Chapter 28

Ranger Lui noticed how close people were standing to the boys' experiment so stopped them to warn the crowd. "I would suggest you all take a step back and watch for flying objects."

Most people stepped back, but Ben and two other boys, who had raised their hands admitting that they were daring, tried to stay as close as they could. They wanted to get a good view of the explosion.

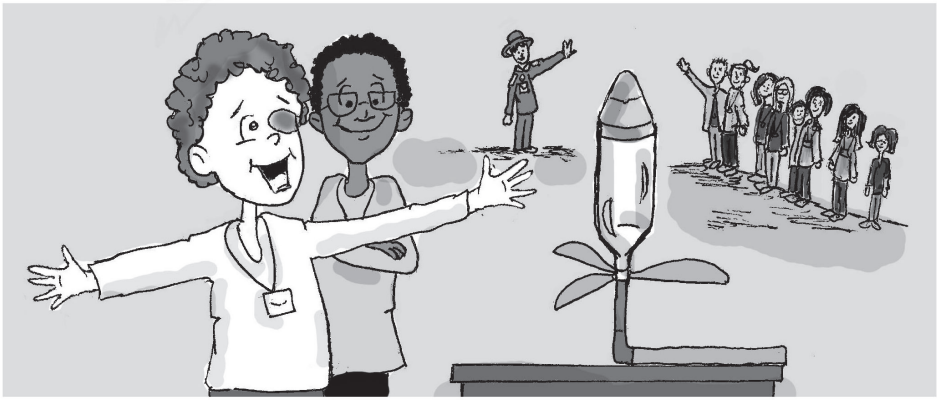
"This is so awesome," David said. "I wish we had done this assignment."

Jarrell stepped behind the water bottle. Philip stepped in front of it to block the crowd from seeing exactly what he and Jarrell were doing. Then the boys stepped to the side.

"Ladies and gentlemen, we present to you the Great Volcano Kilauea," Jarrell said, waving his hand to the side like a circus ringleader.

Nothing happened. Both boys walked back over to their volcano. Philip gave it another shake.

Many in the crowd held their breath, fearing Philip might get hit in the eye again. He stepped aside as Jarrell waved his hand to the side again.



"Ladies and gentlemen, I present to you, Kilauea the Great Volcano!"

Once again, the crowd held their breath, and waited. The boys looked at each other and then…

KA-BOOM! The water bottle shot upward and the cap went flying twenty-five feet into the air.

Loud clapping and cheering erupted from the crowd as the "molten lava rock" cap landed on the ground. Photographers got pictures of it from beginning to end.

"That is what happens to rocks that are literally right below your feet!" Philip declared. When the cheering stopped, both boys took a bow.

Ranger Lui was impressed with their success. "Well done, boys. Let's give Philip and Jarrell another round of applause for this great demonstration. Now, according to your research, how high might rocks fly during the next eruption?"

Without hesitating, Philip answered, “We think they will go about three hundred feet high and the ash plume will go about five miles high.”

“That would be astounding to see. Five miles is as high as planes fly,” the ranger remarked. “We will keep your research here in a file and let you know how close you were when the next eruption happens.”

Jarrell and Philip packed their supplies back in the box and followed the ranger back into the Volcano House. They felt sure they were going to win for the best experiment.

“After the steam and explosion happens in a volcano, out comes lava,” Ranger Lui said. “Bekka and Ben’s assignment was to find out what kind of volcano Kilauea is and then study the types of lava. They were to show what they learned with pictures and an experiment.”

Neither Ben nor Bekka had stage fright and both wanted to explain all they had learned about lava here in the Park. Bekka went first.

“Lava is the liquid that comes up out of the earth after the gases cause the crust to crack open. It’s a mixture of melted rocks, minerals, and gas bubbles. It can be 2,000 degrees hot.”

Holding up a diagram of the shape of Kilauea, Ben took over and added, “You might be wondering why this whole volcano doesn’t explode like Mount St. Helen, a volcano in Washington, did. It’s because this volcano has sloping sides and isn’t tall with a

point. It is called a shield volcano and has lava that runs out like syrup or honey."

Bekka reached for a picture of orange lava running down the side of the volcano. "It is so hot it comes out orange, and when it cools, it turns brownish black."

Ben held up with a picture of lava with a smooth surface. "Some lava is smooth and looks like chocolate pudding. It's called pahoehoe."

"Other lava hardens and breaks apart in chunks, and looks crusty. This one is easy to remember–a'a," Bekka informed them, holding a picture of a'a from the lava field.

Ben held up their map with the road highlighted by a black marker. "The ocean is like twenty miles downhill from here, and when lava flows downhill, it covers up everything in its path. Even houses, trees, and the road."

Many leaned forward to get a good look at the map and how much was covered by lava. Some shook their heads in surprise. "Be careful because you can't outrun it. If it comes after you, you are in trouble because it covers the road you are on, and at the end are the ocean cliffs where it flows over the edge. They are ninety-feet above the ocean."

Ben held up a picture of lava covering the road with a stop sign by the lava. "They always have to make new roads once the lava cools down. They put it on top of the lava."

"The Ranger asked if anyone knows how the Holei Sea Arch was formed," Bekka said. "We discovered the answer. When lava goes over the cliffs into the ocean, waves hit it and then it hardens. Waves and erosion formed the arch."

She held up a picture of the Holei Sea Arch. Everyone who had not seen the Arch yet was amazed. "Be careful if you go there. Ben was almost blown into the ocean chasing his hat."

"Really, you almost went over the cliff?" asked Lili. "I want to go there, but I don't want to fall over the edge."

"There's a short wall by the Sea Arch so it's safe," Ben assured her. "I just went too far out on the lava field where there isn't a sea wall."

Lili exhaled and looked relieved that she would not fall over the edge if they went there.

"We don't know how people used to live in the lava fields hundreds of years ago, but they did," Bekka stated. "We went to the Pu'u Loa Petroglyphs and saw the pictures they etched on lava rocks. It's like they wrote their history in stone. Have any of you been there yet?"

This was a trick question to see if anyone in the crowd admitted they had walked out to see them. Only two hands went up.