General Information

Lesson Parts & Duration

Total Duration: 2 to 2 ½ hours

- Segment 1: Match Me Minus 1: Subtraction (45-60 Minutes)
- Segment 2: Race to Zero: Subtraction with a Number Line (45-60 Minutes)
- Segment 3: Subtraction with a Number Line Practice (20-30 Minutes)

Subject(s)

- Subtraction within 10 (K.OA.A.5)

Objective

- Students will practice subtraction within 10 using manipulatives.
- Students will practice subtraction within 10 using a number line.
- Students will demonstrate knowledge and understanding of subtraction within 10.

Materials

- blank paper
- math manipulatives (about 15 for each student)
- pencil & crayons/colored pencils
- document camera or whiteboard
- **Optional:** printable "Exit Slips" (pages 11-12)
- **Optional:** printable "Break Up Your Day" brain/movement break ideas (pages 13-14)

Instructional Setting

- Seated on the carpet or meeting area

Throughout these lessons, 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: Segment 1: 45-60 minutes

Subject

- Subtraction within 10

Objective

- Students will practice subtraction within 10 using manipulatives.

Materials

- blank paper
- scissors
- pencil/crayons
- math manipulatives (about 15 per student)
- pencil & crayons/colored pencils
- document camera or whiteboard

Students will be making the following materials with a partner. They will need to make one set of cards per 2 students.

Introduction

T *Today we will be playing the game Match Me minus 1. This game will help us practice our subtraction.*
T *First, we will need to make some materials to use when we play this game.*
T *We will need some number cards. We are going to make these with a partner.*

Materials Creation

T *We need a partner for this.*
T *When I say the magic word, which is* SUBTRACTION, *you will stand up and find someone to be your partner.*
T *I will be counting backwards from* 10, *and by the time I get to zero, you need to be sitting respectfully next to your partner.*
T *Please remember to* ASK *your friends if they would like to be your partner.*
T *Would you please be my partner? vs You are my partner!*
T *Ok,* SUBTRACTION!

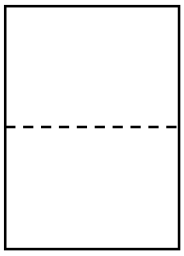
Begin counting slowly backwards from 10. You may also need to circulate and help students find a partner and sit together nicely once they have done so.

T *Fantastic!*
T *Thank you for finding a partner so quickly and respectfully!*
T *Since you will be completing this with a partner, you will need to be sure to take turns when working.*
T *I will be giving directions step by step and you will be following along.*
T *Please be sure not to work ahead and listen carefully to the instructions.*
T *I will give you and your partner a piece of paper to work on together.*
T *You will also need to get a pair of scissors to share.*
T *After you have your materials, please go back to your desk and wait for directions.*

Pass out one piece of paper to each set of partners. Be sure to have a piece for yourself to use as an example.

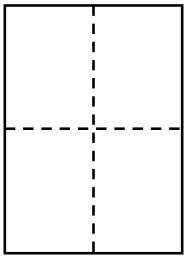
T *Decide who will do the first direction with me. Then you will switch.*
T *When I say the magic word, which is* MATH, *then you can begin, but please do not start until you hear the magic word!*

Step #1:



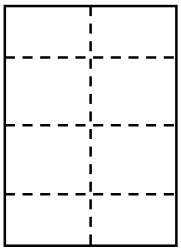
- ***T*** *The person who will be going first, please hold up the piece of paper.*
- ***T*** *Take your paper and fold it once, horizontally.* Show students using your example paper.
- ***T*** *...MATH!*
- ***T*** *Hold your paper up when you have finished this step.*
- ***T*** *Once you have made your first fold, hand the paper to your partner for the next step.*

Step #2:



- ***T*** *Partner 2, fold the paper again, vertically.* Show students using your example paper. Your paper should be folded into fourths at this point.
- ***T*** *...MATH!*
- ***T*** *Hold your paper back up when you have finished this step.*
- ***T*** *Once you have made the second fold, hand the paper to your partner for the next step.*

Step #3:

