

# Standards Alignment: Invent It Challenge



| <p><b>ISTE NETS'S Standards</b></p> <p><a href="http://www.iste.org/standards/standards-for-students">http://www.iste.org/standards/standards-for-students</a></p>   | <p><b>Next Generation Science Standards</b></p> <p><a href="http://www.nextgenscience.org">http://www.nextgenscience.org</a></p>   | <p><b>National Association for Environmental Education Guidelines for Excellence</b></p> <p><a href="http://bit.ly/2dZuaAO">http://bit.ly/2dZuaAO</a></p>  | <p><b>21st Century Learning Standards</b></p> <p><a href="http://www.p21.org">www.p21.org</a></p>   | <p><b>Common Core State Standards for English Language Arts</b></p> <p><a href="http://www.corestandards.org">www.corestandards.org</a></p>   | <p><b>STEAM</b></p> <p><a href="http://www.steamedu.com">www.steamedu.com</a></p>  |
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| <p><b>1. Creativity and Innovation</b></p> <p><b>2. Communication and Collaboration</b></p> <p><b>3. Research and Information Fluency</b></p> <p><b>4. Critical Thinking, Problem Solving, and Decision Making</b></p> | <p><b>Dimension 1: Practices</b><br/>Asking questions; Developing and using models; Planning and carrying out investigations; Analyzing and interpreting data; Constructing explanations and designing solutions; Engaging in argument from evidence; Obtaining, evaluating and communicating information</p> <p><b>Dimension 2: Crosscutting Concepts</b></p> <ul style="list-style-type: none"> <li>• Cause and Effect</li> <li>• Systems and system models</li> <li>• Energy and Matter: Flows, cycles, and conservation</li> <li>• Stability and Change</li> </ul> <p><b>Dimension 3: Disciplinary Core Ideas</b></p> <p><b>Life Science</b><br/>LS2: Ecosystems: Interactions, Energy, Dynamics</p> <p><b>Earth Science</b><br/>ESS2-Earth's Systems</p> <p><b>Physical Science</b><br/>PS3 Energy</p> <p><b>Engineering &amp; Technology</b><br/>ETS1 Engineering Design</p> | <p><b>Strand 1:</b> Questioning, Analysis, and Interpretation Skills</p> <p><b>Strand 2:</b> Knowledge of Environmental Processes and Systems</p> <p><b>Strand 3:</b> Skills for Understanding and Addressing Environmental Issues</p> <p><b>Strand 4:</b> Personal and Civic Responsibility</p> | <p><b>Learning and Innovation Skills</b></p> <ul style="list-style-type: none"> <li>• Creativity and Innovation</li> <li>• Critical Thinking and Problem Solving</li> <li>• Communication and Collaboration</li> </ul> <p><b>Information, Media and Technology Skills</b></p> <ul style="list-style-type: none"> <li>• Information Literacy</li> <li>• Media Literacy</li> <li>• ICT (Information, Communications and Technology) Literacy</li> </ul> <p><b>Life and Career Skills</b></p> <ul style="list-style-type: none"> <li>• Initiative and Self-Direction</li> <li>• Productivity and Accountability</li> </ul> | <p><u>CCSS.ELA -Literacy.CCRA.W.4</u><br/>Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p><u>CCSS.ELA -Literacy.CCRA.W.6</u><br/>Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.</p> <p><u>CCSS.ELA -Literacy.CCRA.W.7</u><br/>Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.</p> <p><u>CCSS.ELA -Literacy.CC RA.W.8</u><br/>Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.</p> <p><u>CCSS.ELA -Literacy.CC RA.W.9</u><br/>Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p><u>CCSS.ELA -Literacy.CC RA.SL.5</u><br/>Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.</p> | <p><b>Science</b></p> <ul style="list-style-type: none"> <li>• Conduct scientific inquiry through the Spark!Lab Process of Inquiry</li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>• Conduct online research</li> <li>• Communicate an invention idea through a digital presentation</li> </ul> <p><b>Engineering</b></p> <ul style="list-style-type: none"> <li>• Solve a problem</li> <li>• Design an invention</li> <li>• Build a prototype</li> </ul> <p><b>Arts</b></p> <ul style="list-style-type: none"> <li>• Imagine and sketch an invention</li> <li>• Create a 3-D prototype</li> </ul> <p><b>Math</b></p> <ul style="list-style-type: none"> <li>• Measure and create a scale model of the invention</li> <li>• Analyze data to refine invention</li> </ul> |