Understanding Standard Form with Numbers up to 120

Teacher Guide

Duration: 20 minutes

Standards for Mathematics

TEKS.1.2.C.iv

Use standard form to represent numbers up to 120.

Focus Strategies

Think Aloud: The teacher models a process of thinking by speaking aloud what is thought. As an example, 'I think I need more color here in my drawing.' This strategy models for students the type of thinking they can use in an upcoming activity.

Think-Pair-Share: Students are prompted to think about an idea on their own. Students then share their idea with a partner and have a quick discussion. Selected students are asked to share their ideas with the whole group.

Materials

whiteboard, markers, number cards (1-120), paper pencils

Key Vocabulary

standard form, place value, tens, ones, show

Warm-Up

Ask students to think of a number between 1 and 120 and write it down. Then, have a few students share their numbers and discuss how they can show them in standard form.

Introduction

Explain to students that today they will learn how to show numbers in standard form. Introduce the concept of standard form and how it relates to place value.

Exploration & Whole Class Discussion

Launch the Problem Strings by presenting the first problem: 'What is the standard form of the number 45?' Allow students to solve it individually. After a minute, ask for volunteers to share their plans for solving the problem. Then, present the next problem: 'What is the standard form of the number 78?' Have students solve it independently, then discuss their plans with a partner before sharing with the class.

Application & Reflection

Present a final problem: 'What is the standard form of the number 123?' Have students solve it independently, then share their plans with a partner. Finally, select a few students to share their plans with the whole class. Encourage students to look for patterns in how they approached the problems.

Assessment

Students will write a short reflection on what they learned about standard form and how they can use it to show numbers. They will share their reflections with a partner, and then a few selected students will share with the class.

Strategies to Support Emergent Bilingual Students

To support emergent bilingual students, we recommend the following:
1. Provide independent think time after asking questions or posing prompts.
2. Have students pair up with a partner to generate responses together.
3. Have students restate each other's reasoning in classroom discussions.
4. Create a public record of classroom discussions.
5. Use color and annotation to help learners make connections for concepts.
6. Introduce academic vocabulary as needed.
7. Use iconic and semantic gestures to help students understand.

Additional Support Resources

If your students need additional support, you can click on one of the lessons below and present it to your whole class. You can use the interactive manipulatives and built in feedback to support students in a whole class discussion. Good questons to ask are 'What do you see?', 'What do you think?' 'What do you wonder?'

Decomposing Numbers to 100 by Place Value: Correcting Decompositions in a Table

Decomposing Numbers to 100 by Place Value: Completing Decompositions in a Table

Sample Lesson Flow

TEACHER SAY	*Today, we are going to learn how to show numbers in standard form. First, I want you to think of a number between 1 and 120 and write it down.*
TEACHER DO	Give students a moment to think and write.
TEACHER SAY	*Now, who would like to share their number? How can we show it in standard form?*
STUDENTS DO	Raise hands to share their numbers.
TEACHER DO	Record a few examples on the board.
TEACHER SAY	*Great! Now let's dive into our first problem string. What is the standard form of the number 45?*
TEACHER DO	Write 'What is the standard form of the number 45?' on the board.
TEACHER SAY	*Take a minute to solve this problem on your own.*
STUDENTS DO	Solve the problem independently.
TEACHER SAY	*Time's up! Who would like to share their plan for finding the standard form of 45?*
STUDENTS DO	Raise hands to share strategies.
TEACHER DO	Record students' strategies on the board.
TEACHER SAY	*Excellent! Now let's try another one. What is the standard form of the number 78?*
TEACHER DO	Write 'What is the standard form of the number 78?' on the board.
TEACHER SAY	*Solve this one independently, then discuss your plans with a partner.*
STUDENTS DO	Solve the problem and then turn to their partner to discuss.
TEACHER SAY	*Let's come back together. Who would like to share their plan for the number 78?*
STUDENTS DO	Raise hands to share.
TEACHER DO	Record their strategies on the board.
TEACHER SAY	*Now, for our final problem: What is the standard form of the number 123?*
TEACHER DO	Write 'What is the standard form of the number 123?' on the board.
TEACHER SAY	*Solve this independently, then share your plans with your partner.*
STUDENTS DO	Solve the problem and discuss with their partner.
TEACHER SAY	*Let's hear some plans for solving the standard form of 123. Who would like to share?*
STUDENTS DO	Raise hands to share.
TEACHER DO	Record their strategies on the board.
TEACHER SAY	*As we wrap up, I want you to think about what you learned today about standard form. Write a short reflection in your math booklet about how you can use standard form to show numbers.*

STUDENTS DO Write their reflections in their math booklets.

TEACHER SAY *When you're finished, share your reflections with a partner. Then, I will ask a few of you to share with the class.*

STUDENTS DO Share reflections with their partner and then raise hands to share with the class.