

Lori Moses  
Lauren Pierce  
Laura Smith  
Sherry Trimble

## Solar System Resources (grades 3-4)

**Name of Resource:** Solar System Journey

**Type of Resource:** Lesson Plan

**Location:** <http://www.successlink.org/great!g867.html>

**Purpose:** Used by Teacher

**Description:** In this lesson, students will be learning about the planets and the sun in our solar system by constructing models of the planets and positioning them in their correct place in the solar system. This activity involves the Tennessee Standard 2.1 a -A model is a representation used to simplify complex phenomena.

**Evaluation:** This is a wonderful lesson plan because it requires students to make an actual model of the planets in our solar system. Hands-on activities are excellent ways to get children to remember information. Students will also have the opportunity to put their creative skills to work in this lesson as they construct their models.

**Name of Resource:** What Planet Are You From?

**Type of Resource:** Lesson Plan

**Location:** <http://ericir.syr.edu/Virtual/Lessons/Science/Space/SPO.html>

**Purpose:** Used by Teacher

**Description:** In this lesson, students view various maps to help them visualize the enormity of the universe. TSW describe bodies that make up the solar system, explain day and night and the Earth's movement, and explain the place of our solar system within the Milky Way Galaxy and the universe.

**Evaluation:** This is an excellent lesson plan because of the skills the students will be able to master after its completion. Children will be able to describe the different bodies that make up our solar system, explain the place of our solar system within the Milky Way Galaxy and the universe, understand day and night and the Earth's movement, and discuss the causes of the seasons.

**Name of Resource:** The Solar System (Day and Night)

**Type of Resource:** Lesson Plan

**Location:** <http://faldo.atmos.uiuc.edu/CLA/LESSONS/546.html>

**Purpose:** Used by Teacher

**Description:** This lesson addresses the reasons for day and night. Students learn the concept of the earth spinning on its axis. This is a very simple lesson, but teaches an abstract concept in a concrete way.

**Evaluation:** This particular lesson gives great ideas to get students to better understand the concept of day and night. Students are asked to get in a group as the teacher shows them a visual model of planets and their various positions throughout a day. I think children will better understand the concept of day and night by actually seeing tangible objects move around a model of the sun.

**Name of Resource:** Space Exploration

**Type of Resource:** Reference Tool

**Location:** <http://m%2Findex%2Fconciseindex%2F14%2FO14A2000.htm>

**Purpose:** Used by Student

**Description:** Space Exploration, or astronautics, science and engineering of travel in outer space. Space probes have provided scientific data on the nature and origin of the solar system and the universe (see Cosmology).

**Evaluation:** This is a very good reference source because within the 7 page article on space exploration, the user can click on selected words within the article to link them to other related articles. The user can also find so much more information with the article's links to news and updates about the topic as well as other Internet sites.

**Name of Resource:** Planet

**Type of Resource:** Reference Tool

**Location:** <http://m%2Findex%2Fconciseindex%2F66%2FO66B7000.htm>

**Purpose:** Used by Student

**Description:** Planet, any of the nine major astronomical objects that orbit the sun and shine by reflecting its light, or any similar astronomical object orbiting a star. Smaller bodies that also orbit the sun, and are. ..

**Evaluation:** This is also an excellent encyclopedia article because of all the extra information it contains. There are links to all the planets in the solar system. This reference tool is also user friendly because it recommends educational products and topic-related books.

**Name of Resource:** The Space Place

**Type of Resource:** Content Resource

**Location:** <http://spaceplace.jpl.nasa.gov>

**Purpose:** Used by Students and Teachers

**Description:** The Space Place contains an online space project as well as an activity center dealing with planets, comets, Mars, telescopes, spacecrafts, asteroids. There are also a variety of projects, information for classroom activities, Mars contest, and a pop rocket project.

**Evaluation:** This is an excellent web site to get students' attention. It is very colorful and easy to understand and use. The Space Place is also a great site for teachers as well as children to get ideas. There are step-by-step instructions on how to make creative space projects, games that incorporate space exploration and interesting facts about the solar system.

**Name of Resource:** Kid's Page

**Type of Resource:** Content Resource

**Location:** [http://Lightspan.com/common/pages/linkOut5.asp?\\_prod+LS&loc=www.jpl.nasa.gov%2Fcassini%2FKids%2F](http://Lightspan.com/common/pages/linkOut5.asp?_prod+LS&loc=www.jpl.nasa.gov%2Fcassini%2FKids%2F)

**Purpose:** Used by Students

**Description:** This particular Kid's Homepage gives an introduction to Saturn, it's rings, as well as information on the Cassini spacecraft. Earth, Saturn, space missions,

and the Huygens probe are also discussed. The Kid's Homepage has easy-to-understand information and a mission time line. Users can make a spacecraft model and find links to astronomy and other space-related Web sites. It is suitable for grades 4 and up.

