Accelerated Individualized Mastery

Addition and Subtraction

Build, Write, Say Activities

Overview

The following 17 activities are designed to give students extra practice with addition and subtraction strategies they have yet to master. These activities use the integer blocks (along with the Build, Write, Say method) to further reinforce the math fact strategies taught within the AIM lessons. **Have your student select the activity they prefer to do. This helps them take ownership of their learning and increases engagement.**

NOTE: Several activities can be used with multiple lessons. Just practice the activity with the current lesson's math facts and have fun!

AIM Activities

Build, Write, Say

Activities	Skills
B1 Build-A-Fact	Addition Facts (any)
B2 Subtraction Scavenger Hunt	Subtraction Facts (any)
B3 Grab Bag	Addition: +2
B4 The Train Hitch	Addition: +9 Addition: +8
B5 Double the Lengths	Addition: Doubles
B6 The Doubles +1 Twins	Addition: Doubles +1
B7 Building a Wall	Addition: Making 10
B8 Building a Bridge	Addition: Making 9
B9 Addend Sleuth	Addition of the Extras Solve for an Unknown
B10 Guess My Number	Solve for an Unknown
B11 Roller Coaster Math	Subtraction: −2
B12 Baseball/Softball Math	Subtraction: −9
B13 Banana Bread Math	Subtraction: −8
B14 Splitting the Bill	Subtraction: Doubles
B15 Code Breakers	Subtraction: Making 10 Subtraction: Making 9
B16 Subtraction Extras Scramble	Subtraction: Extras
B17 Adding Up with Subtraction	Subtraction by 7, or Adding Up by 3 Subtraction by 6, or Adding Up by 4 Subtraction by 5, or Adding Up by 5 Subtraction by 3 and 4

B1 Build-A-Fact

Skill
Addition Facts (any)

Materials
- integer blocks
- dry erase board, marker, and eraser
- selected Fact Check Cards

Set Up

Display seven or eight different Facts Not Yet Known across a table.

1. Explain that your student is a scientist whose goal is to show the "formula" for each problem using the blocks.
2. Have your student walk around the table and select a fact to build with the blocks and say it aloud with the answer.
3. Next, have your student write the fact with the answer on the dry erase board and say it aloud.
4. Once they successfully build the given number of facts (no more than ten), they are finished.
5. This activity can be completed once or twice a day.

ⓘ If your student prefers not to play the scientist role mentioned in this activity, that is fine! They may complete the activity by using the Build, Write, Say method to solve for each Fact Not Yet Known.

B2 Subtraction Scavenger Hunt

Skills
Subtraction Facts (any)

Materials
- integer block representing permanent subtrahend (e.g., 8-block)
- group of integer blocks to hide as minuends (consult Fact Check Cards to see which blocks are required)
- bag of integer blocks (1–10) representing difference
- clipboard, paper, and pencil

Set Up

Decide which integer block you would like to be the permanent subtrahend and give it to your student (e.g., 8-block). Then, ask your student to go to a different room while you hide the minuend blocks (e.g., 13, 17, 10). Lastly, fill a bag with integer blocks 1–10 and label the bag "difference," and place it on top of the clipboard (along with the paper and pencil). When you have finished, ask your student to return to the room.

1. Tell your student that they will be going on a scavenger hunt for math facts.
2. Present your student with the "tools" they will need (the "difference" bag, clipboard, paper, and pencil), then have your student search for the facts you have hidden.
3. Each time the student discovers a minuend, have them flip the subtrahend (e.g., 8-block) upside down on top of the minuend block(s) (e.g., 15) and say the problem that has been built ("fifteen minus eight"). Your student writes the problem on the clipboard.
4. Next, ask your student to find the block in the difference bag that will complete the equation (in this case, the 7-block), and place it beside the upside-down 8-block. Have them repeat the problem and write the difference (15 − 8 = 7).
5. Verify that the answer is correct with your student. If they answer correctly, they are able to "collect" that fact and put it in their pocket.
6. Continue until all facts have been "scavenged."

