



ACTIVITY

- SHADOWS BINGO -



Educational Goals

- ❖ Highlight the playful potential of mathematics
- ❖ Develop the mathematical vocabulary
- ❖ Work on spatial representation by passing from three-dimensional representation to two-dimensional representation

Key Features of the Targeted Competency

- ❖ To mobilize concepts and processes appropriate to the given situation
- ❖ To apply concepts and processes appropriate to the given situation
- ❖ To justify actions or statements by referring to mathematical concepts and processes

Concepts Used

- ❖ Spatial representation
- ❖ Passing from 3 dimensions to 2 dimensions

Materials

- ❖ One bingo sheet per student (in the appendix)
- ❖ Sheet for development of solids (in the appendix)
- ❖ Pencils
- ❖ Paper
- ❖ Flashlight (optional)

Targeted Academic Levels
Grades 3 to 6

Mathematical Field Concerned



Suggested Teaching Formula



Time Required
Approximately 30 to 35 minutes



SUGGESTED PROCESS



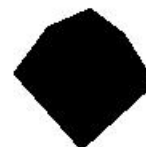
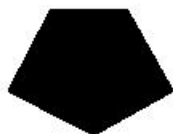
Step 1: Preparation

Before starting the activity, build the solids using the developments provided in the appendix.

Step 2: Introduction (5 minutes)

Hand out one bingo sheet to each student in the class. You may give the same grid to the whole class, which could motivate the students to search all the shadow possibilities for a same solid. You can also use different grids for the same game. You will find other models of the bingo sheet in the “Additional Grids” document.

Explain to the students how the activity will take place. You will show them solids and they will have to identify which shadows in the grid this solid corresponds to. As an example, you can use a truncated pyramid and mention to them that this solid can create several shadows. We suggest that you draw on the board the following shadows, which correspond to the truncated pyramid.



Step 3: The game (15 to 20 minutes)

Show the solids one at a time. The students must find all the possible shadows for this solid, which are represented on the bingo sheet. We suggest that you make the solids (and the flashlight, if needed) available so the students can handle them and try to find different shadow possibilities.

When they find a shadow corresponding to the solid, they can write the solid’s name underneath it. To help them, you can remind them that there are several possible shadows for a same solid.

The first person who succeeds to find a complete row or column wins the game. We suggest that you use the list of solutions in the Explanation Sheet to make sure that the student properly identified the shadows.

Step 4: Reveal the solutions (10 minutes)

Once the game is over, present different possible shadows for each solid. Help yourself by using the list of solutions available in the “Shadows Bingo” Explanation Sheet. To ease the visualization, you can use a flashlight and turn the lights off so the students can see the shadows clearly. A projector can also be used to visualize the shadows of the solids.

Grid 1

Find the possible shadows for the different solids presented