**Evaluation:** This web site is very unique in that the user learns specifically about one planet instead of a brief overview of all the planets. Students will get to read about what it is like on Saturn, the Cassini spacecraft, and the Titan moon around the planet. This content resource is good for looking narrowing down your search to specifics.

**Name of Resource:** The Nine Planets: “*A Multimedia Tour of the Solar System*”

**Type of Resource:** Content Resource

**Location:** <http://seds.lpl.arizona.edu/nineplanets/nineplanetets.html>

**Purpose:** Used by Teacher

**Description:** *The Nine Planets* is an overview of the history, mythology, and current scientific knowledge of each of the planets and moons in our solar system. Each page has text and images; some have sounds and movies, and most provide references to additional related information.

**Evaluation:** This is an excellent Web site. It offers a multimedia tour with vivid images and a detailed description of every planet and moon in the solar system. Children are able to learn essential information while being stimulated visually. Most children are able to learn more efficiently through visuals and activity rather than pure text.

**Name of Resource:** Name That Planet: “*Celestial Bodies—Planets and Their Names*”

**Type of Resource:** Content Resource

**Location:** [http://www.jpl.nasa.gov/ice\\_fire/voll-ll.htm](http://www.jpl.nasa.gov/ice_fire/voll-ll.htm)

**Purpose:** Used by Teacher

**Description:** *Name that Planet* is an exercise naming the celestial bodies. The Web site lists each planet and gives the date and the reasoning for its name. An exercise for the students would be a matching. The students would match the planet to its definition.

**Evaluation:** This exercise provides students with an excellent review of the planets. It provides additional information about the planets as well. The children are able to learn while playing a game. The competition in a game-type situation encourages learning. Students want to win, therefore, put more effort into learning the material.

**Name of Resource:** The Solar System

**Type of Resource:** Content Resource

**Location:** <http://starchild.gsfc.nasa.gov/docs/StarChild/shadow/solarsystemlevel1/solarsystem.html>

**Purpose:** Used by Teacher

**Description:** StarChild is service of the High Energy Astrophysics Science Archive Research Center. The site gives various information on Astronomy. One link is *The Solar System*. The link answers the question, “What is the solar system?” The page is divided into other links such as the sun, the moon, meteoroids, the planets, the asteroid belt, and comets. Each sight explains its role in the solar system.

**Evaluation:** This site provides important content about the solar system. The definitions and explanations are clearly presented. The links are easy to access making it easy for children to use.

**Name of Resource:** Build a Solar System

**Type of Resource:** Content Resource

**Location:** [http://www.exploratorium.edu/ronh/solar\\_system](http://www.exploratorium.edu/ronh/solar_system)

**Purpose:** Used by Teacher

**Description:** *Build a Solar System* makes a scale of the solar system and makes it possible to learn the real definition of space. You fill in the diameter of the sun that you want your model to be scaled by. Then the computer will begin to calculate. The distances and the sizes of the planets will automatically fill in. Then you are able to build your own model using accurate measurements.

**Evaluation:** The activity, *Build a Solar System*, allows students to create their own scale model. It is an efficient way to learn about the solar system. Students feel a sense of accomplishment and pride in something they have created.

**Name of Resource:** Solar System: Lesson Plan for Solar System Site- "*Finding Out About the Stars and Planets*"

**Type of Resource:** Lesson Plan

**Location:** <http://www.siec.k12.in.us/~west/proj/space/lessonplan.htm>

**Purpose:** Used by Teacher

**Description:** The lesson plan is devised for grades K-4. The objective is to learn more about the planets and constellations in our solar system. The required time is four weeks. The lesson plan gives topics to discuss as well as web resources to use.

**Evaluation:** This is an excellent lesson plan for teachers to use. It covers the objectives, materials, activities, as well as providing additional Web sites.

**Name of Resource:** Planet Tac Toe

**Type of Resource:** Content Resource

**Location:** [http://starchild.gsfc.nasa.gov/docs/StarChild/shadow/solar\\_system/levell/.../planet\\_tac\\_toe.htm](http://starchild.gsfc.nasa.gov/docs/StarChild/shadow/solar_system/levell/.../planet_tac_toe.htm)

**Purpose:** Used by Teacher

**Description:** *Planet Tac Toe* is played using solar system trivia. If the student is correct, he/she will receive an "X". However, if the student is incorrect he/she will not receive an "X", but will be provided with the correct answer for further use.

