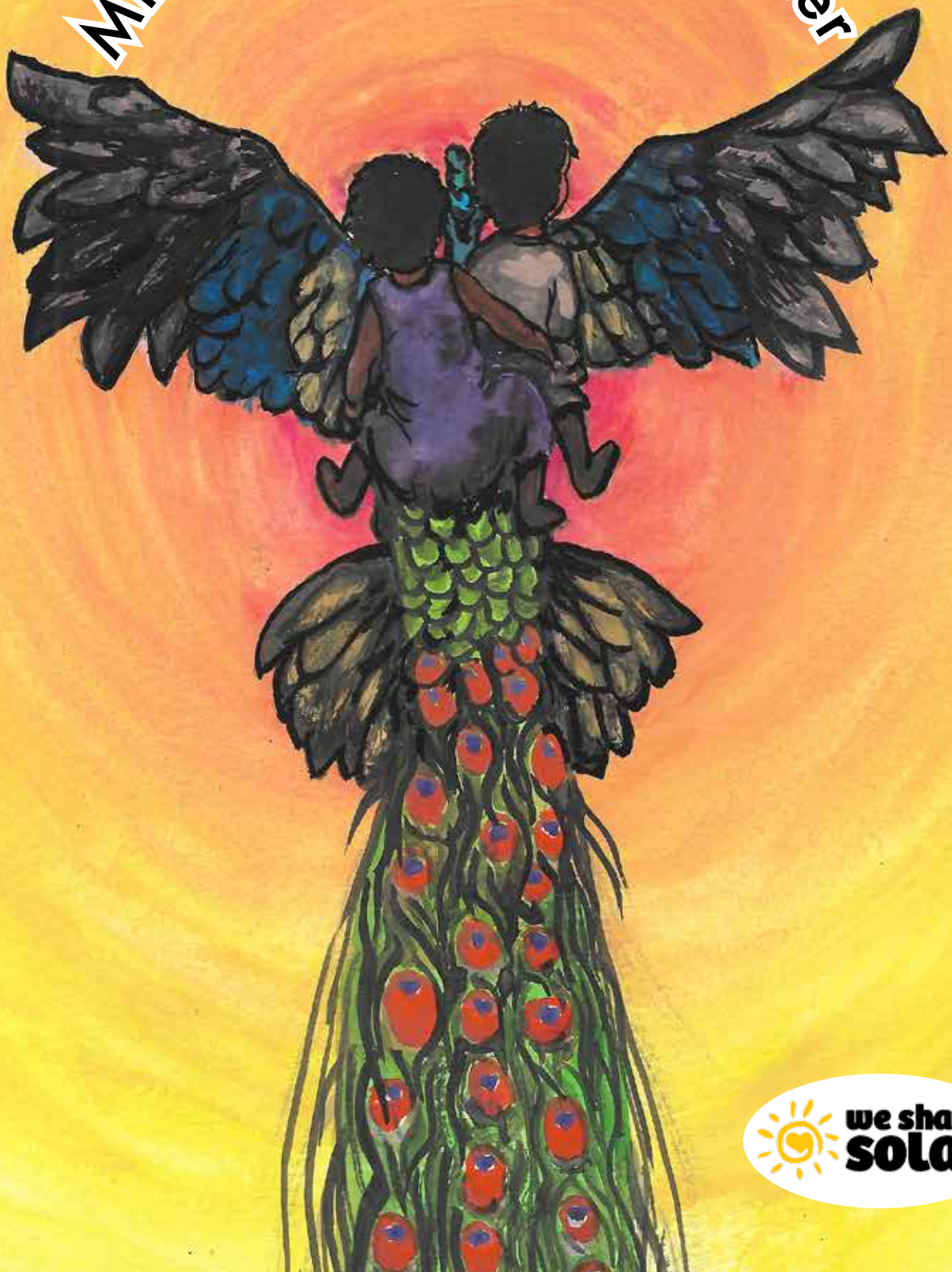
Mirembe the Solar Dreamer



we share solar

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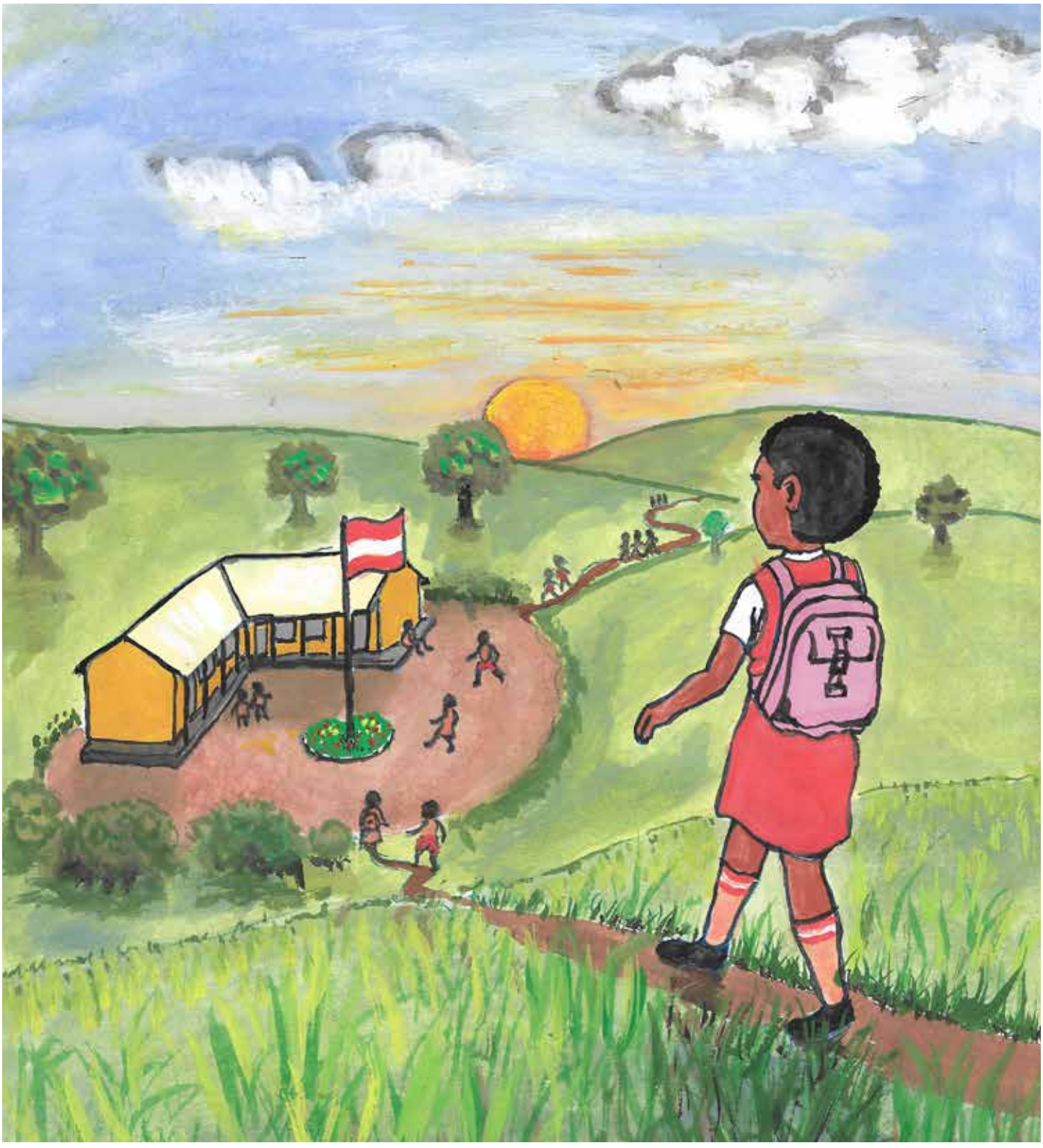
Special Thanks to: Lora, Trish, Burma and Chad

The sun warms Mirembe's face as she walks to school on Friday morning.

