



Building and Making Activities	Topics	Suggested Age	Girl Scout Badge Connections	Steps included
Cupcake Delivery	Design Thinking; Engineering	6+	Daisy - Mechanical Engineering: Model Car	All Steps Step 1: Design and build model cars Step 2: Use model cars to test the friction of different surfaces Step 3: Race your cars!
			Daisy - Journey: Think Like an Engineer	Step 1: Find out how engineers use design thinking to solve problems. Step 2 (partial): Do 3 hands-on design challenges: design and build a fairy house, a car powered by air , and a way to get across a canyon.
			Brownie - Journey: Think Like an Engineer	Step 1: Find out how engineers use design thinking to solve problems. Step 2 (partial): Do 3 design thinking activities: design and build an assistive device , a water collection device, and a device that can launch a ball across a room.
			Brownie - Inventor	All Steps Step 1: Warm up your inventor's mind Step 2: Find lots of ways to solve the same problem Step 3: Make a needs list Step 4: Solve a problem Step 5: Share your invention
			Senior - Journey: Think Like an Engineer	Step 1: Find out how engineers use design thinking to solve problems. Step 2 (partial): Do 3 design thinking activities: design and build prototypes of a can holder that isn't harmful to animals, a kinetic sculpture, and an assistive device for the elderly .
Paper Skyscraper	Design Thinking; Engineering	6+	Brownie - Inventor	All Steps Step 1: Warm up your inventor's mind Step 2: Find lots of ways to solve the same problem Step 3: Make a needs list Step 4: Solve a problem Step 5: Share your invention
			Junior - Journey: Think Like an Engineer	Step 1: Find out how engineers use design thinking to solve problems Step 2 (partial): Do 3 design thinking activities: design and build a paper structure that can support the weight of heavy books , an emergency shelter, and a prototype of a structure that can withstand an earthquake's shaking.
Cooking with the Sun	Engineering Design; Physical Sciences (Solar Energy)	8-13	Brownie - Inventor	Step 1: Warm up your inventor's mind Step 3: Make a needs list Step 4: Solve a problem Step 5: Share your invention

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Linkages	Design Thinking; Engineering	8-12	Brownie - Journey: Think Like an Engineer	Step 1: Find out how engineers use design thinking to solve problems. Step 2 (partial): Do 3 design thinking activities: design and build an assistive device , a water collection device, and a device that can launch a ball across a room.
			Senior - Journey: Think Like an Engineer	Step 1: Find out how engineers use design thinking to solve problems. Step 2 (partial): Do 3 design thinking activities: design and build prototypes of a can holder that isn't harmful to animals, a kinetic sculpture, and an assistive device for the elderly.
Roller Coasters	Engineering; Physics	6-12	Daisy - Mechanical Engineering: Roller Coaster	Step 2: Build a model of a roller coaster Step 3: Test your roller coaster
			Brownie - Journey: Think Like an Engineer	Step 1: Find out how engineers use design thinking to solve problems. Step 2 (partial): Do 3 design thinking activities: design and build an assistive device, a water collection device, and a device that can launch a ball across a room.
			Junior - Entertainment Technology	Step 3: Try the science of amusement park rides
Zipline	Design Thinking; Engineering	6-12	Brownie - Inventor	All Steps Step 1: Warm up your inventor's mind Step 2: Find lots of ways to solve the same problem Step 3: Make a needs list Step 4: Solve a problem Step 5: Share your invention
			Senior - Journey: Think Like an Engineer	Step 1: Find out how engineers use design thinking to solve problems. Step 2 (partial): Do 3 design thinking activities: design and build prototypes of a can holder that isn't harmful to animals, a kinetic sculpture, and an assistive device for the elderly.
Build a Storm Drain	Design Thinking; Engineering; Earth Science	7-13	Brownie - Inventor	All Steps Step 1: Warm up your inventor's mind Step 2: Find lots of ways to solve the same problem Step 3: Make a needs list Step 4: Solve a problem Step 5: Share your invention
			Brownie - Journey: WOW! Wonders of Water	Step 2: Plan a Take Action project, such as making informative posters, promoting recycling at school, or planting low-water gardens.
			Ambassador - Water	Step 3: Find out about water issues Step 4: Explore water solutions Step 5: Educate and inspire
Solve the Fall	Design Thinking; Engineering	6+	Brownie - Inventor	All Steps Step 1: Warm up your inventor's mind Step 2: Find lots of ways to solve the same problem Step 3: Make a needs list Step 4: Solve a problem Step 5: Share your invention

