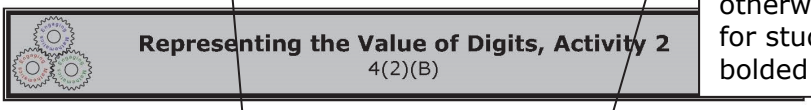
What is found in an Engaging Mathematics TEKS-based activity?

TEKS have been phrased in student-friendly language so that students may gauge their learning.

Common classroom materials are used for ease of preparation. Materials are listed 1-per-student unless otherwise noted. Page titles for student handouts are bolded.



Representing the Value of Digits, Activity 2
4(2)(B)

Activity Objective

I can represent the value of digits using expanded notation and numerals.

I can use numbers and words to describe the combined values of digits.

Materials

- **What is the Value?**
- **Digit Cards**
- Scissors

Answer Key

Answers will vary.

Possible answer.

862,097,683 = (8 x 100,000,000) + (6 x 10,000,000) + (2 x 1,000,000) + (9 x 10,000) + (7 x 1,000) + (6 x 100) + (8 x 10) + (3 x 1)

ELPS have been included in the form of a student-friendly language objective.

Debriefing questions are included to assist the teacher with facilitating a post-activity student discussion.

Debriefing Questions

- How did you represent the value of the digits in expanded notation?
- How did you determine the value of each digit and the combined value of each number?
- How do you know where to place a comma when writing a multi-digit number?
- How would you represent the numbers in expanded form?

Communicating about Mathematics

Students may respond by talking to a partner and recording a written response in the space provided.

Possible sentence frame:
Expanded notation shows _____.
Expanded form shows _____.

Each activity includes an opportunity for students to articulate and summarize their own learning. A sentence frame is provided for students who may need language support.

Listen For . . .

- *Appropriate use of key vocabulary such as place value, period, millions, hundreds, etc.*
- *Understanding that the value of the digit is based on the place value of the digit.*
- *Understanding that when a place-value position represents a value of zero, the value is not included when writing numbers in expanded form or notation.*
- *Correct usage of place value when saying a number, such as eight hundred sixty-two million, ninety-seven thousand, six hundred eighty-three.*

Listen/Look For . . .

Understanding that expanded notation shows the sum of each digit multiplied by its place-value position.
Understanding that expanded form shows the sum of the value of each digit.

Key learning outcomes from the debriefing discussion are summarized here.

Key learning outcomes from the Communicating about Mathematics section are included here.