

Mini Golf!

Developed by Tim Porter, Senior Project Manager, Boston Children's Museum



Suggested Time: 1-2 hours

Suggested Materials:

- Ping pong balls, or other small, light balls
- Dowels (1/2 to 1 inch in diameter) for putter shafts, one for each child
- Foam or other light-weight, stiff, thick, cut-able material for putter head, cut into rectangles between 4 and 5 inches long and 1-2 inches high and wide.
- Recycled materials (eg. foam tubes and rods, rolls of cloth, carpet samples, large cardboard tubes, coffee cans, cups, string, etc.)
- Scissors
- Tape
- (optional) Hot glue

Preparation:

Create a putter for yourself ahead of time by piercing the dowel into a piece of foam, or gluing it or taping it to the foam. You might also create putters for each of your students, depending on their level of ability.

Make a mini-golf hole with the available materials and test out its constraints. The “hole” refers not only to the cup at the end, but to the entire playable part of each group’s creation – including the tee box (where they start playing from on each hole), the fairway (the part in between the start and the end of each hole), and the cup (the end of each hole – where you need to hit the ball into in order to complete playing the hole) .

Discussion:

Before having children build their mini golf holes, begin a discussion with them about golf and mini golf. Have they played before? What equipment did they use? How do you keep score in golf and mini golf? What does “par” mean? After this brief discussion, you can show them the mini golf hole that you created. Ask them to point out in which direction they might hit the ball in order to make a hole in one. Is there more than one way to do it? Is it impossible?

Construction:

Show the children the materials and tools that they’ll be able to use in making their mini golf course. Group children in teams of 3-4. This activity works best if children work collaboratively. Let your students work for 10-15 minutes on the problem. Walk around among the groups, and look for topics of discussion. After this short initial period, pull your students away from the materials, and facilitate a talk about the process so far. Ask them how they got started, what challenges they are currently facing, something that they started out not sure about, but then figured out how to do, etc. This early discussion should last no more than 5 minutes – it is simply a check in, and a way to share early ideas. After this check in, send your students back to their task.

As they are building and designing, give your students some things to think about, such as:

- They’ll first need to decide where the beginning and where the ending of their hole is. In particular, how are they going to create the “cup” – the end goal of each golf hole?
- They’ll be designing their mini golf holes for other children to play – this means that they’ll want to make it fun and challenging – but not so hard that it is not enjoyable to play.
- As their hole is starting to take shape, they’ll need to constantly test it out to make sure that it is performing as they hope it will. This testing, subsequent revision and retesting is intrinsic to the design process.

- Mini golf holes often have themes (think windmills and dinosaurs...). Remind your students of this, and have them think about what the theme of their hole will be, and ask them to give their hole a name.
- When they are finished with their holes, children will play the entire course – a golf course is typically a collection of 9 or 18 holes – in this case it will be as many holes as you have groups of 3-4 children. With this in mind, you might have a discussion with your students about what to name the entire class’s mini golf course.
- Once each group’s hole is nearly done, they will need to determine what “par” is. Par is the average number of shots it should take someone to hit the ball into the hole. On mini golf courses, par is typically 2, 3 or 4. The higher the number, the more challenging the hole is to play. Talk to your students about how they will determine par for their hole. One suggestion is to have each child in the group play the hole 10 times, add all of those scores up, and determine an average score – this can be rounded to the nearest whole number.

Once each group has completed their mini golf holes, assign a hole number to each, so that the playing of the course can happen in an orderly manner. You might have a discussion before the playing commences, in which each group has a chance to show off the unique features of their mini golf hole.

After the children have played the entire course, have a wrap-up discussion. Have them talk about how easy or hard it was to hit the ball into the cup on some of the golf holes, how the ball reacted when it was struck against components of a hole made from different materials (does it bounce the same off of foam as it does off of wood?). Make a list of rules for their golf course, and for playing golf in general (ex. the harder you hit the ball, the farther it goes; bumpers around the edge of a mini golf hole help keep the ball from rolling away; you have to hit the ball harder to make it go uphill; etc.)

Suggestions:

- Foam rods and tubes (such as pool noodles or pipe insulation) make great boundaries for the edge of each mini golf hole. Aside from preventing the balls from rolling off the course, they help delineate each group’s “territory”.
- In the interest of space, you might give each group a set number of foam rods (if you don’t have rods or tubes, you can use string), or give them a perimeter or area that their golf hole must be.
- If you are working with younger children, would like a less complex activity, or are short on space, each group could be given a piece of cardboard or thick oak tag (approximately 24” X 36”) on which they must build their hole. Cut a circle at one end and place a cup in it so they have a target of where to hit the ball, and then encourage them to glue things under (this creates hills) and on (this creates obstacles) the cardboard or oak tag in order to construct their mini golf hole.



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