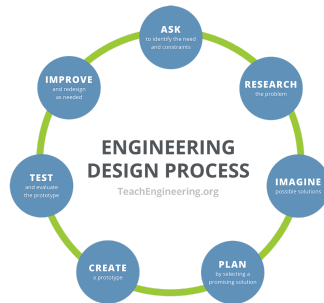


# Design Tech Putt Putt Challenge

Create a 3 hole putt putt course that can fit on a classroom table-top that has a set theme.



*Must Be Included:*

- ☐ At least one tunnel.
- ☐ At least one bridge
- ☐ 2 elevated obstacles
- ☐ At least one object that stays in motion.
- ☐ The 3rd hole has to drop into a container. (Bonus points if you can engineer a flag popping up to signal the end of the round.)
- ☐ Signs/Flags that identify each hole.
- ☐ One hole that uses exactly 50 popsicle sticks.
- ☐ A 3D printed element that cannot exceed 7cm x 7cm x 5cm.
- ☐ The use of Model Magic on one hole.
- ☐ Boundaries around your holes preventing the marble from falling on the floor.
- ☐ Something that swings.
- ☐ Bumper objects on each hole that prevent the ball from having a straight path to the hole.
- ☐ One hole has to have a tribute to an invention that has made a huge impact in the lives of others and

has to be incorporated into the main theme somehow.

#### Materials That Each Group Will Receive:

- ☐ 50 popsicle sticks
- ☐ 2 bags of Model Magic
- ☐ A motor
- ☐ 1 meter of string
- ☐ A bag of math manipulatives
- ☐ Portion cups
- ☐ 20 straws
- ☐ 10 toothpicks
- ☐ 1 AA battery
- ☐ 2 LED lights
- ☐ 12 inches of copper tape
- ☐ 2 coin cell batteries
- ☐ 5 brads
- ☐ Felt for the table top.

#### Unlimited Supplies:

- ☐ Cardboard
- ☐ Construction Paper
- ☐ Upcycled Materials

#### *A Mystery Item Bag*

# Planning Tasks for the Challenge

Team Member Names: (type them here)

- ☐ Research putt putt golf courses to get an idea of what they are like. Talk with your group about fun holes or courses you have played in the past.
- ☐ In your group, list 10 different theme ideas for your course. Type them below. Vote on one and change the color of the text for the winning theme.
- ☐ Using your theme, generate at least 5 names for your course. Type them below and change the text color of your winning name.
- ☐ Create a logo for your course combining both graphics and text. Sketch out 3 designs and select one to be digitally created on Canva or other digital editing software.
  - ☐ Not Started ▾ Sketch
  - ☐ Not Started ▾ Digital Design
  - ☐ Print your logo and show it to Mrs. Bond. You will have to tape your logo to the table when it is time to play putt putt.
- ☐ On Jam Board, start brainstorming ideas for your holes. Look at the criteria and talk about the elements that could be part of each hole. You can create a JamBoard for each hole. Feel free to add images, use the pen tool, sticky notes, etc. (Add your link to the assignment in GC.) Example:  
[https://jamboard.google.com/d/lj3R9I4LS7IeApNfGhID\\_cdobVFOOKDuPpBbIexjcelc/viewer](https://jamboard.google.com/d/lj3R9I4LS7IeApNfGhID_cdobVFOOKDuPpBbIexjcelc/viewer)
- ☐ Draw a blueprint of your course design with a scaled drawing of the entire table and the 3 holes on graph paper. Submit it to Mrs. Bond before you start building.

# Constructing the Course

Work together to construct the course based on your blueprints. All constructed items should fit in your bins. Do not store any materials outside of your bins. (If your bin is full...clean it out. All items from previous projects should be brought home. )

Divide and conquer. Everyone should be on-task working on something to help the course get completed. Tasks that may be helpful in dividing out:

- Border construction to prevent marble from going on the ground.
- Motorized parts.
- Tunnel/bridge construction
- Theme decorations
- 50 stick challenge, etc.

You will be assigned a table to work at in the workshop. If you leave a mess behind on top of the table or below, you will be marked down from your total points. Make sure you clean up your table after each class.

## When Your Course is Done...

Record a Flip video and follow the directions on GC. We will have a chance to set up and play each other's games too!

# Design Tech Putt Putt Challenge Scoring Sheet

Course Name: \_\_\_\_\_

Team Members: \_\_\_\_\_

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Planning Document		Workshop Point Deductions	
Digital Logo		Bonus Points	
Jamboard Planning			
Blueprint Sketch			
3D Design and Print			
Tunnel		2 elevated obstacles	
Bridge		Use of LED Lights	
50 Stick Challenge		Bumpers	
Model Magic			
Element That Stays in Motion		Borders preventing marble from falling or entering into another hole.	
Swinging Object		Hole 1 w/ sign	
Tribute to an Invention		Hole 2 w/sign	
3rd Hole Ends in a Cup		Hole 3 w/sign	

Score for Criteria and Constraints: \_\_\_\_\_

Comments:

