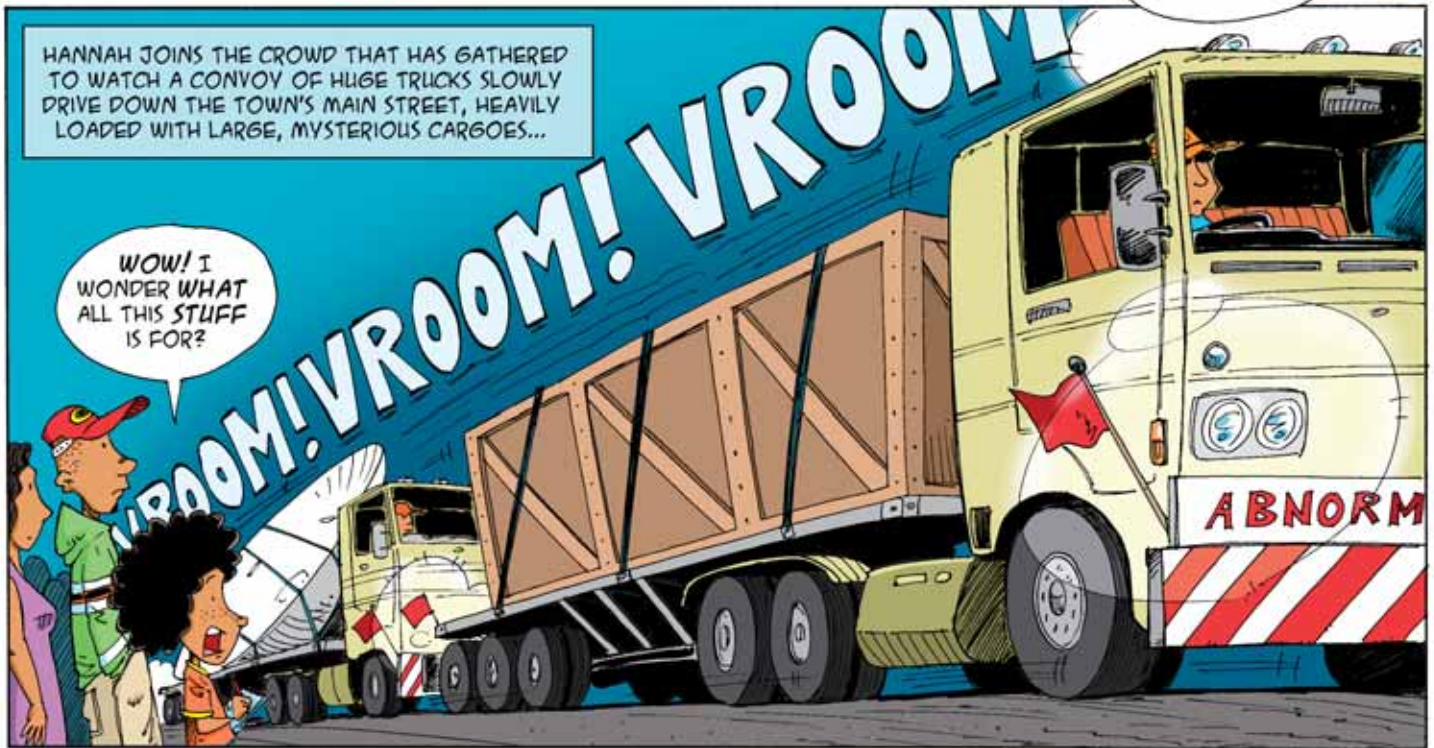
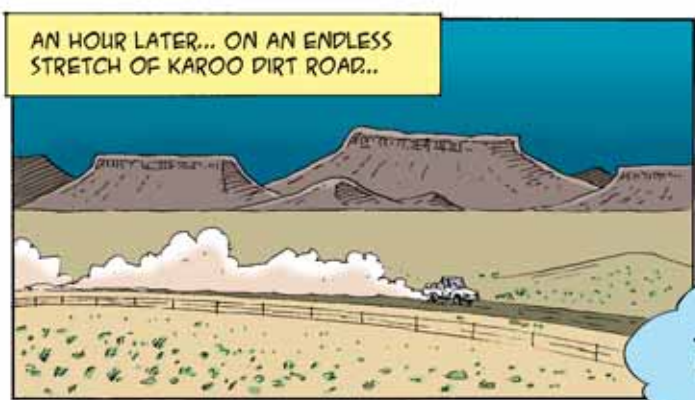
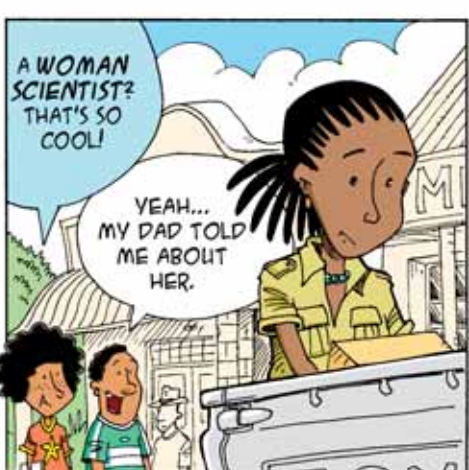