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Grabbers	Design Thinking; Engineering	8+	Brownie - Inventor	All Steps Step 1: Warm up your inventor's mind Step 2: Find lots of ways to solve the same problem Step 3: Make a needs list Step 4: Solve a problem Step 5: Share your invention
			Brownie - Journey: Think Like an Engineer	Step 1: Find out how engineers use design thinking to solve problems. Step 2 (partial): Do 3 design thinking activities: design and build an assistive device , a water collection device, and a device that can launch a ball across a room.
			Senior - Journey: Think Like an Engineer	Step 1: Find out how engineers use design thinking to solve problems. Step 2 (partial): Do 3 design thinking activities: design and build prototypes of a can holder that isn't harmful to animals, a kinetic sculpture, and an assistive device for the elderly.

Science Explorations	Topics	Suggested Age	Girl Scout Badge Connections	Steps included
Energy Red Light Green Light	Physical Sciences; PE	5-9	Brownie - Home Scientist	Step 5: Play with Science
			Cadette - Field Day	Step 3: Play a scientific game

Tech for Global Good Activities	Topics	Suggested Grade	Girl Scout Badge Connections	Steps included
Vaccine Delivery Challenge	Design Challenge; Research	7-12	Senior - Social Innovator	All Steps Step 1: Explore the big picture Step 2: Make connections Step 3: Build empathy for people affected by the issue you've identified Step 4: Develop a solution from a specific point of view Step 5: Practice pitching ideas and getting feedback
Save the Species Challenge	Design Challenge; Research	7-12	Senior - Social Innovator	All Steps Step 1: Explore the big picture Step 2: Make connections Step 3: Build empathy for people affected by the issue you've identified Step 4: Develop a solution from a specific point of view Step 5: Practice pitching ideas and getting feedback
			Senior - Eco Explorer	Step 2: Explore biodiversity Step 3: Investigate a global ecosystem issue Step 5: Share what you learned
			Senior - Voice for Animals	Step 5: Look into an animal issue