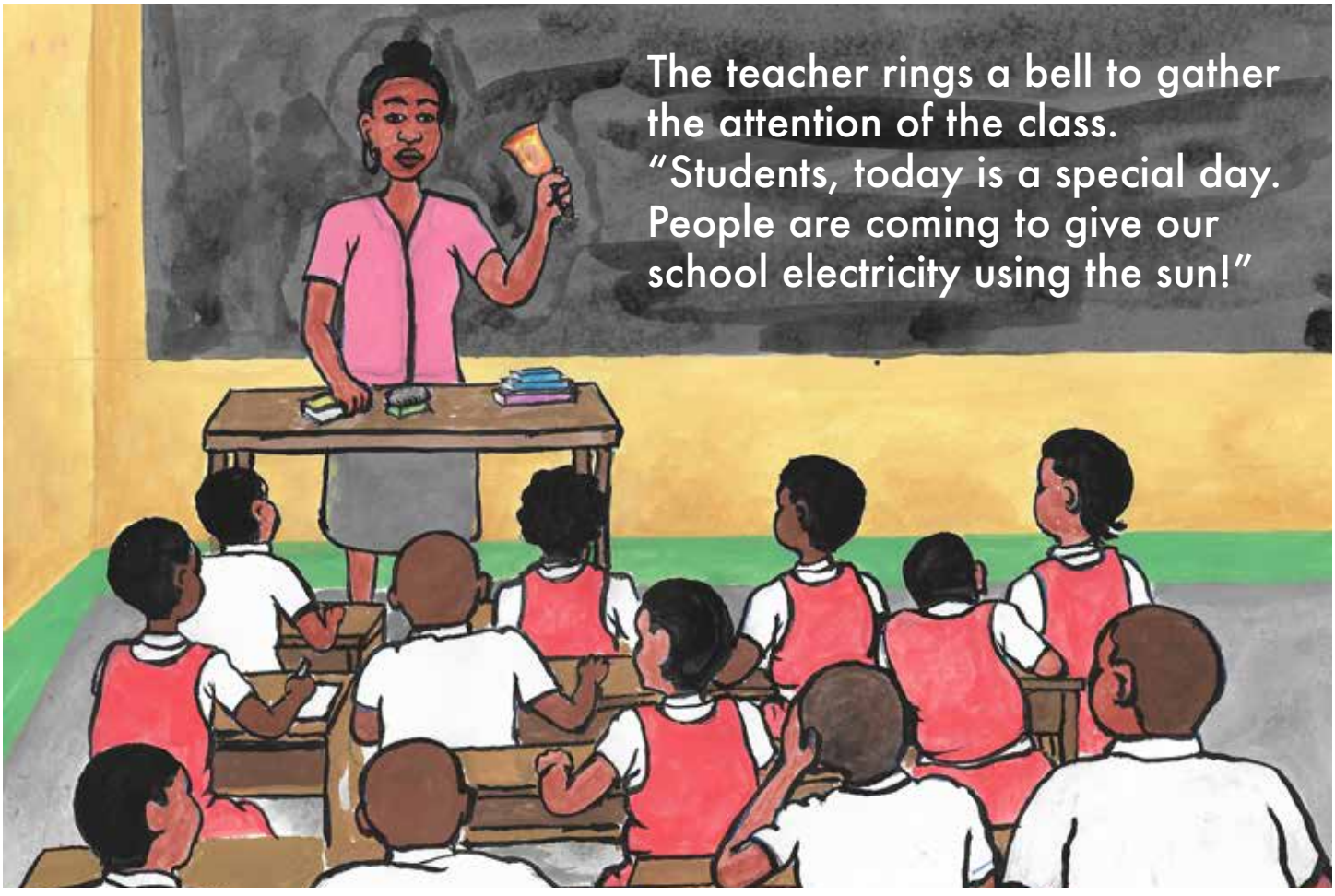
Mirembe is a very special little girl. She is from a small village, deep in the hills. Her mother is a nurse, and her father is a farmer.



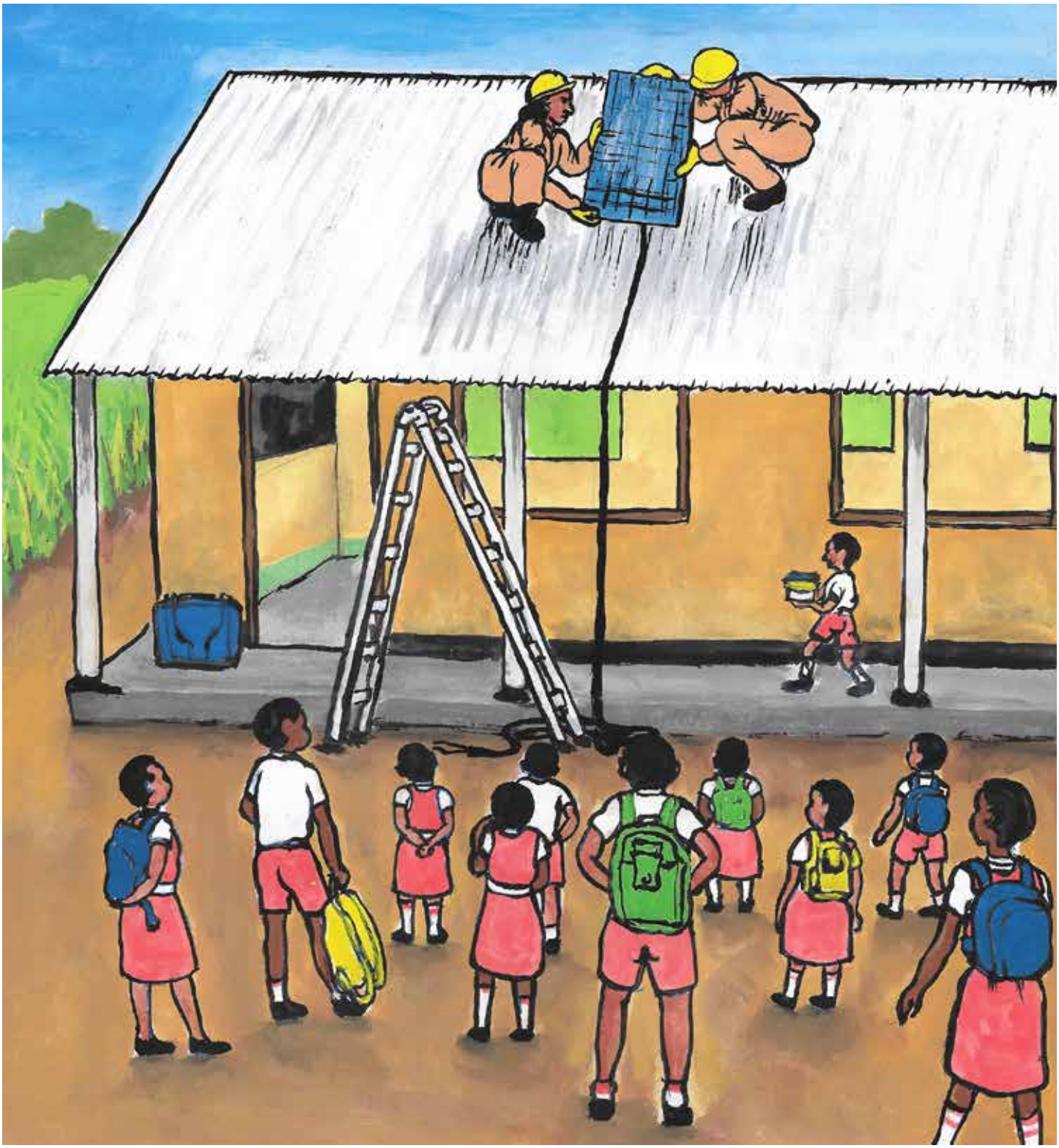
Mirembe is curious, loves to learn, and asks many questions.

Most of all, she is a great dreamer. In her dreams, she travels all over the world collecting answers to her many questions.

She dreams of places and things that she has never even seen or heard of before.



Mirembe smiles in wonder as her mind starts to wander. Of course, she has many questions about the sun and electricity, but before she knows it, school is over for the day.



She sees the people working on the roof and wants to stay and watch, but Mother comes, and it is time to go home.

Mirembe does her chores and has supper. All the while, she is thinking about the sun, hoping that its light will shine in her dreams.

