

LEVELED BOOK • U

ARROWS



MULTI
level
R•U•Y

Written by Dina Anastasio
Illustrated by David Cockcroft

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THE FIRST ARROW

Poloma was tossing her new ball high into the Mississippi air when she discovered the first arrow in the forest. On that summer morning, she was aiming for the Sun, throwing the ball higher and higher, so when it came down and rolled away she had only herself to blame. The ball bounced off a tree trunk, flew over a log, and came to rest at the base of a huge boulder.

She was digging the ball out from the heavy undergrowth when she noticed the arrow carved into the lower part of the massive rock.





Poloma grabbed her ball and raced home. Her grandfather was resting on the porch swing. His eyes were closed, and for a moment, she wondered whether she should wake him with the news.

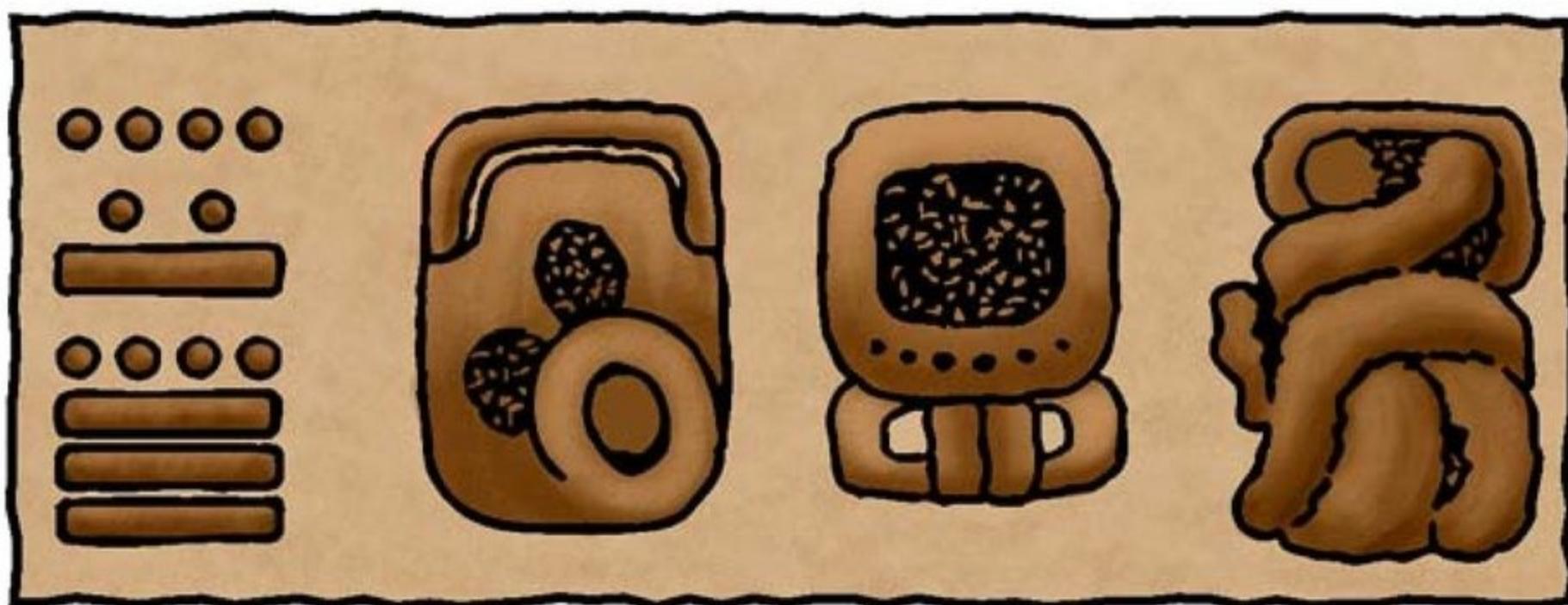
"You've discovered something," he said softly, when she was settled beside him. "I can tell by the way you're fidgeting."

"I've found an arrow, Papa!" Poloma kicked her feet, and the swing moved back and forth, making a gentle, reassuring, squeaking sound.

