

Sphero Chariot Races Lesson Plan

Time: About 30-45 min a day for a week.

Utah Core Standards: SS 6.1.4 Analyze how the earliest civilizations created technologies and systems to meet community and personal needs.

Apply Engineering design Process to this standard.

This is part of the normal 6th grade social studies unit on ancient Rome.

Show a part of the chariot race from Ben Hur

<https://www.youtube.com/watch?v=frE9rXnaHpE>

Reading: Assign to read an article from the History Channel on Chariot Races.

<https://www.history.com/news/chariot-racing-ancient-rome>

Challenge: Create a chariot that will carry a lego figure pulled by a Sphero Robot

Review Engineering design process.

Constraints: Materials:

Unlimited tape and paper

7 popsicle sticks

10 lego Pieces

5 paper clips

2 Blank CD's

3 pipe cleaners

Chariot must have an open top and the lego figure may not be attached (no seat belts or attachment to a brick seat etc.)

Sphero Robots must be block programmed for the course. Not freehand driving/joy sticking it.

Students are put in groups of about 3 students

They create a chariot design plan.

Once they have a plan, they may check out materials and begin their build.

Demonstrate how to do a basic Sphero block program.

Allow them time to experiment, learn, and then program and test their program.

Allow time to go through a few iterations.

Hold the race. My track was a set of 6 desks set up in a table format.

After... Review design and programming things that worked well and some that didn't. Discuss how they would change for a future race.