B3 Grab Bag

Skill
Addition: +2

Materials
- one set of integer blocks (2–9)
- one set of integer blocks (1–10)
- one extra block to represent the selected addend (e.g., 2-block)
- dry erase board, marker, and eraser
- paper bag

Set Up
Write "addends" on the paper bag with the marker. Place the group of integer blocks 2–9 in it. Set aside an extra block for the permanent addend. Write "sums" on the dry erase board and then place the second group of integer blocks 1–10 on it.

1. Ask your student to randomly select an integer block from the "addends" bag (for example, the 9-block). Have them push together the 9-block and the permanent addend (the 2-block). Your student says the problem that has been built ("nine plus two"), and then writes the problem on the dry erase board.
2. Have your student find the block(s) that represents the sum (in this case, the 10-block and unit block) and place them underneath the model for 9 + 2. They repeat the problem and write the sum (9 + 2 = 11).
3. Verify the sum is correct with your student.
4. Repeat the activity with a different Fact Not Yet Known.

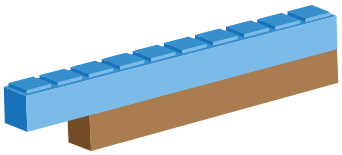
B4 The Train Hitch

Skills
Addition: +9 or Addition: +8

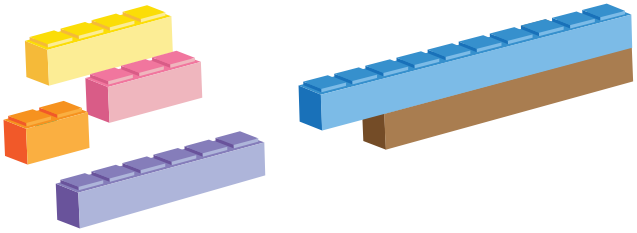
Materials
- integer blocks
- deck of cards (Aces are worth one; face cards removed) or 9-sided die

Set Up
Select either the 8-block or the 9-block to be the train based on which facts your student needs to practice.

1. Have your student hold the 8-block or 9-block horizontally so the hollow side is down. Place a 10-block on top and hold the two blocks together. For this example, we show the 8-block.

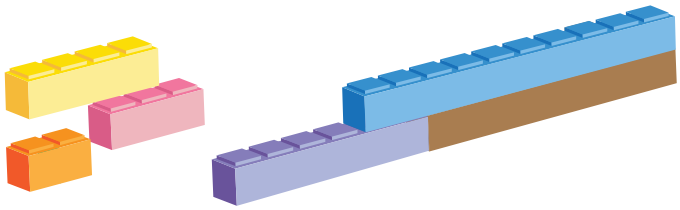


2. Scatter several integer blocks on the table so that the solid side of the blocks is facing up.

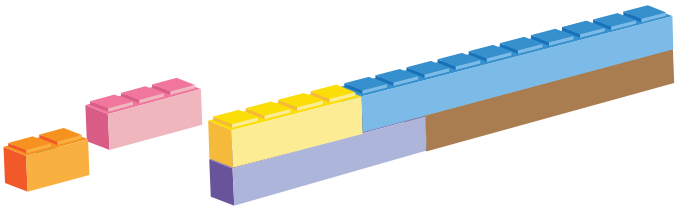


3. Flip over a card from the deck (e.g., a six card).

4. Find the block that matches the number on the card and "hitch" it to the 10-block.



5. Fill in the "missing block."



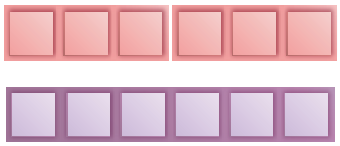
6. Ask your student to say the addition fact aloud (e.g., "eight plus six is fourteen").

