



MATHEMAGIC

- KEY TO THE PREDICTION -



Educational Goals

- ❖ Develop logic
- ❖ Adopt a magic trick and try to find the mathematical mechanism that governs the trick
- ❖ Bring the students to notice a constant or noteworthy element in a situation

Key Features of the Targeted Competencies

- ❖ To decode the elements of the situational problem
- ❖ To modelize the situational problem
- ❖ To apply different strategies in order to elaborate the solution
- ❖ To validate the solution
- ❖ To define the elements of the mathematical situation
- ❖ To mobilize and apply concepts and processes appropriate to the given situation

Mathematical Concept

- ❖ Natural numbers' properties (parity)

Materials

- ❖ Video of the trick
- ❖ Approximately 15 small objects
- ❖ Sheets of paper and pencils

Targeted Academic Levels
Grades 3 to 6

Mathematical Field Concerned



Suggested Teaching Formula



Time Required
Approximately 35 minutes



SUGGESTED PROCESS



Step 1: Introduction (5 minutes)

Play the video of the magic trick once (www.amazingmaths.ulaval.ca).

You will find in the Explanation Sheet for the puzzle “Key to The Prediction” the steps to follow if you want to do this magic trick yourself with your students rather than play the video.

Step 2: Recreate the magic trick (10 minutes)

Place the students in pairs: one plays the role of the magician and the other plays the spectator. They have to recreate the manipulations done in the video.

To do so, present the video a few more times so the students notice and note the manipulations of the magician and the spectator to be able to recreate them.

Step 3: Finding the solution (15 minutes)

Ask the students to try to find the solution, keeping the same teams than for the previous step.

To help them, play the video again and guide the reasoning by drawing their attention on the person that points out the objects first and last. You can also ask them if the magician needs to have a strategy when he does the manipulations.

Step 4: Reveal the solution (5 minutes)

Refer to the Explanation Sheet for the trick “Key to The Prediction”.