

AMPHITHEATER ELEMENTARY SCIENCE GUIDE



8/12/2015

FIRST GRADE

The following pages provide guidance to teachers when implementing science instruction in Amphitheater Elementary Schools. This guide will be revised regularly to ensure alignment with current Arizona State Standards and the requirements of the district.

FOREWARD

Dear Teachers and Administrators,

One of the best ways to engage children in their learning and in the world around them is to provide hands-on opportunities to learn and actually “do” science. Science and engineering education is more important than ever. Becoming college and career ready not only involves gaining factual knowledge, it also involves teaching children to question, explore, build, collaborate, explain, analyze, think critically and creatively, and communicate. Science provides the opportunity for all children to be engaged and solve problems which require these skills.

Over the past two years we have implemented new curriculum in the areas of reading and mathematics. Both of these curriculum areas are critical to student success. Science skills and processes give students real situations to apply what they have learned in reading, writing, and mathematics. Technical writing is necessary when students record their observations, record their analysis of data, and develop conclusions and reports. Integration of the subject areas is critical.

A committee of district teachers met over the past six months to discuss science in our schools, review the Arizona Science Standards, make recommendations regarding the teaching of science, discuss the need for materials, and to develop a science curriculum framework for our schools. According to the committee’s analysis, science instruction is scarce in most elementary classrooms, if taught at all. There are classrooms where science is taught regularly. This was a pleasant finding. **The committee is recommending that science be taught a minimum of 90 minutes per week for all students beginning with the 2015-2016 school year.**

A common question is, “How will we fit this in?”, or, “What should we give up?” in order to teach science. *You will be given the flexibility to reduce some of the time spent on reading and/or math in order to teach science.* Many creative scheduling ideas have come up when teachers begin to talk about how to fit the teaching of science into the day/week.

We introduce the **Amphitheater Elementary Science Guides**. These guides lay out the Arizona Science Standards by grade level, list important academic vocabulary in science, give suggestions for materials and resources and provide many other details for teachers as they prepare their science instruction. We added engineering standards to our curriculum because we know that this type of thinking and “doing” is an important part of STEM education. Inquiry and the Engineering Design Process are the two main threads from Kindergarten through fifth grade. The new curriculum guides will be available electronically and in print. Each school will be scheduling a time to review and discuss the guides, allocate time and resources toward science, and to inventory their science materials.

The guides are not all inclusive. There are many more resources in the community that are not listed, and many more materials that are very effective and practical. We hope to add to these as teachers contribute what they use in their classrooms.

Thank you for all you do to teach science to our youngest scientists!

Sincerely,

Dr. Roseanne Lopez, Chief Academic Officer Elementary Education

Amphitheater Elementary Science Curriculum Plan	
Grade: K-2	Strand: 1 Inquiry Process (Science Lab)
<p align="center">Enduring Understandings (Big Idea)</p> <p>Inquiry uses the scientific process to conduct a complete investigation which is embedded into all areas of science.</p>	
Essential Questions	
<p>What is the process for conducting an investigation? What evidence should be in a science journal during a complete investigation? How do we use scientific investigations to find answers to questions?</p>	
Understanding the Content of this Standard	Essential Knowledge, Skills, and Processes
1. Identify a problem.	<ul style="list-style-type: none"> • Make observations using multiple senses • Ask questions about a simple problem • Collect research/information • Predict the results in a hypothesis (using “if-then” language)
2. Scientific testing	<ul style="list-style-type: none"> • Demonstrate safe behavior and appropriate procedures • Find and list materials and tools • With guidance list the complete steps to conduct the investigation • Participate in the investigation • Make observations and measurements • Record data in a data chart (chart, table, list, log)
3. Analyze data and draw conclusions	<ul style="list-style-type: none"> • Organize the data into graphs (bar, pictograph, tally chart) • Interpret the results of the data • Compare the results to the hypothesis • Generate questions for possible future investigations
4. Communication	<p><u>Explain the results</u></p> <ul style="list-style-type: none"> • Create a display of the complete investigation • Include a science journal with all parts of the inquiry process including research, testing, and analysis • Present the results with others (classroom, grade level, Science Fair) •
Science Vocabulary	
<p>inquiry, question, scientific process, experiment, investigation, opinion, hypothesis, observations, data chart, graphs, results, compare, communication, research, predict, data, models, patterns, conclusion, evidence, classify, sequence, label, diagram, etc.</p>	

