

Weekly Academic Review

Flying a Plane

Week 19

Directions: Read to find out how a pilot controls a plane. Mark the location of the answers on any question that labels which paragraph the answer can be found.

1 After Pat explained to her niece's classmates how a plane can get off the ground, they began asking questions. They wanted to know how to fly a plane.

2 "Is it like driving a car?" one girl asked.

3 "That's a good question," Pat said, "but I need to tell you a little more about planes to give you a good answer.

4 "Flying a plane is different from driving a car because a plane can move in more directions than a car can. When a plane turns left or right like a car, it's called a yaw. Moving the plane's rudder, the part of the plane that sticks up on the tail assembly, makes the plane yaw. Inside the cockpit, the pilot presses a left or right rudder foot pedal to turn the plane.

5 "Now, if a car were to dip to one side on two wheels, there would be the danger that it would roll over. But planes do this all the time in the air. It's called rolling or banking left or right. By raising or lowering the ailerons located on the back of a wing, the pilot can make the plane bank in one

direction or the other. Inside the cockpit, the pilot has a stick called a yoke that controls the ailerons.

6 "A car isn't made to take a nosedive or to take off into the air either," Pat continued. "But when a plane's nose makes this up and down movement, it's called a pitch. Moving the elevator, the part on the tail assembly that is level with the wings, causes the plane to pitch. The same yoke that controls the ailerons moves the elevator.

7 "The other control a pilot has is the throttle. Like a car's gas pedal, it controls the engine speed.

8 "On the ground, I have to steer my plane with my hands and feet. In order to turn left, for example, I have to push the left rudder pedal and move the yoke left. and back at the same time."

9 "Why can't you just use one control?" someone asked.

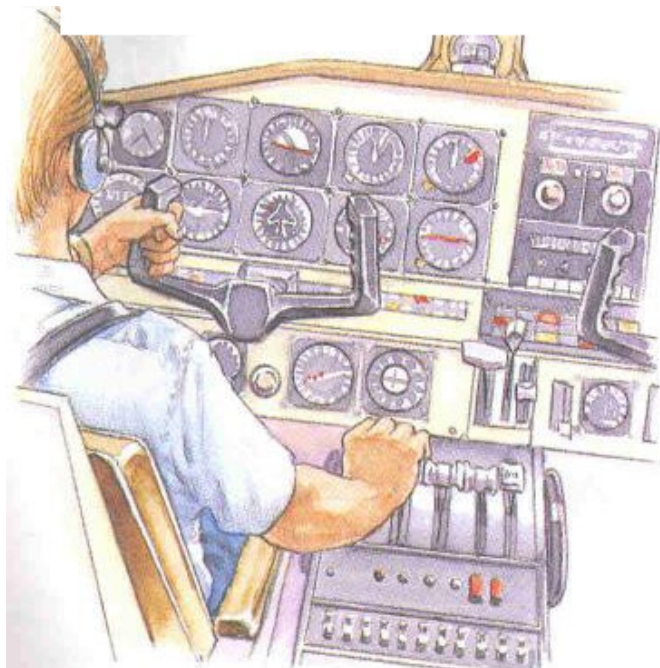
10 "All the movements have to be controlled at the same time to keep the plane in balance. Using only one control would cause an airplane to skid. In a skid, the airplane is inefficient and may become uncontrollable." Pat answered.

11 "You really have to know a lot to be a pilot, don't you?" one boy asked.

12 "Yes!" Pat was quick to say. "You have to be able to handle the controls, read the instruments, and keep on course. You have to know about the weather, navigation, and flight regulations, too.

13 "I had over eighty hours of flight time before I got my private pilot's license," Pat explained. "I needed more training to become a commercial pilot."

14 Suddenly the bell rang, the students and teachers thanked Pat, and the school day was over. On their way home, Amy looked at her aunt and said, "Thanks a lot, Aunt Pat. You were so great," she giggled, "I think you deserve a pat on the back!"



Knowing the Words

Write the words from the story that have the meanings below.

1. side to side movement of the nose of a plane _____
(Par. 4)
2. vertical flat piece on a plane's tail assembly causing yaw _____
(Par. 4)
3. hinged parts on plane wings that make the plane roll _____
(Par. 5)
4. lever that operates the elevators and ailerons _____
(Par. 5)
5. part of a plane's tail assembly that causes pitch _____
(Par. 6)
6. up and down movement of the nose of a plane _____
(Par. 6)

Synonyms are words that have the same or nearly the same meanings. Write the words from the story that are synonyms for these words.

1. rolling _____
(Par. 5)
2. pilot's stick _____
(Par. 5)
3. laws _____
(Par. 12)

Working with Words

The possessive of a plural word that ends in s is formed by adding an apostrophe after the s. For example, the plural possessive form of *friend* is *friends'*. Write a sentence that includes the plural possessive form of each word below.

1. plane _____
2. pilot _____
3. rudder _____

Reading and Thinking

1. What might happen if a pilot used only one control to make a maneuver?

2. Check the sentence that best expresses the main idea of this story.

- _____ A pilot must know a lot.
_____ A plane has four basic controls.
_____ A plane has three basic movements.

A summary briefly gives facts about a topic. To summarize, you must find the most important facts and put them in an order that makes sense. In one sentence, summarize the information in paragraph 5.

Learning to Study

An **outline** is a form that shows how the important points in an article are related. Complete this partial outline for paragraphs 4 through 6 of this story.

I. Airplane Movements

A. Yaw

1. Plane Control: _____
2. Pilot's Control: _____

B. Roll or Bank

1. Plane Control: _____
2. Pilot's Control: _____

C. Pitch

1. Plane Control: _____
2. Pilot's Control: _____

