



Activity

- Puzzle with Dominoes -



Educational Goals

- ❖ Highlight the playful potential of mathematics
- ❖ Memorize addition operations (from 1 to 6)
- ❖ Develop logic

Key Features of the Targeted Competency

- ❖ Use mathematical concepts and processes pertaining to the situation
- ❖ Apply mathematical processes pertaining to the situation

Concepts Used

- ❖ Arithmetic operations (addition)
- ❖ Count
- ❖ Complements
- ❖ Logic
- ❖ Organization strategies

Materials

- ❖ 1 set of dominoes per student or Appendix 1
- ❖ 1 copy of the Activity Sheet per student

Targeted Academic Level
Grades 1 to 3

Targeted Competency



Targeted Areas of Mathematics



Suggested Teaching Formula



Time Required
Approximately 45 minutes

*Only applies to Quebec's education program.





Suggested Process

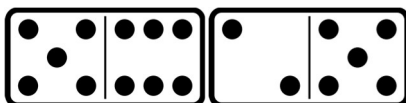


Step 1: Introduction

Hand out a copy of the Activity Sheet and a set of dominoes (or Appendix 1) to each student. Remove the dominoes with a blank side (which represents zero). Only keep the dominoes that have sides with 1 to 6 dots. The students can do the activity alone or in teams of two.

Step 2: The activity (15 minutes)

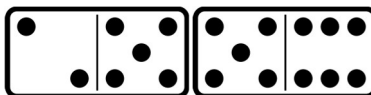
The goal is to place dominoes to cover all the boxes of the puzzle. To place a domino, the sum of all the dots on the domino must correspond to the number indicated on the box. In this version of the game, the sides of the dominoes that touch must not necessarily have the same number. For example, this would be allowed:



There are several ways to place the dominoes in the puzzle. It can be interesting to ask the students to find all the possible solutions, then discuss the fact that it's possible to obtain the same sum in different ways. Many dominoes will be left at the end. When the students think they found the solution, they can look at the Explanation Sheet to check their answers.

Step 3: Challenge (20 minutes)

To make it harder, the students can do the puzzles again using the same dominoes, but the sides of the dominoes that touch must have the same number. For example, the side with 5 dots of a domino must be placed next to the side with 5 dots of another domino:



To guide the students in their reflection, you can suggest they start by finding the boxes which sum can be obtained only one way (e.g. the 2, 3, 11, or 12). They can also remove the dominoes whose sum is not in any of the puzzle's boxes. Finally, they can group the dominoes that have the same sum. If the students are not able to find the solution, they can try turning certain dominoes.

Step 4: Creation (10 minutes)

The students can try creating their own puzzle and challenge the other students to find the solution.

APPENDIX 1