Assessment	
Research report Science Fair projects (individual, group, or class) Interpretation and evaluation of data and graphs to answer the relevant question Science journal showing reflections throughout the inquiry process Presentation of the complete inquiry process Teacher observation	
Materials	Resources and Ideas
Research materials specific to each design	Research sites for kids: <ul style="list-style-type: none"> • www.factmonster.com • www.kidsclick.org • www.ipl.org/div/kidspace • www.kidrex.org • www.sciencebuddies.org/ • www.sarsef.org/ (<i>volunteers are available through SARSEF</i>) • www.powershow.com/view/26bf93-Mzg0N/LPS Science Fair Bill Nye the Science Guy powerpoint ppt presentation FOSS kits Engineering is Elementary units Teachers Pay Teachers BrainPop

Amphitheater Elementary Science Curriculum Plan

Grade: 1st

Strand 4: Life Science

Enduring Understandings (Big Idea)

Explore/investigate the characteristics, features, life cycle and habitats of plants/animals.

Concepts

- Strand 2- History and Nature of Science: Concept 1
- Strand 3- Science in Personal and Social Perspectives: Concept 2
- Strand 4- Life Science: Concept 1- Characteristics of Organisms
- Strand 4- Life Science: Concept 2- Life Cycles
- Strand 4- Life Science: Concept 3- Organism and Environments

Essential Questions

What are the characteristics of plants/animals? What are the observable features of plants/animals? What are the stages of human life? What are some plants and animals that exist in our local environment? What are the different habitats in which plants and animals live? How are plants and animals dependent on each other within a habitat?

Understanding the Content of this Standard

Essential Skills and Processes

Characteristics of plants and animals including growth and development, reproduction and response to stimulus	Identify characteristics of living things by observation or research
Features of plants and animals including movement, protection, respiration and support	Compare observable features of living things
Similarities and differences between/among different groups of animals (e.g. number of legs, body coverings, size)	Identify observable similarities and differences between/among groups of animals
Stages of human life (e.g. infancy, adolescence, adulthood)	Identify stages of human life
Similarities and differences between animals and their parents	Identify similarities and differences between animals and their parents
Plants and animals in the local environment	Identify plants and animals in the local environment
Habitats (e.g. desert, forest, prairie, water, underground)	Compare habitats in which plants and animals live
Plant/animal habitat dependency	Describe how plants and animals within a habitat are dependent on each other
Life science in daily life	Give examples of how diverse people use life science in daily life
Life science contributions and innovations	Identify how diverse people and/or cultures, past or present, have made important contributions to life science innovations

Life science technology	Identify various technologies people use Describe how suitable tools help make better observations and measurements
Science Vocabulary	
<ul style="list-style-type: none"> - Reproduction - Growth - Development - Stimulus - Movement (legs, wings) - Protection (skin, feathers, tree bark) - Respiration (lungs, gills) - Support (stems, trunks) - Life Cycle (infancy, adolescence, adulthood) - Habitat names - Local plants - Local animals 	
Assessment	
<ul style="list-style-type: none"> - Teacher observation - Journal - Informational writing - Projects - Sorts - Written assessment 	
Materials and Resources	
<p>Other</p> <p>Concept books Reading street- extend your day Scholastic News Pearson Interactive Science FOSS Kits National Geographic Discovery Education Highlights Kids Teachers Pay Teachers BrainPopJR</p>	<p>Field Trips</p> <ul style="list-style-type: none"> - Desert Museum - Tucson Village Farm - Pumpkin Patch - Sabino Canyon - Catalina State Park - Wildlife Museum
<p>Videos</p> <p>Magic school bus: Plant Seeds, Gets Planted, All Dried Up (desert), In the Arctic (arctic), In the Rainforest (rainforest), Takes a Dive (ocean)</p> <p>http://www.bbc.co.uk/schools/scienceclips/ages/5_6/science_5_6.shtml</p>	<p>Websites</p> <p>http://pbskids.org/wildkratts/</p> <p>http://www.bbc.co.uk/schools/scienceclips/ages/5_6/growing_plants.shtml</p> <p>http://www.crickweb.co.uk/ks2science.html#habitats4b</p> <p>http://www.abpishools.org.uk/activescience/module</p>
<p>Curriculum</p>	

