Build 706: Hundreds, Tens, and Ones

Teacher		**Class**	Grade 2
Subject	Math	**Topic**	Place value to 1000
Date		**Room**	
Lesson length	60 minutes	**Country**	United States

> Students learn what each digit in a three-digit number means. They build numbers to 1000 with blocks and drawings.

Curriculum links

- Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones.
- Tell how many hundreds, tens, and ones are in a given three-digit number [2].
- Tell how many tens are in 100 and in 200 [2].

Learning objectives

- Students will show how many hundreds, tens, and ones are in a three-digit number.
- Students will explain what each digit in numbers to 1000 means.
- Students will read and build 706 as 7 hundreds, 0 tens, and 6 ones.

Success criteria

- I can name the hundreds, tens, and ones in a number.
- I can build a three-digit number with hundreds, tens, and ones.
- I can show 706 as 7 hundreds, 0 tens, and 6 ones.

What students already know

Hold up 23 with rods and cubes. Ask: How many groups of 10? How many left over? Listen for 2 tens and 3 ones.

Key words

digit	one writing mark from 0 to 9 used to make numbers [2]
place value	what a mark is worth because of where it sits in a number [2]
hundreds	groups of 100, each made from 10 groups of 10 [2]
tens	groups of 10 single cubes stuck together as one stick [3]
ones	single cubes counted one by one [2]

Materials

- base-ten blocks (flats for hundreds, rods for tens, small cubes for ones)
- place-value mats with H T O sections
- number cards to 999
- mini whiteboards and markers
- printed copies of Worksheet Task B (Practice questions: Show how many hundreds, tens, and

Before the lesson

- Print number cards to 999 and copies of Worksheet Task B (Practice questions: Show how many hundreds, tens, and ones are in each number), one per student
- Set out base-ten blocks and place-value mats for each pair

Created with LessonDino.com · AI lesson planner with checkable sources

ones are in each number)

- Load Slides 1-7, 9-10, 12 and test Video clip 1 on slide 6 (0:00-5:00)
- Clear floor space for building and checking with blocks

Lesson outline

0–7 min **Starter** 7 min · Whole class

Recall tens and ones and spark interest in the hundreds place.

YOU DO

1. Show 2 rods and 4 cubes and ask students to name the tens and ones.
2. Say the hook while showing 7 flats, 0 rods, and 6 small cubes on the mat.
3. Ask pairs to guess the number and how they know.
4. Show Slides 1-2 and link guesses to today's goal about 3-digit numbers.

STUDENTS DO

1. Count the tens and ones for 24 with the teacher.
2. Discuss the hook with a partner and guess the built number.
3. Share guesses and hear that the build shows 706.

Say: I have 7 big squares, no sticks, and 6 tiny cubes. What number did I build? Talk to your partner. What is each part worth?

Worked example: 24 = 2 tens and 4 ones. 2 rods mean 20, 4 small cubes mean 4.

Ask: I have 7 big squares, no sticks, and 6 tiny cubes. What number is it? (706, because 7 hundreds is 700 and 6 ones is 6.) · How is 24 different from 246? (24 has only tens and ones; 246 also has hundreds.)

Check understanding: All hold up whiteboards with the hook number. If many miss 706, rebuild 24 and 246 side by side before moving on.

Support: Let students touch and count 2 rods and 4 cubes first, then look at the 7 flats. **Stretch:** Ask what would change if we added 1 more flat to the hook build.

Use: Slides 1-2

7–17 min **Teaching** 10 min · Whole class

Teach what hundreds, tens, and ones mean in a three-digit number.

YOU DO

1. Show Slides 3-4 and explain that each spot tells how many groups of 100, groups of 10, or single cubes [3].
2. Model 453 with blocks: 4 flats mean 400, 5 rods mean 50, 3 cubes mean 3 [3].
3. Model 706 and stress that hundreds are groups of 10 tens, so 1 hundred is 10 tens [2].
4. Show Slide 7 and count 10 rods against 1 flat together.

STUDENTS DO

1. Watch the builds and chant the places: hundreds, tens, ones.
2. Count aloud as teacher trades 10 rods for 1 flat.
3. Repeat what 4, 5, and 3 mean in 453.

