



Making Things Move

GoldieBlox Kit



Board Game Design
Challenge



Model Car Design
Challenge



Roller Coaster Design
Challenge



TABLE OF CONTENTS

Front Inside Binder Pocket

6 Daisy Design Challenge Pieces Handouts
(1 handout per group of 2)

Resources

Troubleshooting guide 1
How To Access GoldieBlox Badge Worksheets and Guides 2
Daisy Design Challenge Pieces 3
Design Challenge Badges Glossary 4

Board Game Design Challenge Badge 5

Board Game Design Challenge Overview 6
Board Game Design Challenge 1 7 – 11
Spinner Pieces 12
Board Game Design Challenge 2 13 - 17

Model Car Design Challenge Badge 18

Model Car Design Challenge Overview 19
Model Car Design Challenge 1 20 – 22
GoldieBlox Parade Floats Handout 23 – 26
Model Car Design Challenge 1 27 – 28
Model Car Design Challenge 2 29 – 33

Roller Coaster Design Challenge Badge 34

Roller Coaster Design Challenge Overview 35
Roller Coaster Design Challenge 1 36
Where Does the Roller Coaster Go Fastest Handout 37
Roller Coaster Design Challenge 1 38 – 39
Simple Roller Coaster Car Handout 40
Roller Coaster Design Challenge 1 41 – 42
Roller Coaster Design Challenge 2 43 – 47

Back Inside Binder Pocket

WD-40 Safety Data Sheet



Please read before
doing activities!

TROUBLESHOOTING GUIDE

Daisy: Making Things Move GoldieBlox Kit

****Please ensure that each bag has its correct number of pieces before returning your kit. Pieces are NOT replaceable.**

FAQ:

1. Q: Are all of the materials I need to earn badges included in the kit?

A: No. Some badges require extra materials such as pencils, paper, markers, etc...that need to be provided by the troop.

2. Q: What badges will Daisies be able to earn with the Making Things Move kit?

A: Daisies can earn 3 different mechanical engineering badges by using this kit. The badges are Roller Coaster Design, Model Car Design, and Board Game Design. Depending on your troop size, it may take more than one meeting to complete a badge.

3. Q: What do I do if I cannot disassemble some of the GoldieBlox pieces?

A: Sometimes the pieces won't come apart easily and can be difficult to disassemble without damaging the piece. Try spraying the pieces with the WD-40 that is included in the kit. If it still won't come apart, email info@gswestok.org and let us know.

4. Q: How many girls does one kit accommodate?

A: There are 6 large resealable bags provided in the kit. Each bag can accommodate 2 girls. Therefore, 1 kit can accommodate up to 12 girls.

5. Q: Do the "GoldieBlox and the Parade Float" books fulfill any badge requirements?

A: Yes! The books contain blueprints in the back of all the parade float designs Daisies will look at for the Model Car Design Challenge #1.

6. Q: How do I acquire more worksheets for the Board Game and Roller Coaster challenges?

A: Log onto the Volunteer Toolkit and follow the instructions provided in the binder. The instruction page is labeled "How to access GoldieBlox badge worksheets and guides". The guides contain everything that is included in this binder.

7. Q: How do I make a spinner for the Board Game Design Challenge 1?

A: Designing a spinner yourself before the meeting will provide insight into assisting girls to build their own. There are helpful GoldieBlox videos online that provide a good starting point:

https://www.youtube.com/watch?v=7NnptJF3_J0

Tips:

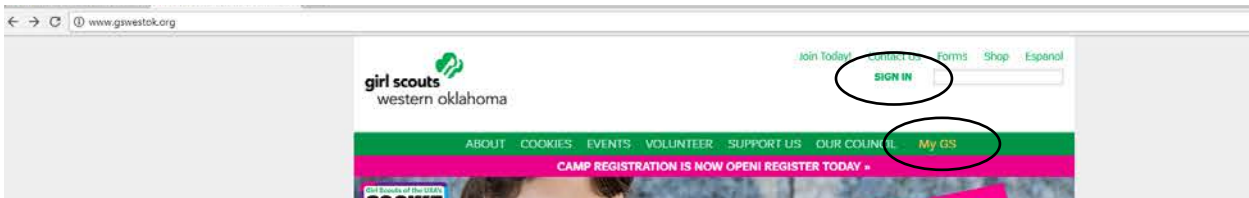
1. **The pieces are prone to rolling easily off tables.** GSWESTOK recommends keeping pieces in a small tray (provided) until girls have use of them.
2. **Prepare!** Carefully read instructions and give yourself plenty of time to prepare.

How to access GoldieBlox badge worksheets and guides

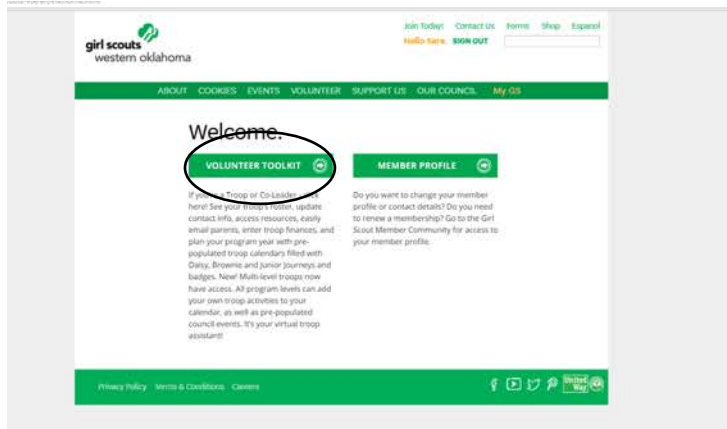
To access the complete guide for the 3 GoldieBlox badges, follow these steps:

***Note: Only Troop Leaders can access the Volunteer Toolkit**

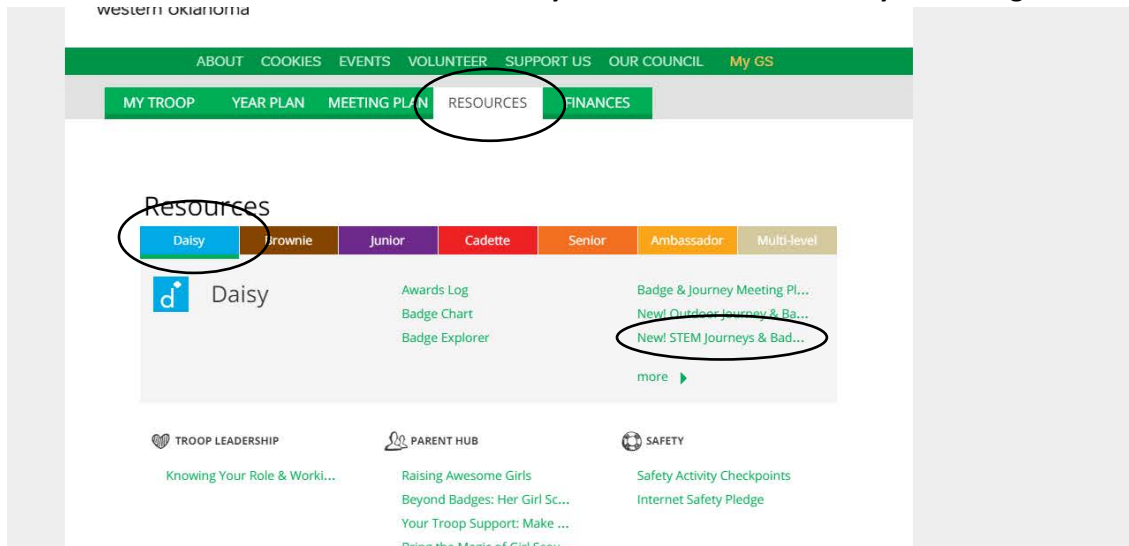
1. Go to www.gswestok.org
2. Sign in by clicking either the “sign in” link or the “My GS” to the top right of the page:



3. After signing in, click on the “Volunteer Toolkit” link:



4. Go to the “Resources” Tab and click on “Daisy” and “New! STEM Journeys and Badges”:



5. Click on the Daisy- Board Game Design Challenge Badge, Daisy- Model Car Design Challenge Badge, and the Daisy- Roller Coaster Design Challenge Badge PDF files.

Daisy Design Challenge Pieces

For 2 Girls



Washers x 8



Small Wheel
End x 8



Small Wheel
Hub x 4



Spacer x 8



Big Wheel End x 2



Tire x 4



Wheels x 7



Blox x 6



Short Axle x 9



Long Axle x 4



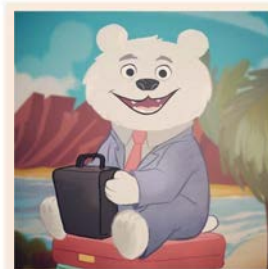
Teal Ribbon



*GoldieBlox and the
Parade Float Book x 1*



Nacho x 1



Flavio x 1



Katinka 1

Design Challenge Badges

Glossary for Daisies

Daisies may not know some of the words used in these badges. Here are definitions you can share with them:

Inventors are people who think of and build new products and ideas.

Engineers are people who like to know how things work. They design and build things people use every day, like computers, phones, roads, bridges and cars.

Brainstorming is what happens when you and your troop get together to come up with ideas.

Features are parts of a product that are designed make them more useful.