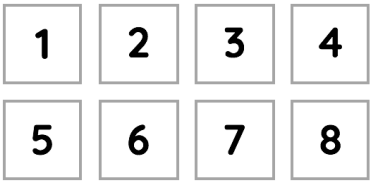


- ***T*** *Partner 1, fold the paper one more time, horizontally.* Continue to show students using your example paper. You paper should be folded into eighths.
- ***T*** *...MATH!*
- ***T*** *Hold your paper back up when you have finished this step.*

Step #4:

- ***T*** *Partner 1, unfold the paper and hand it to your partner.*
- ***T*** *Partner 2, using your scissors, cut the paper on the fold lines you have just created.*
- ***T*** *You should have eight pieces when you are done cutting.*
- ***T*** *...MATH!*
- ***T*** *Hold your hand up when you have finished this step.*

Step #5:



- ***T*** *Pass the eight pieces to your partner.*
- ***T*** *Partner 1, take your pencil and write your numbers, 1-8, on the cards.*
- ***T*** *You should write one number on each card.* Show students how to write the numbers big enough so they can be seen. There should be one number on each card.
- ***T*** *...MATH!*
- ***T*** *Hold your hand back up when you have finished this step.*

As students are creating their cards, be sure to walk around and monitor student progress and help where necessary.

While students are finishing their number cards, you can be prepping the math manipulatives for the game (if they haven't already been organized). Each pair of students will need 15 manipulatives. You could place them in bags or in piles on the space where they sit on the meeting spot.

- ***T*** *After you are finished with your cards, please bring them back to the meeting area/carpet and sit with your partner.*

Match Me Minus 1

As you give the directions, show students under a document camera or somewhere they will be able to watch you play. Write the following sentence on a white board or piece of paper to be used while students are playing the game: ____ is one fewer than ____.

- ***T*** *We are going to use our number cards to play this game.*
- ***T*** *I have also given you some math manipulatives that we will use to play this game.*
- ***T*** *Please remember that when we are using manipulatives today, we are using them to help us practice our math skills.*
- ***T*** *They are not toys right now.*
- ***T*** *They are not for building or playing with.*
- ***T*** *Boys and girls, I will need a partner to help me.* Choose a student to help you.
- ***T*** *My partner and I are going to show you how to play.*
- ***T*** *First, we will need to put our number cards face down so we can't see the numbers.* Model this step.
- ***T*** *Your partner will need to close their eyes.* Have student helping you close his/her eyes.
- ***T*** *When it is your turn, first you will choose a number card.* Model selecting a card.
- ***T*** *Use your manipulatives to build the number that you choose.* Match the number you picked with manipulatives.
- ***T*** *Then you will tell your partner "Match Me minus 1".*
- ***T*** *Your partner will then build a group of manipulatives that is one less than your group.* Have student helping you model this step.
- ***T*** *Your partner will use our sentence to talk about the groups that you have built.*
- ***T*** *____ is one fewer than ____.* Help student to use this sentence to describe both numbers.
- ***T*** *Again, please remember that when we are using manipulatives today, we are using them to help us practice our math skills.*
- ***T*** *I will be looking for mathematicians that can use our tools respectfully and responsibly today.*

You can model how to play the game a few more times so that students understand.

Once you have modeled how to play, have students begin playing with their partners. Allow students to play for about 10 minutes. While they are playing, be sure to circulate around to check for understanding, help students who may need extra support, and ensure students are on task.

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 pages 13-14)

Instructional Plan: Segment 2: 45-60 minutes

Subject

- Subtraction within 10

Objective

- Students will practice subtraction within 10 using a number line.

Materials

- blank paper
- pencil & crayons
- dice (1 per group of 2 students)
- one manipulative per student
- document camera or whiteboard
- **Optional:** printable "Exit Slips" (page 11)

Students will need to set up their number line on their paper before beginning to play the game.

