) around the asteroid to conduct experiments on the object and gather valuable scientific data as it (and you) hurtle through deep space

Collaboration

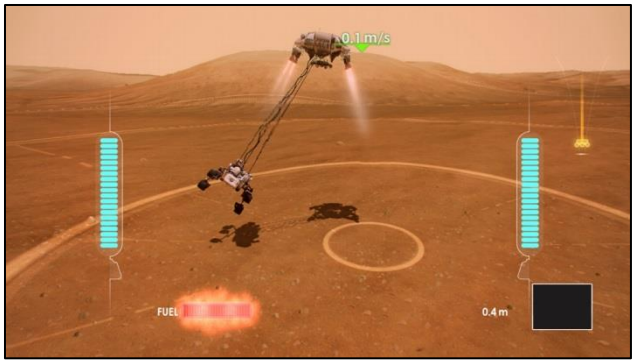
The Asteroid Redirect Mission was developed in collaboration between NASA and KSP developer, Squad. It is based on one of the mission goals of the NASA Asteroid Initiative. The rocket components added to KSP with the release of the ARM include the NASA insignia.

Additional Material

Currently KSP is in stable, playable form, but still in development. It is available through the early access program on Steam. There is a mod called the *Kerbal Space Program for Education* available to educators along with a discounted version of the regular game. The mod is in the early stages of development (April, 2014). While not explicitly focused on the Asteroid Redirect Mission, the content will be applicable. The mod is being developed by TeacherGaming LLC, the creator of MinecraftEdu. Plans for the mod include implementation of the metric system, easier data collection and reporting, in-game mission lessons and out-of-game support materials for educators.

Because KSP is still in development, it does not have an Entertainment Software Review Board Rating. Speculation among the player community is that it will ultimately have an “E for Everyone” or “E10+” for everyone 10 and older.

Mars Rover Landing



POC: Jeff Norris (JPL)
Jeffrey.S.Norris@jpl.nasa.gov
ORIGINAL RELEASE DATE: 7/16/2012
DEVELOPER: Smoking Gun Interactive
PUBLISHER: Microsoft Studios
PLATFORM: Microsoft Xbox 360 w/Kinect
GENRE: Arcade
AUDIENCE: E for Everyone (ESRB Rating)
URL: http://marketplace.xbox.com/en-US/Product/Mars-Rover-Landing/66acd000-77fe-1000-9115-d80258480836

Game Description

The Mars rover game simulates the three stages of Curiosity's landing. Upon entering the atmosphere of Mars, the craft is traveling at about 13,000 mph. A supersonic parachute must be properly deployed, and the heat shield, which reaches 3,800 degrees Fahrenheit at its peak, must be jettisoned during the descent.

Then, rocket engines must be deployed prior to the lowering of the tethered Curiosity rover to the surface. After that, the remainder of the craft must be flown away before the rover lands to prevent a dust cloud that could damage it.

In the game, players use the positioning of their arms, hands and body to control direction, speed and overall velocity of how the rover is setting down. They have got to find the right pace and right angle to gently guide it into its soft landing. Players get scored on how well they complete the three phases.

Collaboration

JPL personnel provided input and review for the design. MSL Entry, Descent and Landing team lead Allen Chen did the narration.

Additional Material

The designers hope the game exposes "kids of all ages to, frankly, how cool this stuff is in terms of otherworldly exploration and the science behind it."

Moonbase Alpha

POC: Daniel Laughlin (HQ)
daniel.d.laughlin@nasa.gov
ORIGINAL RELEASE DATE: 7/6/2010
DEVELOPER: Virtual Heroes, Army Game Studio
PUBLISHER: NASA
PLATFORM: PC
GENRE: Real Time Strategy, Multiplayer, Simulation
AUDIENCE: E for Everyone (ESRB Rating)
URL:
http://store.steampowered.com/app/39000/
http://www.nasa.gov/moonbasealpha

Game Description

In Moonbase Alpha, the players assume the role of astronauts living and working on the Moon. Returning from a research expedition, the players witness a meteorite impact that compromises the life support capability of the outpost. With precious minutes ticking away, the players must repair and replace equipment in order to restore the oxygen production.

