GRADE 6 HISTORY TERM 4

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Indigenous healing in South Africa

Indigenous healers and holistic healing methods

Isangomas and inyangas are the two main types of indigenous or traditional healers in South Africa.

Isangomas

- 1. Isangomas are spiritual healers and are often women. They are people who diagnose illness.
- 2. People often visit the sangoma in family groups but sometimes they go alone. The reason for this is that the sangoma does not see people as individuals but rather sees them as part of a community.
- People's sickness is often related to their relationship with other people. People can also become sick because they are having problems at home or work. This is the reason why sangomas look at the environment that people live and work in to find reasons for their illness.
- 4. Sangomas also look at social factors that could make someone ill, as well as the physical symptoms. This way of looking at illness referred is called holistic. When sangomas diagnose illness, they listen to their ancestors. When sangomas are listening to their ancestors, they may put on special clothes and beads.
- 5. They may use dancing, singing and drumming during a healing ritual. The ancestors speak through them.



New words:

Indigenous: It is local. An indigenous person or plant or idea is something that comes from here.

Diagnose: To inspect and find out what is wrong.

Symptoms: A physical sign that something is wrong.

Ancestors: Members of our community who have died. (Have passed on.)

Holistic: Holistic means looking at the whole person: their financial situation, their family relationships, their living and working conditions.

A sangoma asks the individual and family many questions. The sangoma may also throw the bones. The 'bones' are often real bones of sacrificed animals. They can also be stones, shells or other objects.

Each 'bone' has a meaning. They represent part of the patient's life. For example, one bone could represent a person's mother. Another bone could represent the person's physical health, or financial situation.

'You throw the bones and the ancestors tell you exactly what to say,' says Khumbulile, who has been called to be a sangoma. 'It is not a matter of learning.'



A patient visiting a sangoma

Activity 1

Look closely at the picture above and answer the following questions, in full sentences.

- 1. Explain why the sangoma is throwing the bones?
- 2. Describe what the sangoma is wearing?

- 3. Why is the sangoma wearing these clothes?
- 4. Explain why the whole family visits the sangoma, not just the one person who is ill.

Inyangas

New words:
Inyanga: This is a healer who uses herbs and medicines to make people better.
Muti: A traditional word for medicine.
Toxic: This is another word for 'poisonous'.
Dose: The dose is the amount of medicine which must be taken.
Endangered: There are very few of these things left alive.
Rituals: These are customs or ways of doing things, for example, a wedding ceremony is a ritual.

'Inyanga' means 'man of the trees' in Zulu. Inyangas are healers that make medicines from herbs, roots and bark. Ground up rocks, animal horns and bones can also be used in the making of their medicine.

After a patient has been diagnosed by an inyanga they then go into bush to find the specific plants necessary for healing. Herbs and roots that are used for healing, sometimes called '**muti'**, can be bought at markets as well as directly from an inyanga.



A muti stall

Inyangas train for a very long time. It is important that they know the powers of the different herbs. These are powerful medicines that can be **toxic** if the wrong **dose** is given.



The roots of Hyacinths or Wild Pineapple (umathunga in Zulu) are used for a variety of illnesses from backache and broken bones, to coughs and fevers.



The Bitter Aloe (umhlaba in Xhosa, Zulu and Sotho) is used as a traditional medicine. The leaves or roots are boiled in water. The liquid is used for the treatment of eczema, stress and eye infection. The sap can be applied to burns and bruises.

Below, is a table showing some everyday South African plants which were first used in traditional medicine. Their healing powers have been researched by scientists and they are now used in western medicines as well.

Name of plant	What is this plant used for?	Scientific proof of healing agents
Pennywort/ varkoortjies	It is used to treat wounds and fevers. It is also used to treat acne and allergies.	Yes
Coral Tree/ umsinsi	The bark is used to treat toothache and arthritis. It is also used on swellings and wounds.	Yes
Madagascar periwinkle/ isisushlungu	The roots are used to treat diabetes and rheumatism. Liquid from the leaf is used in chemotherapy to treat several types of cancer.	Yes
Kouterie/ Pig's ears/ imphewula	The warmed leaf is used for earache and inflammation. It is also used to soften and remove warts and corns.	Yes
Hoodia/ bitterghaap	The stems are dried and used to stop people wanting to eat. It is also used for indigestion and stomach ache.	Yes

Activity 2

- 1. Which plant would you use if you needed to treat a wound?
- 2. Which plant would you use if you if you had a stomach ache?
- 3. What plant would you use if you had an earache?