<p>Engineering is Elementary -The Best of Bugs- Insects and Plants</p> <p>Reading Street -A Fox and a Kit- Unit 1 Week 4 (Characteristics, Habitat, Parent Offspring differences) - Get the Egg- Unit 1 Week 5 (Characteristics, Life Cycle) - Animal Park- Unit 1 Week 6 (Characteristics, Habitat) - The Big Circle- Unit 2 Week 4 (Characteristics, Habitat) - Life in the Forest- Unit 2 Week 5 (Characteristics, Habitat) - Honey Bees- Unit 2 Week 6 (Characteristics, Habitat) - Frog and Toad- Unit 3 Week 4 (Plants) - I'm A Caterpillar- Unit 3 Week 5 (Characteristics, Life Cycle) - Where are my Animal Friends?- Unit 3 Week 6 (Habitat) - Mole and Baby Bird- Unit 5 Week 2 (Habitat)</p>	<p>1/home.html</p> <p>http://www.bbc.co.uk/schools/scienceclips/ages/6_7/plants_animals_env.shtml</p> <p>http://www.turtlediary.com/grade-1-games/science-games.html</p> <p>http://www.sheppardsoftware.com/content/animals/kidscorner/kidscorner3.htm</p> <p>http://www.science4us.com/science-songs/</p> <p>http://www.education.com/worksheets/first-grade/life-science/</p> <p>http://www.education.com/activity/first-grade/life-science/</p> <p>http://www.greatschools.org/worksheets/first-grade/science/</p> <p>http://skyenimals.com/</p> <p>http://web.compton.k12.ca.us/pages/departments/curriculum/pdf/1stgradeunitbchp3_5.pdf</p> <p>http://www.internet4classrooms.com/grade_level_help/life_science_first_1st_grade_science.htm</p> <p>http://lessonplanspage.com/?t=Search+lesson+plans&s=+&search-token=55147028e06b94.00387556&searchCat%5B%5D=10&searchCat%5B%5D=143464</p>
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Amphitheater Elementary Science Curriculum Plan

Grade: 1st Strand 5: Physical Science

Enduring Understandings (Big Idea)

Classify objects and materials by their observable properties and understand the way they move.

Concepts

Strand 2- History and Nature of Science: Concept 1

Strand 3- Science in Personal and Social Perspectives: Concept 2

Strand 5- Physical Science: Concept 1- Properties of Objects and Materials

Strand 5- Physical Science: Concept 2- Position and Motion of Objects

Essential Questions

What are the observable properties of an object/material? How can you classify objects/materials by their properties? What is a solid? What is a liquid? In what way can objects move?

Understanding the Content of this Standard	Essential, Skills and Processes
Shape, texture, size, color, weight of objects	Classify objects by observable properties
Solids and liquids	Classify materials as a solid or liquid
Various ways objects can move (straight line, zig zag, back-and-forth, round-and-round, fast, slow)	Demonstrate the ways objects can move
Physical science in daily life	Give examples of how diverse people use physical science in daily life
Physical science contributions and innovations	Identify how diverse people and/or cultures, past or present, have made important contributions to physical science innovations
Physical science technology	Identify various technologies people use Describe how suitable tools help make better observations and measurements
Science Vocabulary	
<ul style="list-style-type: none"> - Shape - Texture - Size - Color - Weight - Solid - Liquid - Straight - Zig-zag - Back and forth - Round and round 	