Introduction

T *We will be continuing our practice with subtraction.*
T *This time we will be using another strategy.*
T *A strategy is a certain way we do something to solve our problem.*
T *This strategy we will be using: a number line.*
T *First, we will learn how to make a number line, then we will learn how to play the game* "Race to Zero."
T *Boys and girls, you are going to play this game with a partner, so like before, I will give you and your partner one paper to share.*

> **Partner Protocol**
> - You can have them play with someone sitting close to them or have them stand up and find a partner in 10 seconds (count backwards from 10 and they need to be sitting next to their partner by the time you get to zero)

T *We need to find a different partner for this.*
T *When I say the magic word, which is* SUBTRACTION, *you will stand up and find someone to be your partner.*
T *I will be counting backwards from* 10, *and by the time I get to zero, you need to be sitting respectfully next to your partner.*
T *Please remember to* ASK *your friends if they would like to be your partner.*
T *Would you please be my partner? vs You are my partner!*
T *Ok,* SUBTRACTION!

Begin counting slowly backwards from 10. You may also need to circulate and help students find a partner and sit together nicely once they have done so.

T *Fantastic!*
T *Thank you for finding a partner so quickly and respectfully!*

Setting up the Paper

- ***T*** *Since you will be completing this with a partner, you will need to be sure to take turns when working.*
- ***T*** *I will be giving step by step directions and you will be following along.*
- ***T*** *Please be sure not to work ahead and listen carefully to the instructions.*
- ***T*** *I will give you and your partner a piece of paper to work on together.*
- ***T*** *Once you have your paper, please go back to your desk, you may sit with your partner, and get out your pencil.*
- ***T*** *Hold your pencil up in their air when you are ready for the directions.*

Pass out one paper to each set of students.

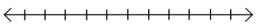
- ***T*** *Both partners will need to write their name on the paper somewhere on the top.*
- ***T*** *Once you have done that, decide who will do the first step and have them hold the pencil back up in their air*
- ***T*** *When I say the magic word, which is MATH, then you can begin, but please do not start until you hear the magic word!*

Step #1:

- ***T*** *Partner 1 draw a horizontal line in the middle of your paper.* Show students using your example paper.
- ***T*** *...MATH!*
- ***T*** *Hold your pencil up when you have finished this step.*
- ***T*** *Then hand the pencil to your partner.*

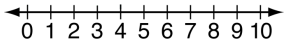
Step #2:

- ***T*** *Partner 2: we will be drawing 11 little lines over top (perpendicular) to the line your partner just drew.*
- ***T*** *Watch as I demonstrate first.* Show students how to equally space the lines to create a number line
- ***T*** *...MATH!*
- ***T*** *Hold your pencil back up when you have finished this step.*
- ***T*** *After you draw the little lines pass the pencil back to your partner for the next step.*



Step #3:

- ***T*** *Partner 1: we will be adding the numbers to our number line.*
- ***T*** *Starting with zero, we will write one number under each little line until we get to 10.*
- ***T*** *Watch as I demonstrate first.* Show students how to add the numbers under the little lines
- ***T*** *...MATH!*
- ***T*** *After you write the numbers, please put your pencil away and bring your paper with the number line on it back to the meeting area/carpet with your partner*



As students are creating their number lines, be sure to walk around and monitor student progress and help where necessary.

Race to Zero

Once all students are back on the carpet/meeting area, begin explaining how to play the game Race to Zero.

- ***T*** *We will be using our number line to play the game Race to Zero.*
- ***T*** *I will need a partner to help me out.* **Choose a student to be your partner.** Be sure that you are demonstrating the game under a document camera or somewhere that all students are able to see what you are doing.
- ***T*** *Each partner will have a manipulative; you will share the die and the number line you made together.*
- ***T*** *You will need to decide who will go first. I will go first to show you how to play.*
- ***T*** *We will both put our manipulatives on the number 10 on our number line.*
- ***T*** *I will roll the die and move my manipulative that many spaces down the number line.* If you roll a 3, move three numbers down the number line, 10-3=7
- ***T*** *Now your partner will take their turn.*
- ***T*** *They will roll and move their piece the number of spaces they roll.*
- ***T*** *We will keep taking turns until someone is able to land on zero.* You will need to demonstrate what happens once students get down to the last few numbers. They will need to land exactly on zero. So if their piece is on number 2 and they roll a 6, they lose their turn. You can "fast forward" your demonstration game and move both of your pieces closer to zero to demonstrate this.
- ***T*** *In order to win, you will need to land exactly on zero.*
- ***T*** *That means if you are on number 3 and you roll a 5, you will lose your turn and it will be your partners turn to try.*
- ***T*** *If my piece is on 1, I have to roll a 1 to win the game.*
- ***T*** *The first person to land on zero is the winner.*
- ***T*** *Once you have a winner, you can play again.*
- ***T*** *Move your pieces back to 10 and start all over again.*
- ***T*** *It is time for you to try.*
- ***T*** *Make sure you are sitting shoulder to shoulder next to your partner with your number line in the middle*
- ***T*** *I will pass out the manipulatives and dice.*
- ***T*** *Once you have your materials you may begin playing the game.*

