Many years ago, people here on earth decided that they wanted to go into outer space.

This is something people had been imagining for a very long time, in books and movies and stories grandparents told to their grandchildren. However, in the 1950s, people decided they really wanted to do it. There was just one problem: how would they get there?

One of the earliest movies about flying to the moon was made by Georges Méliès in the 1920s. It was called A Trip to the Moon. In this movie, the moon was made up of a man’s face, covered in cream, and a whole tribe of angry natives lived there. This part was not very realistic. However, the spaceship didn’t seem too far-fetched: it was a small capsule, like a bullet, that the astronauts loaded into a giant cannon and aimed at the moon.

This movie was based on a book that had come out many years earlier by an author named Jules Verne. One of the fans of the book was a Russian man named Konstantin Tsiolkovsky. The book made him think. Could you really shoot people out of a cannon and have them get safely to the moon? He decided you couldn’t, but it got him thinking of other ways you could get people to the moon. He spent his life thinking about this problem and came up with many solutions.
Some of his solutions gave scientists in America and in Russia (where Tsiolkovsky lived) ideas of their own when they began to really think about going into space. They also thought about planes they and other people had help make, and even big bombs that could fly themselves very long distances. How could they figure out how to take all these ideas and make them into one thing that would work and be safe enough to put astronauts inside?

Many scientists spent years working together to solve the problem. They drew designs and talked about which ones were the best until they had one they could agree on. Then, they built small models of those designs, and tested and tested them until they felt ready to build even bigger models. They made whole, giant rockets that they would shoot off without any people inside to see if they were safe. Often they weren’t, and they blew up right there on the launch pad, or shot off in crazy directions like a balloon that you blow up but don’t tie off, and let fly out of your hand. After many, many tests of these rockets, they started to really send up ones into space with small animals inside, to see if they were safe. Only after a long time did they ever put a person inside of a rocket and shoot him into space.

And even once they began sending people into space, during the Gemini program in the 1960s, scientists were still trying to make the shape of the rockets better. The rocket changed many times, and eventually ended up looking like a half-rocket and half-airplane that was used for many years, called the space shuttle. Now, the government lets private companies try their own designs for spaceships, and they have come up with many different, crazy-looking machines.

There is no one right way to send a person into space. By taking together years of people who imagined ways of shooting someone to the stars, and many years of tests by scientists, we have been able to come up with some ways that work reliably. Still, every day, people who work on this problem are sending each other designs, building test models, and trying to imagine a better way of getting people from earth into the vast deep mystery of outer space.
1. According to the passage, where did people decide they wanted to go many years ago?

   A  outer space  
   B  the North Pole  
   C  the inside of a volcano  
   D  the center of the earth

2. Getting to outer space is a problem mentioned in the passage. How was this problem solved?

   A  Georges Méliès made a movie that showed a tribe of angry natives living on the moon.  
   B  Grandparents told their grandchildren stories about people traveling to outer space.  
   C  Some rockets blew up on the launch pad or shot off in crazy directions.  
   D  Scientists worked together to create a rocket that could send a person into space.

3. Read these sentences from the passage: "Many scientists spent years working together to solve the problem. They drew designs and talked about which ones were the best until they had one they could agree on. Then, they built small models of those designs, and tested and tested them until they felt ready to build even bigger models. They made whole, giant rockets that they would shoot off without any people inside to see if they were safe. . . . Only after a long time did they ever put a person inside of a rocket and shoot him into space."

   What can be concluded from this information?

   A  Scientists in Russia were better at working together than scientists in America.  
   B  Scientists in America were better at working together than scientists in Russia.  
   C  Working together and doing tests were important to making a rocket.  
   D  Most of the scientists who saw the movie A Trip to the Moon did not like it.

4. Why might people be interested in traveling to outer space?

   A  They are interested in meeting a tribe of angry natives on the moon.  
   B  They are interested in watching movies and listening to their grandparents’ stories.  
   C  They are interested in seeing rockets blow up on a launch pad.  
   D  They are interested in exploring the mystery of outer space.
5. What is this passage mostly about?

A the lives of Georges Méliès, Jules Verne, and Konstantin Tsiolkovsky
B the problem of getting people to outer space and how that problem was solved
C a movie about flying to the moon made in the 1920s
D a spaceship in the shape of a bullet that could be loaded into a giant cannon and aimed at the moon

6. Read the following sentences: “After many, many tests of these rockets, they started to really send up ones into space with small animals inside, to see if they were safe. Only after a long time did they ever put a person inside of a rocket and **shoot** him into space.”

What does the word “**shoot**” mean above?

A to fix a problem by working together
B to pour water over someone
C to send with great force
D to break into many pieces

7. Choose the answer that best completes the sentence below.

People wanted to travel to outer space _______ they were able to.

A before
B never
C although
D instead

8. What problem did Konstantin Tsiolkovsky spend his life thinking about?
9. What effect did Tsiolkovsky’s solutions have on scientists in America and Russia?

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10. Was sharing ideas important to making human space travel possible? Explain why or why not, using evidence from the passage to support your answer.

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Teacher Guide & Answers

Passage Reading Level: Lexile 1130

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8. What problem did Konstantin Tsiolkovsky spend his life thinking about?

**Suggested answer:** At minimum, students should respond that Konstantin Tsiolkovsky spent his life thinking about how people could get to the moon. Students may provide more detail, specifying that Tsiolkovsky thought about ways people could get to the moon besides being shot from a cannon.

9. What effect did Tsiolkovsky’s solutions have on scientists in America and Russia?

**Suggested answer:** Tsiolkovsky’s solutions gave scientists in America and Russia ideas of their own about traveling into space.

10. Was sharing ideas important to making human space travel possible? Explain why or why not, using evidence from the passage to support your answer.

**Suggested answer:** Answers may vary, as long as they are supported by the passage. For instance, students may respond that sharing ideas was important to making human space travel possible, citing such examples as the influence of Tsiolkovsky’s ideas on scientists and scientists working together to figure out which rocket designs were best.