# Bridges in Mathematics Tech-Enhanced Activity for Seesaw

# **Making Quilt Blocks & Quilts**

This activity is based on The Math Learning Center's Tech-Enhanced Activities (TEAs), adapted from the Bridges in Mathematics Second Edition PK–5 math curriculum. This activity is designed to support Bridges Grade 1, Unit 5, Module 3, <u>Session 1</u> and <u>Session 2</u> (login required). For standards alignment, refer to the Bridges sessions.

#### Overview

The work supports understanding of making composite two-dimensional shapes (quilt blocks), making shapes made from multiple composite shapes (quilts), and using addition strategies to match the quilt blocks.

	Students will:	Assets
Part 1	Use colored squares to create 3 × 3 quilt blocks and write equations to describe the quilt blocks.	Nine-Patch Quilt Blocks
Part 2	Explore how to put together 3 × 3 quilt blocks to build a quilt.	Making Quilts
Part 3	Write addition equations for quilt blocks of various dimensions and use those quilt blocks to build a rectangular quilt.	Exploring Quilt Blocks

#### Content notes:

- 1. Part 1 focuses on making digital versions of nine-patch quilt blocks and writing the related addition equations. This work aligns with Session 1.
- 2. Part 2 aligns with Session 2. Students practice vocabulary related to geometric motion and use the Number Frames app to explore how to put together four quilt blocks to make a larger "quilt."
- 3. Part 3 extends students' thinking by asking them to analyze and make quilt blocks of various dimensions. These kinds of quilt blocks are not included in the sessions.

## Part 1: Nine-Patch Quilt Blocks [Seesaw]

Students use colored squares to create  $3 \times 3$  quilt blocks and write equations to describe the quilt blocks.

1. Choose your delivery method:

#### If delivering asynchronously

- Students self-pace through the activity.
- Students study each page, read or listen to the strategies for making quilt blocks, and respond to the prompts.
- The last page includes space for an image of their work from the Number Frames app.

## If delivering synchronously

- If possible, practice using this <u>saved</u> <u>state of the Number Frames app</u> on your own prior to the activity.
- Start a Zoom or Google Meet session.
- Open the activity and share your screen.
- Facilitate a discussion about making quilt blocks and how to write addition equations to represent them. Annotate the pages with summarized student input.
- Preview the last page. Share your screen as you open the saved state in the Number Frames app (step 1).
  - Demonstrate how to slide the squares to the quilt blocks, write matching equations, and save an image of your work.
  - Have students open their copy of the activity. Invite students to create quilt blocks on their own devices by following the same link.
  - Students can paste their image on the last page of the activity.
  - Model how to tap on the outline to move or rotate the entire quilt.
- 2. Prior to Part 2, review the student-generated quilt blocks on the last page. These quilt blocks can be used to customize Part 2 of this activity. Consider choosing 4–6 quilt blocks that feature unique patterns and different combinations of 9.

## Part 2: Making Quilts [Seesaw]

Students explore how to put together 3 × 3 quilt blocks to build a quilt.

- 1. Preview the activity. If desired, replace the sample quilt blocks on the "Our quilt blocks" page with the quilt blocks generated by your students at the end of Part 1.
- 2. Choose your delivery method:

#### If delivering asynchronously

- Students self-pace through the activity.
- Students study each page, read or listen to strategies for building quilts, and respond to the prompts.
- The last page includes space for an image of their work from the Number Frames app.

#### If delivering synchronously

- If possible, practice using this <u>saved state of</u> <u>the Number Frames app</u> on your own prior to the activity.
- Start a Zoom or Google Meet session.
- Open the activity and share your screen.
- Note: On the page titled "Red hot equations," the hidden word is "HOT" (formed by the red squares).
- Preview the last page. Share your screen as you open the saved state in the Number Frames app (step 1).
  - Demonstrate how to use the colored squares to make a 3 × 3 quilt block, write an equation, build and name a quilt, and save an image of your work.
  - Have students open their copy of the activity. Make sure students understand they should select the quilt block's border before rotating, duplicating, or moving it. Invite students to create quilts on their own devices by following the same link.
  - Students can paste their image on the last page of the activity.
- 3. Prior to Part 3, review the student-generated quilts and quilt names on the last page. These quilts can be used to customize Part 3 of this activity. You might use quilt images for every student in your class or select 5–8 quilts with unique patterns, examples of rotations, and creative names.

## Part 3: Exploring Quilt Blocks [Seesaw]

Students write addition equations for quilt blocks of various dimensions and use those quilt blocks to build a rectangular quilt.

- Preview the activity. If desired, replace the sample quilts and quilt names on the "Quilt gallery walk" page with quilts and quilt names generated by your students at the end of Part 2. If you'd like to include quilts for your whole class, consider adding additional pages.
- 2. Choose your delivery method:

#### If delivering asynchronously

- Students self-pace through the activity.
- Students study each page, read or listen to strategies for using different kinds of quilt blocks, and respond to the prompts.
- The last page includes an image of their work from the Number Frames app.

## If delivering synchronously

- If possible, practice using this <u>saved state of</u> <u>the Number Frames app</u> on your own prior to the activity.
- Start a Zoom or Google Meet session.
- Open the activity and share your screen.
- For pages "What comes next?" and "Maria's quilt challenge," preview each page before asking students to work on each problem on their own for a few minutes. Then discuss solution strategies as a class and annotate your page with summarized student input.
- Preview the last page. Share your screen as you open the saved state in the Number Frames app (step 1).
  - Demonstrate how to rotate the quilt blocks, move the quilt blocks onto the grid, and save an image of your work.
  - Have students open their copy of the activity. Make sure students understand they should select the quilt block's border before rotating or moving it. Invite students to solve the problem on their own devices by following the same link.
  - Students can paste their image on the last page of the activity.
- 3. Encourage students to experiment with the <u>Number Frames app</u> on their own after the activity concludes. (A link to the main app can be found at the bottom of the last page.)