Force is the strength or energy that creates movement. Push and pull are examples of force.

Friction is a force that slows moving objects.

Board Game Design

CHALLENGE



Board Game Design



CHALLENGE



MATERIALS:

- PAPER
- PENCILS
- OPTIONAL: FIND AND PRINT OUT PUZZLES, MAZES AND OTHER SIMPLE PAPER GAME
- FLAG
- OPTIONAL: POSTER BOARD WITH THE GIRL SCOUT PROMISE AND LAW
- MARKERS AND/OR CRAYONS
- LARGE PAPER, CONSTRUCTION PAPER, OR POSTER BOARD
- OPTIONAL: POSTER BOARD WITH THE GIRL SCOUT PROMISE AND LAW
- BOARD GAME DESIGN CHALLENGE AWARD (YOU CAN BUY THESE AWARDS IN THE GSWESTOK SHOP OR THE ONLINE SHOP AT GSWESTOK.ORG/SHOP.)
- OPTIONAL SURVEY: LAPTOP/TABLET
- OPTIONAL SURVEY: PRINTED COPIES (IF NEEDED)
- SPINNER PIECES ARE INCLUDED

Overview

In the Board Game Design Challenge, Daisies create board games and learn that people who invent new things are called inventors.

Challenge 1:

- Activity 1: As Girls Arrive: Paper Games
- Activity 2: Opening Ceremony: All About Games
- Activity 3: Come Up with an Idea for Your Board Game
- Activity 4: Design a Spinner for Your Game
- Activity 5: Closing Ceremony

Challenge 2:

- Activity 1: As Girls Arrive: Create Your Game Board
- Activity 2: Opening Ceremony: Share Your Board Game
- Activity 3: Test Your Game and Make It Better
- Activity 4: Closing Ceremony: Awards
- Activity 5: Girl Survey

Note to Volunteers:

Use the Talking Points (But Make Them Your Own): In each session, you'll find suggested talking points under the heading "SAY." Some volunteers, especially new ones, find it helpful to follow the script. Others use the talking points as a guide and deliver the information in their own words. Either way is just fine.

Be Prepared (It's What Girl Scouts Do!):

Prep time will take Roughly 50 minutes

Each meeting includes a "Prepare Ahead" section that includes a materials list and what kind of set-up is required. Read it in advance so you have enough time to gather supplies and enlist help, if needed. Please review materials list that you will need to provide on the left.



This badge challenge is supported by the GoldieBlox Making Things Move kit.

Challenge 1



Activity 1: As Girls Arrive: Paper Games

MATERIALS:

Paper

Pencils

Optional: Find and print out puzzles, mazes and other simple paper games

Time Allotment

10 minutes

Steps:

Welcome Daisies, and have them play common paper games in pairs. This could include: Tic Tac Toe, Dots and Boxes (girls take turns forming lines to create boxes on a dotted grid), Pictionary, or any other games you know.

Optional: Hand out puzzles, mazes or other paper games for Daisies.

SAY:

Today, we're going to start designing our own board games. To get ready, play your favorite paper games with your partner! Maybe you like Tic Tac Toe or perhaps you like Pictionary?

Challenge 1



Activity 2: Opening Ceremony: All About Games

MATERIALS:

Flag
Optional: Poster Board with the Girl Scout Promise and Law

Time Allotment

10 minutes

Steps

Recite the Pledge of Allegiance and the Promise and Law.
Conduct any troop business.
Introduce Daisies to the Board Game Design Challenge.

SAY:

Today, we're starting the Board Game Design Challenge badge!

You're going to learn how to invent new board games and create things like an engineer.

Engineers are people who like to know how things work. They design and build things people use every day, like computers, phones, roads, bridges and cars.

Engineers use their imaginations to solve problems and create new products. You'll do the same thing today!



Challenge 1



Activity 3: Come Up with an Idea for Your Board Game

Time Allotment

15 minutes

Steps

Daisies learn about inventors and brainstorm their own board games for Step One of the Board Game Design Challenge.

MATERIALS:

Paper
Markers and/or crayons

SAY:

Who can name a board game you love to play?

Girls may say:

Chutes and Ladders, Peaceable Kingdom games, Candyland, etc. (Let girls name their favorite games, even though not all of them involve spinners.)

SAY:

If you were making up a new game, what would it be like? (Let girls toss out ideas for new board games.)

If they need help getting started, ask questions such as:

Would you have characters in your game? What would they be trying to do?

Girls may say:

Get to the enchanted forest, get to the end of the road first, collect the most of some object, etc.

SAY:

What would the name of your game be? Does someone win the game? What do they have to do to win?

SAY:

Those sound like fun games. Some inventors make up new games! People who make up new things are called inventors. They often brainstorm many ideas at first then draw their ideas so they can show them to others.

Has anyone ever heard of brainstorming? What is it?

(Answer: Brainstorming is when people come together to think of new ideas and solutions.)

You are all inventors, so why don't we take a few minutes for you to brainstorm and draw your board game ideas?

Hand out paper and crayons/markers. Give girls 10 minutes to draw their game ideas. They may want to work alone or in pairs.

Challenge 1

Activity 4: Design a Spinner for Your Game



Time Allotment

15 minutes

Steps

Daisies brainstorm and build spinners for Step Two of the Board Game Design Challenge.

SAY:

In a lot of games, you figure out how many moves you can make by using dice. We don't have any dice. What else could we use? (Answer: A spinner.)

Do you have a favorite game that uses a spinner? How does it work?

Engineers are inventors who know how to design and build all kinds of things. One of the things they might want to design is a game spinner.

Do you think you could design something with pieces from the kit that would work the same way? What would it need to do? (Answer: Spin and point.)

In pairs (or small teams), work together to create a spinner that can turn in a circle and point to something, just like a spinner. See what you can put together. Take turns trying to make your design better.

Engineers always try more than one idea. (Divide girls into pairs or small teams.) Give each team a set from the GoldieBlox Making Things Move kit to build their spinner.

Float around the room, watching girls try out different designs. If they are having problems, avoid offering them a solution. Instead, ask questions, such as, "Why do you think your spinner isn't working yet? What else could you try?"

Keep It Girl-Led: By having girls reverse engineer the spinner, Daisies have a hands-on opportunity to learn about the different parts instead of following directions. If they're having trouble, ask them questions like, "What GoldieBlox parts could turn in a circle? How are they stuck together? What part would help the spinner to point?"

Circulate among the groups, asking questions to prompt further exploration. If girls are having trouble, lead them to use the wheel parts to create a base. Axles can be added to help the spinner point. Remind Daisies that their spinner needs to turn and point.

MATERIALS:

GoldieBlox Making Things Move kit (one set for each pair or small team.)
Feel free to add additional pieces from personal GoldieBlox kits that you or your Girl Scouts may own.

Challenge 1

Activity 5: Closing Ceremony

Time Allotment

10 minutes

Steps

Have Daisies form a Friendship Circle, and discuss with them how they designed their spinners.

SAY:

Different designs do different things. Good designs offer "features" that make them more useful. For example, a feature could be something like a sharp point that helps the spinner move faster. How will you use the spinner in your game? (Answer: The spinner can tell us where or how far to move.)

What features does your spinner design include? What pieces did you start with? Why did you choose those? (Note to Volunteers: They may have started with a wheel and axle because they knew they would need them to spin.)

What other pieces did you add? What about them made you use them? (Note to Volunteers: They may have used an axle or the crank to point or a washer to make it spin faster.)

If we built a spinner with all the features we just came up with, how would we build it? How could we decide between two conflicting features? (Answer: Whichever is most useful.) How would we define "the best spinner"? (Answers may vary. The one that is easiest to spin and spins the longest may be one answer.)

Show Daisies the Spinner Paper Pieces.

SAY:

Is there a design feature that works best to attach these to our spinners? What part could we use? (Answer: Washers)

How do the washers help it spin faster? (Answer: They are smoother than the pegboard or paper, so the wheel doesn't get stuck on them.)

Next time, we'll add these paper pieces on to our spinners before we create and play our board games!

End the meeting with a Friendship Squeeze.