Finally, it is time for Mirembe to go to bed, where she knows she will dream. Before long she is flying...

Mirembe finds herself somewhere she has never been before, in a land far away. She meets a young boy with bright, big eyes. Standing next to him is the largest and most beautiful bird Mirembe has ever seen.

"Hello! My name is Dinesh. I live here in the desert, where the sun shines *all* the time. This here is my friend, Mr. Peacock, he knows all about the sun."

"Hello Mirembe," says Mr. Peacock. "Would you like to go flying with me? We can learn about energy and the sun."

Mirembe jumps with joy. "I would love to!"

Mirembe and Dinesh climb on Mr. Peacock's back and Mr. Peacock takes off into the sky.

Mr. Peacock says, "Energy is all around us. Energy makes things happen. The energy in a river carries boats from place to place. The energy of fire cooks our food and gives us heat. We get energy from food to fuel us throughout the day."

Mr. Peacock continues, "The sun is a huge source of energy. The sun lights our day and helps our food grow."

"What else does the sun do?" asks Mirembe, always curious.

"The sun can even be used to make electricity, to power our homes and schools, which we call *solar* electricity."

"It can even charge a mobile phone!" exclaims Dinesh.

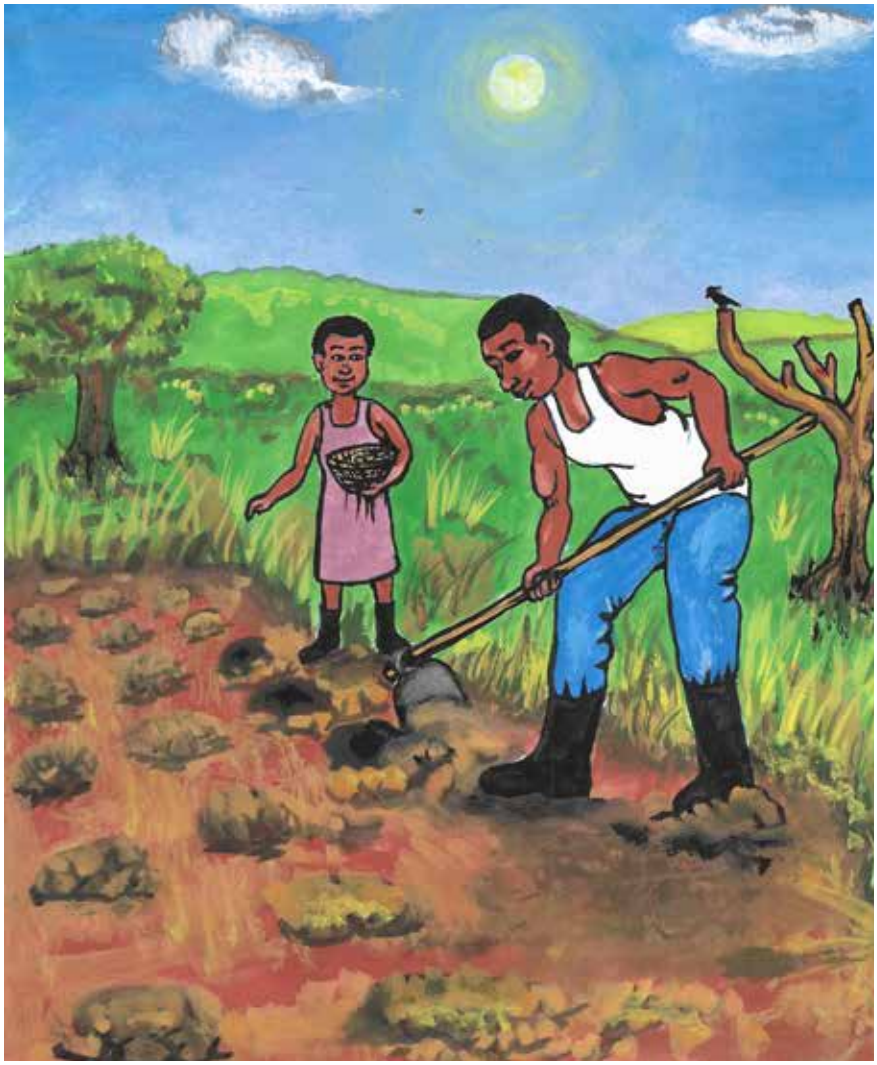
"And, the best part about solar energy is that it is clean energy," says Mr. Peacock.

"So, does that mean there is dirty energy too?" asks Mirembe.

"Yes," Mr. Peacock sighs. "Energy that must be burned to create power makes *too* much smoke, which pollutes our air."

"Using the energy of the sun helps us keep the sky clean!" Dinesh chimes in.

Mirembe wakes up in the morning excited to go to the garden with Father. She tells Father all about what she learned in her dream last night. "Father, did you know that we get energy from the sun? It helps the plants grow, and warms us up on cold days."



"I did, dear," Father replies.

"But did you know it can also charge a mobile phone and give power to the lights? It's called solar electricity!"

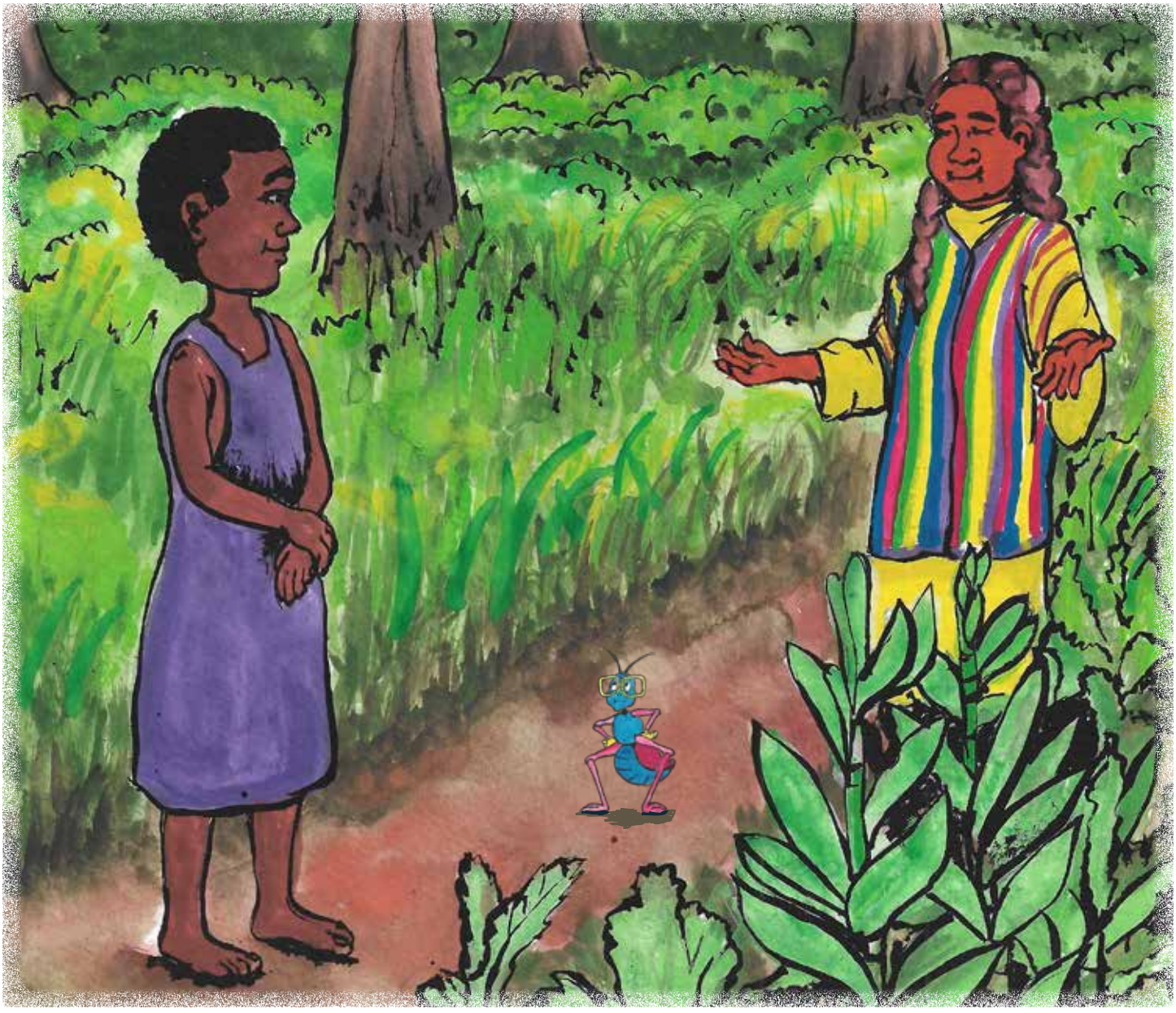
Father is curious. He asks his daughter, "How does sunlight turn into electricity?"