Cybersecurity Classroom Activities	Topics	Suggested Grade	Girl Scout Badge Connections	Steps included
Cryptobabel: Coded Communication	Ciphers & codes	4-6	Brownie - Cybersecurity 3: Investigator	Step 1: Crack a code to solve a problem
			Junior - Cybersecurity 3: Investigator	Step 1: Create and crack a shift cipher code
			Cadette - Cybersecurity 1: Basics	Step 1: Crack a code Step 2: Hack a password
			Ambassador - Cybersecurity 1: Basics	Step 2: Hide a message in plain sight
			Junior - Detective	Step 2: Communicate in code
Netbuilder: Information Transfer	How the internet works and transfers data	4-6	Brownie - Cybersecurity 1: Basics	Step 1: Find out how you use technology Step 5: Find out how messages travel on the internet
			Junior - Cybersecurity 1: Basics	Step 1: Find out how computers read information Step 2: Discover how networks work Step 4: Explore computer communication protocol
Hashing and Cracking: Password Essentials	Creating safe & secure passwords; hacking passwords	4-6	Junior - Cybersecurity 2: Safeguards	Step 1: Create and protect a username Step 2: Create and protect a password
			Cadette - Cybersecurity 1: Basics	Step 2: Hack a password
Social Engineering: Scam Alert!	Comparing real & phony websites, checking for scams/phishing	4-6	Brownie - Cybersecurity 2: Safeguards	Step 2: Find out what information to keep private when you go online Step 4: Find out why you have to be careful about who you trust online Step 5: Test your knowledge of online safety rules
			Junior - Cybersecurity 3: Investigator	Step 5: Investigate if a message is real or fake
			Cadette - Cybersecurity 3: Investigator	Step 2: Identify phishing emails
Cyber Forensics: Digital Footprints	Gather and analyze digital information in order to figure out problems and solve crimes	4-6	Brownie - Cybersecurity 3: Investigator	Step 3: Find out about digital footprints
			Junior - Cybersecurity 2: Safeguards	Step 3: Discover how you share information and what to share Step 4: Find out how information online can last forever
			Cadette - Cybersecurity 2: Safeguards	Step 5: Inventory your digital presence
The Internet of Things	Add a new everyday item to the IoT, how it collects and analyzes data, info sharing & privacy concerns	4-6	Brownie - Cybersecurity 1: Basics	Step 1: Find out how you use technology Step 2: Discover what your technology can do
			Junior - Cybersecurity 2: Safeguards	Step 3: Discover how you share information and what to share
Passwords and Picking: Solving the Puzzle	Passwords are like puzzles, how to make them harder to solve	4-6	Junior - Cybersecurity 2: Safeguards	Step 2: Create and protect a password

Cybersecurity Classroom Activities	Topics	Suggested Grade	Girl Scout Badge Connections	Steps included
Cryptography: Security Alert	Ciphers, encryption, transferring data safely	4-6	Brownie - Cybersecurity 3: Investigator	Step 1: Crack a code to solve a problem
			Junior - Cybersecurity 3: Investigator	Step 1: Create and crack a shift cipher code
			Cadette - Cybersecurity 1: Basics	Step 1: Crack a code Step 2: Hack a password
			Ambassador - Cybersecurity 1: Basics	Step 2: Hide a message in plain sight

Design Challenge Lesson Plans	Topics	Suggested Grade	Girl Scout Badge Connections	Steps included
Design Challenges: Balloon Astronaut	Design spacesuits that can withstand the hazards of high velocity impact from space debris and meteoroids.	2-8	Brownie - Inventor	All Steps Step 1: Warm up your inventor's mind Step 2: Find lots of ways to solve the same problem Step 3: Make a needs list Step 4: Solve a problem Step 5: Share your invention
Design Challenges: Energy at Play	Build a device that can move a ball to a target while exploring energy transfer.	3-6	Brownie - Inventor	All Steps Step 1: Warm up your inventor's mind Step 2: Find lots of ways to solve the same problem Step 3: Make a needs list Step 4: Solve a problem Step 5: Share your invention
			Brownie - Journey: Think Like an Engineer	Step 1: Find out how engineers use design thinking to solve problems. Step 2 (partial): Do 3 design thinking activities: design and build an assistive device, a water collection device, and a device that can launch a ball across a room.
Engineering: Energy Madness	Design a machine that can deliver a remote control to an immobile friend - Rube Goldberg	4-8	Brownie - Journey: Think Like an Engineer	Step 1: Find out how engineers use design thinking to solve problems. Step 2 (partial): Do 3 design thinking activities: design and build an assistive device , a water collection device, and a device that can launch a ball across a room.
			Brownie - Inventor	All Steps Step 1: Warm up your inventor's mind Step 2: Find lots of ways to solve the same problem Step 3: Make a needs list Step 4: Solve a problem Step 5: Share your invention
			Senior - Journey: Think Like an Engineer	Step 1: Find out how engineers use design thinking to solve problems. Step 2 (partial): Do 3 design thinking activities: design and build prototypes of a can holder that isn't harmful to animals, a kinetic sculpture, and an assistive device for the elderly.
			Senior: Cybersecurity 1: Basics	Step 5: Design a Rube Goldberg machine