How people are trained to become a sangoma or an inyanga

Not everyone can become a sangoma or inyanga. Healers believe that they are called by the ancestors to take on this important and respected position in society. Traditional healers speak of a sudden unexplained illness they had or they heard voices and saw visions. Many also talk about very bad headaches that would not go away. Their illnesses would not go away until they listened to the ancestors and went to train as a sangoma or an inyanga.

Nomsa Dlamini first trained as a nurse and worked at Baragwanath hospital for 15 years before she was called to be a sangoma. She started getting terrible headaches and resisted her calling for many years.

'As soon as I made my decision to accept this training, my headaches immediately stopped! In my dreams, the ancestors showed me many things - like throwing the bones. I was learning fast, day and night, nonstop. My training was very traditional. I had to slaughter the goat, drink blood, find hidden things through seeing them in dreams, all those typical things.'

Adapted from: Called to Heal, S. Campbell (Zebra Press, 1998)

Inyangas are called in a different way. In the old days, an inyanga would look at his family and identify the child who showed the most interest in medicines. Inyangas are sometimes identified through dreams. This person then became an assistant to an inyanga. They were taught which plants and herbs to use for healing.

Training to be a sangoma or an inyanga is very hard work. It is both physically and mentally challenging. Some of the things that trainees have to do include the following:

- They have to eat certain foods.
- They have to do exactly as their trainers tell them.
- They have to follow a very strict set of cleansing rituals.

Activity 3

Write the answers to the following questions in your workbooks.

- 1. What symptoms do people experience when they are being called to be a traditional healer?
- 2. Who or what is 'calling' them?
- 3. What happens to people if they ignore their calling?
- 4. Describe three things that trainees may have to do as part of training to be a traditional healer.

There is a lot of discussion about traditional healers. Read two different views.

Opinion 1: Adapted from an interview with Pip Erasmus, from the Traditional Healers Council. This organisation has over 250 000 members in southern Africa.



"All genuine traditional healers try to make their patients better. They are holistic healers and so they look at all the problems a person might have. Traditional healers try to make their patients' bodies better but they also try to make them feel happy again."

Opinion 2: Dr Nathatho Motlana, a highly respected Soweto doctor.



"As we move onto the 21st century of computers and scientific hi-tech I see people who want to move my people back to the 10th century. They say to my people, 'this is your culture'. I say this is absolute nonsense! Too much money is wasted on traditional healers."

Activity 4

Answer the following questions, in full sentences, using your own words. Do not simply write a sentence from the source material.

- 1. Why does Pip Erasmus (Opinion 1) support the work done by traditional healers?
- 2. Do you agree or disagree with Dr Nathatho Motlana about traditional healers?

Some modern western scientific medical discoveries

Edward Jenner discovers a vaccination for smallpox

Three hundred years ago there was no such thing as a **vaccination**. In the past, many people died because of diseases that we prevent today by using vaccination.



Cuard Tomes CO

Edward Jenner

The World Health Organisation vaccinates children against smallpox.

Smallpox was one of the deadliest diseases before the 1800s. It killed large numbers of people. People who had smallpox would get sores all over their bodies. If they survived, they often had terrible scars or pock marks.

In 1796, Edward Jenner, an English doctor, noticed that milkmaids did not catch smallpox. They did, however, catch a disease called cowpox from the udders of the cow that they milked. Cowpox did not kill anyone. Jenner thought that the reason why milkmaids did not get smallpox was because they had had cowpox and that this, somehow, prevented them from getting smallpox.

Jenner thought that if he could give people cowpox then maybe they would not catch smallpox. He conducted an experiment in which he injected people with cowpox and then later he gave them an injection of smallpox. His experiments were successful! People did catch cowpox but they did not get the far deadlier smallpox. Edward Jenner had invented the first vaccination.

It often takes time for people to accept new scientific discoveries. In 1802 this cartoon was drawn and published by the Anti-vaccination Society. They were scared that there might be unknown side effects.



This cartoonist was against vaccinations.

