Design Brief: Chariot Race

Background:
   In ancient times, horses were used to pull chariots. These horse drawn chariots were used in war. They were also a popular form of racing, especially during the Roman Empire.
   We will connect chariot racing with robots. Robots can be controlled manually or we can use a program that gives them instructions. We will do both and compare both strategies.

Challenge 1: (*at home*)
Design a chariot that your Sphero can pull. The chariot should have room to haul small cargo no bigger than a smart phone. Use recycled materials or scraps from crafts. Visit my website for resources and short videos.
http://sanderson.blogs.ccps.us/technology/sphero-robotics
Challenge 2: (*at school*)
Manually drive your Sphero with chariot and compete in a chariot race.
Challenge 3: (*at school*)
Design and create a program that allows your Sphero to compete in a chariot race without a human driver.

Constraints/Criteria:
   ● You can experiment with your robot's capabilities before you compete.
   ● If your robot moves too fast, it will lose control.
   ● If your robot moves too slow, it will lose the race.
   ● You must stay within the boundaries of the course and cross the finish line to win the race.

Materials:
   ● Sphero robot (3" diameter - use a tennis ball as a gauge)
   ● iPad with Tickle app
   ● Chariot course (marked off with tape by teacher)
   ● Chariot building supplies from recycled materials and craft scraps (designed by student at home - cargo provided by teacher)