Say: The first digit tells how many hundreds. The middle digit tells how many tens. The last digit tells how many ones. Ten tens make one hundred.

Worked example: 706 = 7 hundreds + 0 tens + 6 ones. 7 in front means 700, 0 in the middle means 0 tens, 6 at the end means 6. So 706 equals 7 hundreds, 0 tens, and 6 ones.

Ask: In 453, what does the 5 mean? (5 tens, or 50, because it sits in the middle spot [3].) · How many tens are in 1 hundred? (10 tens make 1 hundred [2].) · In 706, what does the 7 mean? (7 hundreds, or 700.)

Check understanding: Thumbs up or down: does the first digit show hundreds? Reteach with 324 as 300 + 20 + 4 if unsure.

Support: Use color mats with H T O and place one block type in each box as you name it. **Stretch:** Ask students to tell how many tens are in 200 without blocks.

Use: Slides 3-4, 7

17–25 min **Video and Zero Talk** 8 min · Whole class

See hundreds built and understand 0 as a placeholder in numbers like 706.

YOU DO

1. Show Slide 5 question: 706 has a 0. Does that 0 mean nothing? Why?
2. Play Video clip 1 on Slide 6 and ask students to listen for hundreds, tens, and ones words.
3. Pause after the hundreds build and ask what 0 tens looks like with rods.
4. Compare 706 and 76 with blocks to show why the 0 matters.

STUDENTS DO

1. Watch the clip and raise a hand when they hear hundreds, tens, or ones.
2. Turn and talk about whether the 0 in 706 means nothing.
3. Hold up 0 fingers for rods when teacher shows 706.

Say: Watch how big blocks make hundreds. When you see 0 tens, it means we put no rods there. The 0 holds the middle spot so 706 does not look like 76.

Worked example: 706 needs 7 flats, 0 rods, 6 cubes. 76 needs only 7 rods and 6 cubes. The 0 in 706 means 0 tens, and the 7 still means 7 hundreds [2].

Ask: 706 has a 0. Does that 0 mean nothing? Why? (No, it means 0 tens and holds the tens spot so the 7 stays hundreds.) · Why is 706 not the same as 76? (706 has 7 hundreds; 76 has only 7 tens [3].)

Check understanding: Cold-call two students to say what 0 means in 706. If confused, rebuild 706 and 76 side by side [2].

Support: Keep both builds on the mat so students can see the extra hundreds box. **Stretch:** Ask what 0 means in 760 in the ones spot.

Use: Slides 5-6, Video clip 1 (0:00–5:00)

25–50 min **Main Activity** 25 min · Pairs

Build three-digit numbers with blocks and write their hundreds, tens, and ones.

YOU DO

1. Show Slides 9-10 and model the 4 steps: hundreds first, then tens, then ones, then say it.
2. Hand out number cards, mats, and blocks and let pairs pick a card and build it.
3. Circulate, ask each pair to point and say, for example, 706 equals 7 hundreds, 0 tens, and 6 ones.
4. Hand out Worksheet Task B for pairs to show how many hundreds, tens, and ones are in each number.

STUDENTS DO

1. Pick a card like 706 and build it with flats, rods, and small cubes.
2. Point to each part and say the hundreds, tens, and ones aloud.
3. Complete Worksheet Task B by showing how many hundreds, tens, and ones are in each number.

Say: Pick a number card to 1000. Build it with hundreds, tens, ones blocks. Write the hundreds, tens, ones. Check together and try another number.

Worked example: Card 249: Take 2 flats, 4 rods, 9 cubes. Look at first digit: 2 hundreds. Middle digit: 4 tens or 40. Last digit: 9 ones. Say it: 249 = 200 + 40 + 9 [2].

Ask: You built 706. How many of each block did you use and why? (7 flats, 0 rods, 6 cubes because 7 hundreds, 0 tens, 6 ones.) · In 324, what does the 2 mean? (2 tens, or 20, because it is in the middle spot [2].)

Check understanding: Visit each pair to hear the sentence for their number. If a pair misses a place, have them rebuild that place alone on the mat.