B5 Double the Lengths

Skills
Addition: Doubles

Materials
- dry erase board, marker, and eraser (or paper and pencil)
- integer blocks

1. **Build**
   - Have your student select an integer block from 1–9 and place it horizontally on the dry erase board.
   - Ask your student to double the length by taking another integer block of the same value and placing it next to the first block.



   - Next, have your student find the integer block that has the same length as the blocks they just added together. For example, if the student selected two 3-blocks, they are the same length as the 6-block. Now the two lengths are the same.

2. **Write**
   Have your student write the Doubles fact under the blocks (e.g., 3 + 3 = 6).

3. **Say**
   Say the equation aloud together (“three plus three is the same as six”).

4. Continue play by having your student build all the Doubles facts.

B6 The Doubles +1 Twins

Skill
Addition: Doubles +1

Materials
- integer blocks
- dry erase board, marker, and eraser (or paper and pencil)

Brother	Sister

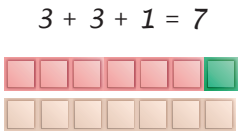
Set Up
For this activity, you will need to create a "scoreboard" by drawing a T-chart on a dry erase board (see example below).

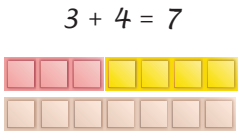
1. Explain to your student that there are twins (a brother and sister) who play the same video game. The sister is highly competitive, and always "one ups" her twin brother by scoring exactly the same amount of points that he does, plus one more. (For example, if her brother scores 3 points in a game, she will **always** score 3 + 1, or 4, points.) Your student's goal will be to find the sum of both twins' points.

2. Have your student select one of the following integer blocks: 3, 4, 5, or 6 and place it horizontally on the dry erase board underneath the "Brother" column. This block will represent the points that the brother scored during the video game (e.g., 3-block).

3. Remind your student that the sister always scores the same amount of points as her brother, plus one more. Have your student place the same integer block plus one unit underneath the "Sister" column (e.g., 3-block and a unit block).

4. Have your student push all three of the integer blocks together and determine which integer block represents the sum. For example, two pink 3-blocks and one green unit block is the same as one tan 7-block. Have your student write the full equation (3 + 3 + 1 = 7).





5. Have your student look at the last two of the three addends. In the current example, ask, "What block is the same as three plus one?"

6. Then, have them write the equivalent equation under the first one. In the current example, the student would select a pink 3-block and a yellow 4-block, check it against the tan 7-block, then write and say 3 + 4 = 7.

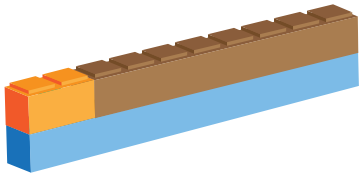
Note
When the addends in the Doubles +1 facts are reversed, the Commutative Property of Addition can be applied to learn these facts.

B7 Building a Wall

Skill
Addition: Making 10

Materials
- integer blocks

1. Have your student place a 10-block horizontally at the bottom of the paper.
2. Ask your student to choose two integer blocks that, when pushed together, are the same length as the 10-block. This may take several attempts, as your student may pick an integer block and then try others to find a second one that fits.
3. Have your student place the selected integer blocks on top of the 10-block to start building the wall.



4. Have your student write the equation for the Making 10 fact. For example, if your student chose an orange 2-block and a brown 8-block, the written equation would be 2 + 8 = 10.
5. Repeat this activity with several or all of the Making 10 facts.

Variation
To practice the companion facts, turn the block wall 180 degrees (so that the addends are now reversed). Then have your student write and say each fact.

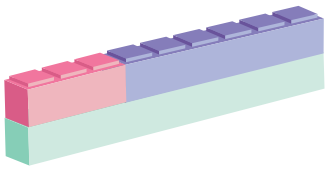
B8 Building a Bridge

Skill
Addition: Making 9

Materials
- integer blocks
- paper and pencil

Set Up
Ask your student to draw a creek (that is narrower than a 9-block) down the center of the paper.