"Hmm... I don't know." Now Mirembe is curious.

All she can think about until bedtime is how sunlight turns into electricity. She hopes her dreams tonight will give her the answer.

Mirembe's dream carries her to a world of green. Green, green, all around, until she sees an ant on the ground.

"Careful! Don't step on my friend!" says a voice.



Mirembe looks up and sees a girl her age. "Oh, thank you, I've just seen her. Hi, my name's Mirembe, who are you?"

"My name is Luz and this is Miss Ant. We are walking home. Do you want to come?" Luz asks.

"Sure!" Mirembe replies.

Mirembe, Luz, and Miss Ant walk through the jungle to a beautiful home in the trees. Mirembe sees something blue and shiny on the roof of Luz's house. She points and asks, "What is that? It looks like the thing they were putting on our roof at school."

Luz replies, "That is our solar panel. It turns sunlight into electricity!"

"Wow!" says Mirembe, "How does it work?"

"I can show you!" remarks Miss Ant.

All of a sudden,

the wind swirls

around Mirembe

and Luz.

They close

their eyes...

...and when they open them, they are the same size as Miss Ant.

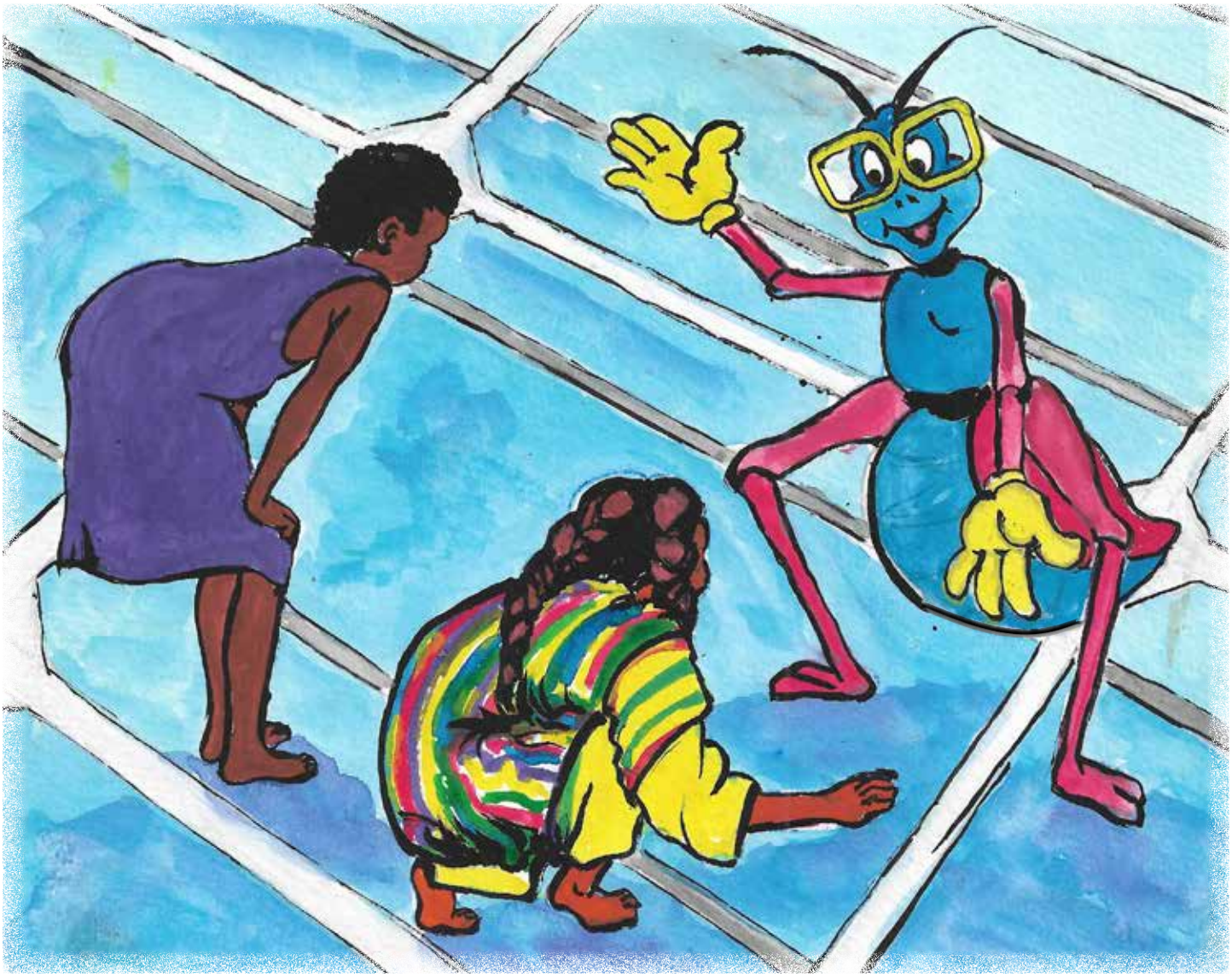
"Follow me!" says Miss Ant.

The three friends climb to the top of the roof to look at the solar panel.

Miss Ant explains, “Solar panels are made of material from the Earth, called silicon, that is found in sand and rocks. They are connected to wires that light our homes.”

“The solar panel loves to collect sunlight and turn it into electricity,” says Luz.

“How does it do that?” asks Mirembe.