<ul style="list-style-type: none"> - Fast - Slow 	
Assessment	
<ul style="list-style-type: none"> - Observations - Journal writing - Informational writing - Written assessments - Project - Sorts 	
Materials and Resources	
<p><u>Other</u> Concept books Reading street- extend your day Scholastic News Pearson Interactive Science FOSS Kits National Geographic Discovery Education Highlights Kids Teachers Pay Teachers BrainPopJR</p> <p>Science Assemblies- Mad scientist Guest speakers- Raytheon</p>	<p><u>Field Trips</u></p> <ul style="list-style-type: none"> - Tucson Children’s Museum
<p><u>Videos:</u></p> <ul style="list-style-type: none"> - Magic school bus: plays ball (forces) - Bill Nye Simple Machines <p><u>Curriculum:</u> Engineering is Elementary <ul style="list-style-type: none"> - Catching the Wind- Mechanical Reading Street <ul style="list-style-type: none"> - Simple Machines- Unit 5, Week 4 </p>	<p><u>Websites</u></p> <p>http://www.msichicago.org/play/simplemachines/</p> <p>http://www.abcya.com/states_of_matter.htm</p> <p>http://www.education.com/activity/first-grade/physical-science/</p> <p>http://www.internet4classrooms.com/grade_level_help/physical_science_first_1st_grade_science.htm</p> <p>http://www.internet4classrooms.com/grade_level_help/physical_science_first_1st_grade_science.htm</p> <p>http://www.discoveryeducation.com/search/page/-/-/-/-/index.cfm?Ntx=mode+matchallpartial&Ntk=all-prelogin&Ne=4294967203&Nr=OR(OR(d_Index_Type:Pre-</p>

[login\),OR\(d_Domain:www.fit4theclassroom.com\)&N=4294967203+31&Ntt=physical%20science](http://www.fit4theclassroom.com/login,OR(d_Domain:www.fit4theclassroom.com)&N=4294967203+31&Ntt=physical%20science)

<http://www.education.com/worksheets/first-grade/physical-science/>

<http://www.learninglabresources.com/2013/10/teaching-matter-with-root-beer-floats.html>

Amphitheater Elementary Science Curriculum Plan	
Grade: 1st	Strand 6: Earth and Space Science
Enduring Understandings (Big Idea)	
Develop an understanding of the properties of Earth materials.	
Concepts	
Strand 2- History and Nature of Science: Concept 1	
Strand 3-Science in Personal and Social Perspectives: Concept 2	
Strand 6- Earth and Space Science: Concept 1- Properties of Earth Material	
Essential Questions	
What are the basic Earth materials? How can you compare the physical properties of basic Earth materials? What are the common uses of basic Earth materials? What are natural resources? How can we conserve natural resources?	
Understanding the Content of this Standard	Essential Skills and Processes
Earth material including rocks, soil, water	Describe basic Earth materials
Physical properties of Earth materials including color, texture and capacity to retain water	Compare physical properties of basic Earth materials
Common uses of Earth materials	Identify common uses of Earth materials
Natural resources including air, water, soil, tress, wildlife	Identify natural resources
Ways to conserve natural resources (e.g. reduce, reuse, recycle, find alternatives)	Identify ways to conserve natural resources
Earth science in daily life	Give examples of how diverse people use space/earth science in daily life
Earth science contributions and innovations	Identify how diverse people and/or cultures, past or present, have made important contributions to space/earth science innovations
Earth science technology	Identify various technologies people use Describe how suitable tools help make better observations and measurements
Science Vocabulary	
<ul style="list-style-type: none"> - Earth - Rocks - Soil - Water - Color - Texture 	

<ul style="list-style-type: none"> - Capacity - Air - Trees - Wildlife - Reduce - Reuse - Recycle 	
Assessment	
<ul style="list-style-type: none"> - Teacher observation - Journal - Informational writing - Projects - Sorts - Written assessment 	
Materials and Resources	
<p><u>Other</u> Concept books Reading street- extend your day Scholastic News Pearson Interactive Science FOSS Kits National Geographic Discovery Education Highlights Kids Teachers Pay Teachers BrainPop JR School grounds</p>	<p><u>Field Trips</u></p> <ul style="list-style-type: none"> - Desert Museum - Sabino Canyon - Catalina State Park - Gem and Mineral Show
<p><u>Videos:</u></p> <ul style="list-style-type: none"> - Magic school bus: recycling <p><u>Curriculum:</u> Engineering is Elementary <ul style="list-style-type: none"> - A Work in Process- Playdough- Chemical </p>	<p><u>Websites</u></p> <p>http://www.teachers.cr.k12.de.us/~galgano/1linkssci.htm</p> <p>http://www.science4us.com/science-songs/</p> <p>http://www.education.com/activity/first-grade/earth-science/</p> <p>http://www.simplyscience.com/firstgrade.html</p> <p>http://www.msucleus.org/membership/html/k-6/rc/pdf/rc1rock.pdf</p> <p>http://www.education.com/worksheets/first-grade/earth-science/</p>

