

Golf Around the Stacks

Strands:

Number & Quantity

Algebra

Functions

Geometry

Statistics & Probability

Materials:

- Two obstacles (1-foot sections of 2 X 4 boards or similar size)
- Plastic golf ball
- Putter
- Tee circle
- Hole circle
- *Golf Around the Stacks* Score Card, 1 per group of 4 players



Where:

Outside

Inside

On-line

On-site

Have you ever wanted to set up your own mini-golf course? You can do it using math! Use geometry to win!



Set-Up:

- Construct the hole for each round by placing the obstacles, tee circle, and hole circle.
- Decide on the number of holes you will play with others.

Object of the Game: Build geometric problem-solving skills by thinking about how to make your shot. Observe the behavior of the ball to explore the angle of incidence and the angle of reflection.

Pregame Activity: Tape a piece of paper to the top of one of the obstacles. Roll the ball so that it rebounds off the side of the obstacle. Have an observer try to draw two lines. One line shows the path of the ball as it was moving toward the obstacle. The second line shows the path of the ball after it rebounded off the obstacle. Repeat until you can predict how the ball will rebound off the obstacle when you hit the ball toward the obstacle.

On Your Turn:

1. Place your ball anywhere on the tee. Your goal is to get the ball in the hole by making it rebound off at least one of the obstacles.
2. Each time you hit the ball you complete one stroke. If you miss the hole, place your ball back at the tee and try again.
3. Keep track of the number of strokes it takes you to hit the hole.
4. Record the number of strokes you took on your turn.
5. If your stroke hits both of the obstacles and makes it in the hole, subtract two from the number of strokes you took on that hole.

Winning the Game: The player with the lowest score after 9 holes wins!

Think About It:

6. How did you decide where to place the ball so that it would hit the hole when you rebounded it off an obstacle?
7. How did you decide how hard to hit the ball so that it would hit the hole?
8. How did the ball bounce off the obstacles?
9. What other games use the skills you learned playing mini-golf?

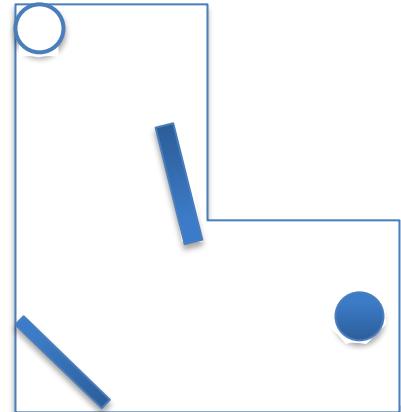
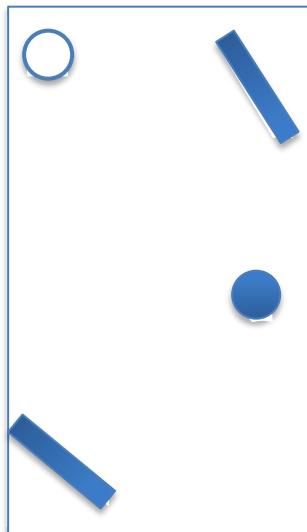
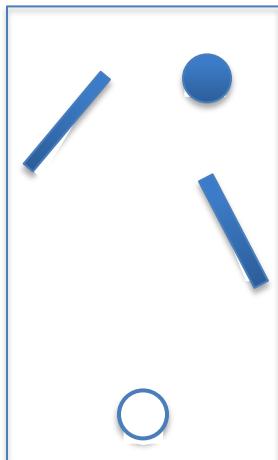
Variation:

Go Around the Stacks: If you have not already done so, make a hole go around an unmovable object like one of the bookshelves in a library. Position the tee so that you cannot hit the ball to the hole without rebounding it off one of the obstacles.

Helpful Hint:

- Make sure to watch what other players are doing. How do other players' shots help you decide how to make your shot?

Here are some sample courses that can be built. The white un-shaded circle is the tee and the shaded circle is the hole. Decide how you would aim a ball sitting on the tee so that it will roll over the hole. The ball must rebound off at least one obstacle.



Golf Around the Stacks Score Card

Directions: Keep track of your strokes on each hole. If your stroke hits both of the obstacles and makes it in the hole, subtract two from the number of strokes you took on that hole.

Player	Hole 1	Hole 2	Hole 3	Hole 4	Hole 5	Hole 6	Hole 7	Hole 8	Hole 9