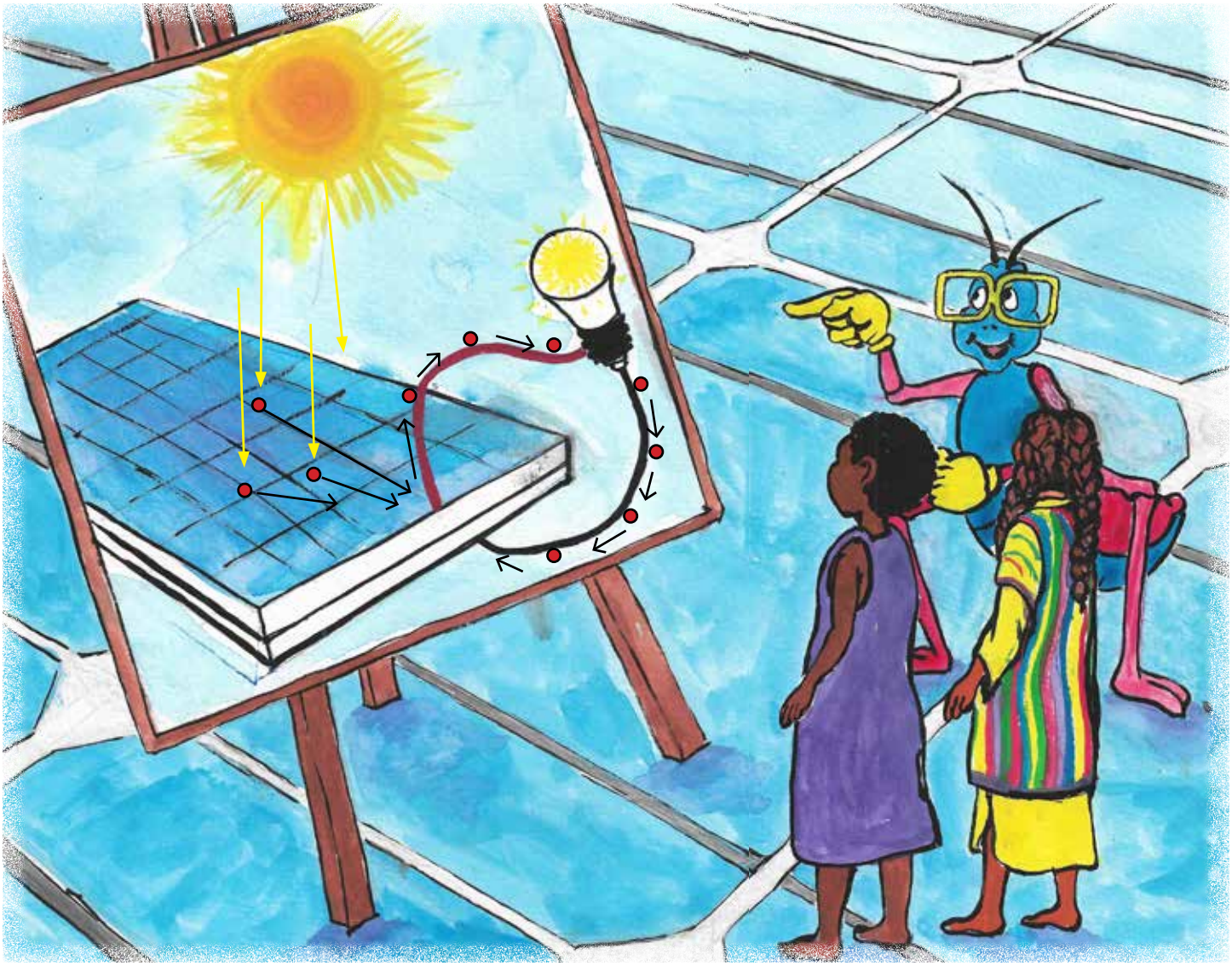


“It’s a bit complicated, but let me try to explain,” Miss Ant says. “When sunlight gets into the solar panel, the solar energy bumps into somethings called electrons. Electrons are so small that even the best microscope in the world cannot see them, but they are everywhere.”

Mirembe and Luz look at each other in amazement.

Miss Ant continues, "When the sun's energy hits the electrons, they move, running around in a circle much like the games we play with our friends, except much, much faster. All of these electrons moving around in wires is what creates electricity, allowing us to use the lights."

Miss Ant adds, "The solar panel only works when the sun is shining."



"So can I make electricity if I run around with my friends?" asks Mirembe.

Miss Ant laughs and replies, "You *do* use energy, but it won't power a light bulb. We need a solar panel for that."

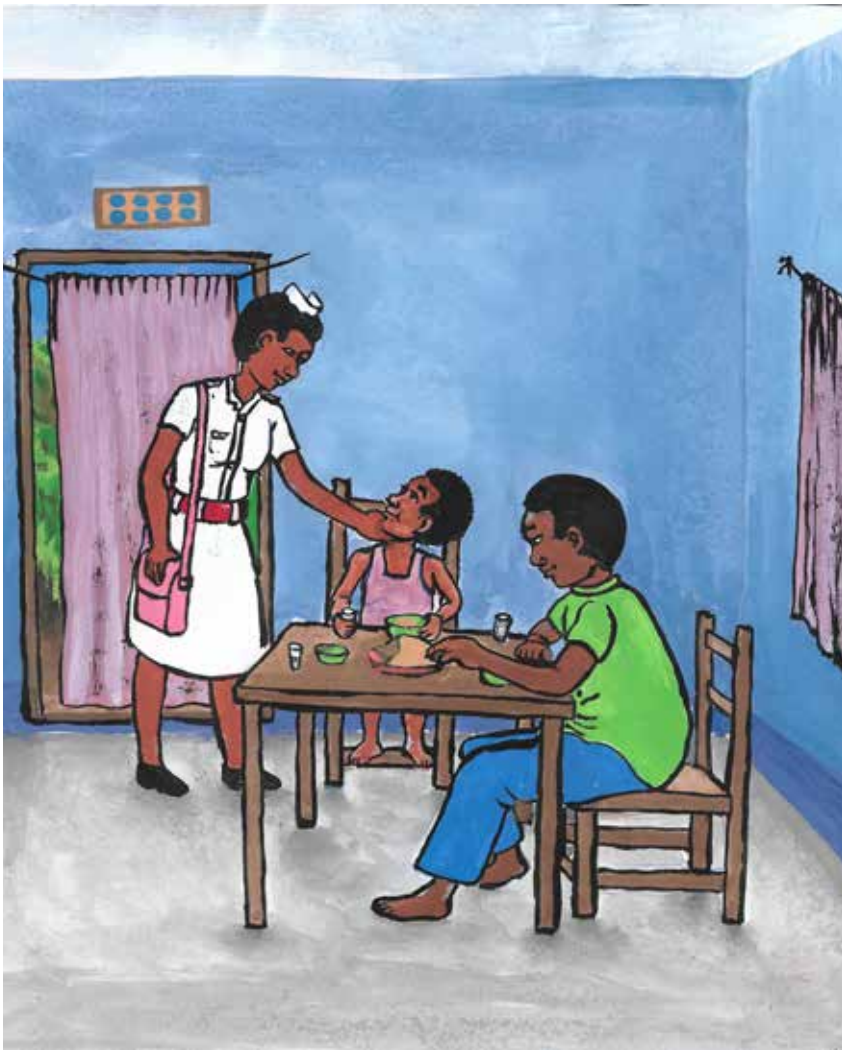
The next day, Mirembe and Father work in the garden. When they return for dinner, Mirembe tells Mother what she learned in her dream the night before. "Mother, solar panels take the energy from the sun and change it into electricity!"

"Did you know that we have a solar panel at the health clinic?" Mother asks.

"Really? You do?" Mirembe exclaims.

"Yes, it runs the refrigerator that we need to keep medicine cold and it gives us light to use at night,"says Mother.

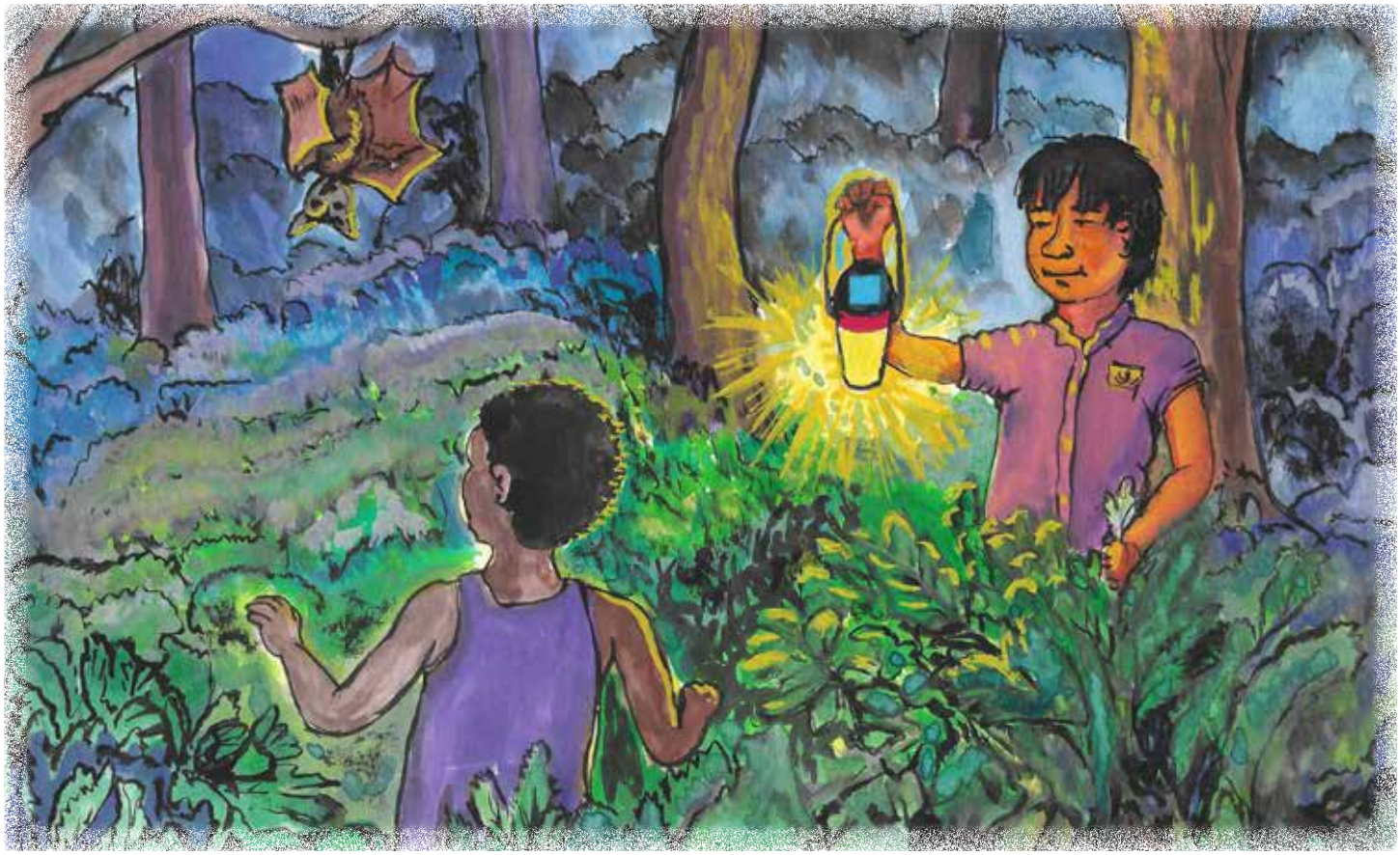
Before Mirembe can ask Mother any more questions, she kisses Mirembe on the cheek and says, "Okay dear, I must go or I will be late for work."



