

Products of 2- or 3- Digit Numbers with a 1-Digit Number

Subject: Mathematics
Stand: Number

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Grade: 4

Content (topic)	
Exploring More Products	
<p>Outcomes</p> <p>N 4.4: Demonstrate an understanding of multiplication (2- or 2- digit by 1-digit) by:</p> <ul style="list-style-type: none"> • Using persona strategies for multiplication, with and without concrete materials • Using arrays to represent multiplication • Connecting concrete representations to symbolic representations • Estimating products • Solving problems 	<p>Indicators</p> <p>N 4.4b: Use concrete materials, such as base ten blocks or their pictorial representations, to represent multiplication and record the process symbolically</p> <p>N 4.4c: Create and solve a multiplication problem that is limited to a 2- or 3- digit number times a 1-digit number</p> <p>N 4.4d: Estimate a product using a personal strategy (e.g., 2×243 is close to or a little more than 2×200, or close to or a little les than 2×250).</p> <p>N 4.1e: Model and solve a multiplication problem using an array, and record the process.</p>
<p>Mathematical Processes:</p> <ul style="list-style-type: none"> • Communication • Problem Solving • Mental Mathematics and Estimation • Reasoning • Visualization 	
<p>Lesson Preparation</p> <p>Equipment/materials:</p> <ul style="list-style-type: none"> • One centimeter graph paper • A loom • A set of pony beads • Wool • Markers/pencil crayons <p>Advanced Preparation:</p> <ul style="list-style-type: none"> • *Instructions for making a loom* • Learn how to bead the loom 	
<p>Presentation Development</p> <ul style="list-style-type: none"> • Teach the students about the significance of beads. For example, 	

beading has been an important part of First Nations culture for approximately 8 000 years prior to European contact. Beads were made of shell, pearl, bone, teeth, stone, and fossil stems. Glass beads became a part of First Nation and Métis culture when the explorers came from Europe and brought seed and glass beads as trading items.

- Explain to students that each tribe had distinct designs, patterns, and approaches; therefore, collections of First Nations beadwork art includes many different designs, styles, traditions and stitches. In Saskatchewan, the Plains Cree People use a lot of symmetry in their patterns as well as distinctive geometrical shapes.
- Have the students use four columns on the graph paper to simulate the loom as explained in a [previous lesson](#). Using **three** colored markers or pony beads, have the students create a pattern.
- After the students have created a 12-row pattern, ask a couple of students to share their pattern with the rest of the class. Ask a couple of students to hold a more complex pattern up and ask the rest of the class to determine the pattern used.
- Next have the students use their own patterns to determine without counting how many beads it took to make this pattern.
- Ask the students how they were able to find the number of beads used. Ask three or four students to come to the board and write down their own strategies.
- After the class has examined a variety of personal strategies, have the students estimate how many beads would be in 223 rows. Have the students come up to the board and show their personal strategies along with the estimated answers.
- Have the students determine how many beads would be required if there are six strings on each loom with 23 rows.
- *How many rows would be required if there are 28 beads on lines of six?*