Lego Sustainability Creations: Applying the SCAMPER Method for Innovative “Build The Change” Solutions

Creative strategies driving eco-friendly toy innovations – a Scout Leader’s Guide

G.A.S.P.!


Substitute
Combine
Adapt
SCAMPER
Modify/
Magnify
Rearrange/
Reverse
Eliminate/
Minify
Purpose

Guide Highlights

- Understanding Lego’s Commitment to Sustainability
- Introduction to the SCAMPER Method
- Applying SCAMPER to Lego Sustainability Creations
- Expanding SCAMPER Approaches for Lego
- Imagining the Future: Lego and Sustainable Innovation

Understanding Lego’s Commitment to Sustainability

Overview of Lego's Environmental Goals

Zero Waste Production

Lego targets zero waste in its production processes by 2030 to minimize environmental impact and promote sustainability.

Sustainable Materials

All Lego products will be made from sustainable materials by 2030, supporting eco-friendly manufacturing and product use.

Carbon Emission Reduction

Lego focuses on reducing carbon emissions and energy consumption throughout its manufacturing and supply chain.

Improved Recyclability

Lego aims to improve the recyclability of its products, encouraging circular economy and less landfill waste.

Current Sustainable Initiatives

Plant-Based Plastics

Using plant-based plastics reduces dependency on fossil fuels and lowers carbon footprint.

Renewable Energy Investment

Investing in renewable energy sources supports clean energy and sustainable power generation.

Recyclable Packaging Design

Designing recyclable packaging minimizes waste and promotes circular economy principles.

Challenges Faced by Lego in Sustainability

Durability and Safety Balance

Ensuring toys remain durable and safe while using sustainable materials is a major challenge.

Sourcing Eco-friendly Materials

Finding reliable and sustainable raw materials that meet quality standards is difficult.

Scaling Sustainable Production

Scaling up production processes to be sustainable without compromising quality is complex.

Introduction to the SCAMPER Method

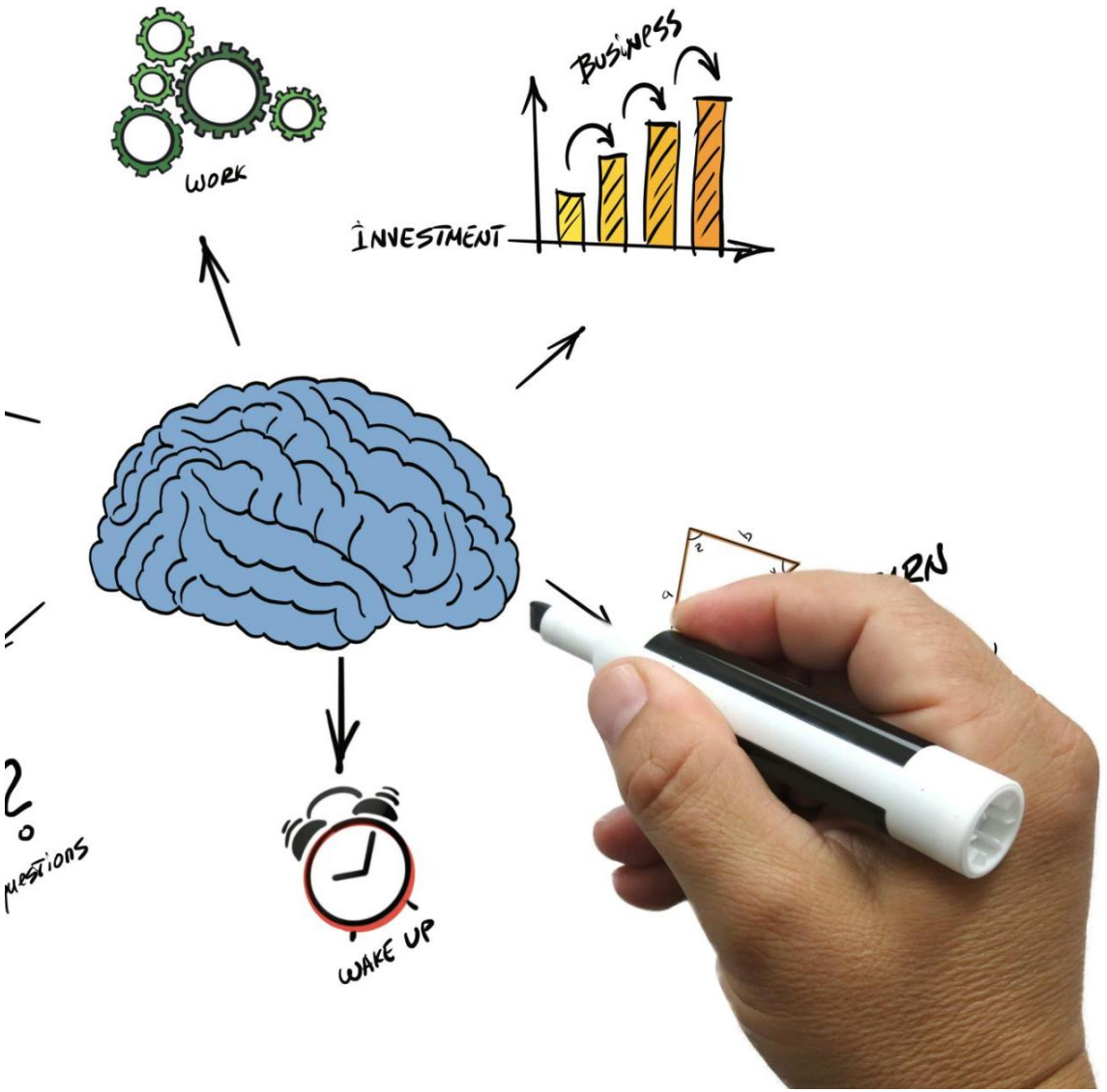
What Is the SCAMPER Method?

