

Mathematics: **Exploring Our Early Connections to the Mathematics Foundations**

Strands:	<i>Number Sense</i>	<i>Algebra and Functions</i>	<i>Measurement</i>	<i>Geometry</i>	<i>Mathematical Reasoning</i>
-----------------	-------------------------	----------------------------------	--------------------	-----------------	-----------------------------------

GETTING READY

Instructional Component(s): Motivator and/or Connection to Experience; In-Class Activity

Strands: This activity can be used to develop familiarity with and deepen understanding of all math strands or of individual strands.

Focus: Students explore their own early experiences with mathematics and how those experiences might affect their work in supporting young children's development in mathematics.

AFTER PARTICIPATING IN THIS ACTIVITY

Students will demonstrate **knowledge** and **skills** that are consistent with an increased understanding and application of the concepts addressed in this activity.

Students will demonstrate an understanding of:

- How their own experiences learning mathematics may affect the ways in which they help children engage with math (*Standards 1, 4, & 6*)*

Students will be able to:

- Reflect on their own experiences learning math (*Standards 4 & 6*)*
- Consider how their own experiences affect how they support young children's development in mathematics (*Standards 1, 4, & 6*)*

*See Appendix A

Mathematics: **Exploring Our Early Connections to the Mathematics Foundations**

Before you start

Research indicates that understanding mathematics, beyond the intuitive and informal experiences that many children have, is critical to future academic success. However, many students and practitioners may not fully engage young children with mathematics experiences because they are uncertain about their own knowledge and skills relating to mathematics. Consequently, many students find it hard to engage with the concepts and possibilities of helping young children's development relating to mathematical concepts.

Because of this, it is often helpful to begin exploring the mathematics foundations by delving into our own relationship to math.

Getting it started



Slide 2

Organize students into pairs or groups of three. Keeping the groups small will increase the likelihood that ideas and feelings will surface. Be sensitive to the depth at which these stories and memories may elicit an emotional response and do not require that all students retell their memories.

Ask students to respond to these questions:

- When you reflect on your own experiences learning mathematics, what specific memories come to mind? Consider particular classes, instructors, activities, or homework assignments.
- Do you remember a time when you really *enjoyed* mathematics? Again, consider particular classes, instructors, activities, or homework that may have been particularly interesting or rewarding.
- Do you remember a time when you first thought math was hard and you could not do it? Again, consider particular classes, instructors, activities, or homework that may have posed a challenge for you.

Keeping it going

Ask students to think of two or three words or phrases that describe their feelings about learning math. Ask them to write these individually on large Post-it® notes or half sheets that can be taped to a board or chart paper.

<p>Putting it together</p>	<p>When all the words are visible, ask the class to review the words that they generated. They can be read aloud by one student or shared by several. Then, ask students to group these words together with other words that are similar or the same. Sometimes it helps to ask, “Do you see any that are similar or express a similar feeling or idea?”</p>
<p>Taking it further</p>	<p>Ask them to come up with names for each group of words. Sometimes the words or phrases fall neatly into two categories—<i>positive</i> and <i>challenges</i>—though there are many other categories they could fall into, such as <i>feeling challenged</i>, <i>important events</i>, or <i>enjoyment</i>.</p>
<p>Targeting individual strands</p>	<p>You might ask students to reflect on their experience with this question:</p> <ul style="list-style-type: none"> • What do our own experiences tell us about working with young children to enhance their development in mathematics concepts and skills? <p>You might point out that, by organizing into groups with similar characteristics and naming the groups, they have just engaged in a classification activity that is related to the algebra and functions strand of the math foundations.</p>