Bailey Education Group
2nd Grade MATH

Unit 14: Developing foundations of multiplication through exploring even and odd numbers | **Days in Unit: 10**

Envision Math Alignment:
2.OA.3: Topic 5 – Lesson 7

Unit Summary:
The focus of this unit is to explore the structure of equal groups using odd and even numbers. This supports doubling strategies for addition and subtraction fluency to 20, and helps set the stage for the introduction to multiplication and division in Grade 3. At first glance distinguishing between odd and even seems like a simple straight-forward skill, but it is being used in this unit to build a strong foundational base for conceptual understanding of equal groups and the sophisticated strategy of using doubles $\pm n$.

Focus Standards and *Specific Guidance for this Unit *(The MCCR Standard is listed along with specific guidance on what part of the standard to teach in this unit)*

Operations and Algebraic Thinking — 2.OA

C. Work with equal groups of objects to gain foundations for multiplication.

2.OA.C.3. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

LEARNING OUTCOMES:
- Model with objects and write equations to express even and odd numbers and connect this understanding to the pattern of skip counting by 2's

LEARNING TARGETS:
- **2. OA.3.1** Identify even numbers.
- **2. OA.3.2** Identify odd numbers.
- **2. OA.3.3** Use skip counting patterns to determine even or odd numbers. (skip count by 2's).
- **2. OA.3.4** Create an equation that shows an even number as a sum of doubles.

Unit Vocabulary:
- Equal
- Odd
- Even
- Pair
- Pairing
- Doubles
- Pattern
- Skip-Counting
- Equation
- Sum
- Addend
- Identify

Essential Questions:
- What is odd? What is even?
- How do I determine if a number is odd or even?
- What strategies can I use to tell if a number is odd or even?
- How are odd and even numbers identified on the number line?
- How can I create an equation that shows an even number as a sum of doubles?

Unit 14: Developing foundations of multiplication through exploring even and odd numbers
Suggested Instruction Time: 10 days

ONLINE INSTRUCTIONAL VIDEOS:

Skip counting by 2s:
https://www.youtube.com/watch?v=wcxaDBbOR5U

Learning odd and even:
https://www.youtube.com/watch?v=uuD5JlrMnAk

https://www.youtube.com/watch?v=oesINcpSuZc

Even or Odd?
https://www.youtube.com/watch?v=XhS8mFdt1R0

Even Numbers Song:
https://www.youtube.com/watch?v=Ei19HMn1BxM

Odd Numbers Song:
https://www.youtube.com/watch?v=hMSd7wGuTT4

INTERACTIVE SMARTBOARD ACTIVITIES
(Use to introduce lessons daily and/or for technology centers):
Note: The students can take turns answering the questions and the teacher can also allow the student to maneuver the mouse and actually host the game.

Doorway Odd or Even:
http://www.doorwayonline.org.uk/number/oddandeven/

The Dragon's Eggs:
http://www.ictgames.com/dragonmap.html

Fruit Shoot Odd Even:
http://www.sheppardsoftware.com/mathgames/earlymath/Fruit_shoot_odd_even.htm

2OA3 Online activities:
http://www.internet4classrooms.com/common_core/determine_whether_group_objects_up_20_operations_algebraic_thinking_second_2nd_grade_math_mathematics.htm

http://www.bbc.co.uk/schools/starship/maths/games/number_jumbler/small_sound/standard.shtml

WHOLE GROUP ACTIVITIES:
(Instructional strategies, guided practice, independent practice)

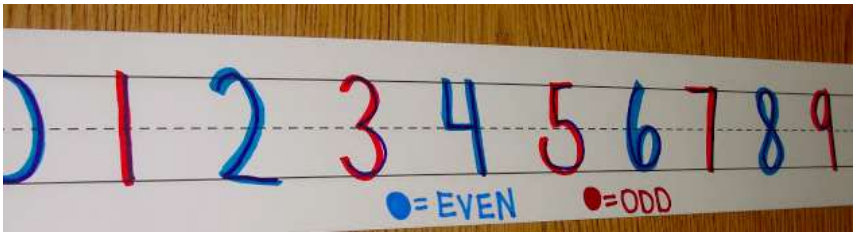
Odd and Even Boots:
https://www.youtube.com/watch?v=Kroh9bbsGfc

