Strand Map Resources for Grades 6-8

Science Literacy Strand Maps are a tool for finding NASA resources that relate to specific science and math concepts, among other things. These strands illustrate connections between concepts as well as how concepts build upon one another across grade levels. The concepts have been identified by the American Association for the Advancement of Science as key benchmarks in the development of a child's scientific understanding. The supplemental links below are listed in NASAWavelength as relevant to the various benchmarks that are addressed by these lessons.

For more information: http://nasawavelength.org/strandmaps#sthash.DqmPuj51.dpuf

Lesson 1

Solar System Trading Cards
http://amazing-space.stsci.edu/resources/explorations/trading/

Distance to the Moon
http://ares.jsc.nasa.gov/ares/Education/Program/ExpMoon/DistanceMoon.pdf

What is a Planet?
http://science.nasa.gov/planetary-science/planetary-science-multimedia-links/what-is-a-planet/

Transit Math
http://www.nasa.gov/pdf/574867main_Transit_Math.pdf

Solar System Lithograph Set
http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Our_Solar_System_Lithograph_Set.html

Lesson 2

Mars Lithograph
http://amazing-space.stsci.edu/resources/print/lithos/marslitho.pdf

Using Earth for Planetary Comparisons
http://ares.jsc.nasa.gov/ares/eeab/BMM.cfm

Mars Match Game
http://phoenix.lpl.arizona.edu/pdf/lesson_4.pdf

Lesson 4

Where is the Oldest Surface on Mars?
http://astrosociety.org/wp-content/uploads/2012/09/C-15001.pdf

Exploring Ice in the Solar System: Ice in the Shadows
http://www.messenger-education.org/library/pdf/ice_shadows.pdf

Cold, Clouds and Snowflakes
http://mynasadata.larc.nasa.gov/lesson-plans/?page_id=474?&passid=96

Exploring Meteorite Mysteries: Crater Hunters
http://ares.jsc.nasa.gov/ares/education/program/expmetmys/LESSON7.pdf

Mars Image Analysis
http://grs.lpl.arizona.edu/lessons/image_analysis.html

Remote Sensing Ices on Mars
http://grs.lpl.arizona.edu/lessons/remote_sensing.html

Lesson 5

Deep Impact
http://deepimpact.umd.edu/educ/Collaborative.html

Dirty Ice or Icy Dirt
http://grs.lpl.arizona.edu/lessons/dirt.html

Why Follow the Water
http://grs.lpl.arizona.edu/lessons/water_follows.html

Let's Go to Mars!
http://spaceplace.nasa.gov/mars-adventure

Lesson 6

Plate Tectonics and Volcanism
http://astroventure.arc.nasa.gov/teachers/pdf/AV-Geolesson-5.pdf

Remote Sensing Ices on Mars
http://grs.lpl.arizona.edu/lessons/remote_sensing.html

Independent Investigations
http://stargazers.gsfc.nasa.gov/pdf/activities/in_a_different_light/lesson6_student.pdf

Put on Your Scientific Inquiry Hat
http://www.images-press.com/_files/lessonPlan_marsby.pdf

Lesson 7

The Relationship Between Science and Technology
http://www.teachersdomain.org/resource/psu06-swift.sci.relationships/

Surface Color and Effect on Temperature Change: A Confirmation-Verification Activity
http://www.nasa.gov/centers/langley/pdf/245894main_MeteorologyTeacherRes-Ch3.r3.pdf

Atmospheric Science Mission
http://astroventure.arc.nasa.gov/teachers/pdf/AV-Atmoslesson-9.pdf

My NASA Data
http://mynasadata.larc.nasa.gov/lesson-plans/unit-lessons/

Barometer Basics: A Structured-Inquiry Activity
http://www.nasa.gov/centers/langley/pdf/245896main_MeteorologyTeacherRes-Ch5.r3.pdf

Constructing a Barometer: A Structured Inquiry Activity
http://www.nasa.gov/centers/langley/pdf/245897main_MeteorologyTeacherRes-Ch6.r3.pdf

Tour of the Electromagnetic Spectrum
http://missionscience.nasa.gov/ems/TourOfEMS_Booklet_Print.pdf

Lesson 8

The Phoenix Mission: Uncovering Martian Water
http://phoenix.lpl.arizona.edu/pdf/lesson_12.pdf

Mission Moon
http://www.lpi.usra.edu/education/explore/LRO/activities/mission_moon/
Using Earth for Planetary Comparisons
http://ares.jsc.nasa.gov/ares/eeab/BMM.cfm

Interpreting Satellite Images
http://science.hq.nasa.gov/kids/imagers/teachersite/RS5.htm

Flood! Remote Sensing Activities
http://www.ebsinstitute.com/EBS.EOS.FL.html

Astronomical Society to the Pacific
http://astrosociety.org/education/the-universe-at-your-fingertips-2-0

Lesson 9

Engineer a Satellite
http://aura.gsfc.nasa.gov/outreach/engineerAsatellite.html

Deep Space Network Poster
http://deepspace.jpl.nasa.gov/dsn/educ/poster.html

Program It!
http://phoenix.lpl.arizona.edu/pdf/lesson_11.pdf

What are Satellites?
http://science.hq.nasa.gov/kids/imagers/teachersite/RS2.html

Chabot Space and Science Center
http://www.chabotspace.org/assets/teacher/touch-the-sun.pdf#page=137

The Relationship Between Science and Technology
http://www.teachersdomain.org/resource/psu06-swift.sci.relationships/

Lesson 10

Lander Design
http://phoenix.lpl.arizona.edu/pdf/lesson_14.pdf

The Relationship Between Science and Technology

http://www.teachersdomain.org/resource/psu06-swift.sci.relationships/

How Clear is Water?
http://genesismission.jpl.nasa.gov/educate/scimodule/CleanRoom/pdfs/HowClearIsTheWaterTG.pdf

Lesson 11

Deep Impact
http://deepimpact.umd.edu/educ/Collaborative.html

Lander Design
http://phoenix.lpl.arizona.edu/pdf/lesson_14.pdf

Lesson 13

Geology Educator Guide
http://astroventure.arc.nasa.gov/teachers/pdf/AV-Geolesson-8.pdf

Mars Exploration Debate
http://grs.lpl.arizona.edu/lessons/debate.html

Space Survey
http://phoenix.lpl.arizona.edu/pdf/lesson_5.pdf

Touchdown Mars!
http://phoenix.lpl.arizona.edu/pdf/lesson_7.pdf