

Invention Fair

Content Area: **Science**
Course(s): **English Language Arts 7, Science 7**
Time Period: **Marking Period 2**
Length: **12 weeks**
Status: **Published**

Unit Overview

Students will research an inventor, his/her invention, and the impact that invention had on society. Research will be presented via PowerPoint. Students will develop an invention or innovation to fill a perceived need in our everyday lives. Ideas will be communicated through drawings, description, and oral presentation.

Essential Questions

How do inventors think and create inventions?

How do these inventions affect our lives, and the lives of the people from the time period when the inventions were created?

Content

Researching an inventor/invention

Process of developing an idea or product [Invention/Innovation]

Skills

Researching

Word processing

Public speaking

Listening

Brainstorming ideas

Developing an idea

Conceptualizing/explaining an idea (drawing, writing)

Assessments

- Inventor/invention PowerPoint
- Inventor/Innovation proposal
- Log/Journal
- Tri-Fold Presentation Board, Drawing, and Bibliography
- Model
- Brouchure
- Presentation
- Detailed “Blueprint” drawing
- Elevator pitch

Lessons/Learning Scenarios

- Students will research and create a PowerPoint on their inventor/invention. Students will collaborate with one or two partners to decide which section of the PowerPoint portion of the Inventor project they will complete. Each student group has picked an inventor from the list, and will complete three slides to be combined with their partner's slides and presented to Mrs. Hathaway and Mr. Roth. Student research will focus on the inventor, invention, and contribution to society. [*Modification made: teachers created heterogeneous groups to ensure support for students] (Instruction will occur in both Science and ELA.)
- Students will present their PowerPoint. Each person in the group will present the highlights of their research. (Presentations will occur in Science and Mrs. Hathaway will attend class as schedule allows.)
- Brainstorm ideas for invention/innovation (Science)
- Write a proposal for the invention/innovation: Proposal should be a detailed explanation of what their product or process will be, how it will work, how the student will create it, and why he/she wants to do it. (Science)
- Create, write, and present an elevator pitch on the invention/innovation. (ELA)
- Individual meetings to discuss student’s progress and address any problems. (Science)
- Work on log/journal; tri-fold presentation board, drawing, and bibliography; model; brochure; presentation; detailed “blueprint” drawing. (Science)

Standards

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| LA.7.CCSS.ELA-Literacy.CCRA.R.1 | Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text. |
| LA.7.CCSS.ELA-Literacy.CCRA.R.2 | Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas. |

LA.7.CCSS.ELA-Literacy.CCRA.R.4	Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
LA.7.CCSS.ELA-Literacy.CCRA.R.7	Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.
LA.7.CCSS.ELA-Literacy.CCRA.SL1	Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
SCI.7-8.5.1.8.A.2	Use mathematical, physical, and computational tools to build conceptual-based models and to pose theories.
SCI.7-8.5.1.8.A.b	Results of observation and measurement can be used to build conceptual-based models and to search for core explanations.
SCI.7-8.5.1.8.B.a	Evidence is generated and evaluated as part of building and refining models and explanations.
SCI.7-8.5.1.8.C.3	Generate new and productive questions to evaluate and refine core explanations.
SCI.7-8.5.1.8.D.1	Engage in multiple forms of discussion in order to process, make sense of, and learn from others' ideas, observations, and experiences.
SCI.7-8.5.1.8.D.2	Engage in productive scientific discussion practices during conversations with peers, both face-to-face and virtually, in the context of scientific investigations and model-building.
SCI.7-8.5.1.8.D.a	Science involves practicing productive social interactions with peers, such as partner talk, whole-group discussions, and small-group work.
CCSS.ELA-Literacy.W.7.2.a	Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
CCSS.ELA-Literacy.W.7.2.b	Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.
CCSS.ELA-Literacy.W.7.2.c	Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.
CCSS.ELA-Literacy.W.7.2.d	Use precise language and domain-specific vocabulary to inform about or explain the topic.
CCSS.ELA-Literacy.W.7.2.e	Establish and maintain a formal style.
CCSS.ELA-Literacy.W.7.2.f	Provide a concluding statement or section that follows from and supports the information or explanation presented.
CCSS.ELA-Literacy.W.7.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
CCSS.ELA-Literacy.W.7.6	Use technology, including the Internet, to produce and publish writing and link to and cite sources as well as to interact and collaborate with others, including linking to and citing sources.
CCSS.ELA-Literacy.W.7.7	Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.
CCSS.ELA-Literacy.W.7.8	Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
CCSS.ELA-Literacy.W.7.9	Draw evidence from literary or informational texts to support analysis, reflection, and research.
CCSS.ELA-Literacy.W.7.10	Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks,

purposes, and audiences.

CCSS.ELA-Literacy.RI.7.1	Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
CCSS.ELA-Literacy.RI.7.4	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.
CCSS.ELA-Literacy.RI.7.10	By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.
CCSS.ELA-Literacy.SL.7.4	Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.
CCSS.ELA-Literacy.SL.7.5	Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.
CCSS.ELA-Literacy.SL.7.6	Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

Resources
