

Includes:

- Vinyl mat • 2 Inflatable number cubes
- 64 Square frames • 1 Inflatable *more/less* cube
- 4 *More/less* frames • 64 Markers

Dive into numbers up to 120 with a marine-themed mat and activities that reinforce place value, addition and subtraction, number patterns—and that’s only skimming the surface! The following activities integrate kid-friendly pieces into play certain to delight and enchant your most intrepid little explorers. Make a Splash™ 120 Mat transforms landlocked lessons into deep-sea discoveries!

CCSS Alignment:

The activities in this guide target the following Common Core State Standards for Math in First Grade:

- ✓ Number and Operations in Base Ten: 1.NBT.A.1, 1.NBT.C.4, 1.NBT.C.5
- ✓ Operations and Algebraic Thinking: 1.OA.B.4

Introducing Make a Splash™ 120 Mat

Before starting the activities, give students time to become familiar with the mat and pieces. Point out the following number patterns on the mat: Each number, starting in the second row, is ten more than the number above it; ten less than the number below it; one more than the number to its left; and one less than the number to its right. Students should also observe that all numbers in a column end in the same number, and all numbers in a row, starting with the second row, begin with the same number.

Note: To ensure that the cubes roll correctly, do not overinflate them.

Activities:

Reeling in Numbers to 120

Pass out one square frame to each student in a small group. Roll one or two number cubes to create a one- or two-digit number. Tell students to find that number on the mat as quickly as possible and place a frame over it. The first student who frames the number should then close his or her eyes and count from that number up to 120! For an added challenge, roll the cubes, but hide the number from students; instead, describe the mystery number with a clue, such as, “This number is 3 less than 42.”

Exploring the Missing Addend

Roll the number cubes to create a two-digit number. Place a frame over that number. Roll again and frame a second number. Ask students “how much more” the larger number is than the smaller number. Demonstrate on the number grid, counting

up from the smaller to the larger number. Explain to students that counting up like this is a way of subtracting the numbers. Continue rolling pairs of numbers; this time, have students count up on the grid. For reference, the image on the right shows

one way students can use the grid to count up from 23 to 47. To reinforce the concept, after counting up, have students state

counting strategies by using the frames to make a number path on the mat, illustrating how they counted up, move by move.

Undersea Calculations

Roll the number cubes to create a two-digit number. Choose a student to place a square frame on that number on the mat. Now, roll the *more/less* cube and have students mentally figure out which number they need to find (for example, if 42 is framed, and you roll +10, students need to find 52). Use the *more/less* frame to check for accuracy: put the original number in the middle of the frame, thereby highlighting the surrounding numbers that are 10 more, 10 less, 1 more, and 1 less. With practice, students will be able to visualize the image made by the *more/less* frame and correctly find numbers that are more and less without actually counting.

Roll & Race to 120

Two players (or teams) take turns rolling a number cube to create a two-digit number. Explain that the first cube rolled will be for the tens place, and the second will be for the ones place. Pass out different-color frames for players to place on the number they rolled. This will indicate a starting point for each player (or team). Now, have the players take turns rolling one of the inflatable cubes and moving that number of spaces. Players can choose to roll one of the number cubes or the *more/less* cube on each turn. (Rolling the *more/less* cube adds a risk-reward element since players can move forward—or go backward!—up to 10 spots.) Continue taking turns until someone reaches 120! Players must land exactly on 120 to win.

For a real challenge, play the same game—but use subtraction to count backward to 1!

A Map of the Deep

Out of sight from other classmates, have a student roll two number cubes. Keep it quiet: this two-digit number is a mystery! Explain to the student who rolled the cubes that he or she is the captain, responsible for directing another student (the navigator) through the grid, from 1 to the mystery number. The captain must use “more or less” directions—such as “20 more,” “1 less,” and so on—exclusively in increments of 1 and 10, to take the navigator to the mystery number.

This can happen in as many steps as the captain describes. There is no right or wrong way to do it, as long as the navigator ends up at the mystery number. Have the navigator leave markers on the numbers he or she moves over, creating a path from start to finish. When the route is fully charted, review with students the steps they took to reach their destination.

Ahoy! For an added challenge, perform the activity above, but this time start at 120 and work backward!

Off-the-Coast Patterns

Have students use different-color frames and markers to highlight patterns on the mat. Here are several fun activities featuring patterns:

- **Odd & Even Numbers:** Frame odds with one color and evens with another, across several rows or columns.
- **Skip Counting:** Count by 5s and 10s. Ask students if they notice what both numbers have in common (when skip counting by 5s, 10s are included!). Also, skip count with 10s and 20s, or 4s and 8s. Cover the numbers as you count, using green to cover one number and orange to cover another. You’ll see that some numbers are part of two or more skip-counting patterns!

aloud the difference between the two numbers, in the context of “how much more” (for example, “47 is 24 more than 23”).

Coral Count Up

Move down two spaces to count up 20, and right four spaces to count up 4. The missing addend is 24!

- **Addition & Subtraction Patterns:** Ask students to solve a series of addition or subtraction problems that have recurring patterns, such as $5 + 7$, $25 + 7$, $45 + 7$, and so on. Have them place frames on the addends and sums while solving, in order to see how the patterns emerge.

Roll two number cubes to create a two-digit number. Ask students to figure out how many more they need to make 120. Encourage students to use various counting strategies, using the mat as a visual aid. To count up by tens, for example, students can find the rolled number on the mat, and then move down, one space at a time; or, to count up by ones, they can move to the right, one space at a time. (If students are still having difficulty navigating the grid, please refer to the previous activity for a visual example of a counting up strategy.) Have students show their own

- **Name That Pattern:** Choose any pattern, and then cover the numbers in that pattern with markers. Ask students to name the pattern displayed on the mat. For variation, exclude one marker from the pattern and have students tell you which number should be covered.