Bridges in Mathematics Tech-Enhanced Activity for Seesaw

Toy Store Problems

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 2, Unit 7, Module 4, <u>Session 1</u> and <u>Session 2</u> (login required). For standards alignment, refer to the Bridges sessions.

Overview

The work supports students' understanding of creating and solving picture problems and sets up a gallery of student-written problems to support work in the remaining sessions in the module.

	Students will:	Assets
Part 1	Use context from a picture to determine which math questions can be answered.	Picture Problems
Part 2	Review the steps for writing a picture problem, then draft one (or more) picture problems.	Write Picture Problems
Part 3	Consider possible strategies for solving picture problems, then solve some on their own.	Solve Picture Problems

Content Notes:

- This TEA focuses on picture problems that use 100s, 10s, and 1s to solve addition and subtraction problems within 1,000. Picture problems involving shopping for toys were not included but could be used at another time.
- Part 1 covers in more detail how to identify mathematical questions based on a picture and how to know if there's enough information in a picture to solve a problem—both skills necessary for students to write their own picture problem. This combines some of the questioning from Sessions 1 and 2.
- Part 2 provides direction for students to write both types of problems, combining some questions from Sessions 1 and 2.
- Part 3 involves solving a Toy Store problem from Session 3. Additional suggestions have been provided for how you might continue to use the problems students wrote for Sessions 3, 4, and 5.

Part 1: Picture Problems [Seesaw]

Students use context from a picture to determine which math questions can be answered.

1. Choose your delivery method:

If delivering asynchronously

 Students self-pace through the activity, making observations about a toy store picture and thinking about and solving problems that can be asked.

If delivering synchronously

- Start a Zoom or Google Meet session.
 Open the activity and share your screen. Students do not need to open their copy yet.
- Discuss the image on the "Kim's toy store picture" page. What do students notice and wonder about the image?
- Have students open their copy and work through the remainder of the activity.
- As a group, share the questions that students formulate about the problem on the last page. Start a discussion about the qualities of strong word problems.
- 2. Review student work on the "Show your solution" page to check student strategies for solving addition and subtraction problems with 100s, 10s, and 1s. Students will have more opportunities in Part 3 and beyond to practice solving picture story problems.

Part 2: Write Picture Problems [Seesaw]

Students review the steps for writing a picture problem, then draft one (or more) picture problems.

1. Choose your delivery method:

If delivering asynchronously

- Students self-pace through the activity, exploring sample picture problems and reflecting on the characteristics of good picture problems.
- On the "Create & solve a story" page, students read the instructions for making their own picture problems.
- Students choose between one of two picture backgrounds to create their own problems.

If delivering synchronously

- Start a Zoom or Google Meet session.
 Open the activity and share your screen. Students do not need to open their copy yet.
- Discuss with students what they notice and wonder about the picture on the "Delivery at the toy store" page. Which questions are answerable? Which are not?
- Repeat the process for the "For sale and already sold at the toy store" page.
- On the "Good picture word problems" page, discuss with students the characteristics of good word problems.
- Review the process for making picture word problems with students. Release students to work independently on their picture problem(s).
- 2. Review the problems students created. Consider which problems you'd like to share with the whole class in Part 3.

Part 3: Solve Picture Problems [Seesaw]

Students consider possible strategies for solving picture problems, then solve some on their own.

1. Choose your delivery method:

If delivering asynchronously

 Students self-pace through the activity, first reviewing a place value and number line strategy for solving a sample problem, then solving three picture problems using any strategies they'd like.

If delivering synchronously

- Start a Zoom or Google Meet session.
- Open the activity and share your screen. Students do not need to open their copy yet.
- Facilitate a discussion of Kim and Luka's strategies for solving Eddie's problem. Ask students how the strategies are similar and how they are different.
- Direct students to open their copy of the activity to solve three picture problems.
- For each problem, remind students that they can mark which problem they will solve with the star and then show how they solved the problem by using any tools or strategies they'd like.
- 2. Review students' work on the problem-solving pages. Look for evidence of understanding how to solve a picture problem.
- 3. Here are some ways you might use more of the problems students have written and solved:
 - Refer to the Note section in <u>Session 5</u> for ideas on returning problems to student writers and solvers, and using them as work samples for assessment.
 - Choose some problems to share and discuss at another time.
 - Look for problems students interpret in different ways due to how the question was asked. Discuss ways to make the question more clear.
 - Share problems that were solved using interesting strategies. Discuss what makes a strategy efficient and which of the strategies you shared appear to be the most efficient.