"And where is this arrow that excites you so much?"

Poloma told her grandfather about the bouncing ball, the boulder, and the arrow that was carved near the bottom of it.

"Do you think the arrow is a **glyph** like the ones in my **code** books?" Poloma asked. "Maybe it's a Mayan hieroglyphic. The Mayans used tiny pictures instead of words and letters. Maybe they carved that arrow," Poloma guessed.



Papa pulled himself out of the swing and smiled down at his granddaughter. "That's a very good question," he said. "But I doubt that the Mayans were carving rocks around here. The Mayans lived farther south, in Mexico and Central America. However, your arrow might very well be part of a code of some kind, but we might have to do some research to find out."

Poloma's grandfather knew a lot about codes. In fact, he had won a medal for his code work during World War II. Papa and other Native American **Code Talkers** had helped the United States and its allies win the war by sending secret messages in languages that people from other nations could not understand.

"Will you tell me again, Papa?" Poloma pleaded. Poloma loved to hear the story of the Code Talkers, even though she had heard it many, many times before. She especially liked to hear about the Mississippi Choctaw Code Talkers like her grandfather.

"Come," her grandfather said, as he took her hand and pulled her from the swing. "I think we should visit this mysterious arrow. I'll tell you about the Code Talkers while we walk."

As they made their way toward the boulder, Papa told Poloma the story of how he and other Code Talkers sent messages that only other Native American Code Talkers could **interpret**.



This group of Oklahoma Choctaw soldiers from World War I paved the way for other native languages to be used as codes in World War II.



QUESTIONS

“We spoke into walkie-talkie radios,” he explained. “There was a Code Talker on each end, and we would only use Choctaw words that no one else could understand. Someone would give me the message that I was to pass on, and I would speak the words in Choctaw. The Code Talker on the other end would receive my message and **translate** it into English for the soldiers. If the enemy was listening on the radio, they wouldn’t be able to understand what we were saying.”

Poloma and her grandfather were at the boulder now. They knelt down, and Poloma pointed to the roughly carved arrow. Wind and rain had eroded and smoothed the arrow's edges so much that Poloma might not have seen it had she not been paying attention.

"What do you think it means?" she asked.

Papa ran his finger back and forth over the carving. "I'm not sure," he said. "It's a very old carving, but it's hard to determine its age. It takes a lot of work to figure out how old a carving is."

"How do people know?" Poloma asked.

"Well, there are many ways. Remember the cave paintings we saw last summer, and the old fossils and bones we saw at the natural history museum? Scientists use a method called **carbon dating** to figure out how old those things are."

"Can we use it to tell how old our arrow is?" Poloma asked.

"Maybe someone could date the plants in the cracks nearest to the carving, but that might not necessarily tell us how old the carving itself is," Papa told her. "Let's try something else. Let's try studying the arrow as it is."

Poloma stared at the arrow for a long time. Suddenly, she had an idea.

"I know!" she shouted. "How about if we consider where the arrow is pointing?"

The arrow was pointing toward another boulder nearby. Poloma and Papa followed it and found the second arrow almost immediately. The second arrow was pointing in the same direction as the first, so they followed that one, too. It led to another boulder, and another arrow, which led to yet another, and then another arrow.

There were six arrows in all.





"What do you think it means, Papa?" Poloma asked as she ran her finger over the sixth arrow.

"I think it means we should look for the next arrow," Papa laughed. "The arrows are sending us somewhere, and I'm very curious to find out where."

They continued on in the direction the arrows had been leading them but saw no more boulders. The arrows led them straight toward a stream.

"What should we do?" Poloma asked.

"I guess we should cross the stream. It looks very shallow, so if we tiptoe from stone to stone, perhaps we'll find another arrow on the other side. Hold my hand tight; we'll cross together."



ANSWERS

They crossed the stream, holding hands, stepping carefully. When they reached the other side, they almost crashed into the next boulder. It was hidden in a grove of old pine trees.

"Do you think there's anything carved on it?" Poloma asked.

"Let's take a look," Papa said.