SCAMPER Overview

SCAMPER is a creative thinking tool using seven techniques to improve products and processes.

Fostering Creativity

The method encourages systematic exploration of alternatives to generate innovative ideas.



Importance of SCAMPER in Creative Problem-Solving

Fostering Innovation

SCAMPER encourages teams to think creatively and develop innovative ideas that address complex challenges effectively.

Challenging Assumptions

Using SCAMPER helps question existing assumptions to discover new perspectives and opportunities for solutions.

Generating Sustainable Solutions

SCAMPER supports the creation of practical and sustainable solutions by exploring problems from multiple viewpoints.

How SCAMPER Relates to Sustainability

Substitution for Sustainability

SCAMPER promotes replacing harmful materials with eco-friendly alternatives to reduce environmental damage.

Combination for Eco-efficiency

Combining features enhances product efficiency and reduces resource usage in sustainable design.

Adaptation to Minimize Waste

Adapting product designs helps reduce waste and supports sustainable consumption.

Elimination of Unnecessary Parts

Eliminating excess components minimizes environmental footprint and improves sustainability.

Applying SCAMPER to Lego Sustainability Creations

Substitute: Using Alternative Materials in Lego Bricks

Bio-based Materials

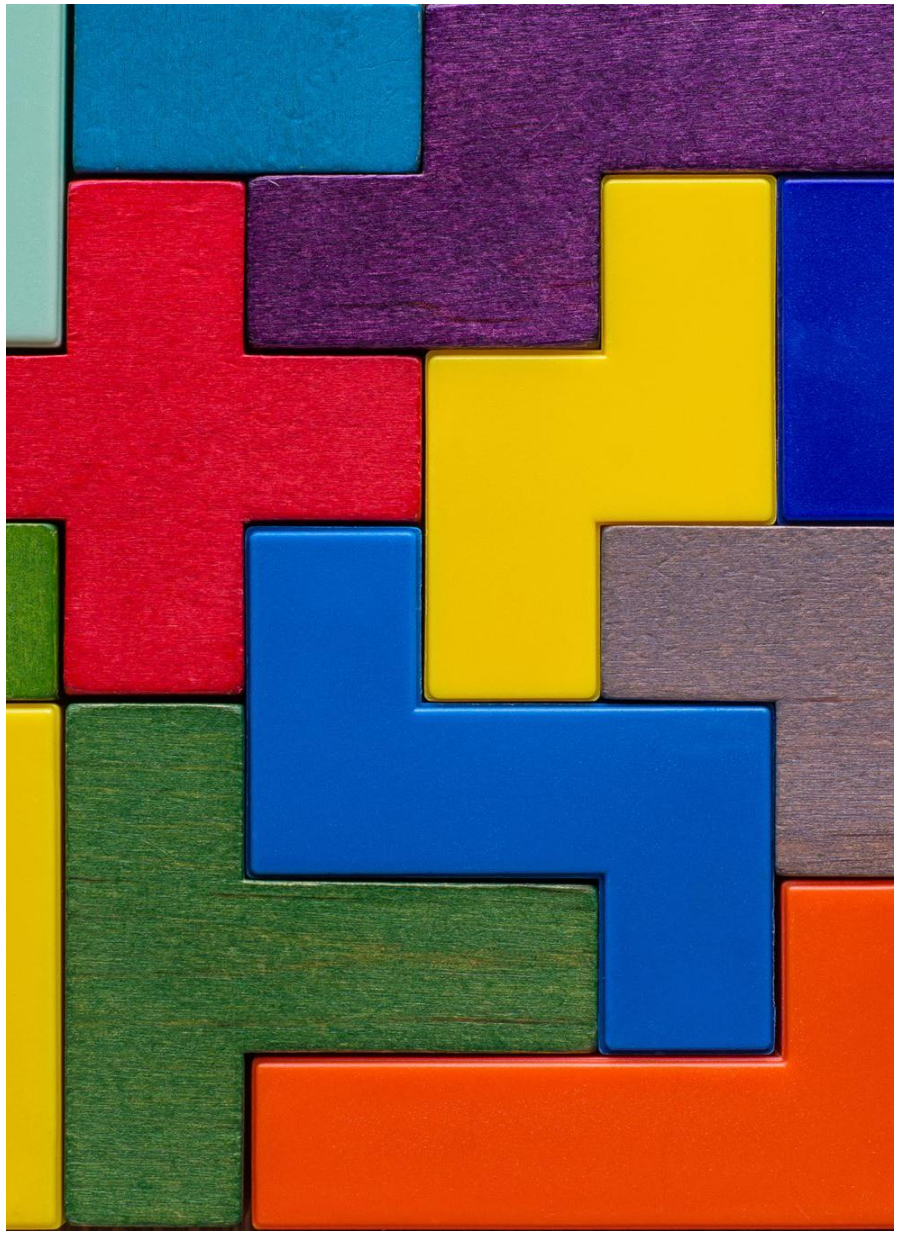
Lego uses bio-based materials derived from renewable resources to reduce reliance on traditional plastics.