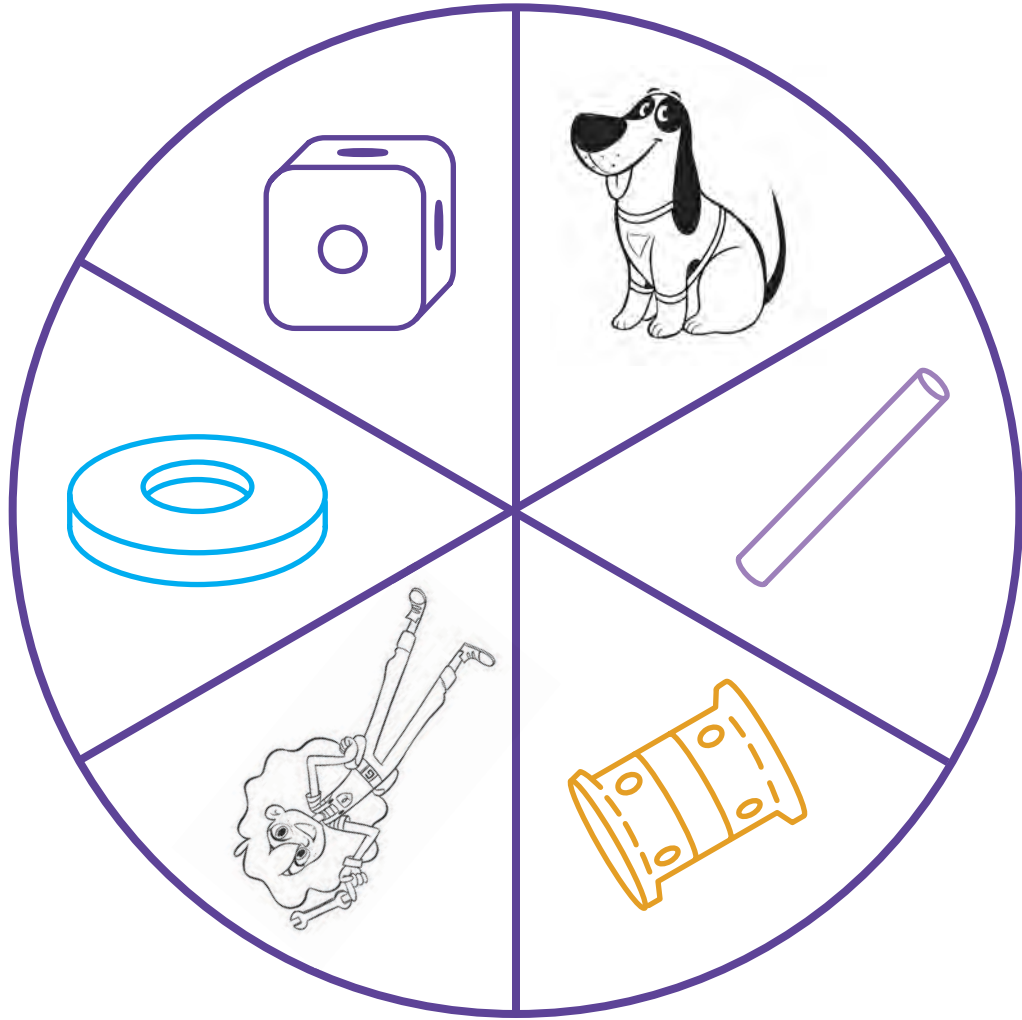
(Note to Volunteers: You may want to save the Daisies' spinners for the next meeting, Board Game Design Challenge 2. If you are able to, label each spinner with the girl or group's name(s) and put away until the next meeting. If you are unable to keep them together, don't worry, the girls will have a chance to rebuild at the start of the next meeting.)



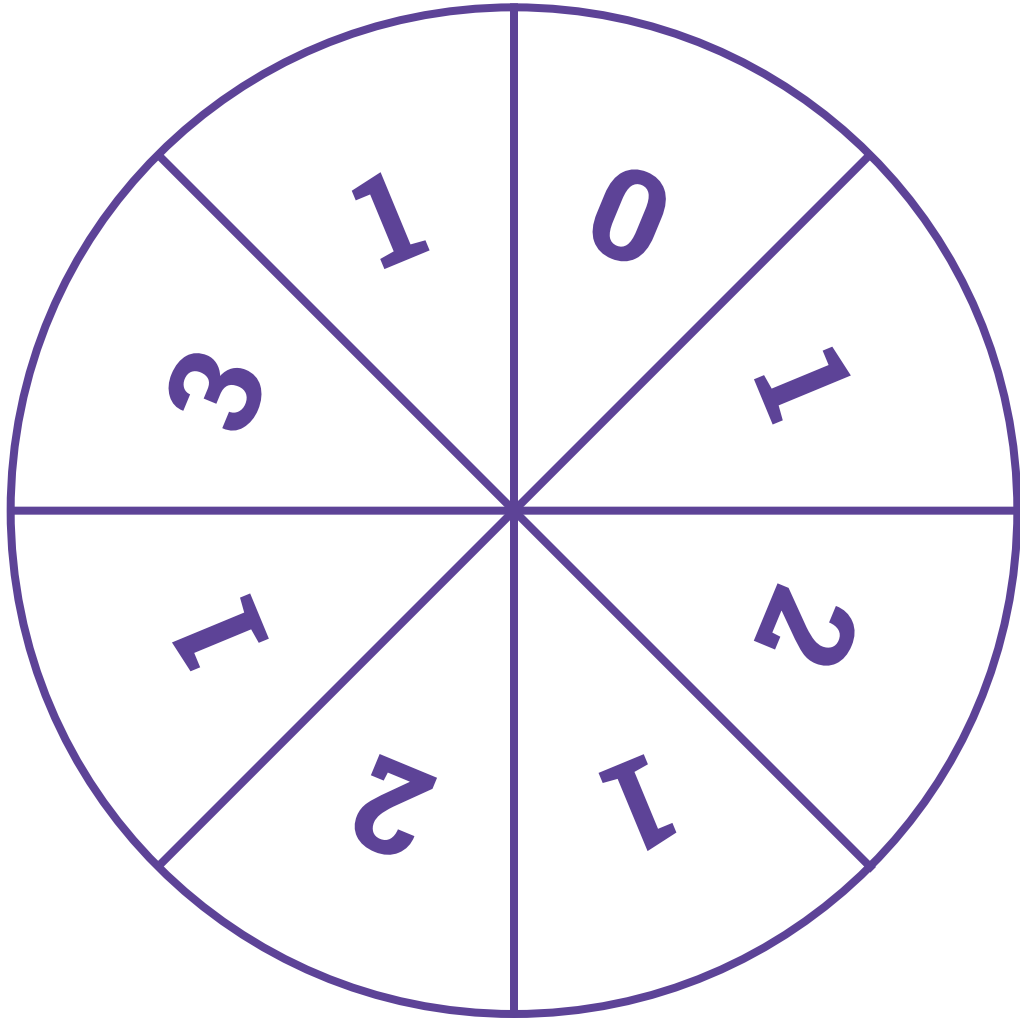
MATERIALS:

Spinner Paper Pieces (one for each Spinner created)

NAME _____



NAME _____



Challenge 2

Activity 1: As Girls Arrive: Create Your Game Board



MATERIALS:

- Spinners created in Board Game Design Challenge 1. (Note to Volunteers: If you were unable to save the spinner between meetings, have Daisies rebuild their spinners during this activity.)
- Spinner Paper Pieces (one for each spinner created)
- Large paper, construction paper, or poster board
- Markers and/or crayons

Time Allotment

10 minutes

Steps

Welcome Daisies, and have them create their game boards. Daisies can also add the Spinner Paper Pieces to their spinners.

Optional: If you were unable to save the spinner between meetings, Daisies can rebuild their spinners.

SAY:

Last time, you brainstormed a board game and created a spinner for it. Now, take a few minutes to create your game board.

Think about all the decisions you made on what the players will be doing in your game and what features your game board might need. For example, since we have spinners, you might include places or spaces for your characters to move around.

Feel free to add the Spinner Paper Pieces on to your spinner, too!

Challenge 2

Activity 2: Opening Ceremony: Share Your Board Game



MATERIALS:

Flag
Spinners and game boards
created by Daisies

Time Allotment

10 minutes

Steps

Recite the Pledge of Allegiance and the Promise and Law.
Conduct any troop business.
Have Daisies share their spinners and game boards.

SAY:

Last time, you designed new, creative board games, just like engineers!

Then, you shared your ideas with others. Engineers do that, too.

Sharing your ideas helps you to get feedback and new ideas to make your game even better.

Today, we're going to finish designing our board games and have a chance to play with them!

Challenge 2

Activity 3: Test Your Game and Make It Better



MATERIALS:

Spinners and game boards created by Daisies
GoldieBlox Making Things Move kit (one set for each pair or small team)

Time Allotment

30 minutes

Steps

Daisies complete Step Three of the Board Game Design Challenge by testing and improving their games. Show Daisies the figurines in the GoldieBlox Making Things Move kit.

SAY:

Let's go back to your great ideas for new board games.

What if you were using these characters in your game?

How could you include them?

Remind Daisies that testing is an important part of designing something new.

SAY:

Once you've invented something, like a new game, you want to test it to see how well it works.

Engineers test all of their inventions to make sure the design is just right.

Now, let's get back into small groups and try to play the games you created.

Use the rest of the pieces, and play a game using your spinner and board! Pay attention to what you like about playing the game and where you could make it better.

Let girls play their games and discuss how they would improve them. If there's time, have girls rework and build on their spinners and board games.

Challenge 2

Activity 4: Closing Ceremony: Awards



Time Allotment

10 minutes

Steps

Have Daisies form a Friendship Circle and wrap up the Board Game Design Challenge before they receive their awards.

SAY:

Let's take turns telling each other what we learned from testing our games and one thing we could do to make them even better. Let girls answer. Make sure every girl gets a chance to speak. Daisies receive the Board Game Design Challenge badge.

SAY:

You've now earned the Board Game Design Challenge badge. Please step forward when I say your name to accept your award. Lead a round of applause for each Daisy as she steps forward.

SAY:

You have earned your Board Game Design Challenge award, which means you have created your own board game and learned what inventors and engineers do. Encourage Daisies to share their new knowledge with others.

SAY:

When you leave here, who do you want to tell about what you learned? Girls may say: My parents, my brothers and sisters, my friends at school. That's great! When you learn something, it's fun to pass it on to others. We can all learn from each other.