They knelt down together, side by side, and examined the boulder. At first they couldn't find an arrow or any other carving, and they were about to give up when Poloma screeched.

"I found something! I found something!" she shouted as she leaned closer to the boulder and scraped off some moss with her fingers. "Look, Papa! It's not an arrow at all—a whole bunch of letters are carved into the lower part of the boulder! I wonder if we can make them out," she said.

"I'm afraid you'll have to read them to me." Papa stood up slowly, rubbing his knees. "My eyes are too old to make out tiny letters that have been hidden behind overgrown weeds for such a long time. I'm afraid my knees aren't too good either."

Poloma leaned closer to the boulder and studied the letters. It took her a long time, but she was finally able to read them all.

"They don't make any sense," she said. "I'll say them to you, but I don't think they mean anything at all."

Poloma read each letter out loud, very slowly.

g p m m p x u i f e s j o l j o h h p v s e

When she was finished, she said, "Maybe they're a code. Do you think they could be a code, Papa?"



"Read them again," Papa said. "Maybe I can make some sense of them if you read them again."

Poloma said the letters again, and then she repeated them one more time. As she read, she could hear her grandfather's footsteps. He was pacing slowly through the dead leaves and pine needles. Papa always paced when he had something important to think over.

"Do they mean anything to you?" she asked when she was done.

"Indeed they do," her grandfather said, still pacing. "Indeed they do."

"What do you think the letters mean?"

"I'm not exactly sure," Papa told her. "But I think it's a cipher, and I think I recognize it."

Poloma knew what a cipher was. It was a code that substituted letters or numbers for the real letters in a message.

"Ciphers like that one have been used in many wars to keep the enemy from learning about battle plans," Papa explained.



CRACKING THE CODE

“Did you use a cipher in the war?”
Poloma asked.

“I saw them used in World War II. The Germans had a very clever machine called the Enigma Machine that substituted letters for other letters. The Code Talkers often used a cipher as well in case a Native American language speaker was captured and forced to translate messages by the enemy. But the first substitution cipher was invented by Julius Caesar more than 2,000 years ago.”

This is an example of a Caesar Cipher. Can you break the code?

nbcm cm uh yrugjfy iz u wuymul wcjbyl

Hint: This cipher shifts each letter in the alphabet forward by the same number of letters.

“I wonder if these letters were used in a war, too,” Poloma said.

Papa had to think about that. He paced for a very long time, and then he stopped beside his granddaughter and cleared his throat.

“I think I remember something,” he said.
“As you know, a great war took place right around here.”

"The Civil War—right, Papa?" Poloma asked.

"Yes. About 150 years ago, the Civil War was fought to free the slaves in the South. I think I remember reading that the soldiers and spies in the North used a special cipher."



"Do you remember what it was, Papa?"

"It was sort of like the Caesar Cipher. Read me the letters again."

Poloma read the letters slowly.

g p m m p x u i f e s j o l j o h h p v s e

"You forgot the spaces," he said. "Read the letters again, and don't forget the spaces between the words."

Poloma read the letters again. This time she was careful to pause wherever she saw a space.

g p m m p x u i f e s j o l j o h h p v s e

She was just about to ask her grandfather what the letters meant when she noticed something in the cipher that she had seen in codes she had **deciphered** before. Most sentences contain at least one short common word, and this one was no different.

"I think I see some interesting letters," she said. "Let's say the letters form words. One of the words has three letters. Let's guess that it's a common word . . ."

". . . like *and*?"

"Or *the*," Poloma suggested. "There has to be one common word in a sentence."

Poloma and Papa were quiet for several minutes as they thought about the three letters.

"I don't think it's *and*," Papa said. "The letters don't make sense."

"But it could be *the*," Poloma said. "Maybe the letters *uif* stand for *the* in some way."

Papa was smiling now. "You are a very smart

girl," he said. "What letter comes before *u* in the alphabet?"

"*T*," Poloma said. "And the letter *h* comes before *i*, and the letter *e* comes before *f*. This is a substitute-letter cipher, Papa!"

