Flight Connections

Trace how problems, tests, and results connect.

3.RI.3.C "Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline words that show why an event happened or what happened because of it. Number the three main stages of the Wright brothers' work in order.

The Wright Brothers' Steps to Flight

1. In the late 1800s, Wilbur and Orville Wright became interested in flight after playing with a small spinning toy. As adults, they ran a bicycle shop in Ohio. Repairing bicycles taught them how to build light, strong parts. That experience helped them make and test parts for flying machines. They also read about birds and earlier inventors who had tried to fly.

2. The brothers first built gliders, aircraft with no engine. Their early gliders did not give the pilot enough control. Because of this problem, the Wrights studied how a bird changes the shape of its wings while turning. They designed a system that twisted the wings in opposite directions. This wing-warping system helped a pilot tilt the aircraft and make safer turns.

3. Next, the Wrights tested their ideas in a wind tunnel, a box that let them measure moving air. The test results showed that some wing shapes worked better than others. Using those results, they built a powered airplane with a small engine and two propellers. On December 17, 1903, at Kitty Hawk, North Carolina, Orville flew it for 12 seconds. That first powered flight led to more tests and longer flights.

2 ANSWER WITH EVIDENCE

Use the passage

1. How did repairing bicycles connect to the Wright brothers' work on flying machines?

2. What problem with the early gliders led the Wright brothers to study birds?

3. How did studying bird wings lead to safer turns for a pilot?

4. How did wind tunnel tests connect to the Wright brothers' powered airplane?

3 YOUR TURN

Your own words

Write a three-event chain from the passage. Put the events in order, use arrows between them, and include because or so to show how each event connects to the next.

ANSWER KEY

Flight Connections

GRADE 3 · 3.RI.3.C

PART 1 · READ AND MARK

Underline words that show why an event happened or what happened because of it. Number the three main stages of the Wright brothers' work in order. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How did repairing bicycles connect to the Wright brothers' work on flying machines?	**Repairing bicycles taught them to build light, strong parts, which helped them make and test parts for flying machines.**
2	What problem with the early gliders led the Wright brothers to study birds?	**The early gliders did not give the pilot enough control.**
3	How did studying bird wings lead to safer turns for a pilot?	**The brothers designed wing-warping after studying birds. Wing-warping helped a pilot tilt the aircraft and make safer turns.**
4	How did wind tunnel tests connect to the Wright brothers' powered airplane?	**The tests showed which wing shapes worked better, and the brothers used those results to build a powered airplane.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Early gliders gave pilots too little control. → Because of this problem, the Wrights studied how birds change their wings when turning. → So they designed wing-warping, which helped pilots make safer turns.

Accept event chains that use accurate events from the passage in a logical order and clearly show cause and effect. Students may choose a different connected chain than the sample.