

2016 Worthington Science Day Design Challenge

The Challenge:

Using some or all of the equipment provided, you are to design a device to transport as many golf balls as possible, as quickly as possible, through the provided course without spilling any.

Materials:

Each team will receive a kit containing the following:

- 1 45-rpm record
- 5 feet of string
- 4 7" x 5.5" pieces of sheet magnet

Water bottles (3 for K-3, 4 for 4-6, 5 for middle school, 10 for high school)

Teams will also have access to scissors.



The Specifications:

- 1) The device may only consist of the materials provided.
- 2) The device must use a record as its base.
- 3) The only parts of the device that may touch the ground are the record and string.
- 4) The device must transport a minimum of 7 golf balls.
- 5) To start the test, the device must be completely contained within the starting area. Time will begin on the judge's signal.
- 6) The test will end when the device crosses the finish line.
- 7) The only way in which teams may control their device is by pulling on the string.
- 8) The number of golf balls counted as "transported" are all those that the device conveys the full length of the course AND are still in or on the device when it comes to a final rest after crossing the finish line.
- 9) The judges may impose any other rules in accordance with the spirit of the contest.
- 10) The decision of the judges is final.

How to Win:

The team's score will be the number of seconds it took to traverse the course, minus the number of golf balls that were transported. The lowest score wins.

Other Rules:

- Teams will have **30 minutes** from when they receive their materials to develop a final design.
- Teams may test on their portion of the course at any time during building.
- Once the building time is over, teams may not touch their devices until instructed to start the test by the judges.
- No outside resources are allowed, including internet access, texting, or consulting with others not participating in the event.