



Experts in Hands-On **STEM** Education

Ignite Girls' Passion for



Webinar Sponsor: PCS Edventures

- Started as Pat's Computer School in 1988
- Grew to network of experiential *learning centers* in Idaho, Washington and California
- PCS Edventures learning solutions are in more than 7000 sites in all 50 states and over 17 other countries
- Philosophy of hands-on projects that fuel a passion for learning and a lifelong love of STEM



Igniting Girls' Passion for STEAM

Who We Serve

- K-12 classroom educators
- After-school and summer programs
- Libraries and makerspaces
- Clubs and youth groups such as FFA, Boys & Girls Club, 4H, and more



**BOYS & GIRLS CLUBS
OF AMERICA**



Today's Panelist



Jessica Ventre

- Experienced elementary educator
- K-5 Science instructional coach
- STEM writer and education specialist
- Instructional designer

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Agenda

- What is *STEAMventures: Food Collection*?
- Targeting Female Learners' Strengths and Interests
- BrickLAB STEAMventures Build Site
- Q&A
- Giveaway!



Targeting Female Learners' Strengths and Interests

Strategies for changing the conversation from

"girls can't"

to

"girls can!"



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Seeds

Easy-to-read interview featuring nonfiction text features.

Change the Conversation:

- Highlight how interests can better our world
- Focus on what means the most to them
- Show how STEM impacts the world
- Introduce STEM role models



The STEAMventures of Chef Sean Sherman



Hi Sean, I'm learning to be a chef.
How did you get started?



Emerson



Sean



I worked in a big city called Minneapolis. I saw restaurants with foods from all over the world: Chinese, Mexican, Thai, Italian. It made me wonder, where's the Native American restaurant?

My family is Oglala Lakota, part of the Great Sioux (Soo) Nation. Our native land is on the Great Plains. I didn't know what foods my great-grandparents ate so I became a food detective.



Editor's note: This is a fictionalized interview for young readers. To hear from Sean himself, visit sioux-chef.com.

Seeds

Art and Math Integration

- Highlights math's creativity and beauty
- Connects interests to real-world application
- Hands-on lessons are memorable

100 Chart Art

Use the key to color each square.

Chefs have to know about art and math!

Key:

Blue	▶	29, 74
Red	▶	20, 44
Yellow	▶	8, 10, 18, 19, 26, 27, 30, 34, 36, 39, 46, 47, 48, 54, 55, 56, 63, 65, 73
Orange	▶	9, 17, 35, 45
Purple	▶	38, 53
Brown	▶	28
Pink	▶	37, 64
Green	▶	1, 12, 13, 23, 33, 42, 43, 52, 57, 58, 59, 61, 62, 66, 67, 68, 70, 71, 72, 75, 76, 80, 81, 82, 83, 84, 85, 91, 92, 93, 94

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1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

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Farms

Resources support reading comprehension with age-appropriate —

language

illustrations

photographs

Change the Conversation:

- Play to girls' strengths
 - Open-ended responses
 - Problem solving



Farms

Engineering and Art Integration

- Emphasize the creative parts of STEAM
- Show there's more to engineering than math and science
- Include open-ended responses
- Explore real-world connections



Write a story!
Roll a dice three times to find out the setting, characters and problem.
Be sure to tell how the characters solve the problem.

Dice	1st Roll: Setting	2nd Roll: Characters	3rd Roll: Problem
1	the farm	potatoes	ran out of seed
2	the field	bumble bees	sprinklers won't turn off
3	the farmhouse	farmer	can't find the shovel
4	the garden	worms	potatoes are rotten
5	the machine shop	kids	tractor is broken
6	the tractor cab	your great, great grandfather	plants are enormous

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Write a story!
Roll a dice three times
to find out the setting,
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Be sure to tell how the
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problem.

Silly Stories

Dice	1st Roll: Setting	2nd Roll: Characters	3rd Roll: Problem
	the farm	potatoes	ran out of seed
	the field	bumble bees	sprinklers won't turn off
	the farmhouse	farmer	can't find the shovel
	the garden	worms	potatoes are rotten
	the machine shop	kids	tractor is broken
	the tractor cab	your great, great grandfather	plants are enormous



Draw a picture of your story in the box below.



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Gardens

Discover how fruits and vegetables grow!

Change the Conversation:

- Spark outdoor exploration
 - **shown to increase girls' interest in STEM**
 - ★ *What would you grow in your garden?*
 - ★ *What kind of garden would work best at your home? Why?*



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Choose three or four activities that interest you.
Cross off each square as you complete the activity.

