

STEAM Challenge

Earn badges, work towards Journeys, and explore new things!

Earn points and collect each color dot from every section to earn a special rocker!

*Make sure to check the Safety Activity Checkpoints **before** starting any activities.*

STEAM Challenge Key:

Science.....	●
Technology.....	●
Engineering.....	●
Art.....	●
Math.....	●



STEAM Challenge Information

The STEAM Challenge is designed to support critical thinking and growth mindsets to show girls how their school learning applies to real-world environments and daily activities. Through the program, girls will challenge themselves to learn and experience how Science, Technology, Engineering, Art and Math (STEAM) exist within unexpected places.

This program will be offered through the months of June, July, and August. The program will close on August 31. Patches and Rockers will be mailed out in mid-September.

Patch & Rocker Information:

All participants will need to complete the following form to receive their patches: [STEAM Challenge Submissions](#)

- All participants with a completed form will receive the STEAM Challenge Patch via mail.
- Every girl can earn a points rocker, based on how many total points she collects.

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STEAM Supreme

- To earn the STEAM Supreme Rocker, girls must complete activities and collect every color dot from each section of the challenge.

**For example, a girl must only complete one activity within the literacy section to collect every color dot from that section. The Dance section is more challenging, and girls will need to complete at least two activities to earn every color dot from this section.*

Challenge Accepted!

- A big part of Science, Technology, Engineering, Arts, and Math is honing your ability to ask questions and present new ideas! If you think we missed something or discovered a way to complete one of the activities that included a different colored dot, you can submit a Challenge Ticket! A challenge ticket must be submitted by the individual girl issuing the challenge. We will review your challenge and if it's accepted, you will earn the Challenge Accepted rocker. Challenge Ticket link: [Challenge Tickets](#)

Total Points Possible per Level:

• Painting & Drawing	310
• Mixed Media Art	340
• Photography	310
• Reading	320
• Music	370
• Dance	350
• Gardening	420
• Culinary Arts	400
• Culture	320
TOTAL POINTS	3,140

Rocker Levels:

- 500 points
- 1,000 points
- 1,500 points
- 2,000 points
- 2,500 points
- 3,000+ points
- STEAM Supreme – for those who collected every color dot from each section.
- Challenge Accepted – for those who challenge an activity (may be mailed separately)

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STEAM Challenge Checklist

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Painting & Drawing – 310 total points possible

- 10 Make your own activity ○○○○○○
- 10 Use something you see in the outdoors to inspire a drawing ●●
- 10 Learn how to make colors out of other colors ●●
- 20 Learn about color theory ●●●
- Optional Resource: <https://www.mensaforkids.org/teach/lesson-plans/introduction-to-color/>
- 20 Learn about why the sky changes colors during sunset, then paint or draw one ●●
- 20 Learn about different drawing and painting mediums and how their made ●●●●●
- 20 Observe the outdoors and make a drawing or painting of what you see ●●●
- 50 Make your own drawing or painting medium and use it to make your own art ●●●●●
- 50 Visit a museum or cultural center to observe different drawings and paintings ●●
- 100 Learn about a famous female artist and make a drawing or painting using the same style ●●●●●

Mixed Media Art – 340 total points possible

- 10 Make your own activity ○○○○○○
- 10 Learn about mixed media art ●●●
- Optional Resource: <https://www.masterclass.com/articles/mixed-media-art>
- 10 Learn about the engineering design process and think about how it can be applied to creating mixed media art ●●● Optional Resource: bit.ly/3qsKkLG
- 20 Design and create mixed media art using common household items such as buttons or string, count how many items you used ●●●●
- 20 Design and create a card for a friend or family member using mixed media art, then count how many items you used ●●●●
- 20 Design and create a mixed media art piece with items found in nature, then share your art and how you made it with friends and/or family members ●●●
- 50 Experiment in digital mixed media art using an online tool such as paint, or the free MoMa Art Lab app ●●●● Optional Resource: bit.ly/3Nephp9
- 50 Design and create a mixed media art piece using technology: by printing, using digital images, and/or using technological components such as old wires. ●●●●
- 50 Create a mixed media animal that would thrive in your environment, count all the items you used, and share what you've created with friends and/or family members ●●●●
- 100 Create a paper mâché sculpture and use mixed media to decorate it ●●●●
- Optional Resource: <https://www.ultimatepapermache.com/paper-mache-recipes>

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Photography – 310 total points possible

- 10 Make your own activity ○○○○○○
- 10 Learn about how photography works ●●●●●
Optional Resource: <https://kids.britannica.com/kids/article/photography/353623>
- 10 Take a photo of your favorite thing ●●
- 20 Learn how to take a good photo considering angles and lighting ●●●●
- 20 Photograph something in nature ●●●
- 20 Learn how to stage an object for a photoshoot ●●
- 20 Learn about the different parts of a camera ●●●●●
- 50 Learn about different cloud shapes and photograph them ●●●●●
- 50 Learn how to edit three different photos ●●●●
- 100 Take three different photos, edit them, then get them printed and make a display ●●●●●

Reading – 320 total points possible

**A special note: Literacy is the most important skill for learners of all ages; this is why each color dot is represented alongside every activity in this section.*

