

Technology Competencies 2008-2009

Grade 4/Science

ISTE Standards

1. Creativity and Innovation
2. Communication and Collaboration
3. Research and Information Fluency
4. Critical Thinking, Problem Solving and Decision Making
5. Digital Citizenship
6. Technology Operations and Concepts

<i>AKS/Science/4</i>	<i>ISTE Standards</i>	<i>Suggested Activities</i>
analyze the components of our solar system and their relationship to one another (GPS, ITBS) (4SC_B2006-8)	<ol style="list-style-type: none"> 1. Creativity and Innovation 3. Research and Information Fluency 4. Critical Thinking, Problem Solving and Decision Making 5. Digital Citizenship 6. Technology Operations and Concepts 	<p>Work with your LSTC to make the PowerPoint template below available to students.</p> <p>Have students add information and appropriate clip art to each slide. As time permits, students may add slide transitions, backgrounds and custom animations.</p> <p><i>(PowerPoint Template: 4SC_Solar_System)</i></p>
analyze the role of relative position and motion in determining the sequence of the phases of the moon (GPS, ITBS)(4SC_B2006-9)	<ol style="list-style-type: none"> 4. Critical Thinking, Problem Solving and Decision Making 5. Digital Citizenship 	<p>Work with your LSTC to make the following links below available to students to learn about the phases of the moon:</p> <p>Arty the Part-Time Astronaut: http://www.3pounds.com/artyastro/ Enchanted Learning: http://www.enchantedlearning.com/subjects/astronomy/index.shtml Harcourt: http://harcourtschool.com/activity/moon_phases/index.html</p>
analyze weather charts/maps and collect weather data to predict weather events and infer patterns and seasonal changes (GPS, ITBS) (4SC_B2006-11)	<ol style="list-style-type: none"> 1. Creativity and Innovation 2. Communication and Collaboration 3. Research and Information Fluency 4. Critical Thinking, Problem Solving and Decision Making 5. Digital Citizenship 6. Technology Operations and Concepts 	<p>Work with your LSTC to have the Weather Channel link available to students: http://www.weather.com</p> <p>Assign a city to each pair of students or have them choose a city. By using the 10-day forecast, have students write a weather forecast, prepare a script in MSWord and present it to the class.</p>

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investigate the nature of light using tools (mirrors, lenses, prisms) (GPS, ITBS) (4SC_C2006-12)	<ol style="list-style-type: none"> 1. Creativity and Innovation 3. Research and Information Fluency 4. Critical Thinking, Problem Solving and Decision Making 5. Digital Citizenship 6. Technology Operations and Concepts 	<p>Work with your LSTC to make the Publisher template below available to students. After teaching the differences in opaque, translucent, and transparent light, have students write the definitions of each and then complete the Publisher template on the computer. Students choose a clip art image on page one to show examples of each and complete the information on page two. After printing page one, flip the paper to print page two on the back. After printing use scissors to cut on the dotted lines.</p> <p><i>(Publisher Template: 4SC_Light_tri-flip_brochure.pub)</i></p>
investigate how sound is produced by vibrating objects (GPS, ITBS) (4SC_C2006-13)	<ol style="list-style-type: none"> 1. Creativity and Innovation 2. Communication and Collaboration 3. Research and Information Fluency 4. Critical Thinking, Problem Solving and Decision Making 5. Digital Citizenship 6. Technology Operations and Concepts 	<p>Work with your LSTC to make the Publisher template below available to students. After teaching the principles of sound have students work individually or in pairs to complete the class work template. (4SC-Sound_Riddle) Students will use the information from the class work to complete the Publisher Riddle template on the computer. After printing page one with the clues, flip the paper to print page two for the riddle answer. After printing, have students draw a picture of several of the sound's wavelengths.</p> <p><i>(Publisher Template: 4SC_Sound_Riddle.pub)</i></p>
demonstrate the relationship between force and motion (GPS, ITBS)(4SC_C2006-14)	<ol style="list-style-type: none"> 1. Creativity and Innovation 3. Research and Information Fluency 4. Critical Thinking, Problem Solving and Decision Making 6. Technology Operations and Concepts 	<p>Work with your LSTC to have the PowerPoint template below available to students. Have students complete each slide with the definition of the simple machine, an explanation of how it works and add clip art that demonstrates an example of the simple machine. As time permits, students may personalize the presentation with backgrounds, slide transitions, extra graphics and custom animations.</p> <p><i>(PowerPoint Template 4SC_Simple_Machines.ppt)</i></p>
describe the roles of organisms and the flow of energy within an ecosystem (GPS, ITBS)(4SC_D2006-15)	<ol style="list-style-type: none"> 1. Creativity and Innovation 4. Critical Thinking, Problem Solving and Decision Making 6. Technology Operations and Concepts 	<p>Work with your LSTC to have the Inspiration template below available to students. Have students change the bubbles to graphics that represent two connecting food chains. Each food chain should begin with the sun and end with a decomposer.</p> <p><i>(Inspiration Template: 4SC_Food_Webins.isf)</i></p>

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<p>explain various factors (adaptations, variation, behavior, external features) that affect the survival or extinction of organisms (GPS, ITBS)(4SC_D2006-16)</p>	<ol style="list-style-type: none"> 1. Creativity and Innovation 3. Research and Information Fluency 4. Critical Thinking, Problem Solving and Decision Making 6. Technology Operations and Concepts 	<p>Work with your LSTC to have the Publisher template and web links below available to students. Have students complete each section of the brochure to explain the behaviors and physical adaptations of a particular animal. Each section allows for text and a graphic. Print page one, flip the paper and print side two on the back.</p> <p>Students may use these supporting web sites: http://nationalzoo.si.edu/Animals/AnimalIndex/ http://www.lpzoo.org/animals/index.html http://www.sandiegozoo.org/animalbytes/index.html</p> <p><i>(Publisher Template: 4SC_Adapt_Survival_brochure-legal-size.pub)</i></p>