End the meeting with a Friendship Squeeze.

Now that I've earned this badge, I can give service by:
Making a new game for my friends or family to play.

MATERIALS:

Board Game Design Challenge award
(Note to Volunteers: You can buy these awards at the GSWESTOK shop or online at gswestok.org/shop)

Challenge 2

Activity 5: Girl Survey



MATERIALS:

Optional Survey:
Laptop/tablet for girls to take online
Copies of Girl Survey if needed

Time Allotment

10 minutes if you are doing the survey during the last meeting.

Steps

Girls complete the Girl Survey about the Board Game Design Challenge Badge.

SAY:

The people at the Girl Scouts' national office want to know what you think about it, how you think it could be improved, and what you think of STEM in general. This is a great chance for you to help Girl Scouts create STEM programs that other girls will enjoy!

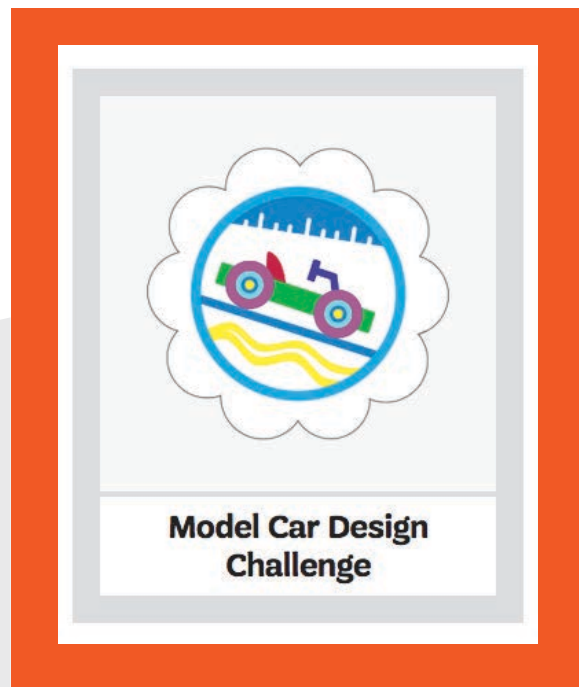
It will take about 10 - 15 minutes.

Explain to girls how they will be taking the survey, either online or by filling out a printed version. (Note to Volunteers: We hope that all girls will complete the survey - we want every girl's voice to be heard. However, the survey is voluntary, so girls don't have to take the survey if they don't want to. Also, for young girls, we encourage you to read the questions aloud while girls individually complete the survey.)

Model Car Design



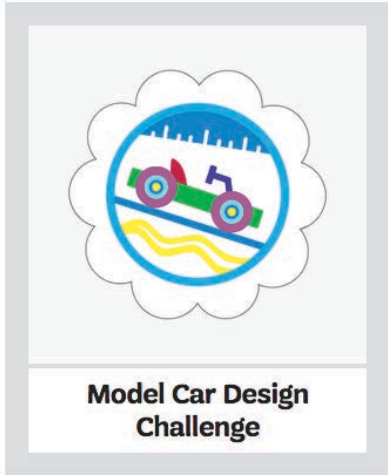
CHALLENGE



Model Car Design



CHALLENGE



Overview

In the Model Car Design Challenge, Daisies learn about engineering and friction by building and testing a model car. Daisies learn how to design and test new things they invent.

Challenge 1:

Activity 1: As Girls Arrive: Playing with Force and Friction

Activity 2: Opening Ceremony: All About Friction

Activity 3: Design and Build Model Cars

Activity 4: Use Model Cars to Test the Friction of Different Surfaces

Challenge 2:

Activity 1: As Girls Arrive: Build a Simple Ramp

Activity 2: Opening Ceremony: Reviewing Force and Friction

Activity 3: Race Your Cars!

Activity 4: Closing Ceremony: Awards

MATERIALS:

- SPORTS AND GAME BALLS (ONE FOR EACH PAIR OF GIRLS)
- MASKING TAPE
- FLAG
- OPTIONAL: POSTER BOARD WITH THE GIRL SCOUT PROMISE AND LAW
- OPTIONAL: PRINT OUT PICTURES OF A BICYCLE WHEEL (INCLUDING BRAKE PADS), A GOLF BALL ON A PUTTING GREEN, A BASEBALL PLAYER SLIDING, AND A SLED LOADED WITH SUPPLIES (OR OTHER EXAMPLES OF FRICTION)
- OPTIONAL: YARD STICKS, RULERS, OR STRING FOR DAISIES TO MEASURE HOW FAR THEIR CARS GO AT EACH STATION.
- OPTIONAL: PAPER AND PENCILS IF DAISIES CAN READ/WRITE TO RECORD DATA.
- FOLDERS, POSTER BOARDS, CARDBOARD, ETC., TO LEAN AGAINST SOMETHING TO CREATE A RAMP
- BOOKS, BOXES, TABLES, ETC. TO CREATE THE HEIGHT AND TOP OF A RAMP
- SURFACE FOR BOTTOM OF RAMP (TOWEL, CARPET, OR ASPHALT)
- MODEL CAR DESIGN CHALLENGE AWARD (YOU CAN BUY THESE AWARDS AT THE GSWESTOK SHOP OR ONLINE AT GSWESTOK.ORG/SHOP)

Note to Volunteers:

Use the Talking Points (But Make Them Your Own): In each session, you'll find suggested talking points under the heading "SAY." Some volunteers, especially new ones, find it helpful to follow the script. Others use the talking points as a guide and deliver the information in their own words. Either way is just fine.

Be Prepared (It's What Girl Scouts Do!):

Prep time will take Roughly 60 minutes

Each meeting includes a "Prepare Ahead" section that includes a materials list and what kind of set-up is required. Read it in advance so you have enough time to gather supplies and enlist help, if needed. Please review materials list that you will need to provide on the left.



This badge challenge is supported by the GoldieBlox Making Things Move kit.

Challenge 1



Activity 1:

As Girls Arrive: Playing with Force and Friction

MATERIALS:

Sports and game balls (one for each pair of girls). Bring different types of balls for girls to roll and observe friction. For example, you might bring a marble, tennis ball, basketball, ping pong ball, baseball, etc.

Create two lines with masking tape on the floor. Each Daisy should sit on the line, facing their partner.

Time Allotment

10 minutes

Steps

Prior to girls arriving, create two masking tape lines. The lines should be close enough that Daisies will be able to roll a ball back and forth between them.

As Daisies arrive, welcome them, and have them pair up.

Hand each pair a ball, and have them sit facing each other on the lines and roll their ball back and forth.

Daisies can roll their ball a few times, then exchange it with another pair to try another.

SAY:

Roll your ball back and forth with your partner.

What happens when you roll it lightly? Does it reach your partner?

What happens when you roll it with a lot of strength?

Daisies roll their balls, experimenting with force.

Challenge 1

Model Car Design CHALLENGE



Activity 2: Opening Ceremony: All About Friction



MATERIALS:

- Flag
- Optional: Print out pictures of a bicycle wheel (including brake pads), a golf ball on a putting green, a baseball player sliding, and a sled loaded with supplies (or other examples of friction)
- Optional: Poster Board with the Girl Scout Promise and Law

Time Allotment

10 minutes

Steps

- Recite the Pledge of Allegiance and the Promise and Law.
- Conduct any troop business.
- Introduce Daisies to the Model Car Design Challenge badge.

SAY:

Today, you're going to be engineers as we start the Model Car Design Challenge! You'll build model cars. Then you'll test how far they roll on different surfaces. Next time, you'll get to improve them based on your tests and race them down ramps! Compare how the different balls rolled in Activity 1: As Girls Arrive: Playing with Force and Friction as examples of force.

SAY:

Let's get started and learn something important engineers have to think about when they build things. When you were rolling your balls earlier, what made the balls move faster? (Answer: Rolling it with more strength or force.)

When you were rolling your balls earlier, what made the balls move slower?

(Answer: Using less strength or force.)

Each time you rolled the ball, you changed the amount of force you used. Force is the amount of strength or energy it takes to move something. Explain friction to Daisies, using the different balls used in Activity 1: As Girls Arrive: Playing with Force and Friction.

SAY:

Were there any balls that were easier or harder to roll? Why do you think that was?

Girls may say: It was hard to roll the tennis ball on the carpet, the ping pong ball went the fastest, etc.

Each of the balls is made of a different material and weighs a different amount. For example, the smaller balls may have been easier to roll. Why do you think that is?

(Answer: The smaller balls were lighter, so the surface affected it less as it moved.)

When you roll the ball, there is something called friction that stops the ball. Friction is a force that slows and stops moving objects. Without friction, any object that was pushed or pulled would keep moving forever! Depending on the ball, there were different amounts of friction at play. For example, there was less friction on the smaller balls, allowing them to move faster than big balls.

Have Daisies quickly predict how they think cars will move on different surfaces.

SAY:

Do you think a toy car would move as fast on asphalt as it would on carpet? Let's take a vote!

Have girls close their eyes and raise their hands to vote "yes" or "no." Count the number of "no" and "yes" answers, and tell the Daisies aloud how the troop voted.

SAY:

Would anyone who voted "no" like to guess which surface will allow the car to travel farthest or fastest? Have the Daisies give ideas.

