

Design a hole for a minigolf course



Using materials of your choice, you and a partner will design and create a table-top mini golf hole using marbles for the ball, and a finger-flick for propulsion. While each hole will be a par 5 it must be possible for a player to get a hole-in-one.

Criteria:

- must have a one-shot solution
- must fit entirely on the surface of a regular classroom table
- must use at least one reflection in the solution
- the hole must be 1.5x larger than the marble
- playing field must be decorated with an appealing theme
- must have a flag with your assigned hole number
- include a scale diagram of the hole showing:
 - *the one-shot solution (include incident and reflected rays, angles of incidence and reflection, and normal)*
 - *the total surface area of the playing field*
 - *the perimeter of the playing field*
 - *the linear distance from the tee box to the hole*

Materials:

Each team will be given the following materials.

- 50 popsicle sticks
- 30 toothpicks
- 8 cubic centimetres of modeling clay
- 2 sheets of 18" x 24" green construction paper
- 1 marble per team

No replacements or "seconds" will be provided, so TAKE CARE!