Support: Work with numbers under 120 first using only tens and ones, then add the hundreds place. **Stretch:** Students build two numbers and tell which hundreds digit is greater and why.

Use: Slides 9-10, Worksheet Task B (Practice questions: Show how many hundreds, tens, and ones are in each number)

50–60 min **Plenary** 10 min · Whole class

Check that students can name hundreds, tens, and ones, including zero.

YOU DO

1. Show Slide 12 true or false items one by one.
2. Ask all to show true or false on whiteboards and defend with blocks language.
3. Fix the false one about 453 by pointing to the tens spot.
4. Restate success lines and preview comparing numbers by hundreds next time.

STUDENTS DO

1. Vote true or false and explain using hundreds, tens, and ones.
2. Correct the false statement about 453 aloud.
3. Say which success line they can now do.

Say: Let us check our work. Is it true that 706 equals 7 hundreds, 0 tens, and 6 ones? Show me true or false and tell why.

Worked example: True: 706 equals 7 hundreds, 0 tens, and 6 ones. False: In 453, the 5 means 5 ones. It means 5 tens, or 50, because the 5 is in the tens place [3].

Ask: First digit is hundreds, middle is tens, last is ones. True or false? (True for a three-digit number [2].) · In 453, the 5 means 5 ones. True or false? (False, it means 5 tens or 50 [3].)

Check understanding: Whiteboard vote on all three items. If many miss the zero item, rebuild 706 once more before dismissal.

Support: Point to H T O labels while voting so students match each digit to its box. **Stretch:** Ask students to make a true sentence about 608 with a zero inside.

Use: Slide 12

Common mistakes

Mistake	How to spot it	How to fix it
Thinking 706 is the same as 76 because 0 means nothing	Student writes 76 for a build with 7 flats and 6 cubes	Build 706 and 76 side by side and name the spots: 0 means 0 tens and keeps 7 as hundreds [2].
Saying the middle digit shows ones, like 5 in 453 means 5	Student writes 453 = 400 + 5 + 3	Point to the middle box and trade rods: 5 rods are 5 tens or 50, while the ones spot shows what is left [3].
Mixing up order and reading 521 as 512	Student builds tens and ones swapped	Use the 4 steps: first digit hundreds, middle tens, last ones, then check with blocks [2].

Support

- Work with numbers under 120 first using only tens and ones, then add the hundreds place.
- Give a place-value chart with H T O labels and pre-sorted blocks to limit counting.

Stretch

- Students build two numbers and tell which hundreds digit is greater and why.
- Students write and solve riddles with a zero in the tens or ones place for a partner.

For the LSE or teaching assistant

Stay with the focus pair during the main build. Prompt pointing and saying hundreds, tens, ones. Use numbers under 120 first, then add hundreds.

Created with LessonDino.com · AI lesson planner with checkable sources

Check for understanding

Question	Answer
What number has 7 hundreds, 0 tens, and 6 ones?	706
In 453, what does the 5 mean?	5 tens, or 50
How many tens make 1 hundred?	10 tens [2]

Homework

Pick two numbers from a book at home and write their hundreds, tens, and ones.

Sources

1. Grade 2 Math Curriculum - Fairfax County Public Schools · fcps.edu · https://www.fcps.edu/academics/elementary/second-grade/year-at-a-glance/math
2. Curriculum Map: iReady Classroom Mathematics Course: MATH 2 ... · ltsd.k12.pa.us · https://www.ltsd.k12.pa.us/wp-content/uploads/2023/04/Curriculum_Map___iReadyClassroomMathematics_4282023.pdf
3. Place Value Explained: Understanding Numbers Up to 1000 · emc.school · https://www.emc.school/math-tips/place-value-explained-understanding-numbers-up-to-1000
4. Terence Tao · Wikipedia · https://en.wikipedia.org/wiki/Terence_Tao
5. SAT · Wikipedia · https://en.wikipedia.org/wiki/SAT
6. Warren Buffett · Wikipedia · https://en.wikipedia.org/wiki/Warren_Buffett

Created with LessonDino.com · AI lesson planner with checkable sources