



Challenge #9 Solar Cup Trivia Challenge

Due Tuesday, May 12

The Trivia Challenge is to encourage students to review all the resources that are on the Metropolitan Water District Solar Cup webpage to learn more about the Solar Cup program.

Challenge details:

Most all the answers can be found on the Solar Cup webpage:

<http://mwdh2o.com/inthecommunity/education-programs/Pages/Solar-Cup.aspx>

Once on the Solar Cup webpage, review the "Resource" section:

- Technical Manual
- Solar Cup 101
- Solar Cup Facts

Also review the drop down menus for the 2.0 section.

This activity is worth 100 points.

You will earn points based on your responses to the questions.

Responses can be emailed to Julie Miller Kalbacher at jamiller@mwdh2o.com Make sure to include your name and school name on your responses.

Good luck with this challenge and with all of your schoolwork.

Solar Cup Trivia

Short Answer

1. What is the weight limit of the batteries in your boat?
2. What is the name of the water agency that is sponsoring your Solar Cup team?
3. What is the weight limit of your boat?
4. How many 12-volt batteries are in a dozen if they are wired in series? In Parallel?
5. What is the total output that your Solar Cup solar array must not exceed?
6. What year did the Solar Cup Start?
7. How many teams were entered the first year?
8. What is the length of the endurance race course?
9. What is the length of the sprint race course?
10. What materials are covered in Tech Report 1?
11. What is the email address where you need to submit this challenge?
12. How much money does a rookie team get to build their boat?
13. What is the "Paddock"
14. What is the "Official Skipper Weight"?
15. What is a quagga mussel?
16. What is the site of the Solar Cup Races?
17. What is the maximum possible score for the Endurance Race?
18. Why do we add flotation to the boat?
19. Besides Solar Cup, list another water education program that the agency sponsoring your team or Metropolitan Water District offers to students or teachers.
20. If the races had not been postponed this year, where do you think your team would have finished?
21. During a typical Solar Cup race weekend, what race usually occurs on Saturday?
22. What water agency serves as the overall sponsor of Solar Cup?
23. During a typical Solar Cup race weekend, what day is used for "Qualifying"?
24. How many points is the Sprint race worth?
25. Explain how a bilge pump works.

True / False

1. Motors can be removed from or added to the Solar Cup boat between races.
2. Boats can use sails if they run out of battery power.
3. All Solar Cup boats must have a fire extinguisher that is at least one pound in size.
4. Teams can test their boats, or do on-the-water testing during the race weekend.
5. Teams can take boat materials back to the campground to work on them at night.
6. Students that want to be skippers of the Solar Cup boat must pass a swim test.
7. You can only use the sun and your solar panels to charge your batteries during race weekend.
8. Teams can race the sprint race with their solar panels on the boat.
9. Boats don't need to have a skipper, remote control driving is allowed.
10. Metropolitan Water District encourages Solar Cup participants to consider careers in water and resource management.
11. Solar Cup race weekend is cancelled if it rains or is cloudy.
12. Skipper meetings are held during race weekend at 7:30 am.
13. If a team fails to pass the Technical Inspection by 1:00 on Friday of race weekend, they are disqualified from all further on the water racing.
14. Outreach project is worth 250 total points.
15. Solar Cup 2.0 Challenge 3 is about batteries made out of lemons.
16. Skippers in the Solar Cup boat must sit or kneel in an area that is more than 60 inches from the bulkhead.
17. A rookie team is a team that has not been in Solar Cup before.
18. There is a rule that says teams may never borrow equipment from other teams.
19. Solar Cup 2020 race weekend was going to be May 15-17.
20. During year one, the program was called Solar Splash.
21. Solar Cup race weekend is usually in April.
22. According to the 101 Booklet, in January teams should focus on Mechanical Systems.
23. Lake Skinner is in Temecula Valley.
24. Solar Cup 2020 is the 18th year of Solar Cup.
25. Chapter 12 in the Solar Cup Technical Manual is about Solar Panels.