



Green ² Troops: Create and Innovate Badge

Badge Purpose: Juniors use their creativity to solve problems and innovate solutions, while learning the design thinking process. This guide outlines how to complete the badge in completely waste-free.

Core Principles:

- Reuse, recycle, or repurpose materials whenever possible
 - Avoid single-use plastics or disposables
 - Use digital tools or reusable materials instead of paper
 - Reflect orally or using reusable formats (whiteboards, chalkboards, etc.)
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Step 1. Think Like an Inventor

Activity: Problem Hunt Scavenger Walk

Objective: Identify problems in the environment, school, or meeting space

- Use dry-erase clipboards or chalkboards to record ideas
- Girls share their findings with the group aloud

Materials Needed:

- Reusable boards or scrap paper
 - Dry-erase markers or chalk
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Step 2. Explore the Design Thinking Process

Activity: Define a Problem and Brainstorm Solutions

Objective: Learn the 5 steps: Empathize, Define, Ideate, Prototype, Test

- Girls work in teams to design a challenge and brainstorm ideas
- Use chalkboards or shared digital docs for planning

Materials Needed:

- Reclaimed materials for visual brainstorming (fabric scraps, yarn, bottle caps)
 - Whiteboards or reused paper for group mind maps
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Step 3. Build a Prototype

Activity: Create a Model or Representation of Your Solution

Objective: Use only repurposed or recyclable materials to build a prototype

- Teams work together using what's available from a reuse bin

Materials Needed:

- Cardboard, paper towel rolls, string, glue sticks, scissors
 - All materials are donated, salvaged, or reused
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Step 4. Share Your Invention

Activity: Host a Mini Maker Fair or Family Showcase

Objective: Present and explain your innovation to others

- Use scrap cardboard or upcycled materials for displays
- Girls explain the design thinking process and what they learned

Materials Needed:

- Display boards from cereal boxes or reused folders
 - Optional: digital presentations on tablets
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Step 5. Reflect on Your Journey

Activity: Reflection Circle or Troop Web

Objective: Reflect orally on the process and what they enjoyed

- Use a ball of yarn to pass around and build a "reflection web"

Materials Needed:

- Reusable name tags or chalk name boards
 - Yarn or string
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Waste-Free Community Service Project: 'Invent for Earth: Community Fix-It & Upcycle Station'

Objective: Help the community repair, reuse, and reimagine instead of throwing away

Event Ideas:

- "Fix a Zipper" Station (sewing/mending help)
- "Tote It" Station (make bags from old shirts)
- "Jar Art" Station (reuse glass jars for decoration or storage)

Girls' Role:

- Lead or assist each station
- Explain why upcycling matters
- Reflect on what items were saved from the landfill

Event Tips:

- All tools and supplies are reused or borrowed
 - Encourage attendees to bring their own mug, plate, or napkin
 - Send digital invites and thank-you cards
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Troop Materials Checklist

- Dry-erase boards or clipboards
 - Chalk and markers
 - Bins of reused crafting/prototyping materials
 - Fabric scraps, yarn, string
 - Scissors, glue sticks (refillable if possible)
 - Yarn ball for reflection activity
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Leader Reminders:

- Encourage creative thinking over perfect results
 - Celebrate every idea and effort
 - Model sustainability by using reusable items yourself
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Junior Girl Scouts: Inventor Journal

Welcome, Junior Inventors!

This is your personal journal to use while you earn your "Create and Innovate" badge. This version helps the planet by being waste-free! Use a dry-erase marker on a laminated version or copy these pages into your reusable notebook. Let's get innovating!

Step 1: Think Like an Inventor

Scavenger Hunt Observations:

Look around and find problems to solve. What could be improved?

- Problem 1: _____
- Problem 2: _____
- Problem 3: _____

Which one are you most interested in solving?

Step 2: Explore the Design Thinking Process

Empathize: Who has this problem? What do they need?

Define: Describe the problem in one sentence.

Ideate: Brainstorm some possible solutions.

- Idea 1: _____
 - Idea 2: _____
 - Idea 3: _____
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Step 3: Build a Prototype

Draw or Describe Your Invention:

You can sketch it or write about how it works.

Materials I used from our reuse bin:

Step 4: Share Your Invention

What did you make and why?

Explain your project to your troop or family.

- My invention is: _____
- It helps by: _____
- What people said about it: _____

Step 5: Reflect on Your Journey

What did you enjoy most?

What would you improve next time?

What did you learn about innovation and reducing waste?

You Did It! You've earned your "Create and Innovate" badge—and you did it in a way that helps the Earth. Great job, Junior!