Teacher wears boots labeled odd and even. Step first with the odd foot. Count and state odd and even as you walk around the class. This demonstrates odd numbers and even numbers. Have students take turns wearing the boots. You can use large rain boots that will fit anyone.

Odd/Even Number Line-
Materials Needed: Sentence Strips

Model making a number line and identify even/odd on a sentence strip.

Then have students make one with number line to 12 and trace the even/odds to match the class number line. Then, they can use this as a resource for our other activities during the unit.



Pass the Paper-
Materials Needed:
- Rubber Ball
- 1 pencil per student
- 1 sheet of paper per table group

Student's desks should be organized into cooperative groups of four or of equal sizes for this activity.

Directions:
1. Ask, "Who can count the class the fastest?" Have a student stand up and count the class. Most likely, a student will count by ones to accomplish this task. Next, ask, "Is there an easier/faster way to count everyone." If students don't come up with it themselves, see if you can lead them to counting by twos. It is a much faster way of counting groups of people. If they still don't get it demonstrate it for them.
2. Next, bounce the ball while students skip count in unison to its bounce. This will help them get warmed up for the next activity.
3. Ask for a student to come to the front of the class and skip count while he/she bounces the

ball. Give a few kids a chance to do this in front of the class.
4. Have each student get a pencil out. Next, pass out one piece of paper per table group.
5. Explain: "We are going to have a race. Each table group has one piece of paper. When I say "go" the first person will write 2, the next will write 4, and so on until your table group has written by two's all the way to 100." When playing "Pass the Paper" explain that the paper should be passed clock-wise.
6. Next, check for understanding. Have the students repeat the instructions.
7. The first table group that has successfully skip counted all the way to 100 lets the teacher know they are done by putting their pencils down and sitting quietly.
8. Review: "What are some reasons it is important to know how to skip count?"

Modifications for Varied Abilities: There are several ways that you can play "Pass the Paper." Skip counting by 2s, 3s, 4s, etc. is only one-way. You can also have students play using addition/subtraction problems. For example, you could have each student write down one addition/subtraction problem that all equals 7 before they pass the paper. The group that has the most by the end of five minutes might be the winning group.

Buddy Up-
Materials Needed:

- Odd or Even Poster- https://betterlesson.com/lesson/524251/odd-or-even
- Place Value Mat- https://betterlesson.com/lesson/resource/2611271/place-value-mat
- Counter Cubes

The students build the number 4 with their ones cubes, and group them into "buddies." I use the term, "Buddy Up!" Explain that because each one of the cubes has a buddy, or can be grouped into 2, the number is even. Challenge the students to work in partners and use their cubes to find other numbers that are even. I create two columns on the board, one for odd and one for even. I write one digit numbers 1-9 on the board. The students choose a number and build it on their Place Value Mat. Have the students group their cubes into "buddies." Ask them if every cube has a "buddy." When they explain that there is one without a buddy, explain to them that this is an "Odd Man Out." Challenge students to use their cubes to identify other odd and even numbers. As the students build each number, I circulate, checking in with students and having them explain their thinking.
I point out our classroom Odd or Even Poster, which serves as a reminder of what we've just explored.

Math in Literature-
One Odd Day by Doris Fisher- http://tunein.com/audio-books/One-Odd-Day-p694111/
My Even Day by Doris Fisher- https://www.youtube.com/watch?v=Bk4HftjD8PQ

Read aloud the books One Odd Day and My Even Day by Doris Fisher and Dani Sneed. Before the read aloud, tell students that the word "odd" can mean more than one thing. Ask them if they know the meanings of the word odd. Do they think the story will be all about odd number, strange things happening, or both? Students identify the odd and even numbers hidden throughout the book, stopping on each page to identify these numbers.

