

# Science of Speed 2 Design for Speed Scope and Sequence

(six-week course)

**Note:** This unit requires 18-32 class periods.

## Part 1

### Teacher

### Students

0 classes

#### Online Setup

- Set up your account and log on to the online portion of the Science of Speed 2 curriculum. Instructions for this can be found on the "Accessing the online portion of the curriculum" page in this guide.

1 class

#### Pretest or Rubric (optional)

- Decide if your class will use the multiple-choice assessments or the rubric. Depending on your choice, either distribute and administer the pretest or distribute and discuss the rubrics.
- Take the pretest or study the rubrics.

Less than 1 class

#### Revving Up: What is the Science of Speed?

- Have students watch the Science of Speed introduction video on the online portion of the Science of Speed 2 curriculum.
- Watch the Science of Speed introduction video.
- Distribute the workbook.
- Present to students the information from the "Revving Up: What Is the Science of Speed?" resource page.
- Discuss the "Dragster Design Checklist" with students.
- Study the "Dragster Design Checklist" in the Student Workbook.
- Have students read the "Engineering Design Process" resource page in their workbooks.
- Read the "Engineering Design Process" resource page in the Student Workbook.
- Encourage students to find photos of cars they like and bring them to the next class. These photos can be used for inspiration when making their designs.

### Teacher

### Students

1 to 3 classes

#### Phase 1: Design: Graphics and Layout

- Read the teacher and student instructions for Phase 1.
- Gather all materials necessary before class. (The "Thumbnail Drawing Sheet" is included in the workbook, but the "Multiview Design Sheets" are available on pull-off tablets. Note also that Step 7 identifies a few dragster wheels as helpful to have on hand during this activity.)
- Have students watch the *Design for Speed*, Phase 1 video.
- Watch the *Design for Speed*, Phase 1 video.
- Have students follow the Phase 1 directions in the Student Workbook.
- Follow the Phase 1 directions in the Student Workbook.

### Teacher

### Students

1 to 2 classes

#### Phase 2: Go/No Go: Checking Specifications

- Read the teacher and student instructions for Phase 2.
- If you plan on doing the optional introductory activity, gather and set out examples of cars that violate at least one design principle and one car that conforms perfectly.