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Number talks

Number talks are a great way to teach number sense and math facts. Number talks are a short teaching activity where the teacher poses an abstract math problem and asks students to solve the problem mentally. Since number talks are a mental exercise, students are not presented with math tools. Students are given thinking time to solve the problem. Students then explain their thinking and give an answer. With the focus on the process, not the answer, the teacher collects the different methods and facilitates a discussion with the class of why they work.

Source: Boaler, J. (2015, January 28). *Fluency Without Fear: Research Evidence on the Best Ways to Learn Math Facts* (Licensed under Creative Commons 4.0). Retrieved from: https://www.youcubed.org/evidence/fluency-without-fear/

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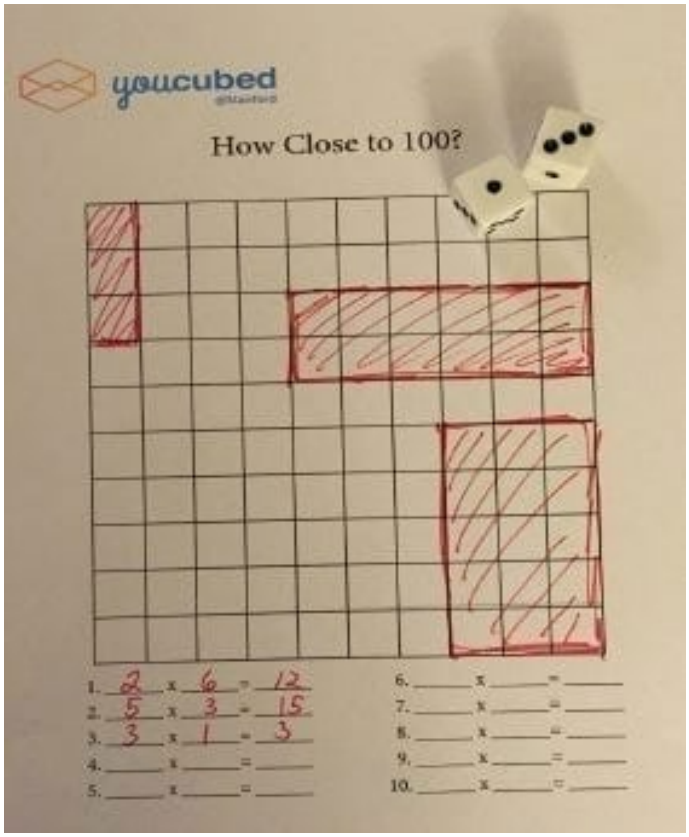
How close to 100?

This game is played in partners. Two students share a blank 100 grid. The first partner rolls two numbered dice. The numbers that come up are the numbers the student uses to make an array on the 100 grid. They can put the array anywhere on the grid, but the goal is to fill up the grid to get it as full as possible. After the player draws the array on the grid, she writes in the number sentence that describes the grid. The game ends when both players have rolled the dice and cannot put any more arrays on the grid. How close to 100 can you get?



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Math Cards

As an alternative to using flashcards for memorization, this activity emphasizes number sense and understanding multiplication. The aim of the activity is to match cards with the same numerical answer, shown through different representations. Lay all the cards down on a table and ask students to take turns picking them. They can pick as many as they find with the same answer (shown through any representation). For example, 9 and 4 could be shown in the following ways: with an area model; as sets of objects, such as dominoes; and as a number sentence. When students match the cards, they should explain how they know that the different cards are equivalent. This activity encourages an understanding of multiplication, and it provides a rehearsal of math facts. Below is an example of what the math cards could look like.

A full set of cards is available for you to print and use in your classroom. To get to the cards, first follow the link below, then click the option to download the entire article as a PDF:
https://www.youcubed.org/evidence/fluency-without-fear/