Amphitheater Elementary Science Curriculum Plan

Grade: 1st

Strand 6: Earth and Space Science

Enduring Understandings (Big Idea)

Identify, compare and describe objects and changes in the earth and sky

Concepts

Strand 2- History and Nature of Science: Concept 1

Strand 3-Science in Personal and Social Perspectives: Concept 2

Strand 6-Earth and Space Science: Concept 2- Objects in the Sky

Strand 6- Earth and Space Science: Concept 3- Changes in the Earth and Sky

Essential Questions

What evidence shows that the sun is a natural source of heat and light? What is the difference between a celestial object and a transient object? What are some changes that occur in the sky? What are the characteristics of seasonal weather patterns? How does weather affect our activities? How do people use space/earth science in their daily lives? Who/what contributed to innovations in space/earth science?

Understanding the Content of this Standard

Essential Skills and Processes

The sun is a natural source of heat and light on Earth (e.g. warm surfaces, shadows, shade)

Identify evidence that the sun is a natural source of heat

Celestial objects (e.g. sun, moon, stars) and transient objects in the sky (e.g. clouds, birds, airplanes)

Compare celestial objects and transient objects

Changes that occur in the sky (e.g. clouds forming and moving, position of the moon)

Describe observable changes that occur in the sky

Temperature, type of precipitation, wind

Identify characteristics of weather patterns

Weather affects on daily activities

Analyze how weather affects daily activities

Space/earth science in daily life

Give examples of how diverse people use space/earth science in daily life

Space/earth science contributions and innovations

Identify how diverse people and/or cultures, past or present, have made important contributions to space/earth science innovations

Space/earth science technology

Identify various technologies people use
Describe how suitable tools help make better observations and measurements

Science Vocabulary

- Sun
- Shadow
- Shade
- Moon

<ul style="list-style-type: none"> - Stars - Clouds - Temperature - Weather - Precipitation - Wind - Climate 	
Assessment	
<ul style="list-style-type: none"> - Teacher observation - Journal - Informational writing - Projects - Sorts - Written assessment 	
Materials and Resources	
<p><u>Other</u> Concept books Reading Street- extend your day Scholastic News Pearson Interactive Science FOSS Kits National Geographic Discovery Education Highlights Kids Teachers Pay Teachers BrainPopJR The sky/the outdoors</p>	<p><u>Field Trips</u></p> <ul style="list-style-type: none"> - Flandreau Planetarium - On-site on the playground
<p><u>Videos:</u></p> <ul style="list-style-type: none"> - Magic school bus: Lost in Solar System, Sees the Stars - Magic School Bus: Kicks Up a Storm, Inside a Hurricane, Makes a Rainbow <p><u>Curriculum:</u> Reading Street</p> <ul style="list-style-type: none"> - Where are my Animal Friends? Unit 3 Week 6 (Weather changes) 	<p><u>Websites</u></p> <p>http://www.teachers.cr.k12.de.us/~galgano/1linkssci.htm</p> <p>http://www.science4us.com/science-songs/</p> <p>http://www.education.com/worksheets/first-grade/earth-science/</p> <p>https://www.teacherspayteachers.com/Product/Free-Phases-of-the-Moon-With-Oreo-Cookies-1135117</p> <p>http://www.education.com/worksheets/first-grade/weather-seasons+science/</p>

Amphitheater Elementary Science Curriculum Plan	
Grade: K-5	Engineering Design Process
Enduring Understandings (Big Ideas)	
<ul style="list-style-type: none"> Defining and Delimiting Engineering Problems Developing Possible Solutions Optimizing the Design Solution 	
Essential Questions	
<p>How might we define a simple design problem reflecting a need or a want?</p> <p>What are the constraints/criteria?</p> <p>How might we generate and compare possible solutions to a problem?</p> <p>How might we plan and carry out fair tests?</p> <p>How might we improve upon our design?</p>	
Understanding the Content of this Standard	Essential Skills and Processes
<p>Students will be able to use the Design Process. (<i>italics denote K-2 language</i>)</p>	<p>Design Process: Students will understand how technology solves problems and makes work easier.</p> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-bottom: 5px;">Identify the problem (<i>Ask</i>)</div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-bottom: 5px;">Do research</div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-bottom: 5px;">Develop possible solutions (<i>Imagine</i>)</div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-bottom: 5px;">Choose one solution</div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-bottom: 5px;">Design and construct a prototype (<i>Plan and Create</i>)</div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-bottom: 5px;">Test the prototype (<i>Test</i>)</div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-bottom: 5px;">Evaluate and redesign (<i>Improve</i>)</div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-bottom: 5px;">Communicate results</div>
<p style="text-align: center;"><u>Identify the problem (<i>Ask</i>)</u> <u>Research</u></p> <p>Find a design problem, based on the fact that peoples’ needs and desires change over time as well as their demand for new technologies.</p>	<ul style="list-style-type: none"> Identify & create a solvable design problem/need/want Explain why that problem is relevant Conduct research