Team coordination along with the proper use and allocation of available resources, including player controlled robots, rovers and repair tools, are key to overall success. There are several ways in which the player can successfully restore the life support system of the lunar base, but since play is scored on the time spent to complete the task, the players have to work effectively as a team, learn from decisions made in previous gaming sessions, and make intelligent decisions in order to improve their score.

Collaboration

NASA personnel at Marshall and Goddard Space Flight Centers worked closely with the US Army Game Studio and game developer Virtual Heroes to create Moonbase Alpha. NASA supplied lunar architecture models, and reviewed game design and content. NASA's Advanced Concepts Lab provided documentation on NASA's Lunar Architecture to insure the fidelity of models used in the game. A team of volunteers at Langley Research Center worked with teachers and Virginia Space Grant personnel to create an 80 page educator's guide. Members of the Immersive Education Initiative reviewed the game and guide, and WisdomTools evaluators tested the game in classrooms.

Additional Materials

Moonbase Alpha was developed as a proof-of-concept precursor to a NASA-themed massively multiplayer online STEM learning game (See Starlite: Astronaut Academy entry). It was a test to see if NASA content could be combined with commercial quality game design, game engine and graphics, to create a fun, educational and inspirational game. In 2010, Moonbase Alpha was named the best government game in the Serious Games Showcase and Challenge at Interservice/Industry Training,

Simulation and Education Conference (I/ITSEC). It was also named STEM game of the year by the Mid-Atlantic National Laboratory Consortium the same year. In 2013, PCGamer included Moonbase Alpha in its list of the top 50 free, online games.

Game developer Applied Research Associates Virtual Heroes Division released an expansion to the original game in 2012. The expansion adds a second mission doubling the amount of playable content. As of April 1, 2014, Moonbase Alpha has been downloaded by 857,427 players who played an average of 42 minutes each.

NASA Kids' Club

POC: Jeff Ehmen (MSFC)
jeff.ehmen@nasa.gov
ORIGINAL RELEASE DATE: 4/6/2006
DEVELOPER: NASA Educational Technology Services (Disney/Pixar for the Buzz Lightyear games)
PUBLISHER: NASA
PLATFORM: Flash, Text
GENRE: Puzzle, Matching, Arcade, Quiz
AUDIENCE: Grades K-4
URL: http://www.nasa.gov/audience/forkids/kidsclub/flash/index.html

Game Description

NASA Kids Club is a web site which hosts or links to games, images and videos for younger students and advice and information for parents and teachers. Interactive materials and games on the site teach children about NASA's plans for missions to the Moon and Mars, the current crew on the International Space Station, keeping airplanes on schedule, how a comet travels through the solar system and more. All of the games are Flash-based, with text versions. The site includes videos and images documenting Sesame Street's Elmo visiting Kennedy Space Center and a suite of games and activities based on Disney-Pixar's Buzz Lightyear's trip on the International Space Station aboard the space shuttle Discovery.

NASA Kids' Club has educational games, engaging multimedia and visuals, and educational activities to cover K-4 students' developmental and learning abilities as addressed in national education standards in mathematics, science and technology. The skill levels provide a natural progression through the site that allows users to find games that are best suited to their varying abilities. Developmentally appropriate content is based on national education standards and benchmarks per grade level. Content is written within the K-4 reading levels as determined by the Flesch-Kincaid Grade Level Score.

Collaboration

The NASA Kids' Club site is designed and maintained by the NASA Education Technology Services team at Marshall Space Flight Center. The games on the site were created by the same team and links go to other NASA games and activities. Images, videos and audio materials are publicly available NASA resources. The Buzz Lightyear games were developed under an agreement with Disney-Pixar. Elmo's visit to Kennedy Space Center was made possible by an arrangement with the Children's Television Workshop.

Additional Materials

The NASA Kids Club hosts a variety of games designed for students from kindergarten to fourth grade. The games are available in Flash and text form. Each comes with links to national educational standards and skills with which they align. The standards covered include:

- 1996 National Science Education Standards (NSES)
- American Association for the Advancement of Science Project 2061: Benchmarks for Science Literacy (AAAS)
- International Technology and Engineering Educators Association (ITEEA)
- International Society for Technology in Education (ISTE)
- National Council of Teachers of Mathematics (NCTM)
- Common Core State Standards Initiative -- English Language Arts and Mathematics Standards (CCSS)
- 2011 -- A Framework for K-12 Science Education (National Research Council) Organization (NRC)
- Mid-continent Research for Education and Learning Compendium Standards and Benchmarks (McREL)

While not mentioned on the NASA Kids' Club site, Elmo is not the only resident of Sesame Street to visit NASA. Leading Muppet Kermit the Frog visited Johnson Space Center in 2005.

