Story Summary

If you ask a grown-up to add up 8 cars + 2 trucks, they'll probably say that's 10 vehicles. And it's true. But these 10 young friends know what else those things add up to: a race! What will they do with 7 robes + 3 capes? Or 6 pots + 4 pans? 10 simple objects can have infinite possibilities. In *Let's Add Up!*, aided by the sweet and lively illustrations of Maggie Zeng, Victoria Allenby cleverly tucks lessons on categorization and all the ways to compose the number 10 into a playdate full of enticing imagination and creative play.

Victoria Allenby has been writing poetry and stories for as long as she can remember. Her debut picture book, *Nat the Cat Can Sleep Like That*, won the 2014 Preschool Reads Award and was nominated for the 2015 SYRCA Shining Willow Award. More recently, her Big, Little Concept Books *Shape Up! Construction Trucks* and *Listen Up! Train Song* have earned several starred reviews and a Mathical Book Prize Honor Book. Victoria lives in Toronto, Ontario.

Maggie Zeng is a children's book illustrator, graphic designer, concept artist, and animator. Born in Montreal, she attends Concordia University and previously received the Outstanding Achievement Award in Applied Arts Technologies at Dawson College. Maggie loves making story-driven illustrations that convey a feeling of adventure and wonder through fun characters and magical environments. Her first picture books are *This is the Boat That Ben Built* and *Room for More*.

Pair this book with:

- *From One to Ten* by Mies Van Hout

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Themes
Number Sense, Math Positivity, Divergent Thinking

Bisac Codes
JNF013030 JUVENILE NONFICTION / Concepts / Counting & Numbers
JNF035030 JUVENILE NONFICTION / Mathematics / Arithmetic
JNF056000 JUVENILE NONFICTION / Toys, Dolls & Puppets
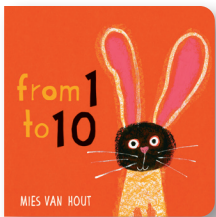
Curriculum Connections
Language Arts: activate prior knowledge, predict, make connections; Mathematics: number sense, partitioning 10, memorizing facts of 10, identifying attributes

Reading Level
Lexile Measure: NP | Fountas & Pinnell: F

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THIS GUIDE CONTAINS:

ACTIVITY	MAIN SUBJECT AREAS	SPECIFIC SKILLS AND TOPICS
Read-Aloud	Comprehension	• activate prior knowledge • predict, make connections
Names for Ten	Mathematics	• number sense: partitioning 10
Ten Song	Mathematics	• number sense: memorize facts of 10
Complements	Mathematics	• number sense: partition 10/ memorize facts of 10
Something in Common	Mathematics	• identifying attributes
Card Games	Mathematics	• number sense: memorize facts of 10

The Read-Aloud

This is the opening sentence.

Learning Expectations:

Students will:

- identify reading comprehension strategies (e.g. activate prior knowledge, predict, make connections) and use them before, during, and after reading to understand texts

You Will Need

- *Let's Add Up!*

How To:

Before Reading

Read the cover, including the author and illustrator's names. With students, recall any other books by Victoria Allenby that you have read. Examine the endpapers.

During Reading

First Spread: Invite students to help you count the drums, then the tambourines, then all the instruments together. Read the number sentence aloud, while pointing with your finger. When saying the word instruments, sweep your finger around the page to take in all the instruments.

Second Spread: Read with excitement.

Third and Fourth Spreads: Use the same pattern as with the first two spreads.

Fifth Spread: Use the same pattern as with the first spread. Then say, "Or…" and invite students to come up with possibilities.

Sixth Spread: Read with excitement.

Seventh through Tenth Spreads: Use the same pattern as with the fifth and sixth spreads.

After Reading

- Do the activities listed on the eleventh spread.
- Choose and act out your favorite spreads.

Activity 1: Names for 10

Knowing all the different ways to decompose 10 is an essential and foundational part of Number Sense. Students will practice decomposing 10, and begin to memorize the additive number pairs in this activity.

Learning Expectations:

Students will:

- compose and decompose the number 10

You Will Need

- Unifix cubes or other linking cubes in different colors.
- "Trains of Ten" worksheet (included below), one or two copies for each student
- crayons or markers
- chart paper

How To:

1. Remind students of how, in *Let's Add Up!*, all the pages showed different ways to make 10. Show the front endpaper with the number expressions on it. Tell them that today, it will be their job to make trains of linking cubes that show different ways of making 10.

2. Give each student ten each of two different colors of linking cubes and a copy of the "Trains of Ten" worksheet.

3. Invite students to make a "train" using any 10 of their linking cubes. It's important that they group each color together, rather than interspersing them. Instruct students to color in one of the "trains" on their sheet to match what they have made.