An Odd Game
Materials Needed: paper, pencils, dice

1. Arrange students into pairs. Each student should have a sheet of paper and a pencil. Provide each student-pair with a die.
2. Instruct students to write the number "19" at the top of their papers.
3. Have the first student roll his or her die. Is the number rolled an odd number or an even number? If the student rolled an odd number (1, 3 or 5), the student must subtract the number rolled from 19. If the student rolled an even number (2, 4 or 6), the student will add the number rolled to 19.
4. Have the second student roll his or her die. Is the number rolled an odd number or an even number? If the student rolled an odd number (1, 3 or 5), the student must subtract the number rolled from 19. If the student rolled an even number (2, 4 or 6), the student will add the number rolled to 19.
5. Continue playing until one of the players loses all of his/her 19 points.

Odd Team Out-
Materials Needed: Deck of cards

Gather the cards numbered 1 to 9 from a deck of cards and shuffle. (The other cards in the deck will not be used for this game.)

1. Arrange students into two groups with the same number of students in each group.
2. Give each student one of the playing cards numbered 1 to 9.
3. Arrange the two groups of students in two circles, one inside the other. Have students in the inner circle turn to face a "partner" in the outer circle. Then have each partner pair add the numbers on their two cards. If the sum of the two numbers is odd, the students are out and go back to their seats. If the sum is even, the partners stay in the game.
4. Have students on the inner circle rotate one student to the right so they are facing a new partner. Have the partners add the numbers on their cards. If the sum of the two numbers is odd, the students are out and go back to their seats. If the sum is even, the partners stay in the game.
5. Have students on the inner circle rotate one student to the right so they are facing a new partner. Continue the game until only one set of partners remains standing.

Odds and Evens-
Materials Needed: p.12-15 https://learnzillion.com/lesson_plans/6984-find-the-difference-in-the-length-of-two-objects-using-addition#lesson

- Odds and Evens gameboard (one for partners)
- Paperclip and pencil to use as spinner or a clear spinner to use on top of the gameboard
- Pencil to record on gameboard
- Color tiles or grid paper for students needing additional instruction

- Book - *Two of Everything* by Lily Toy Hong or show video: https://www.youtube.com/watch?v=RIts_MG0lGo
- Chart paper or a way to display the chart, marker
- Index cards with 1+1=, 2+2=, 3+3=, etc. to 10+10, one card for each set of partners
- Color tiles or grid paper to model
- Gameboards would need to be copied, index cards created, and materials listed above collected prior to this lesson.

Directions:
1. Read Two of Everything to the class. Chart what happens when something is put in the pot. For example, if 3 of something goes in the pot, then how many come out? 3+3=6. Continue this with at least five examples.
2. Give partners an index card with 1+1= or 2+2= or 3+3=, etc. Ask partners to find something or think of something in the real world that represents their equation. For example, 1+1= a pair of shoes, 4+4= the legs on an octopus (4 on each side), 5+5= the number of cents in a dime (nickel plus nickel)
3. Bring the cards back to the group and share the "doubles" found. Ask students about the sums. Do you notice what happens when you add two equal addends? Why do you think this happens? Brainstorm with the class and model with color tiles by creating rectangles to "prove" this concept.
4. Introduce the game Odds and Evens to the class by the teacher playing the game against the class.
    - One player is Even Steven and one player is Odd Rod, each player spins one spinner and the two addends are added together.
    - If the sum is even Steven records it by writing the equation on a blank sheet of paper or in their math journal, and then writing the sum in the box under Even Steven.
    - If the sum is odd Rod records it by writing the equation on a blank sheet of paper or in their math journal, and then writing the sum in the box under Odd Rod and the number goes to Rod.
    - The first player to fill all the blanks is the winner.
5. While the students are playing, the teacher should rotate around the room and see if students are starting to notice what is happening when an even and an even are added together, odd and odd, even and odd? Ask students if they played again if they would like to be Even Steven or Odd Rod and why.
6. After playing discuss the game and the generalizations students were able to construct about even and odd numbers and what happens when you have two equal addends. As students share what they learned, the teachercould chart their ideas such as "odd + odd = even, odd+ even= odd, even + even = even."