SAY:

Today, we'll use the GoldieBlox to find out!

Challenge 1

Activity 3: Design and Build Model Cars



Time Allotment

15 minutes

MATERIALS:

GoldieBlox Making Things Move kit
(one set for each pair or small team.)
(Note to Volunteers:
Depending on what model car Daisies
decide to build, pieces will vary. Feel
free to add
additional pieces from personal
GoldieBlox kits that you or your Girl
Scouts may own.)
"GoldieBlox and the Parade Float" or
GoldieBlox Parade Floats handout

Steps

Daisies build cars for Step One of the Model Car Design Challenge.

SAY:

To test how different surfaces affect friction, we first need to build our model cars!
Choose one GoldieBlox Parade Float to build in pairs for your model car. If you don't like any of the designs, feel free to build your own!

Have Daisies choose one of the floats from the end of "GoldieBlox and the Parade Float" or GoldieBlox Parade Floats handout to build in pairs:

Katinka's Parade Float

The Whirly Mobile

Nacho's Swing Wheeler

Parade Float Base (four short axles, four blox, two wheels)

(Note to Volunteers: You may want to save the Daisies' model cars for the next meeting, Model Car Design Challenge 2. If you are able to, label each car with the girl or group's name(s) and put away until the next meeting. If you are unable to keep them together, don't worry, the girls will have a chance to rebuild at the start of the next meeting.)

BLUEPRINT Parade Float Base

Step 1



Step 2



Step 3



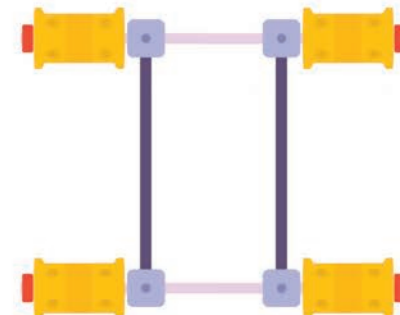
Step 4



Step 5



Step 6



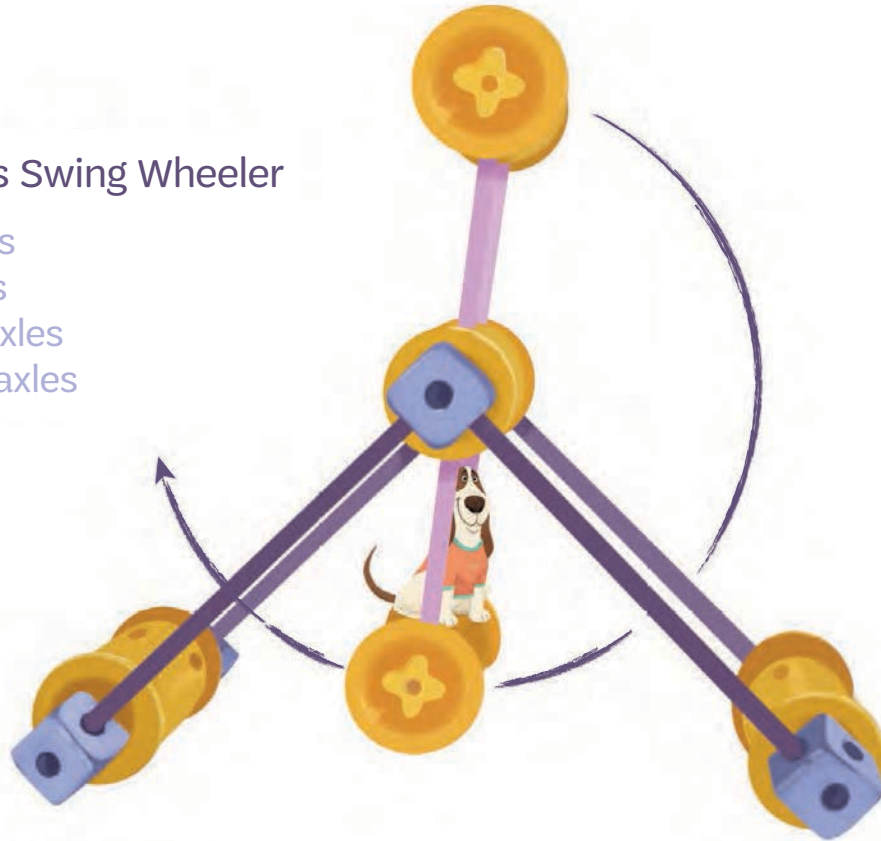
<i>l</i>	<i>l</i>
<i>l</i>	<i>l</i>
<i>l</i>	1:2

Asela

All GoldieBlox products, characters, illustrations, text, copyrights, and trademarks are the sole property of GoldieBlox, Inc.

Nacho's Swing Wheeler

- 5 wheels
- 6 blocks
- 4 long axles
- 7 short axles

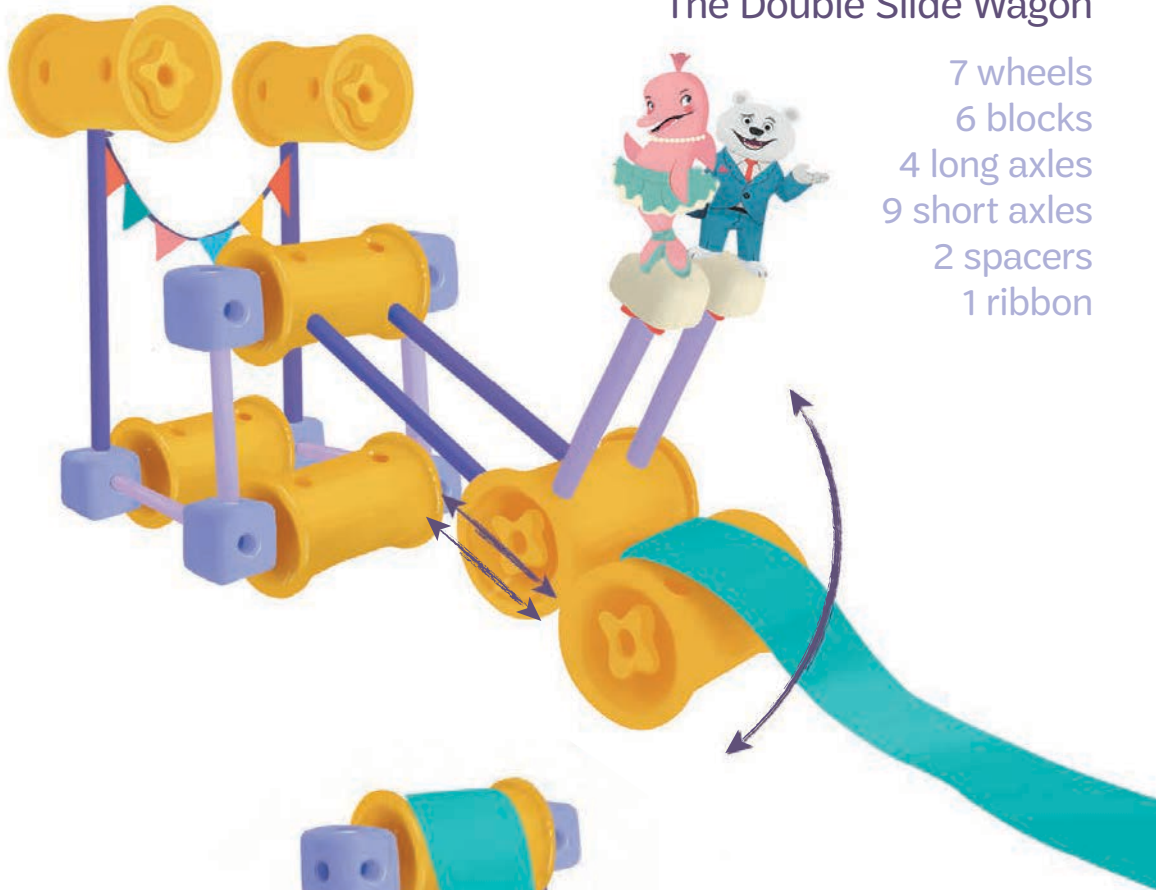


- 5 wheels
- 4 blocks
- 2 long axles
- 6 short axles
- 1 ribbon

Goldie's Ribbon Roller



The Double Slide Wagon



- 7 wheels
- 6 blocks
- 4 long axles
- 9 short axles
- 2 spacers
- 1 ribbon



- 3 wheels
- 6 blocks
- 4 long axles
- 6 short axles
- 1 ribbon
- spacers

Space r Launcher

All GoldieBlox products, characters, illustrations, text, copyrights, and trademarks are the sole property of GoldieBlox, Inc.



Katinka's Parade Float

- 7 wheels
- 6 blocks
- 4 long axles
- 9 short axles
- 4 spacers
- 1 ribbon



- 7 wheels
- 3 blocks
- 2 long axles
- 7 short axles
- 4 spacers

The Whirly Mobile

All GoldieBlox products, characters, illustrations, text, copyrights, and trademarks are the sole property of GoldieBlox, Inc.

Challenge 1

Activity 4: Use Model Cars to Test the Friction of Different Surfaces



MATERIALS:

Floats created in Activity 3: Design and Build Model Cars

2+ friction stations for girls to test their cars (including a different surface at each station). See

Prepare Ahead for more information on how to create the stations.