Personal Interests Can Make a Difference
Girls are often very passionate, focusing on topics that mean the most to them. Inspire them to discover how their interests can be used to better our world.

Connect Lessons to Girls' Natural Strengths
Give female learners opportunities to shine with activities that play to their natural strengths:
Problem-solving • Creativity • Open responses
Critical thinking • Collaboration

Encourage STEAM Exploration at Home
Keep girls' engagement going with these exciting STEAM activities they can try at home:
[Fun STEAM Kit Checklist: Grades K-3](#)

Provide Time and Resources for STEAM Immersion
These online resources pair perfectly with each of our [BrickLAB STEAMventures](#) collections:
[Build STEAMventures Choiceboards & Videos](#)

Introduce STEAM to Girls
For more information on STEAM models, check out [Present and Engage](#).

Take STEAM Outside
Watch this video to see how this educator blends STEAM and gardening to give students ownership of their learning:
[Gardening for STEAM Education Video Interview](#)

Provide Opportunities for Girls to Engage with STEAM
[This no-prep STEAM activity](#) to envision the future of STEAM education for mathematicians and scientists.

Get Started with STEAM from an Early Age
[Scratch Camp](#)'s unique challenges are the perfect way for young girls to see themselves as successful programmers.

Take STEAM Instruction Outdoors

Watch this video to see how this educator blends STEAM and gardening to give students ownership of their learning:

[*Gardening for STEAM Education Video Interview*](#)

Gardens

Science, Art and Math Integration

- Produce tangible results
 - Perfect for formative assessment, review or introduction to skills
- Provide opportunities for enrichment

Draw the correct number of seeds on the strawberry to match the number on the leaves. Then color in the leaves and fruits!

Strawberries are my favorite fruit food!

Let's play a game. Grab dice or cut out the one on the previous page.

Roll-a-Berry

How to Play:

- Roll one dice. Write the number of the first roll on the first line.
- Roll again. Write the number of the second roll on the second line.
- Add the two numbers together.
- Draw the total number of seeds on the strawberry.

$1 + 3 = 4$

roll #1 roll #2

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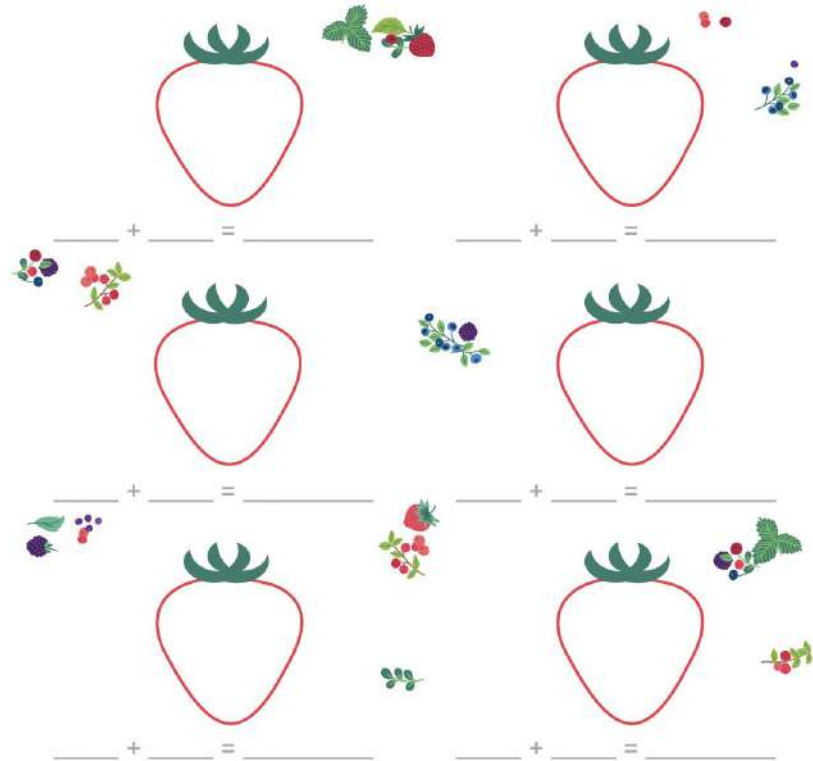
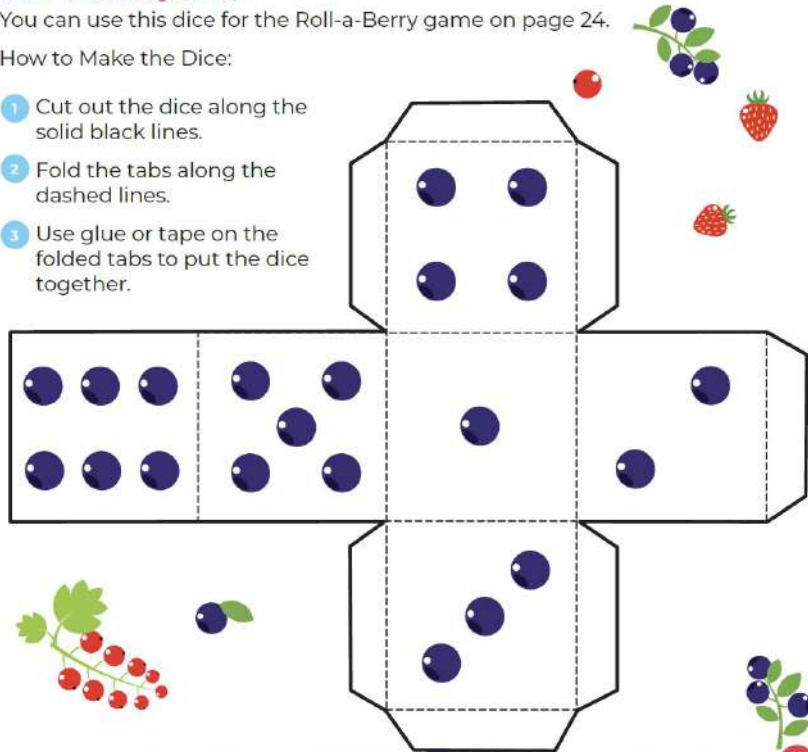
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Roll-a-Berry Dice

