

The history of transportation is very long and full of changes and inventions. It starts with walking, which is not any invention; it just takes energy. People used to walk to get to other places. If you wanted to get somewhere quickly the only way to do that was to run. Actually, the first invention for transportation probably was the shoe. Centuries ago there were no shoes, people walked barefoot.

Then people invented ways to transport themselves and materials from one place to another. In some cultures, people invented sledges, which are a kind of board that you drag along the ground. You can tie things on the sledge to help carry them, but it's a challenging invention since if you hit a rock with the sledge as you pull it, the contents can slip off. In other cultures, people invented the wheel, which they used to make it easier to move things—and people. That was the beginning of many innovations in transportation.

Once people had wheels they could invent other ways to travel. They could put the wheel on a board and make it a wagon, and then they could hitch that wagon to an ox or a horse and ride as well as carry materials. That wheel led to what we have today: trucks, automobiles, and even boats and planes. It even was part of boats. There were steamboats that used giant wheels that turned with blades, pushing the water and pushing the boat forward.

How is the wheel part of planes? An airplane has to take off and land, so unless it is a plane that lands on water it needs to have wheels so it can start building speed as it takes off. Then when it lands it needs wheels to help it land safely. Even the space shuttle, a spaceship, needs wheels so it can land safely. Astronauts pilot the shuttle when it lands on a runway. Some planes have skids, which are like sleds. Those planes use those skids to land on water, but most planes require those wheels. The first planes were gliders, and they just sailed on the wind, but they had wheels, too. Then came the airplane with an engine, followed many years later by the jet plane. Today, we have spaceships, and people predict that someday we will have cars that travel without a driver, that are driven by robots. They all started with that glider.

There is another kind of transportation that started a different way. Water travel has changed a lot, and it has not needed wheels. The first way people could travel on water was swimming. Probably the first person to make a boat really just used a log. It is probable that they could see if the log floated and then they could put things on it and push them along. Soon people would be carving wood to make boats. They would make them from animal skin, too. People figured out how to make sailboat so the wind would push the boat through the water. With the invention of electric and steam engines and gasoline engines, changes in water transportation followed, just as with the airplane. The parallel to the spaceship is the submarine. Today, submersibles enable scientists to explore the ocean's floor.

Directions: Choose the best answer for each question

1. What was the first way people traveled?

- a. wheel
- b. walk
- c. sail
- d. sledge

2. What happened after people invented the wheel?

- a. They invented the sailboat.
- b. They invented the airplane.
- c. They invented land transportation.
- d. They invented the steamship.

3. What was the first way to travel by air?

- a. jet
- b. spaceship
- c. wheel
- d. glider

4. What is the most recent invention for flying?

- a. engines
- b. skids
- c. spaceships
- d. astronauts

5. *Write your own answer to this question.*

Make a timeline showing the sequence of transportation inventions for air travel.

TEACHER NOTES: Develop Students' Skills: Exercise Thinking

These questions have not been validated, so decisions about student's achievement should not be made based on their responses. They are intended to exercise skills. Recommended activities include: students work in pairs to choose the best response; give students the questions without the responses so they generate their own answers; students make up additional questions; students make up questions like these for another passage.

Answers: *You can remove this answer key and then give it to students and ask them to figure out the basis for the correct response.*

Item	1	2	3	4
Answer	b	c	b	c

Question 5 is open-ended. Here is a suggested response.

5. Glider; plane; jet; shuttle/spaceship

I have always wanted to fly. Thinking back, it's what I dreamed about as a child. When I was just five years old, I would watch planes on television, and I was fascinated. How did they stay in the air, I wondered? I had a toy plane that I flew, and I loved to take it outside and fly it through the air. It was just a glider, so it did not really fly far, but I felt special whenever I played with that toy. While other children amused themselves with games, I preferred to fly that little toy plane.

When I was 12, I went to the airport for the first time, and I will never forget that experience. I had seen planes flying above, of course, but always from a great distance. This would be my opportunity to see them close up.

We were going to meet my brother, who was returning home from the war. I was delighted to see him, but I was even more excited about the great planes. They were so much bigger than I had envisioned. I did not want to leave the airport, and I recall looking back at the airplanes taking off as my mother drove us on the expressway home.

I announced, "I want to be a pilot," when my family assembled for dinner. My family liked the idea, but they really thought it was just a passing plan. They got me books about flying, and I read them over and over, because I was so very fascinated. When I was a freshman at high school, I informed my math teacher that I wanted to learn to fly airplanes and that I thought I could do it. My teacher said that if I studied hard, I could get into the Air Force Academy, and that one thing I would really need to fly is math. "There's a lot of math and science you need to know to fly those jets," she said, "but you need to excel in all your subjects to get into that special college."

I was determined to do well, to earn good grades, to learn the math and science I needed. I worked hard at school and I got good grades. I was on the track team, too. I kept busy, and sometimes other students criticized me. They ridiculed my dedication. I did not care what they said; I wanted a chance to go to the Air Force Academy. I was determined to be a pilot, and I was persistent.

When I was 18, I went to college, and I took my first plane trip. I had a scholarship, and I was going to the Air Force Academy. Yes, I did it. I got the grades I needed to get into that college. My career vision had become a reality. I was on the way into the future I had envisioned.

Now I am 21, and I am completing four years at the Academy. I have learned how to fly, and I have learned a lot more, too. On the way to becoming a pilot, I have learned physics, astronomy, and calculus. You really do need to know a lot to be a pilot today. You also need to be a really good decision-maker. With all the instruments that help guide the plane, the pilot still has to make decisions that determine the success of each flight. I still love planes, and I am going to be a pilot now. My dream has come true. I have achieved my ambition.

Directions: Choose the best answer for each question

6. What is the first event?

- a. She is five.
- b. She wants to fly.
- c. She gets a glider.
- d. She is growing up.

7. What happens after they go to the airport?

- a. Her brother comes home.
- b. She decides to be a pilot.
- c. She stays at the airport.
- d. The family moves.

8. What does she do to reach her dream?

- a. She goes to school.
- b. She studies.
- c. She talks with her family.
- d. She buys her own plane.

9. What is the last event?

- a. She finishes college.
- b. She flies a plane.
- c. She goes home.
- d. She gets her own plane.

10. *Write your own answer to this question.*

Make a sequence chart of the important events in the story.

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Answers: *You can remove this answer key and then give it to students and ask them to figure out the basis for the correct response.*

Item	6	7	8	9
Answer	c	b	b	a

Question 10 is open-ended. Here is a suggested response.

10. She goes to the airport; she talks with her teacher; she works hard in school; she goes to the Academy; she graduates.