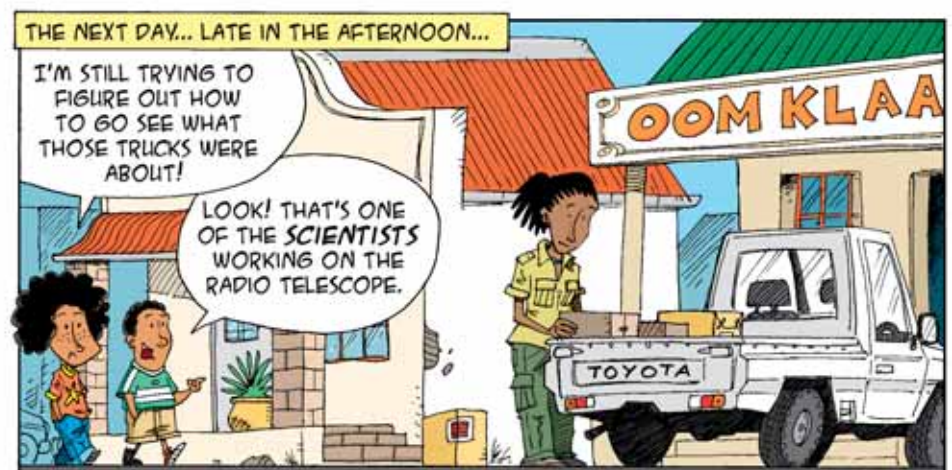
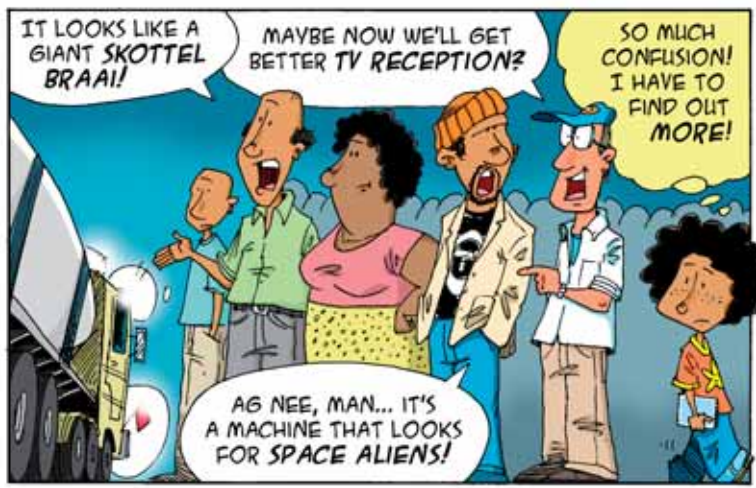




