



PLAY MIX - Sphero

Sphero “Chariots of Fire” Race

Ingredients:

- One Sphero per team (1-3 kids)
- One Sphero Chariot per Sphero (Kids can design their own Chariots instead of using the official Sphero product. See “Mix it Up” section for more information.)
- One tablet with the Sphero app installed for each Sphero
- Blue painter’s tape or masking tape
- Rulers and yardsticks
- Misc. objects for obstacles

Prep:

Mark your race course on the floor using the tape. Use a large oval for a basic race, with a line or square through the middle to mark the lane boundaries for laps (circuits). Tape a short line along one side to mark the starting point. For advanced driving, make your race course any shape requiring precision turns and add walls, ramps, and obstacles. (10 feet by 5 feet)

Steps:

1. Set up each Sphero with a Chariot. If the Chariots are the same color, add numbers, flags, or other flair to each Chariot to differentiate them.
2. Divide the kids into teams. Depending on ratio of Spheros to kids, you can have each child race individually in elimination heats, or set up a relay system where each child on a team has a chance to drive a lap or several laps before handing off to another teammate.
3. Pair each Sphero with a tablet via Bluetooth, and make sure it is connected to the Sphero app before distributing tablets. This will avoid confusion as to which tablet controls which Sphero.
4. Use the app to set the speed to 50% for each Sphero, or have the kids decide what speed the Spheros should be set to. They should all be the same – no cheating!
5. Allow each team 5-10 minutes of practice time to get used to driving. Explain how to use the app to set the Sphero’s orientation for proper navigation, and the difference between using the app’s built-in arrows or tilting the tablet as a joystick. (See Sphero manual for more information.)
6. When ready, line up each Sphero Chariot on the starting line.
7. Begin the count-down... and RACE!

Optional: Play “Chariots of Fire” during the final race!

Mix it Up:



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- Have each team design and craft their own Chariot, using Sphero's STEM challenge: <https://sprk.sphero.com/cwists/preview/63->
- Obstacle Course Challenge: Have each team design their own obstacle course rather than a racetrack and take turns driving the Sphero through each other's courses. Idea: Set up some books the Sphero has to weave around and make the finish line a solid crash into a bookshelf or a wall. The Sphero is a tough little thing, so don't worry about starting the course on a chair and having it jump off onto the floor.
- Using the Tickle app, have each team code their Sphero to navigate the racetrack automatically, and have them take turns running their program on the track. The race will be won by whichever team completes the track with the most speed and accuracy.