"Yes! I remember now! During the Civil War, some Northern spies and soldiers used a code called the advance cipher. They advanced each letter one letter of the alphabet."



THE DRINKING GOURD

Once they had cracked the code, it was easy to read the message.

"Do you know what it says?" Poloma asked.

"I do know what it says. Do *you* know what it says?"

"I know what it says, Papa. It says, 'Follow the Drinking Gourd.' But I don't know what the message means. Do you know what it means?"

Papa chuckled and sat down on a hollow log. "We've made quite a discovery," he said. "We have found six arrows pointing in the same direction. If people followed the arrows, they would reach this boulder, and they would find this cipher. I wonder if the arrows and the cipher were carved during the Civil War."

Papa was pacing again now, and Poloma could tell that he was thinking things over in his mind.

"Before the end of the war," he said, "many slaves wanted to escape to freedom in the North. They followed what was called the Underground Railroad. It wasn't really a railroad. It was just a series of routes and directions and safe houses that led the slaves northward. Some slaves who had escaped returned to help other slaves."

“But who carved the arrows, Papa?”

“I’m not sure if we’ll ever know that,” Papa said. “It might have been a Northern spy trying to help. It might have been a returning slave who had learned the cipher in the North. Or maybe it had nothing to do with the war. Who knows? Maybe some children were playing a game.”

“Did escaping slaves ever carve directions in trees or rocks?” Poloma asked.

“I’ve never heard of it happening, but every day people find new information about the Underground Railroad. Just recently, someone discovered a hidden tunnel and a secret room in a house in Iowa where slaves hid out on the way north.”

A Code in Song

Here’s the first verse of a folksong that gives directions north on the Underground Railroad.

When the sun comes back and the first quail calls,

Follow the Drinking Gourd.

For the old man is waiting for to carry you to freedom,

If you follow the Drinking Gourd.

"What does 'Follow the Drinking Gourd' mean?" Poloma asked.

"The Drinking Gourd is the group of seven stars now called the Big Dipper, which can always be found in the northern sky of the United States. Slaves followed the Drinking Gourd from safe house to safe house, until finally they reached freedom."



The sun was beginning to set, and tiny slivers of light were flickering through the branches. Poloma took her flashlight from her backpack, turned it on, and took her grandfather's hand.

By the time they were on the other side of the stream, the sun had disappeared. Poloma stopped and studied the sky.

"Are you looking for the Drinking Gourd?" her grandfather asked.

"There it is!" Poloma was pointing to the bright shape in the sky. "Shall we follow it?"



"It's your decision. Are we heading north?"

Poloma had to think about that for a minute. The Drinking Gourd would lead them back across the stream, past the boulder with the cipher, and on and on to places north.

"We need to go south, Papa."

Poloma and Papa turned. They moved slowly, like creeping night creatures. The light from Poloma's flashlight led them away from the North Star, past the arrows pointing the other way, out of the woods, and home.

Glossary

carbon dating (n.)	a test to determine age that analyzes the content of carbon, an element in organic material (p. 9)
code (n.)	a system of letters, symbols, or signals that have special meaning and are used to send messages (p. 6)
Code Talkers (n.)	Native Americans who used their native languages as codes during World Wars I and II (p. 6)
deciphered (v.)	worked out the meaning of a secret message or writing (p. 18)
glyph (n.)	a picture or other character with special meaning that is often carved into something (p. 6)
interpret (v.)	to tell the meaning of (p. 7)
Choctaw (n.)	a member of a group of Native Americans in the Southeast (p. 7)
translate (v.)	to take something written or spoken in one language and change it to another language (p. 8)

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Page 7: © Rodger Mallison/MCT/Landov

The photograph on page 7 shows the Choctaw Telephone Squad at Camp Merritt, New Jersey, on June 7, 1919.

From right to left : Captain E.H. Horner (Commanding)

Private James Davenport, Choctaw, age 27

Corporal James Edwards, Choctaw, age 20

Corporal Calvin Wilson, Choctaw, age 24

Private Mitchell Bobbs, Choctaw, age 25

Corporal Taylor Lewis, Choctaw, age 22

Arrows

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