NetworKing

POC: Steven Glendenning (ARC)
steven.k.glendenning@nasa.gov
ORIGINAL RELEASE DATE: 10/11/2011
DEVELOPER: Ames Special Projects Team
PUBLISHER: NASA
PLATFORM: PC, MAC, iOS
GENRE: Strategy, Simulation
AUDIENCE: General
URL:
http://www.nasa.gov/multimedia/3d_resources/scan.html

Game Description

The National Aeronautics and Space Administration (NASA) Space Communications and Navigation (SCaN) Program is responsible for providing communications and navigation services to space flight missions located throughout the solar system. Astronauts, mission controllers, and scientists depend upon the reliable transmission of information between Earth and spacecraft in low Earth orbit (LEO) or deep space. As a new Network Manager, the player's job is to build and upgrade a complex communications network in order to support scientific missions.

Collaboration

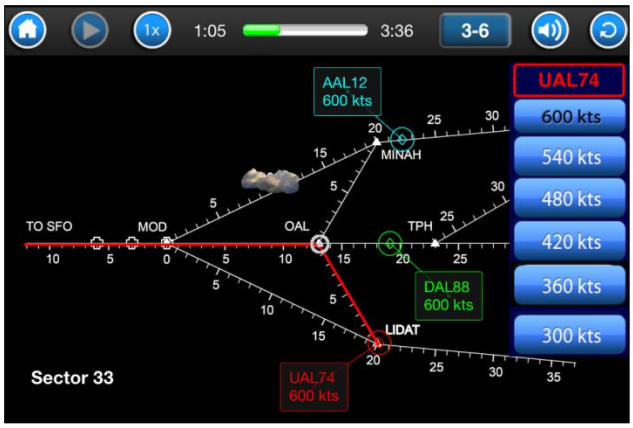
The NetworKing game is based on NASA's Space Communications and Navigation Network (SCaN).

Addition Materials

The game was originally developed for PC and Mac in both downloadable and online browser-based versions. In 2012, a mobile version of NetworKing was released for iOS. The game site includes a comprehensive manual.

Sector 33

POC: Rebecca Green (ARC)
rebecca.a.green@nasa.gov
ORIGINAL RELEASE DATE: 3/13/2012
DEVELOPER:
PUBLISHER: NASA
PLATFORM: iOS, Android
GENRE: Strategy, Simulation
AUDIENCE: Students, Grade 5-9
URL:
http://www.nasa.gov/centers/ames/Sector33/iOS/index.html#.Uo-OMMQ61A8



Game Description

Have you ever wondered what it's like to be an Air Traffic Controller? Imagine it's a stormy Friday in Northern California as the evening rush of air traffic fast approaches the San Francisco Bay Area from the East. All flights going to San Francisco airport pass through "Sector 33" – your sector of airspace. As the lead air traffic controller, your job is to guide the planes safely through Sector 33 as quickly as possible. To do this, you must choose the most efficient route and make strategic speed changes. Can you handle Sector 33?

Sector 33 is a companion game to Smart Skies' educational package LineUp With Math activity. In LineUp With Math students apply proportional reasoning to make decisions and resolve conflict in realistic air traffic control problems involving two or more planes. The challenge in each problem is to line up the planes safely with proper spacing at a given intersection of jet routes. Both LineUp With Math and Sector 33 are designed to connect mathematics and problem solving with the real world. The air traffic control scenarios are intended to increase player interest in aeronautics related careers.