While Mirembe is preparing to go to sleep, she looks out at the dark, starry sky. She knows that solar panels need the sun, so how can they work at night?

Mirembe is still full of questions as she drifts into her dream.

Everywhere she looks it is dark. She hears a rustle above her in the trees and gets scared. "Don't be afraid. It's only me!" A girl holds up a small solar light to her smiling face. "I'm Tala," she says, "and that noise in the trees is my friend, Mr. Bat."



A giant, friendly bat swoops down with a bunch of bananas. "Here, have something to eat. You have a long way to walk to Tala's home," says Mr. Bat.

Tala adds, "The food we eat gives us energy to do all sorts of things."

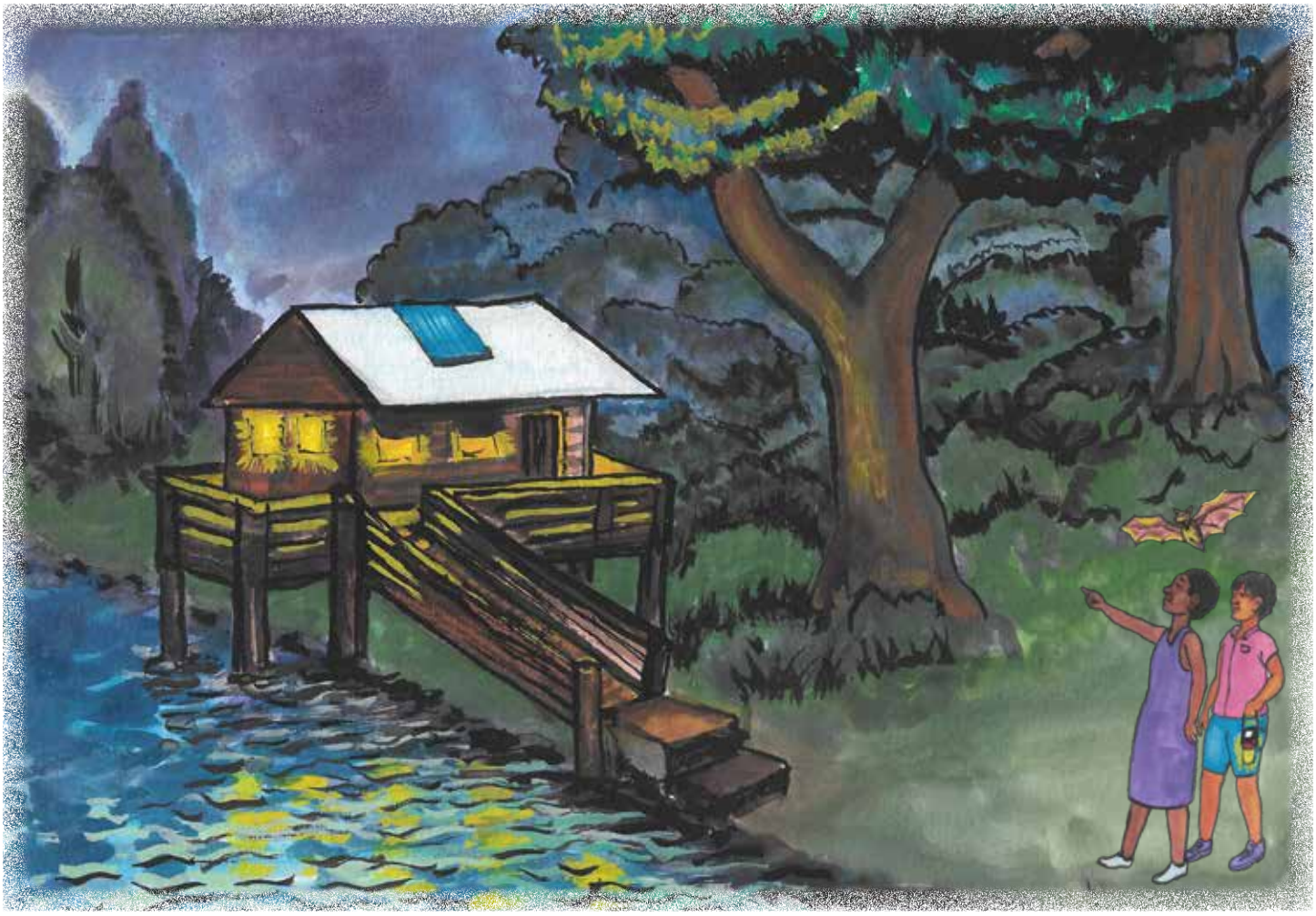
Mirembe eats a banana and feels her energy increasing. She notices a tiny solar panel on the top of Tala's light. Mirembe asks, "Tala, how does your light work at night?"

"There's a small battery in it!" Tala replies. "When the sun is shining, the solar panel charges the battery, which stores the energy so we can use it at night. Just like when we eat food, we have more energy later when we need it."

"So, that's how it works!" Mirembe eats another banana and follows Tala to her home.

When they arrive at Tala's home, Mirembe notices the roof has a solar panel. "Is that solar panel connected to a battery, too?" Mirembe asks.

"It sure is! Mr. Bat *loves* batteries, he can show you," Tala says.



"This solar panel gives out a lot of energy, so it needs a big battery," says Mr. Bat.