Recycled Materials

Incorporating recycled plastics helps Lego lower environmental impact without sacrificing brick quality.

Maintaining Quality

Alternative materials ensure the bricks remain durable and compatible with traditional Lego sets.



Combine: Merging Eco-Friendly Features with Classic Lego Designs

Traditional Lego Aesthetics

Maintains the iconic brick shapes and vibrant colors that define classic Lego play experiences.

Eco-Friendly Materials

Incorporates sustainable and biodegradable materials to reduce environmental impact.

Sustainable Play Value

Combines fun and creativity with environmentally responsible design to encourage eco-conscious play.

Adapt: Modifying Lego Sets for Sustainable Play and Repurposing

Encouraging Reuse

Modifying Lego sets promotes reuse, extending the lifespan of the toys and minimizing environmental impact.

Supporting Multiple Purposes

Redesigning sets for different uses fosters creativity and reduces the need for new materials.

Reducing Waste

Longer lifecycles of toys decrease waste production and contribute to sustainable play.

LEGO Build the Change!

1. Start with a Simple Build

Make a small LEGO thing like a house, car, or robot. Keep it simple so you can easily change it later!

2. Change It in Fun Ways (Using SCAMPER)

- Swap It
- Mix It
- Make It Bigger or Smaller
- Flip or Move It Around
- Use It Differently
- Take Bits Away

3. Show and Share!

Tell someone what you changed and why.

