

Jefferson City Public Schools–Curriculum

SUBJECT: Elementary

COURSE: EER

STRAND: Meant to Invent

Objectives	Assessment/Evaluation	Instructional Activities
(A) Gain an understanding of how machines work Performance: 2.3, 3.1-3.4 Knowledge: (CA) 3 (SC) 2 CAGLE: R.1.E (Gr. 6), R.1.H (Gr. 6) SCGLE: SC2.2.D (Gr. 7), SC8.1.A,C (Gr. 6) NETS: N/A DOK: 1-3	• Ball Bearing experiment • Rube Goldberg Invention sheet	• Simple machines: • wheel • axle • pulley • wedge • screw • lever • gear • bevel gear • gear rack and pinion • cam • crank and rod • ratchet • Spinning Your Wheels • Rube Goldberg background information • Videos: • <i>Simple Machines</i> • Bill Nye: <i>Inventions</i>
(B) Improve creative thinking skills Performance: 1.6, 2.3, 3.1, 4.6 Knowledge: (CA) 3 CAGLE: R.1.E (Gr. 6), R.1.H (Gr. 8), LS.2.A (Gr. 6) SCGLE: SC7.1.A,C,D (Gr 6), SC7.1.B (Gr. 7), SC8.1.A,C (Gr. 6-8), SC8.2.A,B (Gr. 6-8), SC8.3.B (Gr. 6-8) NETS: N/A DOK: 1-3	• Create a Franklin, Edison, and Me invention • Why Didn't I Think of That? web • Create a Handy Hanger invention	• The Flag Tower • Franklin, Edison, and Me challenge • Why Didn't I Think of That? activity • Handy Hanger activity • Power of Creative Thinking background information • The Invention Connection activity

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(C) Demonstrate the invention process Performance: 1.5, 2.1, 3.1, 4.1 Knowledge: (CA) 1,3,5,6 (MA) 2 (SC) 7 CAGLE: R.1.E (Gr. 6), R.1.H (Gr. 8), LS.2.A (Gr. 6) SCGLE: SC2.2.D (Gr. 7), SC7.1.A,C,D (Gr. 6), SC7.1.B (Gr. 7), SC8.1.A (Gr. 6-8) NETS: (3-5) 9 DOK: 1-4	• The World's Ten Greatest Inventions record sheet • SCAMPER Brainstorming answer sheet • Meant to Invent documentation packet - assessed using a scoring guide • How to Think Like an Inventor answer sheet • Last Straw invention presentation - assessed using a scoring guide • Who Owns the Cure? debate - evaluated using teacher observation • Create Meant to Invent invention - assessed using a scoring guide	• The Design Process background packet • Analyze former kid invention winners • Create the World's Ten Greatest Inventions • Brainstorming background information • Practicing the creative part of inventive thinking • Steps to Inventing sheet • What Makes a Person Inventive? information • What Traits Do Inventors Have in Common? sheet • The Last Straw • Marketing background information sheet • Parts of a Patent background information packet • Spaghetti Structures • Step by Step (directions) activity • Who Owns the Cure? activity • Straw Bridges activity • Invention EGGstravaganza egg drop
(D) Perform experimental tests related to various inventions Performance: 1.6, 2.3, 3.1, 4.4 Knowledge: (CA) 1,4 (SC) 2,7 CAGLE: W.2.D (Gr. 5) SCGLE: SC2.2.D (Gr. 7), SC7.1.A,C,D (Gr. 6), SC7.1.B (Gr. 7) NETS: N/A DOK: 1-4	• The Pendulum Project experiment answer sheet - assessed using a scoring guide • Obscertainer experiment results sheet - assessed using a scoring guide	• The Pendulum Project experiment • Obscertainer experiment

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(E) Become acquainted with famous inventors and their inventions Performance: 1.6, 2.3, 3.4, 4.5 Knowledge: (CA) 1,3,4 (SC) 8 CAGLE: R.1.H (Gr. 8), W.2.D (Gr. 5) SCGLE: SC8.1.A (Gr. 6-8), SC8.2.A,B (Gr. 6-8), SC8.3.B (Gr. 6-8) NETS: N/A DOK: 1-2	• Fact Pyramid sheet - assessed using a scoring guide • What Do You Think? interpretation sheet - assessed using a scoring guide	• Leonardo's Mysterious Machinery • Galileo Galilei background information • Inventor's background information of: • great women • minorities • Famous Inventor's packet • What Do You Think? - quotes from famous inventors • Benjamin Franklin packet • Great Thinkers and Their Inventions packet • Thomas Edison and Other Young Inventors packet
(F) Classify inventions and when they took place Performance: 1.6, 2.3, 3.4, 4.5 Knowledge: (CA) 1,3 CAGLE: R.1.H (Gr. 8) SCGLE: SC8.1.A (Gr. 6-8), SC8.2.A (Gr. 6-8), SSGLE: TSSI.7.B (Gr. 5-8) NETS: N/A DOK: 1-2	• Inventions Match answer sheet • The Poetry Wheel - assessed using a scoring guide • The World's Ten Greatest Inventions record sheet • When Did That Happen? answer sheet • Report (when each invention happened) - assessed using a scoring guide • Mass Production experiment - assessed using a scoring guide	• Tool time - ancient tools • Invention Fact Card activity • The Wheel • The World's Ten Greatest Inventions • When Did That Happen? activity • The Great All-Time Inventions game • A World Without Machines - Industrial Revolution packet
(G) Create and present an invention to the class and explain the benefits of the invention and the problem it solves or who it helps Performance: 1.5, 2.1, 3.1, 4.1 Knowledge: (CA) 1,4-6 (MA) 1,2,5 (SC) 2 CAGLE: W.2.D (Gr. 5), LS.2.A (Gr. 5) SCGLE: SC2.2.D (Gr. 7), SC8.3.B (Gr. 6-8) NETS: N/A DOK: 1-4	• Present the Paper Idea Factory invention - assessed using a scoring guide • Presentation of Brown Bagging It invention - assessed using a scoring guide • Meant to Invent: • invention presentations - assessed using a scoring guide • invention packet - assessed using a scoring guide • positive comment sheet • peer analysis sheet	• Paper Idea Factory • Brown Bagging It • Create Meant to Invent inventions

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