Pass out one manipulative to each student and one die for each set of partners to share. Allow students to play for 10-15 minutes. While they are playing, be sure to circulate around to check for understanding, help students who may need extra support, and ensure students are on task.

Exit Slip/Extension "My Subtraction Sentences"

Pass out the "My Subtraction Sentences" exit slip (page 11) or a piece of blank paper. Demonstrate how to generate the subtraction sentence from the game. Example: If you piece is on 7 and you roll a 2 the subtraction sentence you would write down would be 7-2=5.

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 pages 13-14)

Instructional Plan: Segment 3: 20-30 minutes

Subject

- Subtraction within 10

Objective

- Students will demonstrate understanding of subtraction within 10 using various strategies

Materials

- blank paper
- pencil & crayons
- document camera or whiteboard
- math manipulatives (about 15 per student) (optional if student choses to use them)
- **Optional:** printable "Exit Slips" (page 12)

Introduction

T *We have been practicing many different strategies for subtraction today.*
T *First, we used manipulatives when we played match me minus 1.*
T *Then we used a number line to play race to zero.*
T *There are many more strategies you can use like counting on your fingers or drawing a picture.*
T *Now you are going to show all that you know about subtraction strategies.*

Pass out printable exit slip "Subtraction Sentences" (page 12) or a piece of blank paper to each student, be sure to keep one for yourself to use as an example.

****If you passed out the exit slip, skip "Setting up the Paper"**

Setting up the Paper

T *I am going to pass out a piece of paper to each student.*
T *You will NOT be doing this activity with a partner, so everyone will need their own piece of paper.*
T *Once you have your paper, please go back to your desk and write you name at the top.*
T *Please hold your pencil in the air when you have your name on your paper.*
T *Fold your paper along with me: first in half horizontally.*
T *Then in half again and one more time.*
T *Open your paper back up; you should have eight spaces on your paper.*
T *Trace the lines of the folds to create the boxes.*
T *Write the following problems on your paper, one in each box, don't solve them just yet!* Read these aloud for students to copy into each box. Repeat each as necessary.

- 7-2= ___
- 5-1= ___
- 9-9= ___
- 6-4= ___
- 2-1= ___
- 8-3= ___
- 1-1= ___
- 10-3= ___

T *Please hold your pencil back up in the air when you are done writing the problems.* Pause and give students a chance to finish writing the problems

Solving Subtraction Sentences

T *Now turn your paper over.*
T *We are going to draw a number line for you to use, if you'd like, when you are solving the problems.*

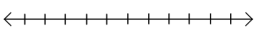
T *When I say the magic word, which is MATH, then you can begin, but please do not start until you hear the magic word!*

Step #1:

T *Draw a horizontal line in the middle of your paper.* Show students using your example paper.
T ...MATH!
T *Hold your pencil up when you have finished this step.*

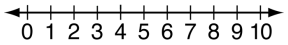
Step #2:

T *Draw 11 little lines over top (perpendicular) to the line your partner just drew.*
T *Watch as I demonstrate first.* Show students how to equally space the lines to create a number line
T ...MATH!
T *Hold your pencil back up when you have finished this step.*



Step #3:

T *Write the numbers 0-10 on your number line.*
T *Starting with zero, we will write one number under each little line until we get to 10.*
T *Watch as I demonstrate first.* Show students how to add the numbers under the little lines
T ...MATH!