Collaboration

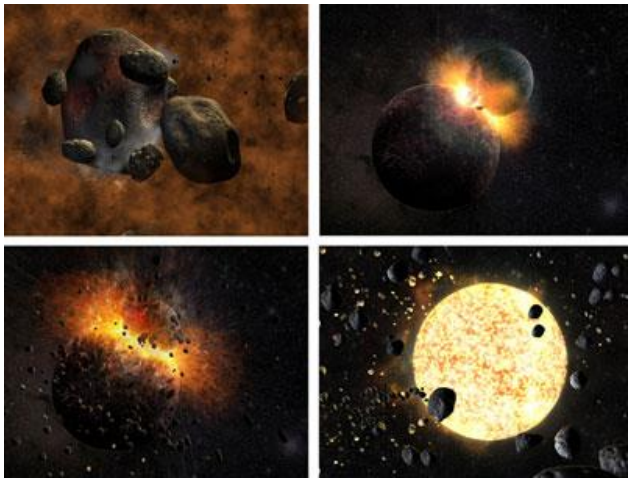
Smart Skies is jointly supported by NASA's Aeronautics Research Mission Directorate, the Federal Aviation Administration and the National Air Traffic Controllers Association.

Additional Material

The LineUp With Math package comes with problem sets, student materials, teacher materials and online videos. Sector 33 expands the available resources. It includes:

- 35 problems featuring two to five airplanes
- Speed and route controls
- Weather obstacles
- Four levels of controller certification

Selene: A Lunar Construction GaME



POC: Bob Starr (LARC)
robert.m.starr@nasa.gov
Release Date: 5/1/2007
Developer: Center for Educational Technology (version 1) Second Avenue Software (version 2)
Publisher: Center for Educational Technology
Platform: PC, Mac, Linux
Genre: Education, Simulation, Research
Audience: Ages 9-18
URL: http://selene.cet.edu/

Game Description

Selene: A Lunar Construction Game challenges players to learn the major geologic processes scientists believe formed the modern Moon. Players construct their own moon and then pepper it with impact craters and flood it with lava. Through game play, the player learns about lunar geology. *Selene* is an instrument that allows researchers to study video game learning and ways to best assess how effectively learning takes place.

Collaboration

NASA funded development of the initial version of Selene. The game content is based on subject matter expertise contributed by CET director and NASA scientist, Chuck Wood. Ian Bogost at Georgia Tech led the game design with a student team.

Additional Material

Selene received an honorable mention in the games and apps category at the International Science & Engineering Visualization Challenge in 2013. The game was originally funded by NASA to study how to best use video games to teach NASA science concepts. It is now supported by the National Science Foundation as part of the CyGaMEs project.

Space Junk Sammy

POC: Ben Lui (GSFC)
ben.y.lui@nasa.gov
ORIGINAL RELEASE DATE: 12/6/2012
DEVELOPER: Space Operations Learning Center
PUBLISHER: NASA
PLATFORM: iOS
GENRE: Arcade, Flash
AUDIENCE: K-6
URL: App
https://itunes.apple.com/us/app/space-junk-sammy/id563217804?mt=8
Web Site http://solc.gsfc.nasa.gov/index.html

Game Description

Space Junk Sammy is an educational game from NASA. Space junk is becoming a big problem for many of NASA's space missions. We need help to clean up the junk in orbit! In this game, the player cleans up space and learns about NASA at the same time. The player can explore the orbits around Earth, Moon and Mars and upgrade the spacecraft with cool new equipment like laser deflectors and rocket attachments. They can grab coins to purchase upgrades.

Collaboration

Space Junk Sammy is part of the Space Operations Learning Center (SOLC) which is a joint effort of the Space Communications and Navigation (SCaN) program and the Goddard Education Office, both located at Goddard Space Flight Center. Analytical Graphics, Inc. provided 3D animations, software tools and technical support at no cost to NASA.

Additional Material

SOLC is unique in its approach to teach school-aged students the basic concepts of space operations. SOLC utilizes the latest web and software technologies to present educational content in a fun and engaging way for all grade levels. They use animations, streaming video, cartoon characters, audio narration, interactive games and more to deliver educational concepts. Their web portal organizes all of these training modules in an easily accessible way for visitors world-wide.

SOLC identifies alignment of its materials to National Science Education Standards for Earth and Space Science and Science and Technology at all grade levels.