You can use this dice for the Roll-a-Berry game on page 24.

How to Make the Dice:

- 1 Cut out the dice along the solid black lines.
- 2 Fold the tabs along the dashed lines.
- 3 Use glue or tape on the folded tabs to put the dice together.



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Food Collection

Trees (G: K-1 and 2-3)

S All About the Power of Leaves

T From Cacao Trees to the Chocolate We Eat

E Cacao Tree Build

A Build-It Challenge

M Cacao Farm Leaf Collection

Years later, Jan decided to do his own plant experiments. Jan put plants in jars filled with water. Why? He thought plants made gases, but he couldn't see them. Underwater, he saw that there were tiny bubbles coming from the plants.

That summer, Jan did 500 experiments. He noticed that he only saw bubbles when the plant was in the sun.

Jan also saw that the bubbles only came from the green parts of the plant, never the flowers. He wrote about his findings in his book "Experiments Upon Vegetables".



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Look at each of the leaves that you cut out. Is it simple or compound?

Give each leaf into the correct place on the bar graph. Then answer the questions.

How many simple leaves are there?

How many compound leaves are there?

How many more simple leaves are there than compound leaves?

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Webinar Video Link

Each registered participant will receive an email notification with a link to the webinar video

Webinar Survey

- Tell us how we're doing
- What topics you'd like us to cover in the future



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GIVEAWAY WINNER SELECTION

Brick LAB STEAM ventures PCS edventures!

FLIGHT COLLECTION



GRADES K-1, 2-3

This collection includes four activity cards: Hot Air Balloons, Drones, Helicopters, and Rockets. The cards are displayed on a yellow background with a blue sky and a red and white checkered border at the bottom. The background also features a lighthouse, a mountain, a cow, and a red brick structure.

Brick LAB STEAM ventures PCS edventures!

TRANSPORTATION COLLECTION



GRADES K-1, 2-3

This collection includes four activity cards: Boats, Trains, Bikes, and Cars. The cards are displayed on a yellow background with a blue sky and a red and white checkered border at the bottom. The background also features a lighthouse, a mountain, a cow, and a red brick structure.

Brick LAB STEAM ventures PCS edventures!

FOOD COLLECTION



GRADES K-1, 2-3

This collection includes four activity cards: Gardens, Trees, Farms, and Seeds. The cards are displayed on a yellow background with a blue sky and a red and white checkered border at the bottom. The background also features a lighthouse, a mountain, a cow, and a red brick structure.

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Contact a
PCS STEMbassador

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solutions tailored for
your learning
environment

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