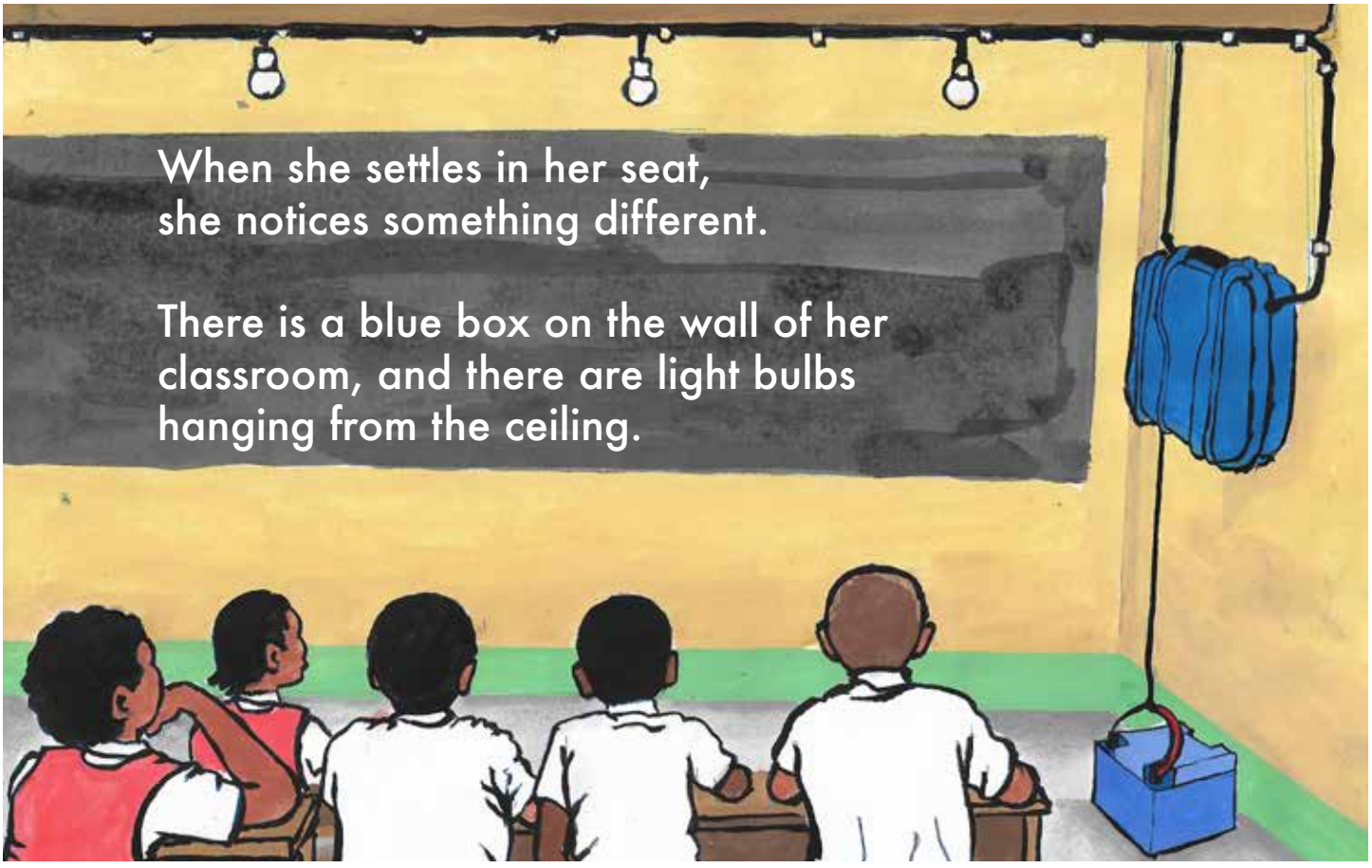
"Batteries come in all sizes. Just like bats! There are batteries in our cell phones and in our cars.

And sometimes we need many big batteries for an entire building to power lights, refrigerators, and fans."

Mirembe's mother wakes her up.
"Mirembe, time to get ready for school."

She jumps out of bed. "Yay! I can't wait!"

Mirembe runs to school.
She is so excited to see the new solar electric system.



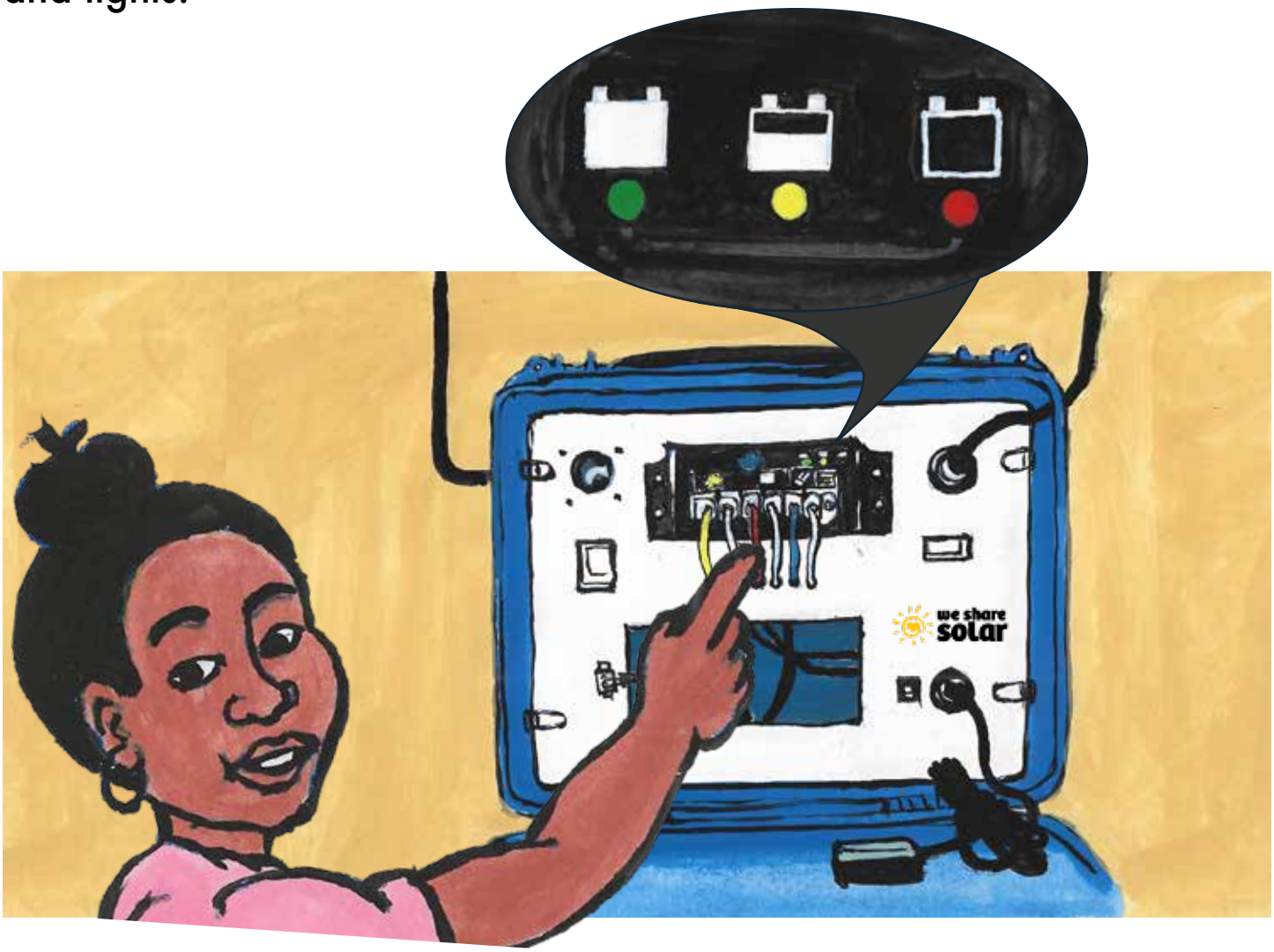
The teacher rings the bell. "Class, over the weekend we received a *We Share Solar Suitcase*. The Solar Suitcase uses a solar panel to power the lights. Can anyone tell us how solar electricity works?"

Mirembe jumps out of her chair, waving her hand in the air. The teacher calls on her and Mirembe comes to the front of the class.

"First of all, the sun is a great source of energy. The solar panel collects the sun's energy and turns it into electricity. Then the electricity travels down little wires where it charges a battery. That way we can use the lights in the evening when we stay late for study time!"

The teacher is surprised. She says, "Thank you, Mirembe. You know a lot about solar energy! There are a few more things I want to tell you about this solar electric system."