**Evaluation:** This is a great activity for reinforcing previous learning and to learn new facts about the solar system. It is self-checking and kids love it.

**Name of Resource:** Views of the Solar System

**Type of Resource:** Content Resource

**Location:** <http://www.solarviews.com/eng/homepage.htm>

**Purpose:** Used by Teacher

**Description:** Presents a vivid multimedia adventure unfolding the splendor of the Sun, planets, moons, comets, asteroids, and more. Discover the latest scientific information, or study the history of space exploration, rocketry, early astronauts, space missions, and spacecraft through a vast archive of photographs, scientific facts, text, graphics and videos. Views of the Solar System offer enhanced exploration and educational enjoyment of the solar system and beyond.

**Evaluation:** The teacher can use this site for finding and researching information. She can bookmark the site so students can explore parts of each planet and see pictures of various things in the solar system. This is also a resource that could be used to show diversity of cultures of our American astronauts.

**Name of Resource:** NASA Kids

**Type of Resource:** Content Resource

**Location:** <http://kids.msfc.nasa.gov/>

**Purpose:** Used by Teacher

**Description:** Providing kid level science information from NASA. Has teacher resources, latest NASA news, rockets, astronauts, puzzles, games, space, and more.

**Evaluation:** Students can use this resource to learn about NASA and learn about rockets and how we study the solar system. There are trivia games and other learning assignments to assess what students are learning by using this resource.

**Name of Resource:** Titan in a Fish Tank

**Type of Resource:** Lesson Plan

**Location:** [http://lyra.colorado.edu/sbo/mary/Cassini/titan\\_demo.html](http://lyra.colorado.edu/sbo/mary/Cassini/titan_demo.html)

**Purpose:** Used by Teacher

**Description:** A classroom activity for grades 3-8 that demonstrates one of Saturn's Satellites, Titan. The only moon in the solar system with a dense atmosphere. Imagining such a strange world as Titan is difficult. Building a "Titan" in a fish tank will help to introduce students to this smog shrouded satellite.

**Evaluation:** Titan in a Fish Tank is an awesome way to get students excited about learning! This activity lets them imagine what a completely different atmosphere would be like. This site promotes the development of higher order of thinking.

**Name of Resource:** Challenger Center On the Solar System

**Type of Resource:** Content Resource/Activities

**Location:** [http://www.challenger.org/tr\\_tr\\_body\\_act\\_solar.htm](http://www.challenger.org/tr_tr_body_act_solar.htm)

**Purpose:** Used by teacher and students

**Description:** Challenger Center for Space Science Education provides many resources for educators in science (space) and math. There are also many student activities and Kid-sized exploration of the solar system.

**Evaluation:** This is a fantastic place for students to get involved with activities and tours using technology! Teachers will also find many resources from this site to help further their studying of the solar system. There is also a place to discuss online with other teachers about lesson planning and sharing ideas.

**Name of Resource:** The Solar System

**Type of Resource:** Content Resource

**Location:** <http://csep10.phys.utk.edu/astr161/lect/index.html>

**Purpose:** Used by Teacher

**Description:** The Solar System is in an outline form that lists all parts of the solar system. Information of the historical development of our modern picture of the solar system. Gives information on the planets and their moons, comets, asteroids, and meteors.

**Evaluation:** The teacher should only use this resource. It would not be appealing to young students learning about the solar system. This site gives a load of information, but mostly reading material. It would be very useful for the teacher to use in finding information on planets when preparing a lesson.

**Name of Resource:** Welcome to the Planets

**Type of Resource:** Content Resource

**Location:** <http://pds.jpl.nasa.gov/planets/>

**Purpose:** Used by Teacher

**Description:** Welcome to the Planets takes each planet separates each planet and gives an individual profile of each planet and information of the planets moons. There are also profiles of different explorers that NASA has used to study about the solar system.

**Evaluation:** Students and teachers can use this resource to further learn about the planets and the way NASA explores the solar system. Information is available in individual profiles for each planet and students can use them to collect data about each planet.

**Name of Resource:** SpaceKids-Space Science for Kids

**Type of Resource:** Content Resource

**Location:** <http://spacekids.hq.nasa.gov/>

**Purpose:** Used by Teacher and students

**Description:** SpaceKids takes students along various journeys within this web site! Several groups and organizations exist where one can participate in making astronomical observations which actually contribute to the study of space science, take a tour through the solar system, and keep up on the latest new for Leonid watching. A teacher's corner is also a link within the site that lists educational sites supported by NASA.