4. Bring students to your meeting place to share their trains. On an enlarged copy of the worksheet, have a student color in their train for a

demonstration. Show students how to write a number sentence that represents the train. For example, if the train has 4 yellow cubes and 6 blue ones, write 4+6=10. Repeat this a few times until students understand what to do.

$$4 + 6 = 10$$

5. Have students return to their seats and write a number sentence to represent their train.

6. Invite students to break their train, make a different one, color it on the sheet, and write its number sentence below. Urge students to make as many trains as they can, without making the same one twice. If needed, allow students to have a second worksheet. Students will differ in their need for a second sheet. Some may see an organized way to generate all possible "trains", but many will not. Some will feel that 6+4 is a different train from 4+6, while others will maintain that they are the same. Some will feel that 10+0 and 0+10 are valid trains, while others will not consider these. Accept all of these differences as valid mathematical thinking. However, if a student, makes a train with a different total number of cars, or makes a factual error, gently correct them.

7. Invite students to cut their sheet of trains into strips (one complete train per strip), and bring all their strips to your meeting place.

8. Invite a student to tape one of their trains to the chart paper. If the number sentence has been cut off, have them or another student write it on the chart. Invite students to count the colored squares with you and read the number sentence, checking it for accuracy.

9. Ask, "Who has a different train to add to our chart?" Accept a volunteer.

Hold their train up to the previous one and have the class give you a thumbs up if they believe it to be a different train. If it is, tape it to the chart below the first one.

10. Continue this way until all possible combinations have been represented. At some point, you will encounter a commutative pair (e.g. 6+4 and 4+6). Allow students to discuss whether or not these constitute the same "train". A helpful conclusion to aim for is that, while the two are interchangeable numerically, they are different in real-world situations. For example, a family with one dog and nine goldfish would feel very different from a family with one goldfish and nine dogs. It is also extremely helpful for students to memorize both ways of saying the number sentence, while recognizing that the numbers are interchangeable. If students do not consider 0+10 and 10+0, present these as valid representations of 10.

11. Ask, "How can we know if we have found all the possible combinations?" Guide students into realizing that, by placing the sentences in order with the first addend increasing in value (i.e. 0+10, 1+9, 2+8, …10+0), they will be easily able to identify any gaps. Invite students to help you rearrange the chart (by moving the taped strips) until this order is achieved. Identify and fill any gaps.

12. Keep the chart posted as a reference.

ACTIVITY 2: TEN SONG

Music is an excellent way to commit facts to memory.

Learning Expectations:
Students will:
- use music to memorize addition facts of 10

You Will Need
- the chart created in Activity #1
- chart paper and markers
- *Let's Add Up!*

How To:
1. Cooperatively with students, create a rap or a song to a familiar tune, using the facts on the chart created in Activity #1.

2. Alternatively, use the following, sung to the tune of the alphabet song. (The last two lines must be sung faster to scan.):

   3+7, 1+9
   6+4 and 5+5
   10+0, 8+2
   I can say them backwards too!
   2+8, 4+6, 0+10,
   7+3, 9+1, they all make 10!

3. Open *Let's Add Up!* to the front end-papers. Point to each of the number pairs while singing the song or rap. Encourage students to repeat the activity while reading the book during their free time or independent reading time.

ACTIVITY 3: COMPLEMENTS

This game will help students develop automatic recall of the number pairs that make 10. This automatic recall will be essential in future mental math problems with larger numbers.

Learning Expectations:
Students will:
- compose and decompose the number 10
- use a game to memorize addition facts of 10
- use a variety of strategies to solve problems

You Will Need
- chart paper and markers
- everyday classroom objects

How To:
1. Set out three or four sheets of chart paper on tables, with a few markers or other writing utensils.

2. Invite students to search the classroom for a collection of up to 10 small, similar objects (e.g. 3 erasers or 7 building bricks) that they can hold in their hand.

3. Instruct students to find a partner who is holding the complement of their collection. That is, when they add the two collections together, the total number of items is 10. If they are unable to find a partner, they should change the number of objects in their hand, either by putting some away or by getting more, and try again. Once they have found a partner, the pair proceeds to any chart paper station and records a number sentence and/or picture which represents their collections (the multiple stations are just to avoid traffic jams. Adjust the number of stations as needed).

4. Students then put their collection away and find a new collection and a new partner. The game continues until the teacher judges that interest has waned.

5. Bring students to the meeting area and display the charts. Study them together to see if any facts of 10 are missing, referring to the chart created in Activity #1 if necessary. Challenge students to go out one more time and try to find a collection that will help fill in the gaps. If necessary, brainstorm together to decide how to come up with 10+0 and 0+10. How do the students feel about the need for some to come back empty-handed? If you have a student who, for whatever reason, did not make a collection in the early part of the game, this could be a chance for them to save the day, with the teacher guiding them to a partner holding 10 objects.