Questions to Pose Before:
What do you know about "doubles" facts?
How do we know if a number is odd or even?

During:
What have you noticed about the sums you are getting while playing the game?
What happens when you add two equal addends? Why do you think this happens?
Are you starting to notice what is happening when an even and an even are added

together, odd and odd, even and odd?
If you played again would you like to be Even Steven or Odd Rod? Why?

After:
As a whole group discuss the questions listed above and focus on what student learned about odd and even addends.

Partners Galore-
Materials Needed: p.16-18 https://learnzillion.com/lesson_plans/6984-find-the-difference-in-the-length-of-two-objects-using-addition#lesson
• Large number of Unifix cubes (or some type of manipulative students can grab) for each student.
• Hundred board per student
• Markers or chips in two different colors (crayons if using paper hundreds board)
• Smartboard of hundreds board (optional)
• Math journal to record and explain
• My Odd Day or My Even Day by Doris Fisher or another literature book about odd and even numbers

Directions:
1. Have students come to the front of the room in groups such as everyone wearing glasses, or everyone with a brother, everyone with a birthday this month, etc. Ask each group to form partners. Each time record on a hundred board whether everyone has a partner or if there is someone left over. If there is a partner color the number on the hundreds board in green, (or use a green marker) if there is not a partner, color the number red on the hundreds board (or use a red marker).
2. After doing several of these examples with numbers from 1 to 20 ask students if they see a pattern in the structure of the numbers on the hundreds board. Have students write a prediction in their journals of what they think will happen when they work with larger numbers.
3. When predictions are completed, students will grab a handful of cubes or other manipulatives and continue to record on the hundreds boards by coloring partner numbers green and no partner numbers red. They will repeat this several times.
4. Look back at the predictions with students and discuss what happened. Ask students to write what they have learned in their journals. Chart ideas from student responses looking for the words "odd" and "even" to come out of their discussion. Focus this discussion on rules about which numbers are odd and which numbers are even and how we know.
5. Close the lesson by reading My Odd Day or My Even Day by Doris Fisher. These books will help students deepen their understanding of odd and even.

Questions to Pose During:
Discuss which group is odd/even.
How do I know if a number is odd or even?
What strategies can I use to determine if a number is odd or even?
After:
What patterns do you see in the structure of the numbers on the hundreds board?
How does this structure relate to odd and even?

Odd or Even Game-
Materials Needed:

- Game Page- https://betterlesson.com/lesson/resource/2522126/odd-or-even-game-page?from=resource_title
- Dice
- Place Value Mat- https://betterlesson.com/lesson/resource/2611268/place-value-mat

Before students begin to apply what they've learned, we revisit the list of odd and even numbers that you have made as a class. To make sure my students make sense of what we're discussing, rather than categorizing this as a procedure or a list, ask the students to think about how the numbers with buddies are "easier" numbers.
1. Have a list of two-digit numbers on the board, and two columns: odd and even.
2. Have one student choose a number. Before they begin to work, Use one of your teaching tools - socializing intelligence - by having students turn and talk about how they can determine whether the number is odd or even. To continue to stretch student thinking, come back together to continue the discussion.
3. The teacher role is to facilitate the expression of their thinking rather than "doing their thinking for them". If necessary, guide students to think about the one digit numbers as ones. In your example number we look at the ones place. If the digit in the ones place is even, then the number is even.
4. Let's try this with odd numbers. Use a smaller two digit number, and look at the ones place to do a quick check. Does everyone in the ones place have a partner? Although the concept of determining whether a number is even or odd by only looking at the ones place, it may not yet make sense for my young students, which is why I've used a smaller odd two digit number. Model the entire number by drawing circles, counting up to the final number while drawing each circle in partners.
5. Continue to practice with several more examples of two digit numbers on the board. Each time have have students determine whether the numbers are odd or even, in partners if necessary, building each two digit number.
6. The students then play the Odd or Even Game Page in partners. They roll the two dice and build a two-digit number with the numbers shown on the dice, and write it in the boxes. Both partners then build that number on their place value mat, and determine whether the number is odd or even by "Buddying Up" the cubes in the ones place. They then circle their determination.