Space Place

POC: Nancy Leon (JPL)
nancy.j.leon@jpl.nasa.gov
ORIGINAL RELEASE DATE: 2/1/1998
DEVELOPER: Space Place and various mission education and outreach teams
PUBLISHER: NASA
PLATFORM: PC, Mac, Linux, iOS
GENRE: Arcade, Puzzle, Quiz
AUDIENCE: K-6
URL: http://spaceplace.nasa.gov/menu/play/

Game Description

Space Place hosts wide array of interactive games, hands-on projects, and fun facts that relate to space and Earth science at the elementary level. Its mission is to cultivate children's interest in and enthusiasm for science and technology. Space Place aims to raise awareness of NASA's work, and impart clear, easy-to-understand information about science, technology, engineering, and math topics. The site pulls together more than thirty resources including games and other interactive content. The games include NASA science-themed crossword puzzles, memory challenges and puzzles. The site also includes links for three iOS games: Rescue 406, Satellite Insight and Comet Quest. Web versions of Satellite Insight and Comet Quest are also available.

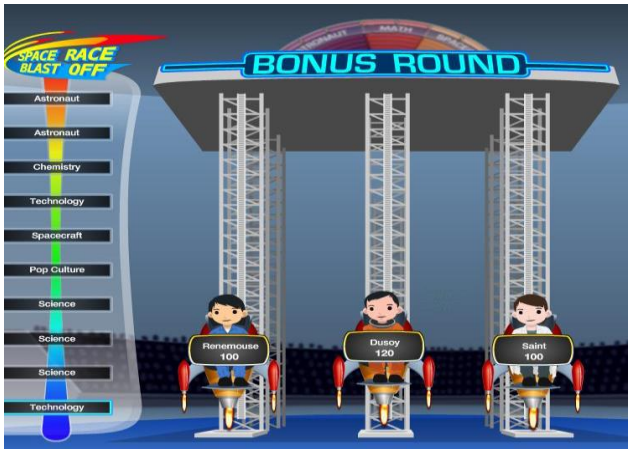
Collaboration

Space Place is a joint effort by NASA, the Jet Propulsion Laboratory, the California Institute of Technology and the International Technology and Engineering Association. Many of the games and activities at Space Place were developed in-house and based on NASA content. Some materials were created through collaborations. The Comet Quest game app is the result of cooperation between NASA and the European Space Agency. Rescue 406 is from a joint effort between NASA, the National Oceanographic and Atmospheric Administration (NOAA) and the United State Coast Guard. The Satellite Insight is another collaboration between NASA and NOAA through the GOES-R mission.

Additional Material

Space Place lists the Next Generation Science Standards and links to the Space Place materials that align with each standard. This is the reverse of how most sites match standards to activities, but it is a suitable approach for a site dealing with such a large number of individual activities and projects. Space Place is available in both English and Spanish. Space Place has received more than two dozen awards and citations for its web-based approach to science and technology education.

Space Race Blast Off



POC: None
ORIGINAL RELEASE DATE: 1/30/2012
DEVELOPER: NASA's Internet Services Group in the Office of Communications
PUBLISHER: NASA
PLATFORM: Facebook
GENRE: Trivia, Multiplayer
AUDIENCE: General (Facebook terms of service limit access to 13 and over)
URL: This game is no longer available. The former URL was http://apps.facebook.com/spacerace

Game Description

In 2012, NASA released its first Facebook game. Space Race Blastoff pitted players against online opponents in test of knowledge of NASA history, technology, science and pop culture. Players who correctly answered questions scored and earned digital badges depicting NASA astronauts, spacecraft and astronomical objects. It was a trivia game with categories of questions ranging from astronauts to technology.

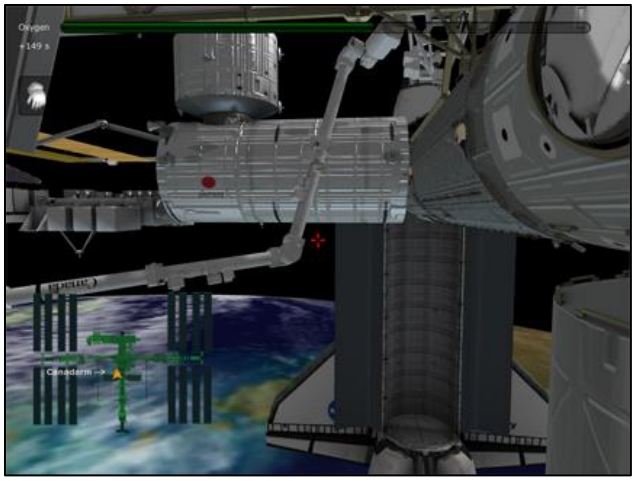
Collaboration

Space Race Blast Off was developed by the Internet Services Group in NASA's Office of Communications. Questions were based on NASA's history. This foray into Facebook games was intended to introduce NASA's history to a new audience of social media users.