Optional: Yard sticks, rulers, or string for Daisies to measure how far their cars go at each station.

Optional: Paper and pencils if Daisies can read/write to record data.

Time Allotment

15 minutes

Steps

Set Up. (5 minutes)

Prior to the meeting, prepare 2 or more friction stations. See Prepare Ahead for more information.

Before Daisies test their cars, help the girls design an investigation to help them complete Step Two of the Model Car Design Challenge.

SAY:

When engineers build something new, they test it to see if there are ways to improve their design. How could we test which surface is best for cars? (Answer: Roll a car across different surfaces.)

How could we make sure the test is fair?

Girls may say: Test all cars on the same surface. Use the same force on each car on each surface. Use the same car on each surface.

How can we measure how far the cars go?

Girls may say: Eyeball it. Use a yard stick, tape measure or string. Count floor tiles.

How can we sure our results are right?

Girls may say: Do the test more than once.

This is a great plan for testing your cars on different surfaces. Now, put your plan into action and test your cars, just like engineers.

Test your car. (10 minutes)

Divide the girls into pairs (most likely the same teams they built their cars in).

Tell Daisies to take turns testing their cars at the different Friction Stations around the room.

SAY:

Test your car by letting it roll down the ramp and onto a surface.

Do this three times for each surface.

Be sure to remember which surface was easier for your car to move on and at which station your car went the farthest. Engineers do testing, just like this, to design cars that are both fast and safe!

Optional: If Daisies can read, write, and measure, hand out paper, pencils, and yard sticks (or other measurement tools) to measure how far their cars go at each station and record their results.

Daisies test their cars on each surface.



Challenge 1

Activity 5: Closing Ceremony: Reviewing Our Testing Results



MATERIALS:

None

Time Allotment

10 minutes

Steps

Have Daisies form a Friendship Circle and discuss their test results.

SAY:

Do you see a pattern in our results?

(Answer: Most cars should have traveled the farthest at the same station--the one with the smoothest surface.)

Which cars traveled farthest? Why do you think that is?

(Answer: The smallest cars should have gone the farthest. This is because it was lighter, so the rough surface affected it less.)

Why do you think the cars traveled farthest there? Is that what you thought would happen?

Did the car eventually stop on the smoothest surface? Why?

What sorts of surfaces are the slipperiest? How could make them even more slippery?

What would happen if we put oil on everything? (Answer: The car would go farther but still stop.)

Why? (Answer: On Earth, there is always some friction, even if it's only air resistance.)

Can you think of an example when friction makes it hard to slide something heavy? (Example: Trying to slide furniture across a carpet.)

End the meeting with a Friendship Squeeze.

Challenge 2

Activity 1: As Girls Arrive: Build a Simple Ramp



Time Allotment

10 minutes

Steps

Prior to the meeting, create a sample ramp for Daisies. You may make a simple ramp by placing strips of cardboard or folders on textbooks. As Daisies arrive, welcome them, and have them work in pairs or small teams to build a simple ramp to start testing their cars. Optional: If you were unable to save the model cars between meetings, Daisies can rebuild them.

SAY:

Today, you're going to redesign and race your model cars. Looking at my ramp, do you think you could create one for your car? Once you create it, see how your model car rolls down. Have Daisies create simple ramps and begin to test their model cars. If there's time, encourage Daisies to redesign their ramps to see how it affects their car's speed.

SAY:

What happens if you change the height your ramp? Does it affect how fast your car rolls down the ramp?

Lead them to discover that the height/incline of the ramp affects the speed of the car as it goes down, i.e. it goes slower when there is less slope, and faster when there is more incline.

MATERIALS:

Model cars created by girls in Model Car Design Challenge 1. (Note to Volunteers: If you were unable to save the model cars between meetings, Daisies can rebuild their cars during this activity.)

Folders, poster boards, cardboard, etc., to lean against something to create a ramp

Books, boxes, tables, etc. to create the height and top of a ramp

Prepare a sample ramp to show Daisies.



Challenge 2



Activity 2: Opening Ceremony: Reviewing Force and Friction

Time Allotment

10 minutes

Steps

Recite the Pledge of Allegiance and the Promise and Law.

Conduct any troop business.

Review force and friction with Daisies, and explain today's engineering challenge to Daisies.

SAY:

Does anyone remember what force is? What's friction? (Answer: Force is the strength or energy that creates movement. Friction is a force that slows moving objects.)

What did you learn about force and friction from testing your cars last time?

Girls may say: Friction affects how fast it goes, the size of the car affects its speed, etc.

Last time, you built your model car. You learned about force, friction, and how the size and weight of a car can affect its speed. You even tested your cars on different surfaces to see how different surfaces affect the amount of friction.

Today, you'll have the chance to use all you've learned to redesign your car before we have a Troop Car Chase to see whose car goes the furthest!

MATERIALS:

Flag

Challenge 2

Activity 3: Race Your Cars!



Time Allotment

30 minutes

Steps

Set Up. (5 minutes)

Set your sample ramp or one of the Daisies' ramp on or next to the surface. This will be the race track for the Troop Car Chase. Divide Daisies back into their pairs (or new pairs) to redesign and improve their car's build before taking part in a Troop Car Chase for Step Three of the Model Car Design Challenge.

SAY:

Now, you'll have ten minutes to pair up and draw a plan for a car that will (1) carry the characters and (2) roll the farthest when placed at the top of a ramp on the roughest surface (towel, carpet, or asphalt depending on your setup).

Remember to think about all the things you learned last time that can make this car even better than before.

Design and build. (10 minutes)

Give girls ten minutes to build and test their cars on the Troop Car Chase racetrack.

If you were able to save the girls' cars from Model Car Design Challenge 1, Daisies can choose to build off of their old cars or create brand new ones. If you weren't able to save them from the last meeting, don't worry, just have girls create brand new cars!

Race your new cars. (15 minutes)

Hold a Troop Car Chase using the new cars and racetrack.

Allow the first pair to test their car and leave it where it stops.

Place the next car at the top of the ramp, and watch to see if it either bumps or passes the previous car. If so, it now stays on the track as the record-holder. Whichever car is still on the track after testing them all is the winner.

SAY:

You all did a great job coming up with new car designs, just like engineers.

It's okay if your car didn't go the farthest today. Sometimes engineers have to test their designs many times before

MATERIALS:

Model cars created by girls in Model Car Design Challenge 1 or rebuilt in Activity 1: As Girls Arrive: Build a Simple Ramp

Sample ramp or ramps created in Activity 1: As Girls Arrive: Build a Simple Ramp

Leftover parts from the GoldieBlox Making Things Move kit for girls to rebuild their model cars

Surface for bottom of ramp (towel, carpet, or asphalt)

Challenge 2

Activity 4: Closing Ceremony: Awards



Time Allotment

10 minutes

Steps

Have Daisies form a Friendship Circle and wrap up the Model Car Design Challenge before they receive their awards.

SAY:

How did you improve your car today? What did you do to make it better than your first design?

If you could rebuild your car one more time, what would you change?

You were engineers today. How did that feel?

Let's go around the circle. Each of you can tell a little story about what you learned.

Keep It Girl-Led: Let girls answer. Make sure every girl gets a chance to speak.

Daisies earn the Model Car Design Challenge badge.

SAY:

You've now earned the Model Car Design Challenge badge.

Please step forward when I say your name to accept your award.

Lead a round of applause for each Daisy as she steps forward.

SAY:

You have earned your Model Car Design Challenge award, which means you have learned about friction by building and testing model cars. You now know how to design and test new things that you invent.

Encourage Daisies to share their new knowledge with others.

SAY:

When you leave here, who do you want to tell about what you learned?

Girls may say: My parents, my brothers and sisters, my friends at school.

That's great! When you learn something, it's fun to pass it on to others. We can all learn from each other.

End the meeting with a Friendship Squeeze.

MATERIALS:

Model Car Design Challenge award
(Note to Volunteers: You can buy these awards from the GSWESTOK shop or online at gswestok.org/shop)

Challenge 2

Activity 5: Girl Survey



Time Allotment

10 minutes if you are doing the survey during the last meeting.

Steps

Girls complete the Girl Survey about the Model Car Design Challenge Badge.

SAY:

The people at the Girl Scouts' national office want to know what you think about it, how you think it could be improved, and what you think of STEM in general. This is a great chance for you to help Girl Scouts create STEM programs that other girls will enjoy!

It will take about 10 - 15 minutes.

Explain to girls how they will be taking the survey, either online or by filling out a printed version.

(Note to Volunteers: We hope that all girls will complete the survey - we want every girl's voice to be heard. However, the survey is voluntary, so girls don't have to take the survey if they don't want to. Also, for young girls, we encourage you to read the questions aloud while girls individually complete the survey.)