1. Explain to your student that the two of you are two neighbors separated by a creek. You want to build a bridge nine feet across; place a 9-block horizontally in the middle of the paper.
2. Then explain that each layer of the bridge will take both of you to build. You place an integer block with a value smaller than nine (e.g., the pink 3-block) on top of the 9-block.
3. Ask your student to find the correct block to fill the space and make nine. Then have them write the equation to show the addition fact. For example, 3 + 6 = 9.



4. Take turns until you have practiced all of the Making 9 facts.

If your student prefers to not draw the creek or play the role mentioned in this activity, that is fine! They may complete the activity by using the Build, Write, Say method to solve for each Fact Not Yet Known.

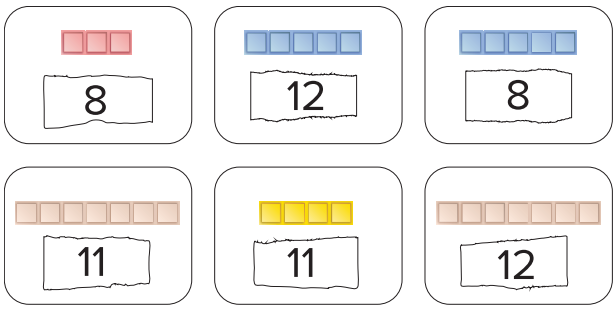
Note
Since there are only two new facts to master in this lesson, it is recommended that you focus primarily on 6 + 3 and 3 + 6 during this activity.

B9 Addend Sleuth

Skills
Addition of the Extras
Solve for an Unknown

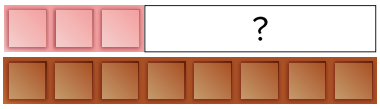
Materials
- dry erase board, marker, and eraser (or paper and pencil)
- integer blocks
- six-cup muffin tin or six small containers
- six slips of paper that fit into the cups or containers

Set Up
For the six slips of paper, write “8” on two of them, “11” on two of them, and “12” on the last two. Pick out one 3-block, one 4-block, two 5-blocks, and two 7-blocks. Place one of these blocks in each muffin cup or other container. Add to each cup or container a slip with an appropriate sum. One way to set it up is shown below:



1. Explain to your student that each cup or container holds an addend and the sum of an Extras addition fact. For this activity they will be a sleuth or detective and determine the other addend that makes the sum.

2. **Build**
   - Have your student select a container and build the addition problem, solving for the unknown addend. For example, if the slip of paper shows 8 for the sum, they would take an 8-block and place it horizontally on the bottom of the dry erase board.
   - Next, have them take the integer block from the same container (e.g., the 3-block) and place it directly above the 8-block so that the ends are flush.



   - Encourage your student to try different integer blocks for the missing addend until they find the one that, when added to the 3-block, makes eight (the 5-block).

3. **Write**
   Ask your student to write the equation above the integer blocks on the dry erase board (3 + 5 = 8).

4. **Say**
   Say the equation aloud together, “Three plus five is the same as eight.”

5. Continue play with the remaining containers until all the facts have been solved.

ⓘ If your student prefers not to play the detective role mentioned in this activity, that is fine! They may complete the activity by using the Build, Write, Say method to solve for each Fact Not Yet Known.

B10 Guess My Number

Skill
Solve for an Unknown

Materials
- integer blocks

1. Select a few Fact Check Cards with facts your student has mastered. Say, "I'm thinking of a number that is (selected number) more than 5. What is the number?" Your student can respond either orally from memory, hold up the integer block that represents the number, or write the number on a dry erase board.
2. Play continues: "I'm thinking of a number that is (selected number) more than 7. What is the number?"
3. As your student becomes more proficient with the activity, try rephrasing the question: "I'm thinking of a number that is (selected number) greater than 7. What is the number?"
4. Continue for several rounds.
5. Switch roles and allow your student to make up the riddles for you to solve.