Get a picture taken of your LEGO creation giving it a title, along wih your name +scout-group– you could win a prize!

Take your LEGO creation to pieces G.A.S.P.!

LEGO "Build the Change" Activity Instructions

🎯 Goal:

On a green base board use LEGO bricks to explore creative changes to a basic model by applying **SCAMPER** strategies: **S**ubstitute, **C**ombine, **A**dapt, **M**odify/Magnify, **P**urpose - put to another use, **E**liminate/Minify, **R**earrange/Reverse. Overall theme: **SUSTAINABILITY**.

1. **Build a Basic Model**
   - Use a few LEGO bricks to create a simple object (e.g. a house, car, robot, bridge).
   - Keep it small and clear so changes are easy to see.
2. **Apply SCAMPER Steps One by One**

🧠 **Step**	**Action Prompt**
🔁 Substitute	Swap one piece for something different (colour, shape, or function).
➕ Combine	Add two ideas together—mix parts of two builds.
🔄 Adapt	Change the design to fit a new purpose or situation (e.g. underwater use).
🔍 Modify/Magnify	Make something bigger, smaller, taller, or exaggerated.
🎯 Purpose	Use your model in a totally new way. What else could it be?
✂️ Eliminate/Minify	Remove parts to simplify or streamline the design.
⬅️ Rearrange/Reverse	Change the order or flip parts around to see what happens.

3. **Reflect, Share & Deconstruct**
   - **Ask**: *How did you build change? What ideas did you discover*
   - **Record**: *Get a photo taken of your Lego creation along with your name & Scout group/unit to be in with a chance of winning a prize.*
   - **Return**: Deconstruct your wonderful creation and return the bricks!

Expanding SCAMPER Approaches for Lego

Modify: Redesigning Packaging for Reduced Environmental Impact

Material Reduction

Packaging redesign focuses on using less material to minimize environmental footprint and resource use.

Incorporating Recycled Content

New packaging incorporates recycled materials to reduce waste and support circular economy efforts.

Simplified Recycling

Packaging is designed to be easier to recycle, promoting higher recycling rates and less landfill waste.

Put to Another Use: Upcycling Old Lego Pieces

Creative Reuse of Lego Bricks

Upcycling old Lego pieces inspires innovative new creations and prolongs the life of materials.

Sustainability Through Upcycling

Reusing Lego bricks helps reduce waste and supports environmental sustainability practices.

Community Engagement

Encouraging upcycling fosters community participation and shared creativity among Lego enthusiasts.

Eliminate: Removing Non-Recyclable Components From Products

Improving Product Sustainability

Removing non-recyclable components enhances the overall sustainability of products by enabling better recycling.

Facilitating Circular Economy

Elimination of hindering materials supports circular economy by promoting reuse and reducing waste.

