

Lesson Plan

Designed to Fly

Book: *Flying Cars*

Series: Let's Fly

Level: Beacon

Objective

To help students practice recalling details from a text and using those details to make choices about the design of a vehicle.

Supplies

- *Flying Cars* book
- Whiteboard
- 11 x 17 paper
- Pens, markers, or colored pencils

Before the Activity

Read *Flying Cars* out loud, or assign it to students to read on their own.

Activity

Several companies around the world are working to make flying cars. Each one has a different design. Ask the following questions to review some of the details about flying car design described in Chapter 3 (“Part Car, Part Plane”):

- What three methods do flying cars use to move through the air? (Answer: propellers, rotors, or ducted fans [pp. 15–16])
- What two sources of power can flying cars use? (Answer: gasoline and electricity [p. 17])
- What two kinds of vehicles do flying cars have to follow safety rules for? (Answer: They must follow rules for both cars and airplanes [p. 17].)
- What are two examples of safety rules for planes? (Answer: They have rules about weight and wing shape [p. 19].)
- What are two examples of safety rules for cars? (Answer: They must have a cage and crumple zones to protect passengers [p. 18].)

Chapter 4 (“Flying Cars Today”) includes details about current flying car designs, including their names, special features, and how they incorporate safety rules. Ask the following questions to review the information from this chapter:

- What two ways do flying cars take off? (Answer: on a runway like an airplane or up and down like a helicopter [p. 21])
- What two strategies help designers have fewer safety rules to follow? (Answer: making a vehicle that only flies or shaping the vehicle like a motorcycle [p. 25])

Next, have students look at the “Parts of a Flying Car” diagram on page 17. Give each student an 11 x 17 piece of paper. Students should create their own design for a flying car. Write the following six questions on the whiteboard to help them think through the design:

- How will the vehicle get power?
- What will help the vehicle move through the air?
- Will the vehicle travel on the ground? If so, how will it move?
- What parts of the vehicle will help it follow safety rules?
- How will the vehicle take off and land?
- What special features will the vehicle have?

Once students have thought of answers to each question, they should draw a labeled diagram showing their flying car design. The diagram should have six labeled parts. At the top, students should create a name for their vehicle.

Give students time to work on their drawings. Then have students present their design to the class. They should answer each of the six questions.

Evaluation

Give students 1 point for labeling each part of the car in their diagram and 1 point for answering each question in their presentation, for a total of 12 points.

Standards

This lesson may be used to address the Common Core State Standards’ speaking and listening standards, grades 3 and 4 (SL 3.1, 3.4, 4.1, 4.4).