B11 Roller Coaster Math

Skill
Subtraction: −2

Materials
- integer blocks
- separate 2-block that will be used as subtrahend throughout
- paper and pencil

Set Up
Set aside one 2-block to use as the permanent subtrahend, then keep a pile of blocks to the side to represent the "tickets." Each square on a block represents one ticket.

1. Have your student pretend they are working at a county fair as a ticket taker for the roller coaster. Each roller coaster ride costs 2 tickets per person. Explain that the integer blocks will represent fair tickets for this activity.
2. Tell your student that you will pretend to be various fairgoers who are waiting in line for the roller coaster.
3. Your student must use the Build, Write, Say method to correctly subtract 2 "tickets" from the block(s) you give them, so they can give you the appropriate change.
4. For example, if you give your student a 6-block (minuend), they must use the 2-block (permanent subtrahend) to build, write, and say the correct answer. This will tell them how many tickets you should receive back (in this case, you would be receiving a 4-block after your student has removed 2 "tickets").
5. Continue "riding the roller coaster" until your student has had sufficient practice with these facts.

! If your student prefers not to play the role mentioned in this activity, that is fine! They may complete the activity by using the Build, Write, Say method to solve for each Fact Not Yet Known.

Variation
To practice a different set of math facts, feel free to change the required amount of "tickets."

B12 Baseball/Softball Math

Skill
Subtraction: −9

Materials
- integer blocks
- separate 9-block that will be used as subtrahend throughout
- paper and pencil

Set Up
Set aside one 9-block to use as the permanent subtrahend, then keep a pile of blocks to the side to represent the number of players on each team.

1. Tell your student that they are the coach of a baseball or softball team, and it is time to decide which players are going to start in today's game, and how many players will be sitting on the bench.
2. Each team may only have nine starting players.
3. As the assistant coach, you will present integer blocks (representing the number of players on each team) to the coach (e.g., 14).
4. Your student must use the Build, Write, Say method to correctly subtract the 9-block from the blocks you give them to find out how many players will be benched at the start of the game. (e.g., 14 − 9 = 5. Five players will be on the bench at the start of the game.)
5. When the coach (your student) has correctly informed their assistant coach (you) of the number of benched players, pretend that you are now on a different team and practice a different −9 fact.

ⓘ If your student prefers not to play the role mentioned in this activity, that is fine! They may complete the activity by using the Build, Write, Say method to solve for each Fact Not Yet Known.

B13 Banana Bread Math

Skill
Subtraction: −8

Materials
- integer blocks
- separate 8-block that will be used as subtrahend throughout
- paper and pencil

Set Up
Set aside one 8-block to use as the permanent subtrahend, then keep a pile of blocks to the side to represent the patrons at a restaurant.

1. Tell your student that they are working as a server in a restaurant.
2. Present your student with integer blocks (e.g., 15), and tell your student that those are the amount of people they are serving.
3. It is dessert time, and everyone wants the restaurant's famous banana bread! Unfortunately, there is only one loaf left.
4. Each loaf has eight slices of bread. It's restaurant policy that slices may not be cut in half or shared, so not everyone will be able to have banana bread for dessert.
5. Ask your student to use the Build, Write, Say method to correctly subtract the 8-block from the block(s) you give them, so they may figure out how many people will need to choose a different dessert. (e.g., 15 − 8 = 7. Seven customers will not be able to eat banana bread for dessert.)
6. When your student is able to build, write, and say the correct answer, pretend that the same banana bread shortage occurred the next day of work (with a different minuend, such as 12).
7. Continue until facts have been sufficiently practiced.

ⓘ If your student prefers not to play the role mentioned in this activity, that is fine! They may complete the activity by using the Build, Write, Say method to solve for each Fact Not Yet Known.

B14 Splitting the Bill

Skill
Subtraction: Doubles

Materials
- integer blocks (2–10)
- paper and pencil

Set Up
Place a pile of integer blocks, as well as a pen and paper on a table. Pretend that you and your student are both out at a restaurant, and have just been given your bill.