As students are creating their number lines, be sure to walk around and monitor student progress and help where necessary.

T *You may also use manipulatives to solve the problems if that is the strategy that you chose.*
T *Please remember that when you are using manipulatives, you are using them to help you practice your math skills.*
T *They are not toys right now.*
T *They are not for building or playing with.*
T *Please raise your hand if you would like to use manipulatives to solve your problems today.* Pass out about 15 manipulatives to each student who requests them.
T *When I say the magic word, SUBTRACTION, you may begin solving your problems.*
T *You can use any of the strategies we have practiced today or any others that you may know.*
T *When you have finished solving, please put your paper* <designate a spot in the room for the papers to go: on a table or counter would be a good spot> *and you may* <give students a choice for finished activities: reading a book quietly is always a good option!> *when you are finished.*
T *Okay,* SUBTRACTION.

Be sure to collect the student work and place it somewhere for the classroom teacher to see when he/she returns.

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 pages 13-14)

Name: _____ANSWER KEY_____

Exit Slip: Segment 3

Subtraction Sentences

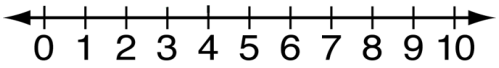
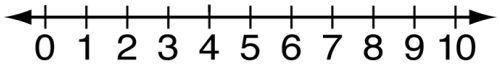
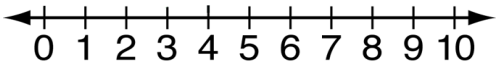
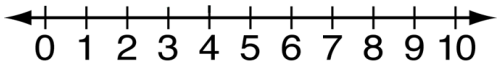
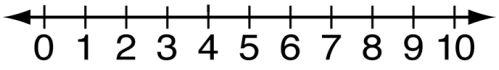
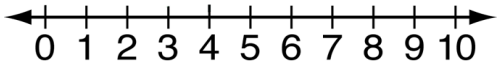
7-2= 5	5-1= 4
9-9= 0	6-4= 2
2-1= 1	8-3= 5
1-1= 0	10-3= 7

Name: _____

Exit Slip: Segment 2

My Subtraction Sentences

Write subtraction sentences each time you roll the die!

Example: $7-2=5$  	
 	
 	

Name: _____

Exit Slip: Segment 3

Subtraction Sentences

7-2= _____	5-1= _____
9-9= _____	6-4= _____
2-1= _____	8-3= _____
1-1= _____	10-3= _____

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 Spell!

- We are going to use our bodies to practice making some letters of the alphabet. Please stand up quietly.
- When I say a letter, you use your arms, legs, head, and body to see if you can make that letter!"
- Choose 5-6 letters to have students make with their body. You could even try some simple words or letters that their names start with to change it up! Have them sit down quietly when they are finished.

Break Up Your Day: Guess My Number!

- Begin by showing an example:
- "I am thinking of a number between 1 and 10. Who would like to guess my number" Call on a student.
- When they take a guess, let them know if your number is bigger or smaller than what they guessed (ex: Student guesses 5, your number is 7, so you would say "My number is bigger than 5." Then call on another student to guess).
- Keep giving clues until students guess the number.
- You could play again with the teacher picking the number if students need reinforcement, or you could have a student come up and pick the number (have them tell you what the number is so you can help them).

"Break Up Your Day!" continued

Break Up Your Day: Sorting Kids!

- "Let's get some of our wiggles out by sorting ourselves into different groups.
- We will sort first by boys and girls. If you are a girl, stand on the right (show which direction that is) and boys on the left. SORT!"
- Once they have sorted themselves, have them count how many students are in each group and compare the groups. Which group has more, which has fewer?
- "Now let's sort by our clothes. If you have red on today, stand on the right, if you do not, stand on the left. Ok, SORT!"
- Again, once they are sorted, have them count the groups and compare them.
- Repeat this sorting with other colors or patterns for clothes, types of clothing, shoes/sandals, etc. You could sort by likes/dislikes as well: Likes cookies vs. likes cake; likes fruit vs. likes vegetables; likes math vs. likes reading.
- "Thank you for sorting with me today! Let's all return to our spots respectfully and quietly."