

Solar Car Day by Day Guide: Building the Car Day 8-17

Getting ready to build: Day 8 and 9 (5/21-5/22)

1. Finish Solar Car Log (6 pages)
2. Work with group to choose design
3. Each person will draw a labeled actual size top view and side view and a sketch of the bottom view to show bushings and axels
4. Use overhead projector to trace the outline of your chassis including cut outs and axel lines
5. Cut out outline with scissors
6. Get a piece of balsa wood and draw parallel lines using the triangle ruler
7. Cut out your chassis and sand it
8. Optional Step. If you wish to paint your chassis you must come in at lunch (check with me first) so that it is dry the next day

Getting your car Ready for the Roll Down test: Day 10, 11, 12 (5/26-5/28)

9. Get bushings (brass or plastic) axels, wheels and gears
10. Use the line you drew to mount your bushings.
11. Attach bushings using hot glue
12. Then attach wheels and gears so that you have a rolling car
13. COMPLETE Roll Down test worksheet (1 per group) You're trying to get a score based on how far and how straight your car rolls.
14. Make any adjustments to your car to improve roll down test and turn in the paper with all of your team's names on it

Getting ready for a speed test: Day 13, 14 (6/1-6/2)

- 15: Get a motor and a pinion gear, wires and a motor stand (if it is in your plans)
16. Mount your motor. You may need to make a balsa wood platform for it depending on your gears.
17. Connect wires and make sure everything is running the way you want it.
18. Add any bumpers that are in your plans
19. Do a speed test with batteries without the solar panel: Do three trials and calculate the speed. Complete first part of speed worksheet for your team

Adding the Solar Panel: Day 15, 16 (6/3- 6/4)

20. Get some balsa wood scraps for mounting your solar panel. Use cut out cardboard as your guide
21. Cut and glue your solar panel mounts to the chassis
22. Add Velcro to your mounts and get a solar panel
23. Attach solar panel and revise wiring if necessary (look for demo in class)
24. Complete the speed worksheet with the solar panel (with batteries if no sun is available)

Day 17 6/5 we'll be choosing the cars for the race.