



This book is about Mmantsae Moche Diale, a South African Scientist.

Mmantsae is a Physicist who studies the sun's energy, and ways for people to use that energy.



Teacher Mpilo said, "Today, I will tell you about an important South African Scientist. This person began life in a village in Limpopo and became a top Physicist."

Physics is the scientific study of physical things (called matter) and energy.



Teacher continued, "This Science hero is Mmantsae Moche Diale. She was born in rural Ga-Masemola in Limpopo. She went to school in Sekobetlane Maphutha.

There were big electricity pylons near the village where she lived. But her village did not have electricity."



“As a child, she was interested in how we get energy such as electricity. She knew that everyone should get enough energy to meet their needs.”

Teacher paused, and asked, “Can anyone tell me how we get electrical energy?”



"We burn coal to make electricity," said Nhlovu. Teacher replied, "Yes, but our earth is running out of coal and other energy sources that are not renewable."

"The sun and wind are renewable resources," said Sphe. Teacher nodded.



Teacher continued with the story, “Young Mmantsae wanted to find a way for everyone to have cheap and clean energy, from renewable resources.

She studied Mathematics and Natural Sciences at school, and she loved Physics. She knew she wanted to study Physics at university,” said Teacher.



“People asked Mmantsae, ‘What do you think you will do with Physics? Can you get a job?’ They discouraged her.

She studied Science with Education, to be a Science teacher. She was also interested in studying about renewable sources of energy,” said Teacher.



"Teacher, who were Mmantsae's role models then?" asked Sphe.

"There were only a few women working in Physics, and even fewer Black women Physicists," replied Teacher. "In those days, there were no South African women role models for Mmantsae."



"After many years of studying, Mmantsae became a Professor of Science. She now teaches and researches at a university," Teacher Mpilo told the class.

"She is a role model for young Black women in Science, especially Physics. She is doing important research," said Teacher.



Teacher explained, "Mmantsae's research is to find ways to catch the sun's energy and to store that solar energy.

Solar energy stored in batteries can be used to provide electricity in rural areas. Solar energy is a cheap and renewable source of energy."



Teacher asked, "What do we mean by 'renewable and non-renewable' sources of energy?"

"Renewable energy is energy that never gets used up, like the sun," said Ntando. "Energy that isn't renewable will run out, like coal, that's non-renewable," said Vusiwe.



Soon, the lesson is ending. Teacher concludes, "Mmantsae leads a group of researchers studying 'clean, green energy', renewable energy.

The goal of their research is to produce 'solar cells that can take the most energy from the sun, and hand it to the people'."



As the class is packing, Teacher Mpilo says, "Professor Diale's wish is to see more women studying Physics. I hope many of the girls here will study Science and Maths!"

"And of course, the boys too!" smiles Teacher.



—Questions

1. Why was the young Mmantsae interested in energy?
2. What is 'solar energy'? What can we use solar energy for?
3. What type of Scientist is Professor Diale? What is her research about?
4. What difficulties did Mmantsae have in following her dreams?
5. Explain how coal is obtained.
6. Why do you think it is important for us to use renewable energy?
7. Find out about five black women who are doing work in renewable energy.
8. What are the top 10 countries that are most advanced in the use of renewable energy?



—Books in this series

- Andile Mji
- Asnath Mahapa
- Bongani Mayosi
- Charlotte Maxeke
- Mmantsane Moche Diale
- Mulalo Doyoyo
- Tebello Nyokong
- Tshilidzi Marwala



This story was created and written in Siswati, as part of the Zenex Ulwazi Lwethu reading materials project in 2020.