

Bachelor of Education (Elementary) & Bachelor of Education (Secondary) STEM Lesson Plan

February 27, 2026

Lesson Title: Place Value Lesson # 1 Date: February 27, 2026
 Name: Denae Lafferty Subject: Math Grade(s): 2

Rationale:

Place value is a foundational concept in Grade 2 mathematics. Understanding tens and ones helps students build number sense and prepares them for addition, subtraction, and larger numbers. This lesson focuses on making place value concrete and meaningful by using hands-on materials rather than worksheets. Students physically build numbers, draw them, and explain their thinking. This supports deeper understanding and confidence in math.

Core Competencies:

Communication	Thinking	Personal & Social
<p>Students explain their thinking using math language (tens, ones, bundle, total). How it applies: Students work with partners and share how they built their number.</p>	<p>Students use critical and creative thinking to solve problems and represent numbers in different ways.</p> <p>How it applies: Students think about how to group objects efficiently into tens and ones. They problem solve when building numbers and explore multiple ways to represent the same number (for example, 34 as 3 tens and 4 ones or 2 tens and 14 ones for extension students). They reflect on how grouping helps their understanding.</p> <p>Students anticipate and correct mistakes when bundling and reflect on why grouping in tens is an efficient strategy.</p>	<p>Students demonstrate responsibility, collaboration, and respect while working with others.</p> <p>How it applies: Students work in pairs, share materials, take turns, and listen respectfully to their partner’s explanation. They take responsibility for building and recording their number accurately. They build confidence by sharing their thinking in a safe classroom environment.</p>

Big Ideas (Understand)

Numbers to 100 can be described, compared, and represented in different ways.

Learning Standards

(DO)

(KNOW)

Learning Standards - Curricular Competencies	Learning Standards - Content
<ul style="list-style-type: none"> Students will represent and describe numbers to 100 in different ways (concrete, pictorial, symbolic). 	<ul style="list-style-type: none"> Students will understand that two-digit numbers are made up of tens and ones.

Instructional Objectives & Assessment

Instructional Objectives (students will be able to...)	Assessment
<ul style="list-style-type: none"> Build a two-digit number using tens and ones. Draw a model of their number. Write how many tens and ones are in the number. Explain their thinking using math language. 	<p>Formative Assessment:</p> <ul style="list-style-type: none"> Teacher observation during partner work. Listening to student explanations. <p>Exit Ticket (Summative Check for Understanding):</p> <p>Students are given one number (example: 46). They must:</p> <ol style="list-style-type: none"> Draw bundles and single ones. Write: ___ tens and ___ ones. Write the number sentence: 4 tens + 6 ones = 46 Answer: "How do you know your answer is correct?" <p>Assessment criteria:</p> <ul style="list-style-type: none"> - Correct number of tens - Correct number of ones - Accurate number written - Clear explanation of thinking

Prerequisite Concepts and Skills:

Ability to count to 100.

Ability to group objects.

Understanding that 10 is a group.

Basic number recognition (two-digit numbers).

Indigenous Connections/ First Peoples Principles of Learning:

Learning is holistic, reflexive, reflective, experiential, and relational.

How it applies: Students learn by physically building numbers using natural materials and by working together in relationship with peers. This lesson connects to land-based ways of learning by emphasizing grouping natural materials and learning through experience rather than abstract worksheets.

Universal Design for Learning (UDL):

Visual (drawing)

Kinesthetic (building bundles)

Verbal (explaining)

Partner work

Choice of materials

Multiple Means of Representation (How students access information):

- Concrete materials (sticks, straws, bundles)
- Visual modeling on the board
- Drawing representations
- Verbal explanation of concepts
- Clear vocabulary anchor chart (tens, ones, bundle, place value)
- Step-by-step modeling before independent work

Multiple Means of Action & Expression (How students show learning):

- Building with materials
- Drawing their model
- Writing numbers and number sentences
- Explaining thinking verbally to a partner
- Exit ticket for independent demonstration

- Option to show learning in more than one way (extension task)

Multiple Means of Engagement (How students stay motivated):

- Hands-on materials
- Partner collaboration
- Real-life land-based connection (grouping gathered items)
- Choice of materials (sticks, beads, straws)
- Positive math mindset language
- Opportunities for movement during partner sharing

Differentiate Instruction (DI):

Low Floor:

- Use numbers 10–40.
- Provide tens/ones mat.
- Small teacher support group.
- Pre-bundled tens available.

High Ceiling:

- Show a number two different ways (ex: $34 = 3 \text{ tens } 4 \text{ ones OR } 2 \text{ tens } 14 \text{ ones}$).
- Compare two numbers and explain which is larger.
- Order three numbers from smallest to largest.

Support for Students Needing More Structure:

- Use smaller numbers (10–40)
- Provide a tens/ones mat template
- Pre-bundled groups of ten available
- Small group support with teacher

- Guided counting together before building independently
- Visual anchor chart left visible throughout lesson
- Sentence starter for explanation:
“I know this is correct because...”

