



CHALLENGE

- PAPER CLIPS CREATIONS -



Educational Goals

- ❖ Compare and build solids
- ❖ Describe prisms and pyramids with faces, vertexes and edges

Key Features of the Targeted Competencies

- ❖ To apply different strategies in order to elaborate the solution
- ❖ To validate the solution
- ❖ To mobilize and apply concepts and processes appropriate to the situation

Concepts Used

- ❖ Building polygons
- ❖ Edges
- ❖ Vertexes
- ❖ Faces

Materials

- ❖ Paper clips
- ❖ Straws
- ❖ Paper
- ❖ Pencil

Targeted Academic Levels
Grades 3 to 6

Mathematical Field Concerned



Suggested Teaching Formula



Time Required
Approximately 35 minutes



Suggested Process



Step 1: Introduction

Place the students in teams of 2. Tell the students they will have to meet a special challenge. They will have to be ingenious and creative to succeed. Provide each team with a lot of paper clips and straws and ask them what they think they will have to do with these materials.

Step 2: The challenge (20 minutes)

Say what the challenge is: in teams of 2, the students must build using paper clips and straws the polygon with the biggest number of edges possible.

- They are allowed to distort the paper clips (unroll them, bend them, etc.).
- They are allowed to cut the straws.
- They have 20 minutes to build their polygon.
- They are not allowed to use materials other than the straws and the paper clips to build their polygon.

Once their polygon is built, they have to count the number of edges.

Then, they must find a name for this solid. To guide their thought process, you can ask them the following questions:

- Do you know the name of this polygon? (If it has one, use the right name.)
- If it does not have a name, using your knowledge of prisms and polygons, what would you name it?
- What type of solid is this polygon? Is it a pyramid or a prism?

Step 3: Review (15 minutes)

Ask the students to present to the class the polygon they created. They have to describe it by talking about the faces, the edges and the vertexes. They must also say the name they chose and explain why they named it that.

Write on the board the number of edges of every team's polygon. The team that managed to build the polygon with the biggest number of edges wins.