MATERIALS:

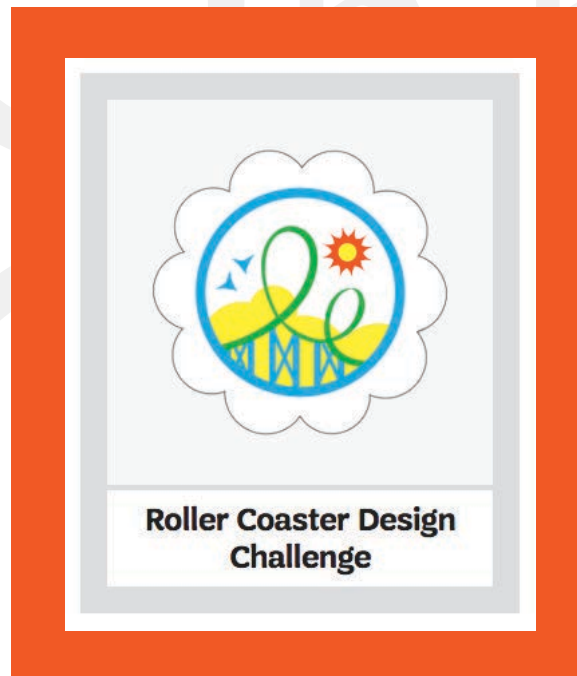
Optional survey: Laptop/tablet

Optional survey: Copies of Girl Survey (if needed)

Roller Coaster Design



CHALLENGE



Roller Coaster Design



CHALLENGE



Overview

In the Roller Coaster Design Challenge, Daisies learn about engineering and motion by building and testing a roller coaster. Daisies explore how roller coasters work and how to design, build, and test a new product.

Challenge 1:

- Activity 1: As Girls Arrive: How Does It Move?
- Activity 2: Opening Ceremony: All About Roller Coasters
- Activity 3: Make a Simple Roller Coaster Car
- Activity 4: Build a Model of a Roller Coaster
- Activity 5: Closing Ceremony

Challenge 2:

- Activity 1: As Girls Arrive: Prepare for Testing
- Activity 2: Opening Ceremony: Engineers Work Together!
- Activity 3: Test Your Roller Coaster
- Activity 4: Closing Ceremony
- Activity 5: Girl Survey

Note to Volunteers:

Use the Talking Points (But Make Them Your Own): In each session, you'll find suggested talking points under the heading "SAY." Some volunteers, especially new ones, find it helpful to follow the script. Others use the talking points as a guide and deliver the information in their own words. Either way is just fine.

Be Prepared (It's What Girl Scouts Do!):

Prep time will take Roughly 50 minutes

Each meeting includes a "Prepare Ahead" section that includes a materials list and what kind of set-up is required. Read it in advance so you have enough time to gather supplies and enlist help, if needed. Please review materials list that you will need to provide on the left.



This badge challenge is supported by the GoldieBlox Making Things Move kit.

MATERIALS:

- FLAG
- WHERE DOES THE ROLLER COASTER GO FASTEST? HANDOUT
- OPTIONAL: POSTER BOARD WITH THE GIRL SCOUT PROMISE AND LAW
- SIMPLE ROLLER COASTER CAR HANDOUT
- FOLDERS, POSTER BOARDS, CARDBOARD, ETC., TO LEAN AGAINST SOMETHING TO CREATE A RAMP
- BOOKS, BOXES, TABLES, ETC. TO CREATE THE HEIGHT AND TOP OF A RAMP
- ROLLER COASTER DESIGN CHALLENGE AWARD
(NOTE TO VOLUNTEERS: YOU CAN BUY THESE AWARDS FROM THE GSWESTOK SHOP OR ONLINE AT GSWESTOK.ORG/SHOP.)

Challenge 1



Activity 1: As Girls Arrive: How Does It Move?

MATERIALS:

None

Time Allotment

10 minutes

Steps

Welcome Daisies, and have them act out how different people, animals, or even machines move.

SAY:

Today, we're going to learn about motion, speed, and engineering.

To get you thinking, can you act out how a human moves? What sort of actions do we make?

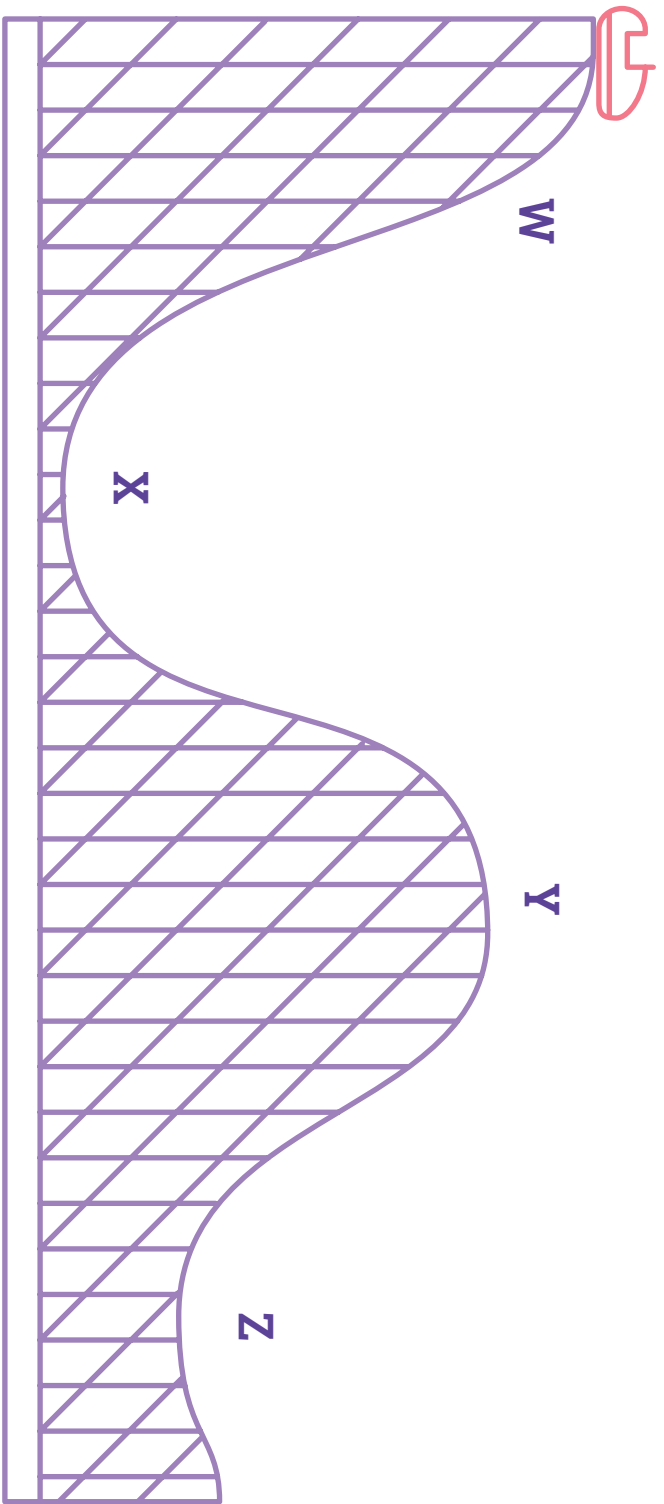
How does a dog move? What about a frog?

What about machines? Can you think of a machine that moves? How does a car move?

If you are busy preparing for the meeting, you can have another volunteer lead or have the girls take turns thinking of motions for everyone to act out.

NAME _____

Where does the roller coaster go fastest?



Draw a line under the part of the track where the coaster goes fastest.



Challenge 1



Activity 2: Opening Ceremony: All About Roller Coasters

Time Allotment

10 minutes

Steps

Recite the Pledge of Allegiance and the Promise and Law.

Conduct any troop business.

Introduce Daisies to the Roller Coaster Design Challenge badge.

SAY:

Have you ever been on a roller coaster? What were your favorite parts? Why?

Girls may say: I like going on the loops, I like going upside down, etc.

Show Daisies (or hand out) the Where Does the Roller Coaster Go Fastest? handout.

SAY:

Take a look at this picture. Where do you think a roller coaster would go faster? Slower? Why?

Give girls time to answer.

SAY:

Today, we'll start to build our own roller coaster to see how its design affects how fast it moves, just like engineers.

Engineers use their imaginations to solve problems as they invent and build things. You'll do the same thing today as you build and test your roller coaster!

MATERIALS:

- Flag
- Where Does the Roller Coaster Go Fastest? handout
- Optional: Poster Board with the Girl Scout Promise and Law



Challenge 1



Activity 3: Make a Simple Roller Coaster Car

Time Allotment

15 minutes

Steps

Daisies build a roller coaster car for Step One of the Roller Coaster Design Challenge.

SAY:

When you've earned this badge, you're going to know how roller coasters work. The first step is to make a car for your roller coaster. Show girls your sample roller coaster car or the Simple Roller Coaster Car handout as an example.

SAY:

Sometimes, engineers don't know exactly how things are built. They have an idea through a picture or model, but then they have to figure out how to make it.

Testing out different parts gives engineers a chance to learn more about how each piece works and may even give them new and better ideas! Can you put together a roller coaster car?

Divide girls into pairs, and give each pair a set of GoldieBlox parts. Let girls put the parts together.

Keep It Girl-Led: By having girls reverse engineer the roller coaster car, Daisies have a hands-on opportunity to learn about the different parts instead of following directions. If they're having trouble, ask them questions like, "What piece could you use to attach the wheels?" If girls still have trouble, suggest they limit themselves to four blocks and four short axles or use the GoldieBlox parts to demonstrate how to make a simple car with two wheels.

If you have extra time, Daisies can add to their roller coaster cars, however, make sure the cars are still able to roll down a ramp for the next activity.