ACTIVITY 4: SOMETHING IN COMMON

This game builds on the divergent thinking presented in *Let's Add Up!*, giving students the opportunity to think of non-obvious attributes in common objects, and to create a scenario in which the whole is (qualitatively) greater than the sum of the parts.

Learning Expectations:
Students will:
- identify attributes of everyday objects
- identify an attribute that two objects have in common
- compose and decompose the number 10
- use a game to memorize addition facts of 10
- collaboratively write a short text modelled on a story read in class

You Will Need
- chart paper and markers or equivalent
- a variety of classroom supplies and student belongings
- *Let's Add Up!*

How To:
1. Students need to be familiar with the game "Complements" in Activity #3 before playing this extended version of the game.

2. Send students out to find their collections, adding that they may choose objects from their backpacks or objects from the classroom (to increase the diversity of objects). Instruct students to come to the meeting area as soon as they have a partner with a complementary number of objects.

3. Once several pairs of students have returned to the meeting area, call the rest to join you, even if they do not yet have a collection or a partner. Scan the group and choose a pairing in which the two sets of objects have an obvious similarity (e.g., one student has 2 markers and the other has 8 pencils). Write the number phrase on a chart: 2 markers + 8 pencils. Re-read a page of *Let's Add Up!* Discuss what the author has done to be able to add her two unlike groups together. She has found what the two groups have in common (much like higher-grade math students finding a common denominator before adding fractions). Brainstorm with students to come up with a way in which the two groups on the chart are similar, then complete the number sentence: 2 markers + 8 pencils = 10 writing tools. Proceed to other pairs of students. When objects are so dissimilar that students cannot think of how they are alike, the teacher can model thinking outside the box to find a similarity (e.g. 1 bean plant + 9 toy animals = 10 things you feed). Think of all kinds of attributes: color, shape, material, purpose, size, time or place of use, surface pattern, where they are stored, etc.

4. If you have a classroom jobs roster, consider adding the job of "Things in Common Puzzler" to the list. Each day, one or more students can be assigned the task of bringing a puzzle (2 collections that total 10) to the meeting area. The rest of the class must guess the number sentence, including a common attribute. Keep it cooperative. The goal is not to "stump" the classmates, but to encourage all students to think divergently.

5. Collect the student-generated puzzles into an illustrated book, following the pattern of *Let's Add Up!* This will require some group brainstorming to come up with the "Or a …" page that will follow each puzzle. For example, using the suggestion from step 3, above, "2 markers + 8 pencils = 10 writing tools", could be followed by "or an art class!" on the next page. If some students have not participated in devising puzzles, they might be chosen as illustrators for these new pages.

ACTIVITY 5: CARD GAMES

Games help students engage longer, maximizing the chance that facts will become memorized.

Learning Expectations:

Students will:

- compose and decompose the number 10
- use games to memorize addition facts of 10

You Will Need

- normal playing cards

How To:

Remove tens and face cards from a normal deck of playing cards to play these games.

TEN SNAP

Two players. Cut the deck in half and give each player half. Students take turns turning the top card and placing it face-up beside their deck. Each player has their own face-up (discard) pile. Urge students to turn the card with the number facing away from themselves (so their opponent sees it first) and to do so quickly, to maximize fairness. Any time the top cards on the two discard piles add up to ten, the players race to say, "Ten!" The first player to do so gets both discard piles, which they turn over and place under their draw pile. The game ends when one player has all the cards.

GO FISH FOR TENS

Two to four players. The same as for regular Go Fish, except instead of aiming for matching pairs, players aim for pairs that add to 10. For example, if the player has a 3, they would ask, "Do you have a 7?"

MEMORY (AKA CONCENTRATION) OF TEN:

Two players. Use only the red or only the black cards (still with tens and face cards removed). Shuffle cards and place face-down on the table. Players take turns revealing two cards. If the two cards add up to 10, they constitute a pair and the player keeps them. If not, they turn them back down in the same places and the other player takes their turn. The game continues until all the cards are gone. The player with the most pairs wins.

Bibliography

http://www.edu.gov.on.ca/eng/curriculum/elementary/language18currb.pdf

The Kindergarten Program (ontario.ca)

https://files.ontario.ca/books/edu_the_kindergarten_program_english_aoda_web_oct7.pdf

Mathematics (gov.on.ca)

https://www.dcp.edu.gov.on.ca/en/curriculum/elementary-mathematics/grades/g1-math

Name: _____

Trains of Ten