**Evaluation:** This is an excellent site for kids to learn about the solar system. There are active ways they can learn and be a part of observations made about our solar system with many other students across the world.

**Name:** Welcome to the Planets

**Type of Resource:** Content Resource

**Location:** <http://pds.jpl.nasa.gov/planets>

**Purpose:** Generally directed towards students to gain background information, but is a good resource for teachers also.

**Brief Description:** This is a collection of many of the best images from NASA's planetary exploration program. Along with each image is a fact sheet, which gives characteristics of the object pictured.

**Evaluation:** Teachers could use this program to gather information for an introductory lesson. Or they could use it in class as a resource to give to students.

**Name:** Windows to the Universe

**Type of Resource:** Content Resource

**Location:** <http://www.windows.ucar.edu>

**Purpose:** For Student and Teacher use....more so directed toward students.

Emphasis on introducing them to the solar system with unique and fun activities.

**Brief Description:** Offers a fun and different Webs sites about the Earth and Space sciences. Windows to the Universe is graphics intensive! It allows you to choose beginner, intermediate or expert level. There are hundreds of learning

opportunities, such as, postcards, fact sheets, games, projects, history and much more. This site contains so many neat things for students to work with.

**Evaluation:** Teachers would want to direct students to this site for extra fun and learning activities or for a resource. This site would also be helpful for teachers because it offers suggestions for projects.

**Name:** Views of the Solar System

**Type of Resource:** Content Resource

**Location:** [www.solarviews.com/eng/homepage.htm](http://www.solarviews.com/eng/homepage.htm)

**Purpose:** Directed for the use of students particularly with available resources and fact sheets. Also provides lesson plans that teachers may get ideas from.

**Brief Description:** Views of the Solar System presents a vivid multimedia adventure unfolding the splendor of the Sun, planets, moons, comets, asteroids, and more. Discover the latest scientific information, or study the history of space exploration, rocketry, early astronauts, space missions, and spacecraft through a vast archive of photographs, scientific facts, text, graphics and videos. Views of the Solar System offers enhanced exploration and educational enjoyment of the solar system and beyond.

**Evaluation:** Teachers can use this for examples of interesting lesson plans or activities. Is a very resourceful site with good and accurate information.

**Name:** Zoom Astronomy

**Type of Resource:** Content Resource

**Location:** [www.enchantedlearning.com/subjects/astronomy/index.shtml](http://www.enchantedlearning.com/subjects/astronomy/index.shtml)

**Purpose:** Directed at students in particular.

**Brief Description:** Zoom Astronomy is a comprehensive on-line site about space and astronomy. It is designed for people of all ages and levels of comprehension. It has an easy-to-use structure that allows readers to start at a basic level on each topic and then to progress too much more advanced information as desired, simply by clicking on links.

**Evaluation:** this site would be very helpful for a teacher because it provides quizzes the students can take as well as suggested classroom activities. The site is very well informative and could be a good supplement to the lesson so that children can do interactive things and still learn in the process.

**Name:** The Nine Planets

**Type of Resource:** Content Resource

**Location:** <http://seds.lpl.arizona.edu/nineplanets/nineplanets/>

**Purpose:** Used to give students background knowledge of the solar system.

**Brief Description:** Provides information on recent discoveries, facts about each planet a glossary and a tour of the solar system. There are also links provided to show other related sites.

**Evaluation:** The site is very informative and helpful to teachers. Would be useful for mostly students but teachers could pull information from the site they want their children to learn.

**Name:** Lets Blast off to the Solar System

**Type of Resource:** Content Resource

**Location:** <http://www.geocities.com/CapeCanaveral/Lab/2683/planethm.htm>

**Purpose:** Designed mainly for intermediate to older students.

**Brief Description:** Provides detailed information and findings around the solar system and the planets. Gives mostly text information but has many available photographs.

**Evaluation:** This site would be very well composed. Teachers could use it to compliment their lessons or as a resource for themselves and students.

**Name:** The Sun

**Type of Resource:** Content Resource

**Location:** <http://www.seds.org/billa/tnp/sol.html>

**Purpose:** Generally directed to an intermediate to older level of students.

**Brief Description:** Provides some pictures but mostly text and is very informative. Are able to find out what the sun is made of, that it is a star not a planet, it is not only the largest star, but also the largest known object in the entire solar system along with many other interesting facts.

**Evaluation:** Would be a great resource to a teacher and the classroom. Students can use it as a source of background information.