Good practices
LOGIC_808BCD_EN

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Based on an idea by the students of the **Budapest Fazekas Mihály Elementary and Secondary School**

Description of the problem / exercise: **Find out!**

Find out which element I meant! Two, four or more can play.

1. In the first round, any of the 24 basic shapes (circle, triangle, or square) from the Poly-Universe set are scattered on the table.
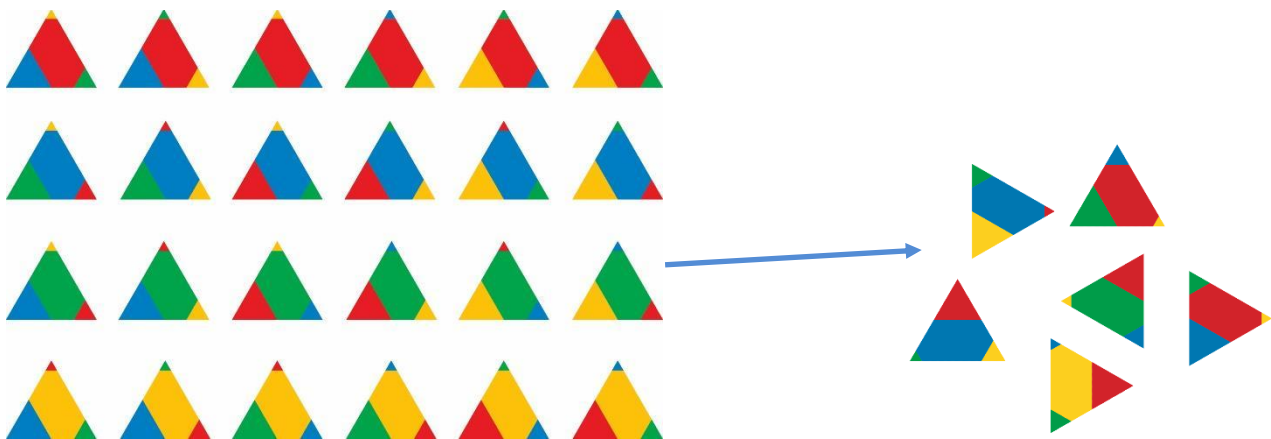
A member of the group selects an item with his eyes and mentally notes all its details (colors, dimensions) or takes a picture of it with his mobile phone to avoid making a mistake. During the selection, the participants in the game do not look at the eyes of the person making the selection.

The players present one element after another and ask the selector how many similarities can be identified between the basic element and the selected element.

For example: Base color and colors of smaller shapes: 0, 1, 2, 3, 4 identities are possible, but if 3 are found on the first try, they match the selected element and the game has to be restarted.

The player keeps the element shown in mind until the game is solved. Using combinatorial reasoning, players continuously narrow down the possibilities until they finally decipher the parameters of the selected element and point to the solution.

2. In the second round, all three basic shape sets are scattered on the table with a maximum of 3×24 elements.

After the selection, the players present one element after the other and ask the selector how many similarities can be identified in the basic element's components with the selected element.

In this case, the shape of the base body counts as an information, the color of the base body and the colors of smaller shapes: 0, 1, 2, 3, 4, 5 identities are possible, but if the first match is 4, it may be not same as the selected element and the game does not have to be restarted.

- *Why this exercise is good*: Develops combinatorial thinking, logical skills and prediction skills. Develops communication skills.

- *Which level is recommended:* Upper primary school, secondary school, teacher training

- *School subject(s):* Mathematics, logic

- *Comments*: Including more sets makes the game harder, less likely that players will pick the same item at first.