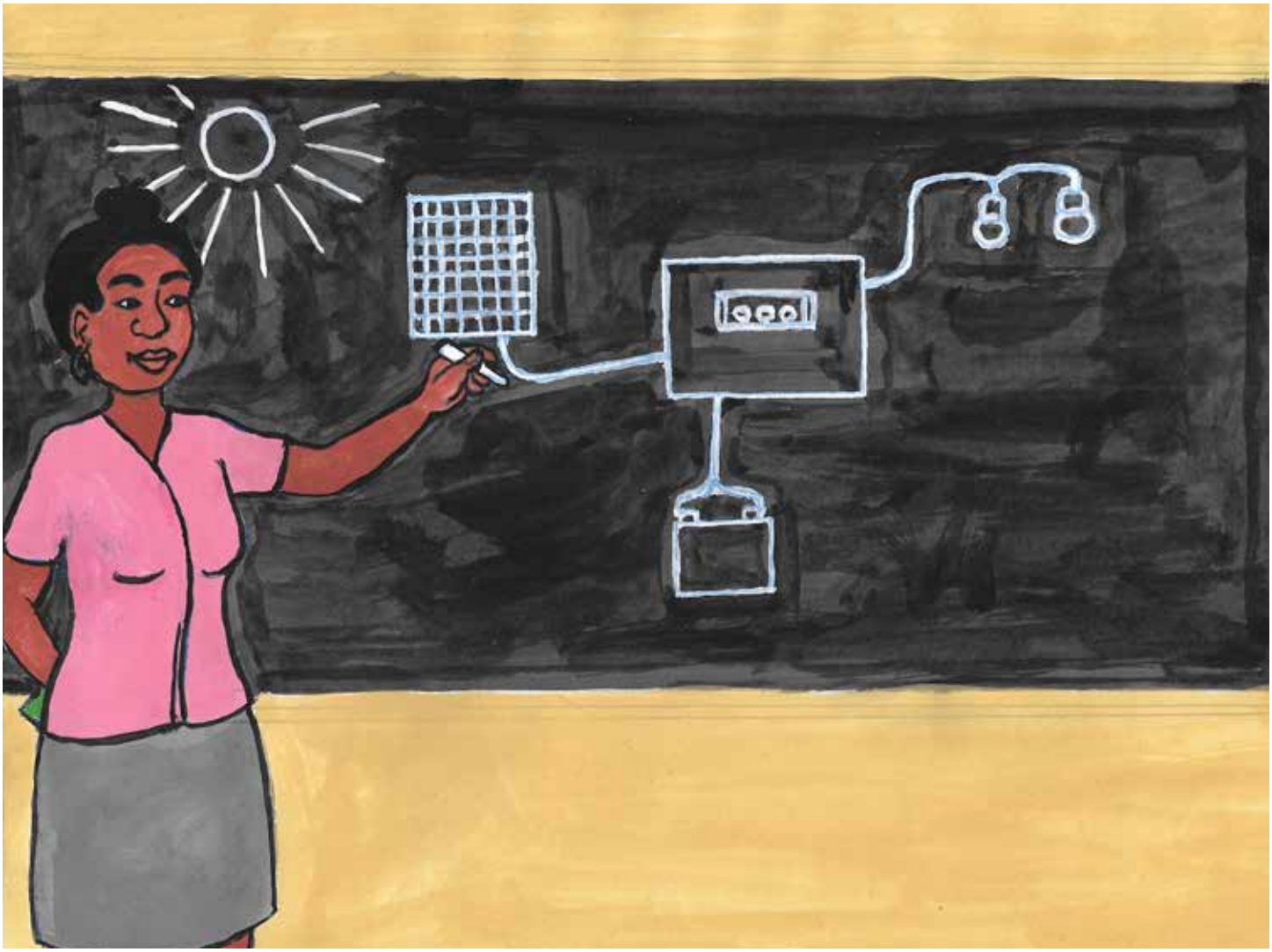
The teacher opens the We Share Solar Suitcase. "When the electricity from the solar panel comes into the Solar Suitcase, it has to first go through the charge controller before going to the battery and lights."



The teacher points at a black square in the suitcase and says, "The charge controller protects the battery. The little lights on the charge controller tell us how the battery is doing. *Green* means the battery is full, *yellow* warns us the energy is getting low, and *red* means the whole system will soon turn off until it receives more sunshine."

Mirembe raises her hand to ask a question. The teacher calls on her. "Why does the charge controller need to protect the battery?"

"Good question. The solar panel *loves* to give electricity to the battery. It loves to give electricity so much that the charge controller must protect the battery from receiving too *much* electricity," says the teacher.

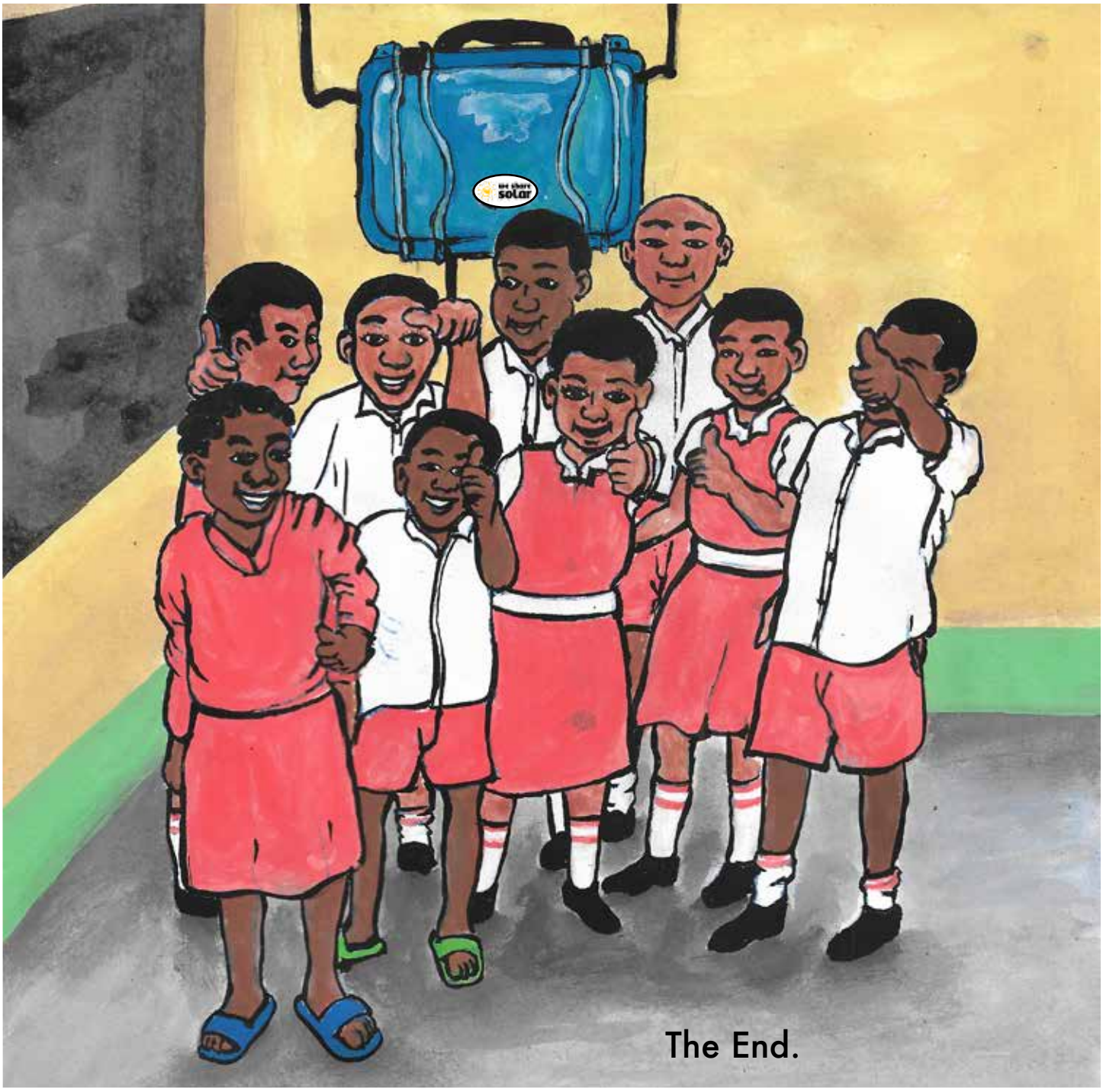


"The lights, mobile phones or other things that need electricity love to *take* electricity. So the charge controller also protects the battery from *giving* too much electricity."

Mirembe raises her hand again and says cheerfully, "So, the charge controller is like the brains of the Solar Suitcase!"

Everyone gathers around the We Share Solar Suitcase, looking at it closely and studying its various parts. Inspired by the power of the sun, the students make up a little song.

Maybe you can help them sing along!
"The sun helps the plants grow; the sun makes the energy flow.
Solar panels provide the light; batteries help us see at night.
We love solar power!"



The End.