



Push Box

Grade 2

Addition and Subtraction Situations

5 levels

Probing Questions

- What does the ramp mean?
- What do the orange blocks mean?

Uncover the Thinking

Use facilitating questions to uncover students' strategies, especially on missing addend problems. Are they viewing them as "how many more?" or using subtraction to find the answer.

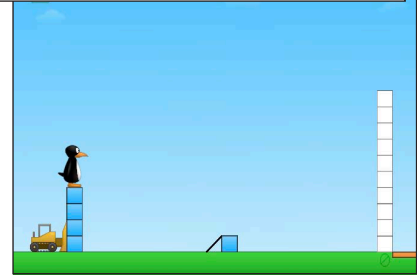
What Do the Standards Say?

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

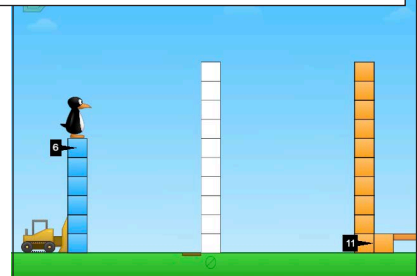
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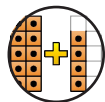
The problems progress from simple adding ...



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



Addition and Subtraction Situations - 1



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

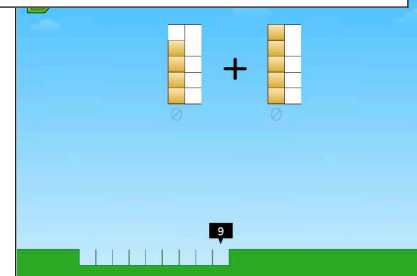
"Once students are able to visualize the numbers 1 through 10, they begin to develop mental strategies for manipulating those numbers, all within the context of the numbers' relationship to ten."

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

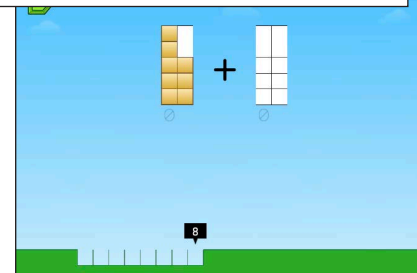
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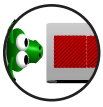
Addition is connected to number lines, a concept used in advanced math.



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



Addition and Subtraction Situations - 2



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.

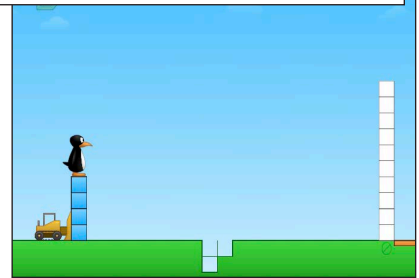
The Bigger Picture

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

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



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

