

# Duck Race

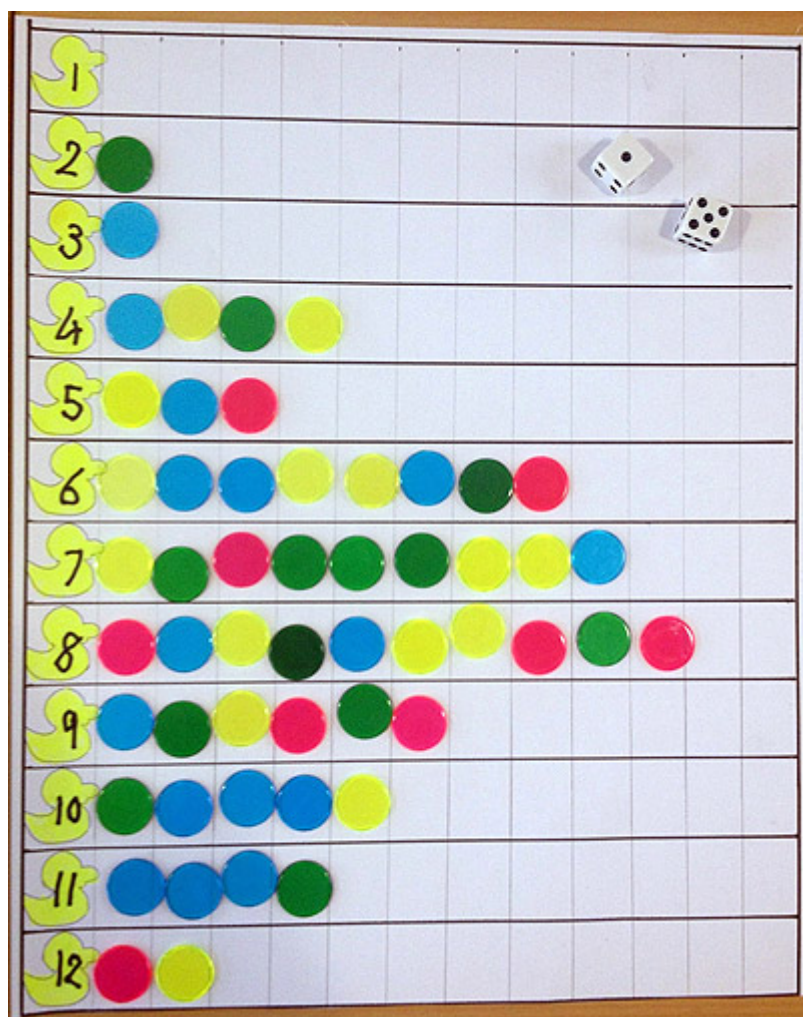
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## Annotation

Nina can use and explain the results of a game she played to identify which outcomes are more likely to occur in future games.

## Problem: Duck Race

A group of students are playing a Duck Race game. They throw two dice, add their numbers together and put a counter in the row that represents the total shown on the two dice. The first full row of counters is the winning "duck".



The teacher asks the students:

*If you wanted to be the winner, which number would you choose to be your duck?*

## Student Response

Nina: I would choose the number eight duck because that duck got the most throws.

Teacher: Tell me more about that.

Nina: More of the answers were for eight, although seven was very close.

Teacher: Can you tell me some more about your thinking?

Nina: Well, you'll get more sevens and eights because there's more ways to make those numbers, like  $5 + 2$  and  $6 + 1$  and  $4 + 3$  all make seven. But you can only get twelve with two sixes, and you can't get one at all because the two ones on each dice make two. So twelve and one would be bad ducks to choose.