

# Push Box

Grade 2

△ Addition and Subtraction Situations

📄 5 levels



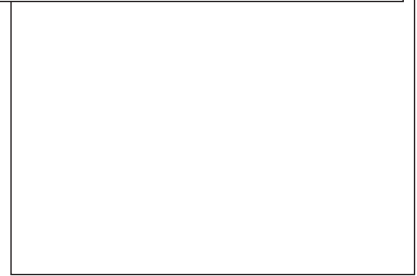
STMath.

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The problems progress from simple adding . . .



. . . to missing addend problems using numbers greater than 10.



Addition and Subtraction Situations - 1

# Pie Monster

Grade 2

△ Addition and Subtraction Situations

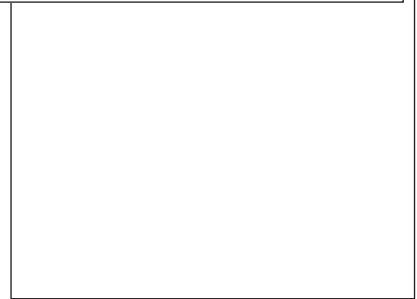
📄 4 levels



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The missing addend can be found below the monster . . .

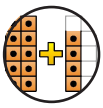


. . . or on the conveyor belt.



Addition and Subtraction Situations - 2





# Ten Frame Addition

Grade 2

△ Addition and Subtraction Situations

📖 4 levels

## Probing Questions

- How do you know how many squares to fill in?
- What does the number of holes in the ground mean?

## Research is Clear

Changing the orientation and filling approach in a ten frame helps develop a stronger number sense and think more flexibly.

## Something to Think About

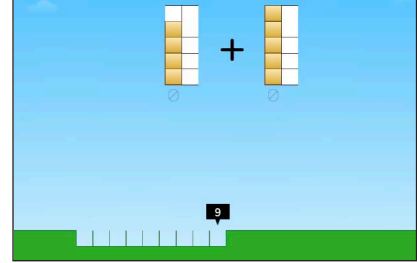
"Once students are able to visualize the numbers 1 through 10, they begin to develop mental strategies for manipulating those numbers, all within the context of the numbers' relationship to ten."

<https://www.ru.ac.za/media/rhodesuniversity/content/sanc/documents/SANC%2010-frames%20reading.pdf>

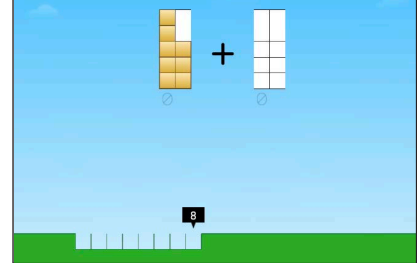
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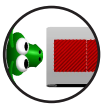
Addition is connected to number lines, a concept used in advanced math.



Level 4 doesn't allow using 0. Click in the upper-right corner to start the puzzle over.



Addition and Subtraction Situations - 3



# Push Box Subtraction

Grade 2

△ Addition and Subtraction Situations

📖 3 levels

## Probing Questions

- What do the holes in the ground mean?
- How do you know how many boxes to fill?

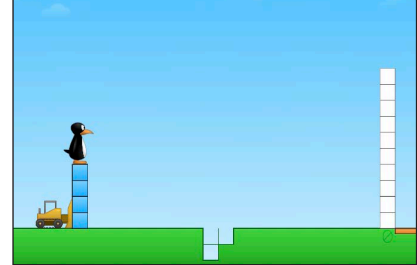
## Something to Think About

Allow students to experience the puzzles and develop a visual understanding before introducing mathematical vocabulary.

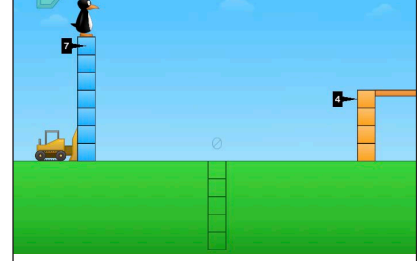
## The Bigger Picture

Being able to flexibly solve addition and subtraction problems is foundational to the work students will be expected to do in algebra.

Some puzzles are examples of subtraction as take-away . . .



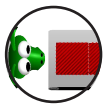
. . . while others present subtraction as finding the difference, how many fewer, or comparing.



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Addition and Subtraction Situations - 4



# Pie Monster Subtraction

Grade 2

Addition and Subtraction Situations

4 levels

## Probing Questions

- What are the circles with the red lines for?
- What are the boxes for?
- What do the circles on the monster's back represent?
- What do the circles on the conveyor belt represent?

## What Do the Standards Say?

Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. CCSS.Math.Content.2.OA.1

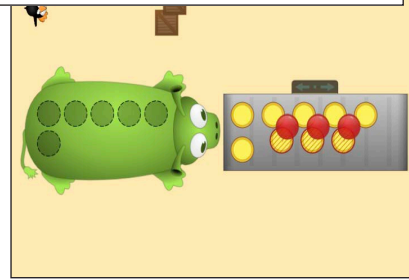
## Something to Think About

This game presents several models of subtraction and helps students develop the ability to think flexibly about the problem. It also allows students to see how subtraction and addition are related.

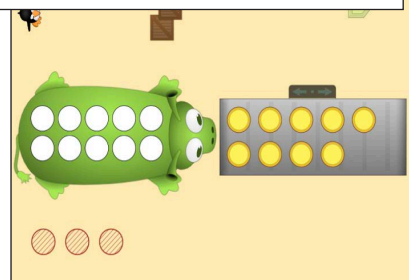
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Use the scrub bar to slow down the visual feedback.



Level 4 has puzzles with the unknown in all positions.



Addition and Subtraction Situations - 5



# How Many More?

Grade 2

Addition and Subtraction Situations

5 levels

## Probing Questions

- What does the claw do?
- What do you have to do to help JiJi cross?
- How could you describe the relationship between the two numbers with words?

## Supporting Struggling Students

Be sure students have understood the tutorial at the beginning of Level 1. It is also helpful to have students work with manipulatives if they are having trouble.

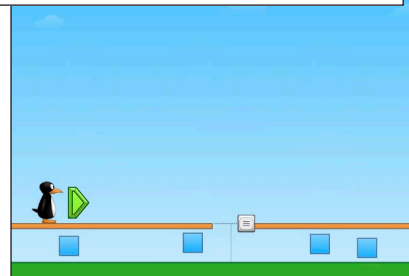
## What Concepts Are Being Developed?

In Levels 2-4, the relationship between the two numbers is presented visually and, upon completion of the puzzle, as words and numerals. In Level 5, students must create the description in words themselves which requires more abstract thinking.

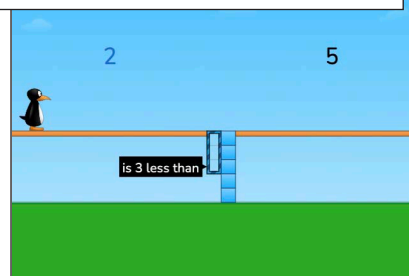
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If there are the same number of blocks on both sides, click the slider to activate the green arrow.



Focus students' attention on the words at the end of the puzzles in Levels 2-4.



Addition and Subtraction Situations - 6