SKA SOUTH AFRICA  
SQUARE KILOMETRE ARRAY

# MISSION MEERKAT No. 1







TWO WEEKS LATER...

PUPILS AND PARENTS ARE GATHERED IN THE SCHOOL HALL...

WELCOME EVERYONE. TODAY WE HAVE A SPECIAL TREAT. THIS IS NALEDI, SHE'S AN ASTRONOMER WHO WILL TALK TO US ABOUT THE NEW MEERKAT TELESCOPE OUTSIDE OUR TOWN.

THANK YOU, MISTER PRINCIPAL.

WE ALL ARE FAMILIAR WITH ALL THE BEAUTIFUL STARS WE CAN SEE IN THE SKY AT NIGHT.

BUT THERE ARE LOTS OF OBJECTS IN SPACE THAT WE CAN'T SEE. WE STUDY THESE INVISIBLE THINGS USING RADIO TELESCOPES.

BUT HOW CAN YOU STUDY THINGS, IF THEY ARE INVISIBLE?

THE OBJECTS MAY BE INVISIBLE TO OUR EYES, BUT WE CAN PICK UP THE RADIO WAVES THEY SEND OUT.

THINK OF THE RADIO WAVES WHICH ARE DETECTED BY A RADIO AND TURNED INTO MUSIC AND SOUND.

# MEERKAT TELESCOPE

Dish

THE DISH OF A RADIO TELESCOPE DETECTS THE RADIO WAVES.

RADIO WAVES TRAVEL ACROSS SPACE FOR MILLIONS OF KILOMETERS BEFORE ARRIVING ON EARTH.

Radio waves

Receiver

The dish can be rotated and tilted up and down to point at different parts of the sky.

THE RECEIVED RADIO WAVES ARE THEN PROCESSED BY COMPUTERS INTO IMAGES.

Radio Telescope Image courtesy of NRAO/AUI

IN THE SAME WAY, LOTS OF OBJECTS IN SPACE SEND OUT RADIO WAVES.

BUT AREN'T ALL THESE RADIO WAVES DANGEROUS?

THERE IS NO DANGER AS THE RADIO TELESCOPE ONLY COLLECTS WAVES THAT HAVE BEEN REACHING EARTH ALL THE TIME.



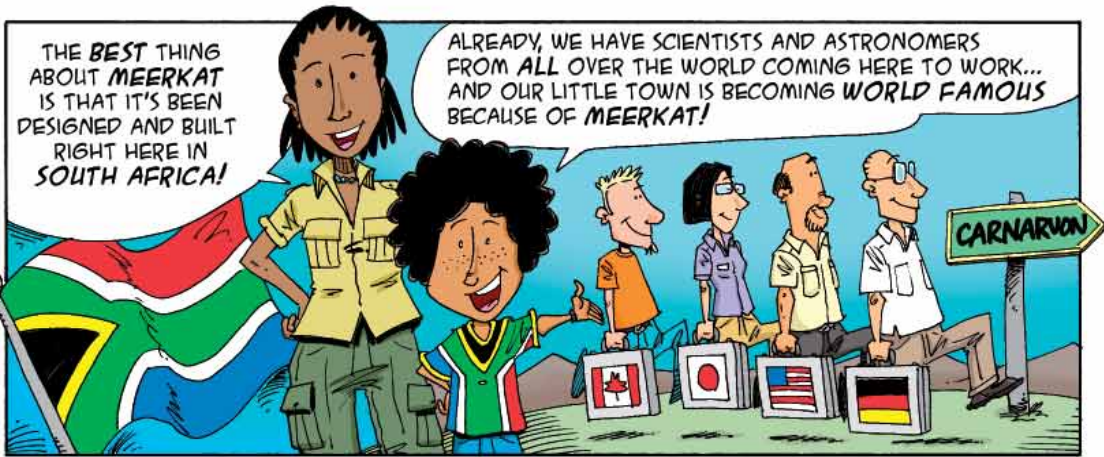
WHY IS THE TELESCOPE BEING BUILT ALL THE WAY OUT HERE?

WE DECIDED TO BUILD MEERKAT NEAR CARNARVON BECAUSE OF THE KAROO'S IDEAL CLIMATE WITH FEW CLOUDS AND VERY LITTLE MOISTURE.

WE ALSO NEED TO BE FAR AWAY FROM BIG CITIES WHERE CELLPHONES, RADIO AND TV STATIONS GENERATE A LOT OF RADIO WAVES WHICH WOULD INTERFERE WITH OUR RECEPTION OF THE SIGNALS FROM SPACE.

THERE'S A LOT WE DON'T KNOW ABOUT THE UNIVERSE. MEERKAT WILL HELP US DISCOVER HOW GALAXIES ARE FORMED, HOW STARS ARE BORN AND DIE AND WHAT BLACK HOLES REALLY ARE.





"Mission MeerKAT" is brought to you by the South African Square Kilometre Array Project ([www.ska.ac.za](http://www.ska.ac.za)), which includes the MeerKAT project. These radio astronomy projects are managed by South Africa's Department of Science and Technology, via the National Research Foundation. The project is being developed in close cooperation with the government of the Northern Cape Province and the local authorities in Carnarvon and Williston. Produced by Jive Media [www.jivemedia.co.za](http://www.jivemedia.co.za). All rights reserved.