Friction Merry-Go-Round
Investigation #5

Description
I'm busy getting dizzy...I'm busy getting dizzy...Try this motion experiment to learn more about friction and resistance!

Materials
- Heavy board or book
- Metal lid
- 7-14 Marbles

Procedure
1) Lay the board on the table. Hold one corner and spin it.
2) Count how many rotations the board had before it stopped.
3) Now lay the metal lid under the center of the board so that the flat part of the lid is on the table.
4) Spin the board again, with a similar amount of force as the first time.
5) Count the number of rotations the board had.
6) Fill the lid with 7 marbles.
7) Place the board onto the marbles. Spin the board once more.
8) Was there a difference in the number of rotations?
9) What would happen if you added more marbles?
My Results

Explanation
On the first spin: There was more surface area contacting the table, so there was a higher amount of resistance and friction.

On the second spin: Placing the board on the lid reduced the area contacting the table and provided a smooth surface. Those combined changes reduced the friction and allowed the board to spin more freely.

On the third spin: When spinning the board on the bed of marbles, not only was there even less surface area, but also the balls were able to move. The marbles acted like bearings in machinery and reduced the friction even more.

Parents and Educators: use #CuriousCrew #CuriosityGuide to share what your Curious Crew learned!