

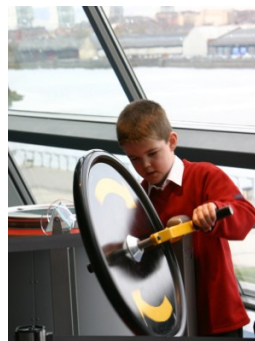
Recitation 4-5: Rotational Motion, Toy Cars

Task 1: The Spinning Wheel

Spin our PASCO wheel and try to tilt it. Describe what you feel.

Now, try rotating the spinning wheel on the stool (Dr. Bennett did that in class, can you?)

Why did the stool start rotating?



Task 2:

1. Divide into random teams. Spend 2 minutes getting to know each other. Be sure to record team members names.

Team Member	Contact Info (e.g. cell phone, Facebook, etc).

2. Run the car across the floor. Determine how far the car will go. Record the average of three tries.

Try 1: _____ Try 2: _____ Try 3: _____ Average: _____

3. Without disassembling the car, guess how the car works. Discuss your guess with your teammates and record your results.

4. Carefully disassemble the car. Figure out how the car actually does work. Record these results.

5. Analyze the car.

- a. How many revolutions does a tire make for each revolution of the flywheel? _____
- b. For one revolution of the flywheel, how far would the car travel? _____

6. Brainstorm on ways that you could improve the car's performance. Record the ideas generated by your brainstorming.

7. Try to implement one of the methods of improvement. Record what you did to improve the car. We have available many common materials and you may request things from your TA. Your request needs to be specific, and not just ask for materials.

8. Reassemble the car with the improvement. Retest your car and see how far it will go now. Record the average of three tries.

Try 1: _____ Try 2: _____ Try 3: _____ Average: _____

9. Enter your car in the contest to see how well it does.

10. Fill out the web form before you enjoy the weekend (due at midnight, Thursday, November 19). Everyone must fill out the web form.