Activity name: From 2 to 12

Time: 15-20 minutes

Educational objective (operationalised): The student develops an intuition for probability and makes decisions based on observed solutions

Materials needed: learning by moving boards from 2 to 12, balls, three six-sided dice for each student, sashes, bags

Experience/activity:

1. Division into teams: Students are randomly assigned to teams of 3-4 (e.g. by drawing coloured cards). Each team receives bags in their colour.
2. Aim of the game: Each team has to place at least one of their bags in each sash. Each sash is assigned a board with numbers from 2 to 12 (see figure below).
3. Gameplay:

   Each student rolls two dice and adds up the total. They run to the

   designated line on the playing field.

   They throw the bag into the sash marked with the calculated total.

   End of the game: The game continues until the first team announces that they have at least one bag in each sash (from 2 to 12).

4. After the game, the teacher leads a discussion:

   Are there a similar number of bags in all sashes?

   If not, why do some sashes have more bags than others?

5. Then the game is repeated, but this time the pupils throw three dice at once and then choose two of them and count the sum of the dots - this way they have the opportunity to influence which fields they will fill.

Modifications, i.e. how else you can play/lead the activity:

Different numbers of points can be awarded for each sash (the most for the extreme ones, the least for the middle ones) and teams can be given a specific amount of time for the activity, e.g. 5 minutes. After this time, the teams count how many points they have managed to score.

Understanding – building knowledge:

I got a total of 9 points – which pairs of dice could I have used to get this? Which sums are

the easiest to obtain? Which pairs of dice give them?

Another experiment (e.g. sample tasks/puzzles):

If we were throwing eight-sided dice, which sums would be thrown most often?