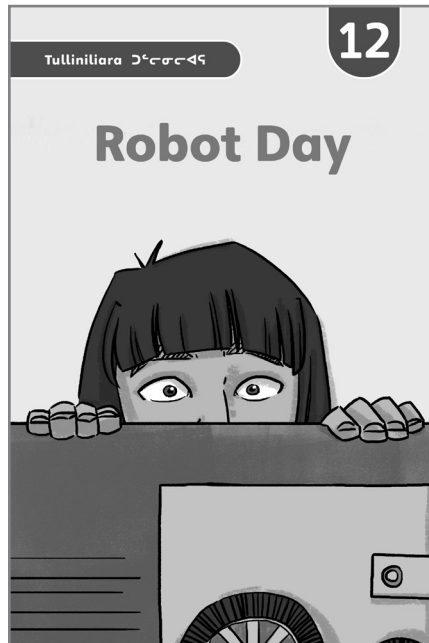


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TULLINIARA  
EXTENSION ACTIVITY



## Level 12: Robot Day

### ICON LEGEND



TEACHER SCRIPT



INDIVIDUAL ACTIVITY



IMPORTANT INFORMATION



CLASS DISCUSSION



PAIRS/SMALL GROUP ACTIVITY



LARGE OPEN SPACE

### TEACHER SCRIPT TRANSLATIONS

Throughout this extension activity, you will find teacher scripts written in English to help you guide your lessons. Student reproducibles are provided in Inuktitut and English.





# LESSON PLAN 1: ROBOT DAY

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## LESSON 1

1. Before reading, tell students that you are going to read a book called *Robot Day*. Explain to students that this book tells a story about how to work together and learn new things. Tell students that the students in this book work together to learn how to build a robot. Ask students what they know about robots. Give the class time to share ideas and discuss.
  2. Read the book *Robot Day* up to page 21 out loud to students.
  3. After reading the first part of the book, ask students what they learned about STEM and robotics. Give the class time to share ideas and discuss. Record students' ideas on the chart paper. Students may share things like:
    - ☛ "STEM" stands for science, technology, engineering, and math.
    - ☛ Engineers use science, technology, and math to build robots and other structures/machines.
    - ☛ Computer codes tell a computer what to do.
    - ☛ A computer is like a robot's brain—it tells the robot what to do.
  4. Tell students that robotics isn't the only type of STEM project in the world: many problems are solved using a combination of science, technology, engineering, and math. People who study and work in STEM often work and solve problems together. Ask students if they think Martha and Junior are working well together so far. Have students brainstorm ways they could be a better team. Write down their ideas on a piece of chart paper.
  5. Next, explain that students are going to participate in their own STEM challenge! Explain the challenge:
    - ☛ Their community needs a bridge to cross a nearby river or lake.
    - ☛ The bridge needs to be very strong so it can support the weight of a water truck filled with water.
    - ☛ They are going to build a model of the bridge. The model bridge has to span a 20-centimetre gap, and it needs to hold 2 kilograms of weight.
    - ☛ The materials they have are glue and popsicle sticks.
- Note:** If you don't have small weights for this type of project, change the weight requirement to something you do have—for example, 3 textbooks or 4 cups of water.
6. Divide students into pairs to plan their bridge building. Hand out the **Designing a Bridge** worksheet, one for each pair. Tell students that they will plan how they will build their bridge and work as a team. Explain that they do not need to answer the last question on the worksheet yet.
  7. If there is still time, allow students to begin building their bridges.

## LESSON PLAN 2: ROBOT DAY

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### LESSON 2

1. Review the first half of the book *Robot Day* with the class. Review the definitions for *STEM*, *engineering*, and *computer code* that you discussed in the previous lesson.
2. Ask students to predict what they think will happen in the second half of the story.
3. Finish reading *Robot Day* out loud to the class.
4. Discuss the problems Junior and Martha's robot had when they were not working together. Then, discuss how they fixed their robot by working together. Remind students that when they are building their bridges, working together will help them learn and be successful by using everyone's strengths.
5. Provide students with time to finish building their bridges. The glue will need to dry, so you will test the bridges tomorrow.
6. Once students are done building their bridges, reflect on the activity. Have students share what they found easy and what they found difficult about the challenge. Ask students to share something positive that happened when they were working in pairs.
7. Provide pairs with time to complete the reflection question on their **Designing a Bridge** worksheet.

**Follow-up:** Test the bridges to see if they meet the project criteria and if they can hold the weight! Whether the bridge can or cannot hold the weight should not be assessed, since this activity is focused on students participating in a STEM project and working together as a team.

### SHARING AND DISPLAYING (CLASSROOM REINFORCEMENT)

Take photos of the bridge-building process and the completed bridges. Display them next to students' **Designing a Bridge** worksheet.

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<p>ᑭᑦᑎᓐ ᑕᑦᑎᓐᑕᑦᑎᓐᑕᑦᑎᓐᑕᑦᑎᓐ?</p>	<p>ᑕᑦᑎᓐ ᐃᑲᑕᑦᑎᓐᑕᑦᑎᓐᑕᑦᑎᓐ ᑕᑦᑎᓐᑕᑦᑎᓐᑕᑦᑎᓐᑕᑦᑎᓐ ᑕᑦᑎᓐᑕᑦᑎᓐᑕᑦᑎᓐᑕᑦᑎᓐ?</p>
<p>ᑕᑦᑎᓐ ᐃᑕᑦᑎᓐᑕᑦᑎᓐᑕᑦᑎᓐ ᐃᑲᑕᑦᑎᓐᑕᑦᑎᓐᑕᑦᑎᓐ ᑕᑦᑎᓐᑕᑦᑎᓐᑕᑦᑎᓐᑕᑦᑎᓐᑕᑦᑎᓐ?</p>	

Names: \_\_\_\_\_

# Designing a Bridge

Create a plan for building your bridge.

<b>Draw your bridge design.</b>	<b>What will make your bridge strong?</b>
<b>What will make your bridge stable?</b>	<b>How will you work together as a team?</b>
<b>What did you learn about working together as a team?</b>	