Support for English Language Learners:

- Clear modeling before expectations
- Visual vocabulary posted (tens, ones)
- Partner talk before whole class sharing
- Allow oral explanation instead of written explanation if needed

Extension for Students Ready for Challenge:

- Represent the same number in more than one way ($34 = 3 \text{ tens } 4 \text{ ones OR } 2 \text{ tens } 14 \text{ ones}$)
- Compare two numbers and explain which is greater
- Order three numbers from smallest to largest
- Create a number card for another group to build
- Explain why grouping by tens is efficient

Flexible Grouping:

- Students work in pairs
- Teacher pulls small support group if needed
- Extension students can work independently or as peer helpers

Materials and Resources

- Small sticks or straws
- Elastics for bundling

- Number cards (20–99)
- Recording sheet
- Basket for demonstration
- Exit ticket sheet

Lesson Activities:

Teacher Activities	Student Activities	Time
Introduction (anticipatory set – “HOOK”):	<p>Teacher Activities:</p> <ul style="list-style-type: none"> ● Show a small basket of sticks. ● Tell a short story about gathering berries or wood. ● Count 10 loose sticks. ● Bundle them together. ● Ask guiding questions about grouping. <p>Student Activities:</p> <ul style="list-style-type: none"> ● Participate in counting. ● Share observations. ● Predict why grouping helps. 	10 mins
Body:	<p>Teacher Activities:</p> <ul style="list-style-type: none"> ● Model building 34 using bundles and ones. ● Write expanded form (3 tens + 4 ones = 34). ● Draw visual model. ● Give instructions for partner activity. 	35 mins

	<ul style="list-style-type: none"> ● Circulate and observe. <p>Student Activities:</p> <ul style="list-style-type: none"> ● Work in pairs. ● Pick number card. ● Build number using bundles. ● Draw model. ● Write tens and ones. ● Explain thinking to another pair. 	
<p>Closure:</p>	<p>Teacher Activities:</p> <ul style="list-style-type: none"> ● Bring students to carpet. ● Ask reflection questions: <ul style="list-style-type: none"> ○ Why do we group in tens? ○ How does grouping help us? ● Hand out exit ticket. <p>Student Activities:</p> <ul style="list-style-type: none"> ● Participate in discussion. ● Complete exit ticket independently. 	<p>12 mins</p>

Organizational Strategies:

Students seated in pairs.

Materials pre-sorted in bins.

Clear modeling before activity begins.

Visual example left on board.

Proactive, Positive Classroom Learning Environment Strategies:

Clear expectations before handing out materials.

Use positive language (“I like how you bundled carefully.”)

Encourage growth mindset (“Mistakes help our brain grow.”)

Circulate and support calmly.

Give responsibility (materials manager in each pair).

Anticipated Misconceptions:

- Students may think the “3” in 34 means 3 ones.
- Students may make bundles that are not equal to ten.
- Students may count by ones instead of grouping.

Teacher Response:

- Re-model bundling slowly.
- Ask: “How many are in one bundle?”
- Use guiding questions instead of telling.

Extensions:

Build 3-digit numbers (for advanced students).

Create their own number cards for classmates.

Use base-ten blocks for comparison.

Connect to skip counting by 10s.

Reflections (if necessary, continue on separate sheet):

When planning this lesson, I focused on making place value concrete and meaningful instead of worksheet-based. I intentionally moved from hands-on materials to drawings to written numbers. I also wanted students to see math as connected to real life experiences, such as grouping items

gathered on the land. I considered different learning styles and included low floor and high ceiling options to support all learners. Creating the exit ticket helped ensure I had a clear way to assess individual understanding after partner work.

1. Our Number is: _____

A. Build It

Use your sticks and bundles to build your number.

B. Draw It

Draw your bundles (tens) and single sticks (ones) below.

(Teacher note: leave a large blank box here)



C. Write It

_____ tens and _____ ones

Expanded form:

_____ tens + _____ ones = _____

D. Explain Your Thinking

How do you know your answer is correct?

Exit Ticket – Place Value

Name: _____

My Number: _____

1. Draw the number using tens and ones:

(large blank box)



2. Write how many tens and ones:

_____ tens and _____ ones

3. Write the number sentence:

_____ tens + _____ ones = _____

4. Circle the digit that shows the TENS place in your number.

5. How do you know your answer is correct?

Optional Support Version (Low Floor Option)

(You can make a second version for students who need more structure.)

Instead of open drawing space, include:

Tens:

[] [] [] [] [] []

Ones:

○ ○ ○ ○ ○ ○ ○ ○ ○ ○

Students circle or draw inside boxes.

Optional Extension Version (High Ceiling)

Add at bottom:

Can you show your number in a different way?

Example: $34 = 2 \text{ tens and } 14 \text{ ones}$

Draw it below: