

## General Information

### Lesson Parts & Duration

Total Duration: 1 hour

- Craft: Representing Tens and Ones Using Ten Frames and Paper Chains

### Subject(s)

- Groupings of Tens and Ones; Counting (1.NBT.2)

### Objective

- Students will represent a two-digit number by filling in ten frames.
- Students will write a number sentence in expanded form to equal a two-digit number represented in the ten frame.
- Students will work in partners to create a paper chain to represent a two-digit number and write a matching number sentence in expanded form.

### Materials

- pencil
- red and blue crayons/colored pencils
- base ten blocks: tens and ones
- document camera or whiteboard
- “Ten Frame” student sheet – teacher will need a copy to demonstrate
- colored strips of paper – 2 different colors, 1 inch wide x 8 1/2 inches long (cutting a regular 8 1/2 x 11 piece of paper will work)
- index cards or 8 1/2 x 11 piece of paper cut up in 1/4 pieces – one piece per student
- tape or glue or stapler
- **Optional printable:** “Ten Frame” student sheet (pages 6-7)
- **Optional:** “Break Up Your Day” brain/movement break ideas (page 8)

### Throughout this lesson, you will find:

- ☀ **Scripted Text** indicates things that need to be said directly. Bullets starting with a “T” followed by *italicized type* indicate scripted text
- ☀ **Clarifiers** within scripted text are in orange
- ☀ **Teacher Directions** indicate things you should be doing
- ☀ **Side notes** provide helpful hints, ELL strategies, differentiation and information
- ☀ **Break Up Your Day** (Brain/Movement Breaks) are in green boxes (at the end)

### Remember!

Quality over quantity. All components do not have to be accomplished; lessons may be ended at any time and resumed later.

## Instructional Plan: 60 minutes

Have students sit on the floor or at their tables to see the document camera.

### Introduction

*T* Let's practice counting by tens and ones using our base ten blocks.

Show a number of tens and ones. Count them out-loud together while pointing to the blocks. Do several examples. Have students come up to be the teacher and count them with the class.

#### Note:

Allow 5 min  
for practice.

### Activity

Have a copy of the "Ten Frame" sheet and red and blue color crayons/markers/colored pencils ready to demonstrate the activity. Pass out the sheets to the students. Students should be sitting at their tables and should be able to see the document camera to follow along.

*T* Write your name on your paper. See example & model so students can follow.

*T* Let's count how many boxes are in this grid. Point to the first ten frame on the page.

*T* 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. Point to the boxes starting on the top row going from LEFT to RIGHT. Then continue pointing and counting the next row of boxes going from LEFT to RIGHT.

*T* There are ten boxes in each grid.

*T* This is called a ten frame.

*T* Let's practice just pointing and counting on our own ten frame.

*T* Notice the direction I go in when I point.

*T* We always start in the top left corner and go left to right.

*T* Do it with me. Make sure students point to their sheet and count out-loud with you.

*T* 1, 2, 3, 4, 5.

*T* I got to the end of the row.

*T* Where should I go next?

*T* Down? Point to the box directly below. Wait for students to answer. Answer: No.

*T* In the middle? Point to a box in the middle of the second row. Wait for students to answer. Answer: No.

*T* All the way to the left? Point to the first box in the second row. Wait for students to answer. Answer: Yes.

*T* Right!

*T* We have to sweep all the way across to the other side and go left to right.

*T* Just like how we would read in a book.

*T* Now let's try counting more than one ten frame.

*T* Start at the top left again. Make sure students point to their sheet and count out-loud with you.

*T* 1, 2, 3, 4, 5

*T* Now go to the next row.

*T* Left to right.

*T* 6, 7, 8, 9, 10.

*T* There's another ten frame under it!

*T* We should keep counting.

*T* After 10 is 11, 12, 13, 14, 15. Make sure students point to their sheet and count out-loud with you.

*T* Where should I go now? Wait for students to answer. Answer: Next row, first box.

*T* Correct!

*T* 16, 17, 18, 19, 20.

*T* We got all the way to 20!

*T* Before we continue with our activity, we are going to take a break and play "Human Tens and Ones".



## Make sure to “Break Up Your Day!”



Now is a great time to take a break and get students re-energized.

Please see directions for “Tens.” (see page 8)

*T* That was fun!

*T* Now let's get back to our ten-frame activity.

*T* Please take out a blue and red crayon.

*T* We are going to fill in our ten frames to make a number.

*T* Let's make the number 13.

*T* Pick up our red crayon and draw circles with me.

*T* Remember we start at the top and go left to right.

*T* Count with me as we draw.

*T* 1, 2, 3, 4, 5. Draw red circles in each box as you count.

*T* Now go to the next row and go left to write.

*T* 6, 7, 8, 9, 10.

*T* We filled up the ten frame!

*T* Are we done?

*T* Nope, we need to go to the next ten frame to get to 13.

*T* Since we filled up our ten frame, I want you to use your blue crayon to draw the rest of the circles in the next ten frame.

*T* Keep counting and drawing with me.

*T* 11, 12, 13. Draw blue circles in each box as you count.

*T* Great job!

*T* Now let's count them again.

*T* Is there a faster way to count these circles without counting every box one at a time? Wait for students to answer.

*T* Since this top ten frame is full, how many circles are there? Wait for students to answer. Answer: 10.

*T* Right, 10!

*T* Since I see that the ten frame is full, I don't need to count every circle.

*T* I can just point to it and say 10!

*T* Let's try it the fast way.

*T* 10! Point to the top ten frame.

*T* Count on.

*T* 11, 12, 13. Point to the circles from left to right in the bottom ten frame.

*T* Wasn't that faster?

*T* Now let's write the number sentence in expanded form.

*T* Remember, expanded form means to write the number in a number sentence by breaking it apart into tens and ones.

*T* How many tens are there?

*T* Look at how many full ten frames we have. Point to the top ten frame.

*T* We have 1 ten, so let's write 1 on the first blank to represent our tens. Wait to see if a student corrects you. Answer: It's not just 1, there are 10 circles.

*T* Oops! I made a mistake! There isn't just 1 box filled.

### Differentiation:

Pair struggling students with a partner. Or pull a small group to the side to work with you.

Show 13.

○	○	○	○	○
○	○	○	○	○

○	○	○		

$$\underline{10} + \underline{3} = \underline{13}$$

Show 13.

○	○	○	○	○
○	○	○	○	○

○	○	○		

$$\underline{10} + \underline{3} = \underline{13}$$

- T** There are 10 boxes filled so we have to write 10 on the first blank to represent our tens. **Write 10 in the tens blank.**
- T** Remember, the 1 in the tens place is not just one, it represents 10.
- T** How many ones do we have?
- T** Look at how many we have left in the next ten frame. **Point to the circles from left to right in the bottom ten frame.**
- T** 1, 2, 3.
- T** We have 3 ones.
- T** Let's write 3 on the second blank to represent our ones. **Write 3 in the ones blank.**
- T**  $10 + 3 = 13$ .
- T** Let's try one more together.

Do the next problem on the sheet together. Go through the steps just like you did with the first problem. Then let the students continue to work independently on the rest of the sheet.

Name \_\_\_\_\_ **ANSWER KEY**

TEN FRAMES

Show 13.

○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○

$10 + 3 = 13$

Show 15.

○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○

$10 + 5 = 15$

Show 14.

○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○

$10 + 4 = 14$

Show 17.

○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○

$10 + 7 = 17$

Show 11.

○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○

$10 + 1 = 11$

Show 18.

○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○

$10 + 8 = 18$

Show 16.

○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○

$10 + 6 = 16$

Show 19.

○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○

$10 + 9 = 19$



**Make sure to "Break Up Your Day!"**



Now is a great time to take a break and get students re-energized. See our list of engaging movement and brain break ideas to get your students moving and ready to refocus! (see page 8)

### Paper Chain Craft

Bring students back together for the craft. Have colored strips of paper and glue/stapler/tape, and index cards/quarter sheets of paper available.

- T** You did a great job filling in our ten frames.
- T** Now we are going to make paper links to represent one of the numbers you made with your ten frames.
- T** I'm going to demonstrate how to do it.
- T** I will choose one of the numbers from my sheet to make with my paper links.
- T** I think I will choose the number 13.
- T** Just like my circles we drew on the tens frames, I will use 2 different colors.
- T** One color for my tens, and one color for my ones.

### Note:

If using glue stick or glue, you need to pinch the ends together and count to at least 20 for the paper to stay together.

**T** To make my ten, how many links do I need? **Wait for students to answer. Answer: 10.**

**T** I'll choose one color and I'll need ten strips.

**T** Watch how I make a circle and glue it together. **Form a circle with one strip of paper and glue/tape/staple together the ends.**

**T** Then take another strip and put it through the circle and glue the ends together. **Form a circle with another strip of paper by putting the strip through the first circle and glue/tape/staple together the ends. You should be forming chain of links.**

**T** We should see a chain forming!

**T** I'll keep doing this until I have ten links to represent my ten. **Finish the chain of ten links.**

**T** Now we need to add my ones.

**T** How many ones do I need? **Wait for students to answer. Answer: 3.**

**T** I need 3 ones.

**T** I'll take another color to represent my ones. **Take 3 strips of another color.**

**T** Just like how I linked my other strips together, I'll attach 3 more of the other color for my ones. **Continue to attach the 3 strips onto the chain to finish.**

**T** Ta-da! I have my chain to represent 13.

**T** If I count it the fast way, I can see that the first color is my ten.

**T** 10, and then count on by ones for the other color links. **Point to the ten links and say ten.**

**T** 11, 12, 13. **Point to the ones while counting out-loud.**

**T** Ready to make your paper chain?

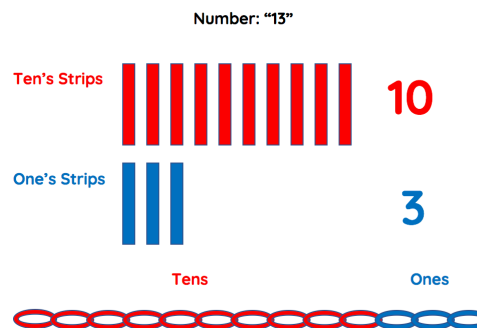
**T** I'll put you in partners so you can work together to glue the links together.

**T** You will make one chain together.

**T** Choose one of the numbers you drew on your sheet.

**T** Look at the colored circles on your sheet to help you figure out how many strips to get for your tens and ones.

#### Paper Chain: Showing Tens and Ones



**Put students in partners. Call small groups of students at a time to come get the materials they need. Walk around to assist with the craft and make sure they are following directions. You may need to cut more strips of paper if you run out. Once they have finished their chain, have the partners write their number sentence on the index card.**

#### Note:

**Pair struggling students with a partner who understands the concept.**

**After they finish the project, there are two options:**

**Option 1:** Partners glue/staple/tape the index card to the end of the chain. Display the chains.

**Option 2:** For a game, mix up their index cards and pass them out again. Have the chains laid out or hanging around the room. Partners have to find the chain that matches the number sentence on their index card.



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Now is a great time to take a break and get students re-energized. See our list of engaging movement and brain break ideas to get your students moving and ready to refocus! (see page 8)

Name \_\_\_\_\_

## TEN FRAMES

Show 13.



\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Show 15.



\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Show 11.



\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Show 18.



\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

**Show 14.**



\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

**Show 17.**



\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

**Show 16.**



\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

**Show 19.**



\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

## Make sure to “Break Up Your Day!”

These can be used in the middle of a lesson or at the end of your lesson.

Here are a few engaging movement and brain break ideas to get your students moving and ready to refocus!



### Break Up Your Day: The Wiggles!



- Let's get our wiggles out before we continue!
- Stand up and shake out your arms (4-5 seconds to shake) Remember! No one should get hurt! ...now FREEZE!
- Now shake the wiggles out of your right leg...FREEZE!
- Now shake the wiggles out of your left leg...FREEZE!
- Now shake all the wiggles out of your whole body....FREEZE!
- And sit back down quietly please...Thank you!



### Break Up Your Day: Body Stretches!



**10 minutes**

**FORMATION:** Standing at desks

- Have students begin the day with a series of simple activities lasting 30 seconds or more: jumping jacks, knee lifts, flap arms like a bird, hopping, scissors (feet apart then cross in front, feet apart then cross in back)...
- Follow each activity with a basic stretching movement:
- Reach for the sky runner's stretch
- Butterfly stretch (sit with bottom of feet together)
- Knee to chest, rotate ankles, scratch your back

**Hold stretches for 10 - 30 seconds. Repeat a different simple activity followed by a new basic stretch as many times as desired.**



### Break Up Your Day: Tens!



- Students stand in a circle.
- Starting with one student, the student counts out-loud starting with the number 1.
- The next student going clockwise says 2. Students continue to count until the student says 10. When a student says a ten (or a multiple of ten. Example 20, 30, 40, 50 etc.) the student sits down.
- Continue counting until there is only one student standing.
- To differentiate, the class can count to a smaller number like 30 and then the next student starts over at 1 again once you reach 30.
- To make is harder, class can count by 2's.
- Students who are sitting or standing may not talk or help. If a student says the wrong number or doesn't remember or isn't listening, he/she sits down.