Additional Material

This entry is included for historical reference. Space Race Blast Off is no longer online.

Station Spacewalk Game



POC: Steven Glendennig (ARC)
steven.k.glendenning@nasa.gov
ORIGINAL RELEASE DATE: 6/3/2010
DEVELOPER: Ames Special Projects Team
PUBLISHER: NASA
PLATFORM: PC, MAC
GENRE: Strategy, Simulation
AUDIENCE: General, educational materials for grades 5-8.
URL:
http://www.nasa.gov/multimedia/3d_resources/station_spacewalk_game.html

Game Description

The Station Spacewalk Game allows players to take on the role of an Astronaut tasked with completing several missions around the International Space Station. The majority of the missions take place outside of the Station. Freedom of movement in space is granted by a Simplified Aid For EVA Rescue (SAFER) unit, a propulsive backpack system. Players have a limited supply of oxygen that must be carefully conserved. Each mission has a number of objectives that players must complete. As they play through the missions, players receive some guidance from Mission Control. Players are scored at the end of a mission based on time, oxygen remaining, and objectives completed. The game includes seven missions.

Collaboration

Game play is based on real extra vehicular activities and the game is made with NASA 3D models used in mission planning.

Additional Materials

A nine-question student worksheet and teacher answer key to go with the game are available at the web site.

Starlite: Astronaut Academy

POC: Daniel Laughlin (HQ)
Daniel.d.laughlin@nasa.gov
ORIGINAL RELEASE DATE: pending
DEVELOPER: AMMB, LLC
PUBLISHER: AMMB, LLC
PLATFORM: PC, Mac, Linux, iOS
GENRE: Adventure, Role Playing Game, Simulation, Multiplayer
AUDIENCE: E for Everyone (ESRB rating), middle and high school age students.
URL: pending (http://starlitegame.com is the development site)

Game Description

The Starlite game series is intended to give players a chance to experience the future of space exploration using NASA-inspired science and engineering. Set in the year 2035, the game is based on realistic expectations of the environment, equipment and missions facing future astronauts. Players will embark on adventures into space, Mars, the asteroid belt and the outer planets. The game will promote greater understanding of an appreciation for science, technology, engineering and mathematics.

Collaboration

Starlite: Astronaut Academy is being developed under a non-reimbursable space act agreement between NASA and Astronaut: Moon, Mars and Beyond, LLC. The agreement provides AMMB with access to NASA subject matter experts to provide information for game development and to review the game.

Additional Material

Astronaut: Moon, Mars and Beyond, LLC, is supported by Project Whitecard Studios and WisdomTools Studios.

Starlite: Astronaut Rescue

POC: Daniel Laughlin (HQ)
Daniel.d.laughlin@nasa.gov
ORIGINAL RELEASE DATE: 1/27/2014
DEVELOPER: Project Whitecard Studios, Inc.
PUBLISHER: Project Whitecard Studios, Inc.
PLATFORM: PC, Mac, Linux, iOS
GENRE: Adventure, Role Playing Game, Simulation
AUDIENCE: E for Everyone (ESRB rating),
URL: http://store.steampowered.com/app/266090/

Game Description

Astronaut Rescue puts the player in the boots of a future astronaut on Mars in the world of Starlite. In this twenty minute mini adventure, the player must use triangulation to locate a damaged Mars flyer and its astronaut pilot. The game contains hands-on inquiry and problem solving in mathematics, physics and engineering.

Collaboration

Starlite: Astronaut Rescue was developed under a space act agreement to develop NASA-based digital badges. The game was a test of the technology to earn and receive digital badges through educational game play. It was reviewed by NASA in that context.

Additional Material

Starlite: Astronaut Rescue is the first release in the series leading up to alpha testing of the multiplayer online game Starlite: Astronaut Academy. Completing the game earns the player an “astronaut rescue” badge compatible with Mozilla’s Open Badge Standard.