Note: For students who continue to struggle, showing them a number line beginning at 1 might help, because together they can more readily identify the even/odd numbers up through ten. As we extend to 20, they may begin to detect a pattern. I assist with this thinking not by pointing it out, but by asking students to make comparisons between 1 - 10, and 11 - 20. I may create two number lines for those students who need vertical comparisons but if I do this, I make sure to then "move" the 11-20 number line to its correct place - extending the 1 - 10 number line. We continue on to 21 - 30 to make sure this group of students can apply the pattern to this new range of numbers.

Odd Olly and Even Elly Game-
Materials Needed:

- Printable ladybugs- http://www.dltk-kids.com/crafts/insects/cellyolly.htm
- Dice

Set up:
First, print out two ladybugs and color them (or print in color). Call one of them "Odd Olly" and the other one "Even Elly". Then, cut out two green leaf shapes and divided each one into thirds and 12 black spots.

1. Explain the difference between even numbers and odd numbers as follows.
Beginning with two black dots, place one dot on each wing of the ladybug. Explain that when one dot can match up with a dot on the other side, it means the dots come out even. Add another dot to one side and show how they no longer match up. Now there is an extra dot on one side. That means the number of dots is odd.
Try this with different numbers of dots until the players are comfortable with which numbers (groups of dots) are even and which are odd.

To play:
Each player chooses a ladybug, Odd Olly or Even Elly. They will use that ladybug for the entire game. Explain that "Odd Olly" only likes to have odd numbers of dots on her back while "Even Elly" only likes to have even numbers of dots. Starting with the younger player, roll one dice. The player then places that number of dots on his/her ladybug's back and decides if the number is even or odd. If the ladybug likes the number of dots on its back then the ladybug gets a piece of leaf. (so, for example, if the player was using "Even Elly" they would get a leaf piece for a 2, 4 or 6) The next player rolls the dice and play continues until one of the ladybugs has a whole leaf and wins the game.

Brain Pop Activities:
https://educators.brainpop.com/bp-jr-topic/even-and-odd/

Additional Worksheets:
http://www.commoncoresheets.com/SpecificLink.php?Path=Math/Values/Even%20or%20Odd%20(visual)

http://www.commoncoresheets.com/SpecificLink.php?Path=Math/Values/Creating%20Even%20Equations

http://www.commoncoresheets.com/SpecificLink.php?Path=Math/Interactive/2oa3

http://www.internet4classrooms.com/printables/common_core/math_mathematics_2nd_second_grade/gallery_the_number_odd_even_2nd_second_grade_math_mathematics.htm

https://www.worksheetworks.com/math/beginning/evenodd-maze.html

MINI LESSONS/CLOSURE ACTIVITIES

Partners and Clapping Patterns-
1) I tell the kids to hold up a certain number of fingers, then to "partner up" the fingers. If every finger has a partner, the number is even. If a finger lacks a partner, it's odd. Then I explain that for larger numbers, you look at the ones place for the number of fingers to partner.
2) We count to a certain number alternating claps and snaps. All of the claps are odd numbers, all of the snaps are even.