- 10 Make your own activity ○○○○○○
- 10 Learn new words! Find and learn about new words in the worlds of science, technology, engineering, and mathematics ●●●●●
- 10 Read a short poem out loud and see if you can hear a pattern, like music ●●●●●
- 20 Learn about Japanese haiku poems and their structures ●●●●●
Optional Resource: <https://imaginationssoup.net/haiku-poems-for-kids/>
- 20 Read 1-2 books over your summer break ●●●●●
- 50 Read 3-5 books over your summer break ●●●●●
- 100 Read more than 5 books over your summer break ●●●●●
- 100 Get a library card and learn about all the things your local library has to offer ●●●●●

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Music – 370 total points possible

- 10 Make your own activity ○○○○○○
- 10 Learn about what music is ●●●●●●
Optional Resource: <https://kids.kiddle.co/Music>
- 10 Learn about jazz music ●●
Optional Resource: <https://kids.kiddle.co/Jazz>
- 20 Listen to jazz music and tap your toes to match the jazz rhythm, then count the steps as they repeat ●●●●●●
- 20 Use household items to make musical instruments with different tones and pitches ●●
- 50 Learn about different equipment used to record music ●●●●●●
- 50 Learn about sound waves and why music sounds different in different spaces ●●●●●●
- 100 Learn about musical scores from different movies. How do the scores affect how you feel in a movie?
Would the movie feel different if different music was used? ●●●●●●
- 100 Learn how to read music ●●●●●●
Optional Resource: <https://www.123homeschool4me.com/learn-to-read-music/>

Dance – 350 total points possible

- 10 Make your own activity ○○○○○○
- 10 Learn about the history of dance ●●
Optional Resource: bit.ly/3OSGy8z
- 10 Make up and practice your own dance ●●●●●●
- 10 Learn about the mechanics of dance ●●●●●●
Optional Resource: bit.ly/45JGca9
- 20 Learn a new dance technique and practice it ●●●●●●
- 20 Learn about stretching and how it helps care for your body ●●●●●●
- 20 Learn about a dance from another country, what makes it unique? ●●●●●●
- 50 Learn about the science of motion and practice observing how things move, then make your body move,
such as jumping and spinning. ●●●●●●
Optional Resource: bit.ly/3OUILAg
- 100 Go see a live dance performance and try one of the dances yourself when you get home ●●●●●●
- 100 Take a single dance class or participate in a public dance ●●●●●●

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Gardening – 420 total points possible

- 10 Make your own activity ○○○○○○
- 10 Learn about this history of agriculture ●●●●●
Optional resource: <https://kids.britannica.com/students/article/agriculture/272753>
- 10 Learn about the different types of gardens ●●●●●
Optional Resource: bit.ly/42j3lgM
- 20 Learn about hydroponics ●●●●●
Optional Resource: <https://kidsgardening.org/resources/gardening-basics-hydroponics/>
- 20 Learn what it means to “rotate crops” ●●●●●
Optional Resource: https://kids.kiddle.co/Crop_rotation
- 50 Visit a public garden and learn about three new plants you observed ●●●
- 50 Learn about what is needed for vegetable growth and plant a vegetable seed(s) ●●●
- 50 Visit a farmers’ market and learn about local produce and observe how booths are set up ●●●
- 100 Learn about the five ways plants spread or disperse their seeds. Then identify a plant for each of the five methods. ●●●●● Optional Resource: bit.ly/3WTprpe
- 100 Grow a Sock Garden and count the number of plants that grow ●●●●●
Optional Resource: <https://runwildmychild.com/grow-your-socks/>

Culinary Arts – 400 total points possible

- 10 Make your own activity ○○○○○○
- 10 Learn about kitchen safety ●●●
Optional Resource: <https://www.kids-cooking-activities.com/kitchen-safety-rules.html>
- 10 Prepare a healthy snack ●●●●●
- 10 Learn proper knife safety and cutting skills ●●●●●
Optional Resource: <https://www.forksoverknives.com/how-tos/knife-skills-cutting-technique/>
- 20 Learn about at least five different tools in your own kitchen ●●●●●
- 20 Learn about recipes and create your own ●●●●●
- 20 Learn about and try a snack from another country ●●●●●
- 50 Bake cookies using different ingredients/ratios to see how the cookies change ●●●●●
Optional Resource: <https://bit.ly/3NcNOe1>
- 50 Learn about culinary schools and what future chefs learn about ●●●●●
Optional Resource: bit.ly/43mnaF7
- 100 Plan a healthy meal, make the meal, and share it with friends and/or family members ●●●●●
- 100 Speak with a chef and learn more about how they plan and prepare their menus ●●●●●

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Culture – 320 total points possible

- 10** Make your own activity ○○○○○
- 10** Learn about Anthropology ●●●●●
Optional Resource: <https://www.amnh.org/explore/ology/anthropology>
- 10** Learn about a different culture from another continent ●●
Optional Resource: <https://www.americananthro.org/ParticipateAndAdvocate/Content.aspx?ItemNumber=1718>
- 20** Learn about traditional homes in countries other than your own ●●●●●
- 20** Learn about your own families culture ●●
- 50** Observe the night sky and draw your favorite constellation. Learn about different stories behind constellations from different cultures. ●●●●●
- 50** Visit a cultural center near you ●●
- 50** Learn the different mathematic systems of measurement and their histories ●●●●●
Optional Resource: bit.ly/43tozKf
- 100** Pick a continent and learn about all the different countries on that continent, then pick one of those countries and learn about the history and different cultures with it. Then share what you have learned with friends and/ or family members ●●●●● Optional Resource: <https://www.globetrottingkids.com/>

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