(Note to Volunteers: You may want to save the Daisies' roller coaster cars for the next meeting, Roller Coaster Design Challenge 2. If you are able to, label each car with the girl or group's name(s) and put away until the next meeting. If you are unable to keep them together, don't worry, the girls will have a chance to rebuild at the start of the next meeting.)

MATERIALS:

GoldieBlox Making Things Move kit
(one set for each pair or small team.)

(Note to Volunteers: A simple roller coaster car uses 2 wheels, 4 blocks, and 4 short axles, but girls can build upon this with the other pieces. Feel free to add additional pieces from personal GoldieBlox kits that you or your Girl Scouts may own.)

Simple Roller Coaster Car handout

Simple Roller Coaster Car

Roller Coaster Design Challenge

A simple roller coaster car uses:

- 2 wheels
- 4 blocks
- 4 short axles



Girls can build upon the simple roller coaster car with the other GoldieBlox.

All GoldieBlox products, characters, illustrations, text, copyrights, and trademarks are the sole property of GoldieBlox, Inc.

Challenge 1



Activity 4: Build a Model of a Roller Coaster

Time Allotment

15 minutes

Steps

Daisies build a simple roller coaster (ramp) and begin to test their roller coasters for Step Two of the Roller Coaster Design Challenge.

SAY:

Now, you're going to build a model of a roller coaster. Once you're done, you can test how fast your car goes on the roller coaster.

First, you're going to build simple ramps. Next meeting, you'll get to test your cars against one another on a roller coaster you build.

Create a sample ramp for Daisies to see. You may make simple ramps by placing strips of cardboard on textbooks. Show Daisies how the roller coaster rolls down the ramp.

SAY:

Now, create your own ramp. Once you build it, see how your roller coaster car rolls down.

Have Daisies create simple ramps and begin to test their roller coasters.

If there's time, encourage Daisies to redesign their ramps to see how it affects the roller coaster car's speed.

SAY:

Engineers test their new creations, just like this, to see how the different parts, like the roller coaster and car, work together.

What happens if you change the height your ramp? Does it affect how fast your car rolls down the ramp?

Lead them to discover that the height/incline of the ramp affects the speed of the car as it goes down, i.e. it goes slower when there is less slope, and faster when there is more incline. Daisies will be looking at this more Roller Coaster Design Challenge 2.

MATERIALS:

Roller coaster cars created by girls in Activity 3: Make a simple roller coaster car

Folders, poster boards, cardboard, etc., to lean against something to create a ramp

Books, boxes, tables, etc. to create the height and top of a ramp



Challenge 1

Activity 5: Closing Ceremony



Time Allotment

10 minutes

Steps

Have girls form a Friendship Circle and discuss how they designed their roller coaster cars and ramps.

MATERIALS:

None

SAY:

Did you notice anything when you changed the design of the roller coaster ramp? How did the car move differently?

(Answer: The design of the ramp affected the speed of the car. The height/incline of the ramp affects the speed that the car goes down, i.e. slower when less slope, faster when more incline.)

How could you expand or improve the roller coaster or your car?

What was your favorite part of the day's activities? Let's give every girl a chance to share.

End the meeting with a Friendship Squeeze.

(Note to Volunteers: You may want to save the Daisies' roller coaster cars for the next meeting, Roller Coaster Design Challenge 2. If you are able to, label each car with the girl or group's name(s) and put away until the next meeting. If you are unable to keep them together, don't worry, the girls will have a chance to rebuild at the start of the next meeting.)



Challenge 2



Activity 1: As Girls Arrive: Prepare for Testing

Time Allotment

10 minutes

Steps

Welcome Daisies, and have them work in pairs build one simple ramp to start building their roller coaster for the meeting.

Optional: If you were unable to save the roller coaster cars between meetings, Daisies can rebuild them.

SAY:

Today, you're going to work together to build and test your roller coasters. To start, can you build a simple ramp like last time?

MATERIALS:

Folders, poster boards, cardboard, etc., to lean against something to create a ramp

Books, boxes, tables, etc. to create the height and top of a ramp



Challenge 2



Activity 2: Opening Ceremony: Engineers Work Together!

Time Allotment

10 minutes

Steps

Recite the Pledge of Allegiance and the Promise and Law.
Conduct any troop business.
Ask Daisies for advice on building a roller coaster.

SAY:

Now that you've built a few simple roller coasters, do you have any tips for others who might want to build a roller coaster?

Girls may say: The ramp needs to be sturdy, make sure the car rolls straight, etc.
Let girls speak. Give each girl a chance to share a tip.

SAY:

Just like you, engineers share their ideas and advice with one another to improve their inventions.
Next, you'll work together in teams to build larger roller coasters!

MATERIALS:

Flag

Optional: Poster Board with the Girl Scout Promise and Law

Challenge 2



Activity 3: Test Your Roller Coaster

Time Allotment

30 minutes

Steps

Daisies learn about motion and gravity by testing their roller coasters for Step Three of the Roller Coaster Design Challenge. Divide Daisies into small groups of 3-4, and set up the engineering challenge for the day.

SAY:

Sometimes, engineers combine what they've made to create something brand new. Work in teams to see if you can combine your ramps to create one roller coaster. Is there a way to put them together? Would you need to improve your roller coaster cars? Then, test your roller coaster! Please set your car at the top of the ramp and let it go -- but don't push it! Then, catch your roller coaster cars at the end of the ride, so you don't run into other group's coasters.

Daisies work in teams to build a larger roller coaster. (Note to Volunteers: If Daisies cannot create a roller coaster with multiple ramps that works with their roller coaster cars, encourage them to instead make a larger ramp than they made before.) Let girls test their cars on their roller coaster. Make sure every girl gets a turn. Explain that gravity moves the car down the ramp.

SAY:

How does the car roll down the ramp?
Girls may say: It rolls, etc.

There's something all around us that keeps us on the ground. It also helps the roller coaster car to roll down the ramp. Does anyone know what that is? (Answer: Gravity.) Gravity is a strong force that pulls objects, including us and roller coasters, to the ground. For example, what happens when you jump up? Want to test and find out? Jump on the count of three!

One, two, three, jump! Daisies jump. Explain how gravity affects the roller coaster.

MATERIALS:

Flag

Optional: Poster Board with the Girl Scout Promise and Law

SAY:

When you jump up, gravity brings you back down to the ground.

How do you think gravity affected your roller coaster? (Answer: It moved the roller coaster car down the ramp!)

Just like gravity brings you back to the ground, gravity moves the roller coaster car down the ramp.

Challenge Daisies to redesign their coasters.

SAY:

Now, try to change your roller coaster so your car rolls down the ramp at three different speeds:

slow, medium and fast.

Let girls play around with the ramp to see what changes the speed of the cars. If they don't realize that changing the height of the ramp changes the speed, suggest they try that.

It's okay if not every solution works. The idea is for girls to test out different ideas.

Challenge 2



Activity 4: Closing Ceremony: Awards

Time Allotment

10 minutes

Steps

Have Daisies form a Friendship Circle and wrap up the Roller Coaster Design Challenge before they receive their awards.

SAY:

Let's talk about what you learned. How fast did the car move on the first ramp you set up? Girls may say: Slow, not very fast.

What did you do to make the car roll faster?

Girls may say: Held the lid up higher, propped it with axles.

What was your favorite part of making and testing a roller coaster? Why?

Let's go around the circle. Each of you can tell a little story about what you learned.

Let girls answer. Make sure every girl gets a chance to speak.

Daisies receive the Roller Coaster Design Challenge badge.

SAY:

You've now earned the Roller Coaster Design Challenge badge.

Please step forward when I say your name to accept your award.

Lead a round of applause for each Daisy as she steps forward.

SAY:

You have earned your Roller Coaster Design Challenge award, which means you have learned about engineering and motion by building and testing a roller coaster.

Encourage Daisies to share their new knowledge with others.

SAY:

When you leave here, who do you want to tell about what you learned?

Girls may say: My parents, my brothers and sisters, my friends at school.

That's great! When you learn something, it's fun to pass it on to others. We can all learn from each other.

End the meeting with a Friendship Squeeze.

Now that I've earned this badge, I can give service by: Teaching someone else what I've learned about engineering

MATERIALS:

Roller Coaster Design
Challenge award

(Note to Volunteers: You can buy these awards from your council shop or the Girl Scouts' website.)

Challenge 2



Activity 5: Girl Survey

Time Allotment

10 minutes if you are doing the survey during the last meeting.

Steps

Girls complete the Girl Survey about the Roller Coaster Design Challenge Badge.

SAY:

The people at the Girl Scouts' national office want to know what you think about it, how you think it could be improved, and what you think of STEM in general.

This is a great chance for you to help Girl Scouts create STEM programs that other girls will enjoy!

It will take about 10 - 15 minutes.

Explain to girls how they will be taking the survey, either online or by filling out a printed version.

(Note to Volunteers: We hope that all girls will complete the survey - we want every girl's voice to be heard. However, the survey is voluntary, so girls don't have to take the survey if they don't want to. Also, for young girls, we encourage you to read the questions aloud while girls individually complete the survey.)

MATERIALS:

Optional: If girls are taking the survey online: Laptop/tablet

Optional: If girls are filling out the survey on paper: Copies of Girl Survey (pdf available in Meeting Aids) and pen or pencil