A Chant for Odd and Even Numbers-
Someone on this board posted this in response to my question (sorry...don't remember who). I tried it and it works great. Here is a chant:
2,4,6,8,10 -- even numbers let's say it again!
1,3,5,7,9 -- odd numbers, oh my!
Each day we determine if the date and the day of school is odd or even. They must explain why it is odd or even also.

Choosies-
Odds and evens, also known as swords, choosies, pick, odds-on poke, or bucking up, is a hand game played between two people. The individuals prepare by deciding who will be assigned odds and who will be evens. Then, one or both people say "One, two, three, shoot!!" As the word "shoot" is said, the two people quickly and simultaneously thrust a fist into the center, extending either an index finger, or both the middle and index finger, indicating one or two. The sum total of fingers displayed is either odd or even. If the result is odd, then the person who called odds is the victor, and can decide the issue as he or she sees fit. Often, the participants continue to shoot for a best two out of three.

Chart and Cubes-
First introduce that all numbers are either odd or even. Even numbers have partners, odd numbers do not...like being odd man out. Ask a child to come to the front of the room and ask if ____ has a partner? Then begin a chart and write 1 in the odd column. Continue this with the numbers two and three. Then children use unifix cubes to manipulate to find out if numbers 4 - 9 are odd or even. If they partner them, they are even. If there is an odd man out, it is odd. Continue to add to the chart. Talk about patterns and where 0 belongs. Mention how even though 0 can not have a partner, 10 does. Try it with unifix cubes and talk about place value. Continue to ask questions and show them that no matter how large a number is, they can know if it is odd/even by looking at the ones place.

Shout and Whisper
I have mine shout the even numbers and whisper the odd numbers to help them see the pattern at first.

Odd Man Out (Finger Activity)
What you do is you call out a number, say 6. You start counting on your right thumb and you say one, count on your left thumb and say two, count on your right index finger and say three, count on your left index finger and say four continue in this manner until you get to the desired

number. When you have reached the number, put hands together and see if every finger has a partner. If it does, the number is considered even; if it doesn't, the number is considered odd (odd man out). When the number is ten or higher (say, 15) touch your ten fingertips and say 10 then begin counting on your thumb and say 11 and the left thumb and say 12, etc. If the number is 20, 30, etc., touch your ten fingertips that many times (twice for 20, three times for 30, etc.) and continue counting as described above.

Scoop Cubes-
Have students scoop unifix cubes and arrange them in partners to determine if they have "scooped" an odd or even number. Count and record the number under odd/even. (Small plastic containers and cans work well for scooping.) Repeat the scooping a number of times.

Hundreds Chart-
Use a hundred chart. Give one to each student and have the kids color in the squares above the even numbers. Then the write 'Even' on their pages. Repeat the activity on a different day for the odd numbers.

Turn and Talk-
Begin with having students turn and talk about the following question:
"What do you know about odd and even numbers?"
The students turn and talk about what they already know about even numbers. If It happens that one student does not have a partner to turn and talk with, remind the students about working in partners in class. What happens when one person doesn't have a partner?
Even numbers are numbers where everyone has a buddy.
Ask the students about one student not having a partner to turn and talk with. Do you think that we have an even number or odd number of students in our class if one person did not have a partner? How do you know?

Deeper Thinking-
Have students to turn and talk about what they learned about odd and even numbers. Next, challenge them to share with everyone why it would be important to know whether a number is odd or even. This is a challenge, because most students have yet to consider fractional numbers or division. I'm not looking for a "right" answer. I'm encouraging my students to think more deeply about their learning to consider its purpose. Some students may say that even numbers are easier to add, but have difficulty sharing why they know this. This is an opportunity to develop student thinking. Encourage students to "show" when words fail them. Then, they have a concrete example to describe.

Lesson Activity Based Closure
TTW use one of the activities provided to close out the lesson to make sure each student can talk about what they have learned today. It is important for the teacher to model a problem at the end of the lesson and let one students model the process to check for understanding.