1. Present your student with the integer block(s) that will represent your total bill (e.g., 12; consult the fact check cards from the lesson for these numbers).
2. Ask your student if they would be willing to split the bill evenly with you (tax and tip are included in the total amount, so no need to worry about that).
3. Your student must use the Build, Write, Say method to figure out how much each of you must pay. (e.g., 12 − 6 = 6, "We each need to pay six dollars.")
4. Continue until facts have been sufficiently practiced.

! If your student prefers not to play the role mentioned in this activity, that is fine! They may complete the activity by using the Build, Write, Say method to solve for each Fact Not Yet Known.

B15 Code Breakers

Skills
Subtraction: Making 10
Subtraction: Making 9

Materials
- integer blocks
- separate 9-block and 10-block that will be used throughout
- paper and pencil

Set Up
Create a "secret message" for your student by writing a word, phrase, or sentence consisting of underlined blank spaces (one space per letter; similar to the game Hangman). Set aside one 9-block and one 10-block, and place the other blocks in a pile next to them.

1. Explain to your student that there is a coded message you would like them to decipher.
2. Students are able to guess one letter per each Subtraction Making 10 and Making 9 fact that they correctly show using the Build, Write, Say method.
3. To begin, place a block (e.g., the 3-block) on top of the 10-block.
4. Ask your student to select the correct block to build the subtraction fact, making sure they flip the block over to represent subtraction.
5. If your student can correctly teach back the math fact using the Build, Write, Say method, they may guess one letter.
6. If this letter is found in your secret message, fill in the corresponding blank spaces of your message.
7. If this letter is not found in your secret message, write it on the side of the page, then cross it out.
8. Continue this process until the student is able to decipher your secret message.

Variation
For an added challenge (as well as a quicker game), only permit your student a set number of guesses. For example, practice seven math facts, and then allow them to guess the rest of the message.

B16 Subtraction Extras Scramble

Skill
Subtraction: Extras

Materials
- integer blocks (one of each):
  - 3-block
  - 4-block
  - 5-block
  - 7-block
  - 8-block
- paper and pencil

Set Up
Scatter these five integer blocks across the table so that they are not in order. Through trial and error, students will build, write, and say the four possible subtraction facts from the lesson with the blocks available.

1. Tell your student that they must find the four hidden subtraction facts that can be made out of these blocks.
2. Encourage students to use the Build, Write, Say method to find the four math facts.
3. Once students have built the fact correctly, encourage them to write the fact on the paper, then say the fact aloud.
4. Continue until all four facts have been discovered.

B17 Adding Up with Subtraction

Skills
Subtraction by 7, or Adding Up by 3
Subtraction by 6, or Adding Up by 4
Subtraction by 5, or Adding Up by 5
Subtraction by 3 and 4

Materials
- integer blocks (all)
- paper and pencil
- paper clip or some other item to serve as a “goal marker”
- AIM number line (see number line on the next page)

! If your student prefers not to play the role mentioned in this activity, that is fine! They may complete the activity by using the Build, Write, Say method to solve for each Fact Not Yet Known.

Set Up
Place the “Goal” number line, integer blocks, and paper and pencil on a table in front of your student. Explain to them that this is how they will track their “progress” of doing chores to earn a hypothetical goal of their choice (e.g., the student must finish 13 chores to earn the goal of going to the movies).

1. Each block (and space on the number line) is representative of one day of chores.
2. Place the paper clip on the number line to mark the required number of daily chores the student must complete to earn their goal (e.g., 13).
3. Depending on which lesson you’re working on, tell your student the number of chores they have already completed (e.g., to practice facts from Lesson 19: Subtracting by 7 or Adding Up by 3, you would use 7 as the subtrahend).
4. Ask your student to use the Build, Write, Say method along with the Adding Up strategy to find out how many more chores they must complete to go to the movies. (This should be done on the number line.)
5. Do this several times until the student has sufficiently practiced the desired subtraction facts.

AIM Activities

Number Line