Imagining the Future: Lego and Sustainable Innovation

Potential New Product Lines Inspired by SCAMPER

Sustainable Materials

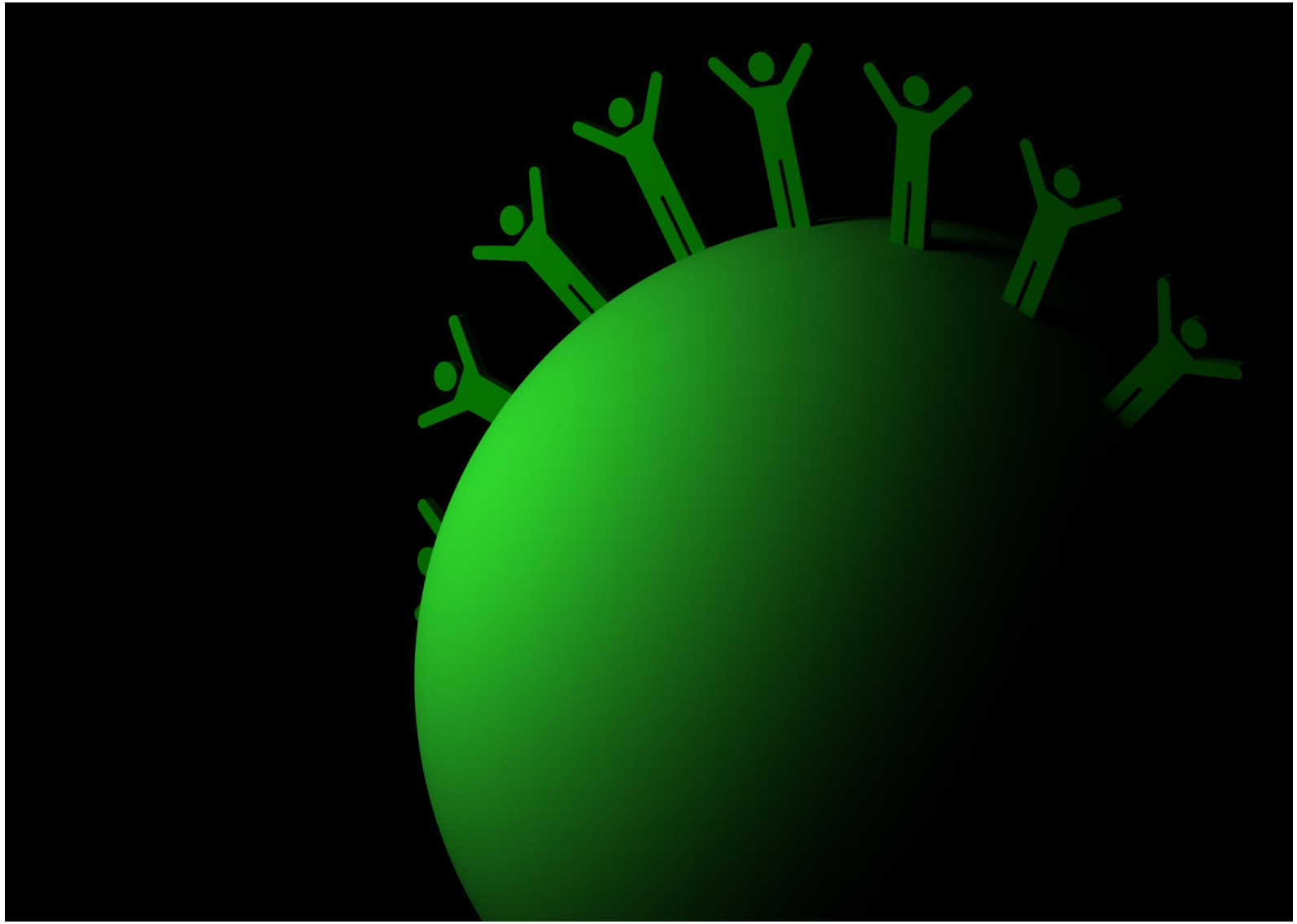
Future product lines will incorporate eco-friendly and sustainable materials to reduce environmental impact.

Multifunctional Designs

Designs will focus on multifunctionality, enhancing play value and user engagement for children.

SCAMPER Innovation

SCAMPER techniques inspire creative new product concepts that transform traditional toy designs.



Community Projects and User-Driven Sustainable Designs

Community Engagement

Active involvement of communities enhances ownership and commitment to sustainable design goals.

Shared Responsibility

Sustainable initiatives thrive when stakeholders collectively share responsibility for environmental outcomes.

Creative Green Solutions

User-driven designs encourage innovative and practical solutions for environmental sustainability.

Long-Term Vision for a Fully Sustainable Lego Ecosystem

Circular Material Use

Lego focuses on using renewable and recyclable materials to reduce environmental impact and promote circularity.

Sustainable Production

The production process aims for zero waste and energy efficiency to minimize carbon footprint across operations.

Eco-Conscious Packaging

Lego implements sustainable packaging solutions to reduce waste and enhance recyclability of products.

End-of-Life Product Use

Encouraging recycling and reuse of Lego products ensures minimal waste and supports a circular economy.

Conclusion

SCAMPER Method Application

Lego uses the SCAMPER method to foster innovative and sustainable solutions in product development.

Environmental Responsibility

Lego’s commitment to sustainability reflects its responsibility toward reducing environmental impact through innovation.

Future Sustainability

By embracing creativity and responsibility, Lego is advancing toward a greener and more sustainable future.