40 Ways to Leave a Lesson-
https://docs.google.com/file/d/0B-0npvl9xzTBMGs1SUUzeEN3RU0/edit

www.mathworksheetisland.com

SMALL GROUP/CENTER ACTIVITIES:

Estimate Odd and Even:
https://hcpss.instructure.com/courses/106/pages/2-dot-oa-dot-c-3-centers-and-independent-practice

Even Odd Counters:
https://hcpss.instructure.com/courses/106/pages/2-dot-oa-dot-c-3-centers-and-independent-practice

Dino Blast:
http://www.mathwire.com/games/dinoblast.pdf

Additional Center Activities with Free Printables:
http://www.stepinto2ndgrade.com/2012/09/even-and-odd-freebies.html

SUMMATIVE ASSESSMENT RESOURCES:

https://hcpss.instructure.com/courses/106/pages/2-dot-oa-dot-c-3-assessment-tasks

http://commoncoretasks.ncdpi.wikispaces.net/2.OA.3-2.OA.4+Tasks

http://standardstoolkit.k12.hi.us/common-core/mathematics/mathematics-assessments/mathematics-grade-2-assessments/

https://www.orglib.com/2.nbt.4-worksheet-as-assessment-viewTestQuestions_0d1520c2bb_ddaac3f3d2154f46a5e76777e2dcbf35_226.html

http://illuminations.nctm.org/Activity.aspx?id=3566

FORMATIVE ASSESSMENTS:
http://www.ehow.com/about_5419008_types-formative-assessment.html

http://www.edutopia.org/resource/checking-understanding-download

http://wvde.state.wv.us/teach21/ExamplesofFormativeAssessment.html

http://www.sheppardsoftware.com/mathgames/placevalue/value.htm

ADDITIONAL ONLINE RESOURCES (Bellwork):
Worksheets-
www.mathworksheetisland.com

http://www.k5learning.com/free-math-worksheets/second-grade-1

http://mathworksheetwizard.com/secondgrade-math.html

http://www.mathworksheets4kids.com/activities/2nd-grade.php

http://www.tlsbooks.com/secondgrademathworksheets.htm

Skip counting printable poster for practice
http://www.sparklebox.co.uk/3901-3910/sb3909.html#.Vbgu9SiyBsu

Free printable number cards:
http://www.activityvillage.co.uk/number-flash-cards-1-30

Free printable ten frames:
http://www.mathwire.com/templates/tenframemat.pdf

Free printable dominoes:
http://www.dltk-cards.com/dominos/

Free printable spinners:
http://cte.sfasu.edu/wp-content/uploads/2012/09/Templates-for-Spinners.pdf

Free printable hundreds charts:
https://www.superteacherworksheets.com/hundreds-chart.html

Free printable coins and bills
https://www.moneyinstructor.com/play.asp

Virtual manipulatives can be found here:
https://grade1commoncoremath.wikispaces.hcpss.org/file/view/Directions%20for%20Virtual%20Manipulatives%201.NBT.2.pdf/519489918/Directions%20for%20Virtual%20Manipulatives%201.NBT.2.pdf

Practice for Math Fact Fluency Activities:
http://www.interventioncentral.org/teacher-resources/math-work-sheet-generator

http://www.abcya.com/math_facts_game.htm

http://www.playkidsgames.com/games/mathfact/mathFact.htm

http://www.factmonster.com/math/flashcards.html

http://www.fun4thebrain.com/addition.html

http://www.mathplayground.com/index_addition_subtraction.html

http://www.math-drills.com/addition.shtml

http://mrshillsallstars.weebly.com/addition-without-regrouping.html

https://www.pinterest.com/janwray/double-digit-addition-subtraction/

http://www.theteachersguide.com/twodigitadditionworksheets.htm

DIFFERENTIATING RESOURCES:

http://www.internet4classrooms.com/common_core

http://www.k-5mathteachingresources.com