Name: _____ Date: _____

The Squirrels and the Engineer

Reading level 8 (4th grade) · 609 words

Birds were meant to eat the seed in Mark Rober's backyard feeders. Squirrels ate it instead. So in 2020 he built an obstacle course in his yard to keep the squirrels away from the feeders. Then he filmed what the squirrels did.

Who builds an obstacle course for squirrels? Mark Rober is an engineer. For nine years he worked at a NASA lab called JPL. He spent seven of them on a Mars rover named Curiosity. In 2011 he made his first YouTube video. Now he builds things and tests them on camera.

Curiosity is about as big as a small SUV. More than 3,000 people helped build it and land it. Rober was one of them. It landed on Mars in August 2012. Its job is to find out if Mars ever had the right conditions for tiny forms of life.

Landing a rover that big was hard. Airbags had worked for earlier rovers. Curiosity was too heavy for them. So engineers used a sky crane. A rocket stage came down at a gentle walking pace. It lowered the rover on three cords. The wheels touched down. Then the cords were cut.

A rover on Mars sounds like a bigger puzzle than a squirrel. But the squirrels were not easy. Rober built the first course in his own yard. It had eight parts. It had string bridges, a ladder bridge and trap doors. There was even a catapult.

Rober filmed each squirrel in secret as it tried each part. The first part was a ladder bridge, borrowed from an earlier video of his. At the ladder bridge, the squirrels tried to cross. Then they changed tactics. They jumped the whole thing.

After just a few days, the squirrels had beaten the whole course. Rober said he had guessed too low about how smart and quick they were. One report said the course looked very hard for a squirrel. His first design had lost.

A year later he built a second course. This one took about two months. It had many parts. Rober built it to test the squirrels' mental limits and their physical limits. One part had a pop-up security doll. After that came a spinning pole and a small helicopter on a zip line.

Next came a wall of bricks that move in and out. Then came ducts and a laser room. The lasers were fake. Each room had a one-way exit door. At the end sat a vault named Fort Knuts. It held the big prize.

Did the squirrels win again? Rober had turned his whole backyard into a course. In the end, they did win. One report said they were eventually able to reach Fort Knuts. They went through one part at a time, and Rober filmed it all.

Millions of people watched. The first squirrel video came out in 2020 and the second in 2021. A third followed. A small problem at a bird feeder had turned into a whole series. That is a lot of attention for one backyard.

Rober has talked about builds that fail. In April 2018 he gave a talk about a dartboard. It was built to give a bullseye every time, and it worked. His builds usually take two or three months. That one took three years. When it barely worked at rehearsal, he asked, "OK, that sucked, but what did we learn from that?"

In the videos, each squirrel is shown playfully working its way along the course. Each one is seen trying, failing and, in the end, mastering it. The engineer built the course. The squirrels found a way through. It all began at a bird feeder.

Questions

1. What was Mark Rober trying to keep away from his bird feeders?

A. Squirrels
B. Raccoons
C. Crows

2. Why did engineers use a sky crane for Curiosity?

A. It was cheaper than a parachute
B. The rover was too heavy for airbags
C. The rover could not fly

3. What did the squirrels do at the ladder bridge?

A. They crossed it slowly
B. They ate the ropes
C. They skipped it entirely

4. What did Rober do after the squirrels beat his first course?

A. He gave up
B. He built a harder second course
C. He moved the feeders

5. In the sentence "a vault named Fort Knuts," what is a vault?

A. A bird feeder
B. A kind of bridge
C. A locked room

6. How long did the dartboard build take, compared with his usual builds?

A. Two weeks
B. Three years
C. Two months

Words to know

obstacle: in the way
rover: Mars vehicle
catapult: throwing machine
vault: locked room
mastering: getting good

Answer key: The Squirrels and the Engineer

1. A. Squirrels
2. B. The rover was too heavy for airbags
3. C. They skipped it entirely
4. B. He built a harder second course
5. C. A locked room
6. B. Three years