Create or identify criteria for success and constraints.	<ul style="list-style-type: none"> Understand & explain that there are constraints on material, time and costs
<p><u>Develop possible solutions (Imagine)</u> Generate and compare possible solutions to a problem.</p>	<ul style="list-style-type: none"> Work within the criteria while generating possible solutions Judge solutions against constraints Identify solution(s) that best fits problem
<p><u>Design and construct a prototype (Plan and Create)</u> Plan the model or prototype based on chosen solution(s). Create the model prototype.</p>	<ul style="list-style-type: none"> Design a model. Communicate the design of a model (written on paper, whiteboard, or computer software, etc.) Construct a model using available resources.
<p><u>Test the prototype (Test)</u> Design and conduct fair tests with controlled variables.</p>	<ul style="list-style-type: none"> Plan and conduct fair tests using prototypes Control variables Consider failure points found through testing
<p><u>Evaluate and redesign (Improve)</u> Evaluate & redesign model.</p>	<ul style="list-style-type: none"> Use failure points to identify parts of a model that can be improved Make changes to the model (redesign). Repeat testing process
<p><u>Communicate results</u> Communicate results.</p>	<ul style="list-style-type: none"> Explain your results using data Gather input from peers Describe successes and failures Suggest improvements based on the criteria and failure points
History of Engineering and Innovation	
How have individuals contributed to engineering innovations?	<ul style="list-style-type: none"> Research the various contributions of scientists and innovators in this field (e.g., Wilber and Orville Wright, Leonardo da Vinci, Thomas Edison, Benjamin Franklin, Steve Jobs, Bill Gates, Mary Anderson-windshield wiper, George de Mestral-velcro, Alan Turing-computer science/cryptologist, Hedy Lamarr- basis for wi-fi). Describe how science, engineering and technology have improved the lives of people. Critique the benefits and risks related to the use of technology. Investigate careers related to engineering & design.
Science Vocabulary	
prototype, model, design, process, predict, evaluate, technology, record, research, create, problem, solution, design problem, want, need, individual, community, global, technology, criteria, constraints, materials, cost, generate, compare, options, reasonable, plan, blueprints, investigate, variable, fair test, control, failure points, redesign	

Assessment	
Formative	Summative
<ul style="list-style-type: none"> • Reflections • Center activities (teacher observation) • Engineering Journals 	<ul style="list-style-type: none"> • Performance assessment • Presentation of design
Materials	Resources
<p>Engineering is Elementary Units Various materials for making models and prototypes Collection of recycled materials, non-working objects and parts</p>	<ul style="list-style-type: none"> • Discovery Education • Reading Street Leveled Readers (on-line) • Reading A-Z leveled readers • Khan Academy • http://www.sciencekids.co.nz/engineering.html • www.teachengineering.org • http://www.childrensengineering.org/ • http://www.childrensengineering.com/free-resources.htm • https://www.teachengineering.org/googlesearch_results.php • http://betterlesson.com/lesson/620237/the-wonderful-towers-of-watts-building-background-knowledge?grade=14&subject=2&from=bl_directory_no-keywords_second-grade_technology-and-engineering_mt-lesson_620237_title • http://www.engr.ncsu.edu/theengineeringplace/educators/k8plans.php • https://drive.google.com/folderview?id=0Bzm8D1yH2vdZXzIERWhDYTFFLXc&usp=sharing • YouTube videos <ul style="list-style-type: none"> ▪ Nasa For Kids: Intro to Engineering ▪ The Engineering Process: Crash Course Kid ○ National Science Foundation Resources: https://www.nsf.gov/news/classroom/engineering.jsp ○ Teachers Pay Teachers