Activity 5

With your partner, look carefully at the cartoon above and read the text in this unit. Answer the questions in your workbook:

- 1. Why did Jenner want to vaccinate people with cowpox?
- 2. How does the cartoonist show us that he thinks that the cowpox vaccination might be dangerous?
- 3. Why do you think that the cartoonist was scared of having the cowpox vaccination?
- 4. Do you find the cartoon funny? Why or why not?

The connection between germs and disease, and the role of Louis Pasteur

Do you know why it is important to sneeze into a tissue? Do you know why you wash your hands before you eat food? Do you know why meat rots if it is left uncovered? The answer to all these questions is that there are germs floating in the air and there is a link between germs and disease.

Giving people vaccinations stopped millions of people from catching smallpox. By 1800 people still didn't know what caused diseases. Louis Pasteur was a French scientist, who proved that germs caused disease.

Pasteur proved that the air contains many germs and that tiny microbes can cause decay and disease. This is the reason why open wounds become infected easily and why mould starts to form on old food. Mould shows that food has gone bad.

Louis Pasteur worked with a team of doctors and they discovered that if they injected a human with a mild form of a disease, the body's immune system would attack and destroy the disease. So, if a stronger form of the disease attacked the body, the body was prepared and could fight the disease.

Pasteur also invented a process in which liquids such as milk were heated. Heating liquids kills most germs. This process is called pasteurising, after Louis Pasteur. That is why we all drink pasteurised milk.



Louis Pasteur

Did you know?

Germs can also infect water. Pasteur proved that boiling water destroys most germs.

New words:

Germs: This very small organism, which causes disease. Another word for a germ is a microbe or bacteria.

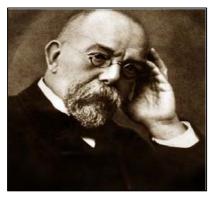
Mould: A type of bacteria.

Pasteurising: The process of boiling milk or other liquids to kill the bacteria which could cause disease.

Airborne microbes: Germs which are carried in the air.

Germs that cause TB and the role of Robert Koch

Robert Koch



Tuberculosis (TB) was one of the biggest killers of people in the 19th century, in Europe. TB was very common amongst the poor people who lived in cramped, overcrowded cities.

The reason is that TB is spreads, through the air, from one person to another. TB germs get into the air when a person with active TB disease speaks, sings, sneezes or coughs. People who are nearby breathe in the bacteria and become infected.

In 1882, Robert Koch announced that he had found the germ that caused TB.

Koch's first experiments were with an animal disease called anthrax. He discovered that the germs or microbes which caused anthrax could live long after the animal was dead.

He then wanted to find the germs that caused septicaemia, which is when blood becomes infected or poisoned because a wound is not treated. Septicaemia was killing many people in the 19th century.

When looking under a microscope at a sample of infected blood, Koch could not see any germs. The reason was that they were too small. He then added a few drops of violet colouring to the blood. The dye attached itself to the septicaemia germs so he could see the germs and prove that they were causing the infection.

The TB germ was even smalller than an anthrax or septicaemia germ. By using his colouring dyes and a new and more powerful microscope lens, Koch was able to see these tiny microbes.

Koch's research encouraged other scientists to discover the germs which caused other diseases. Between 1879 and 1900, the germs that caused over twenty diseases were discovered. The next problem scientists faced was how to kill these germs.

Activity 6

Answer the following questions in full sentences.

- 1. One of the symptoms of TB is a bad cough. Use the knowledge you gained from this chapter to explain why TB is more common in overcrowded cities than it is in rural areas.
- 2. Robert Koch was determined to find a cure for anthrax, septicaemia and TB. What did these diseases have in common that made him so determined to find what caused them?
- 3. Robert Koch discovered of the TB germ. What effect did this discovery have on other scientists?

The first antibiotic and the role of Alexander Fleming

Alexander Fleming was trained as a medical doctor, but he worked as a scientist. In 1928, he was experimenting by using petri dishes to grow bacteria in order to study them. One day, as he was cleaning up, he noticed that some of the bacteria in one of the dishes had been killed by some green mould. He discovered that the mould was from the penicillium family and that it could kill harmful germs. Fleming worked with two other scientists from 1928 to 1941 to make the antibiotic penicillin.



During World War II (1939 - !945) antibiotics were desperately needed to treat wounded soldiers. The American chemical industry took up the challenge and found a way to mass produce penicillin. Since then, penicillin has saved thousands of lives.

A breakthrough in surgery: The first heart transplant

Discoveries that made surgery possible

Surgery is the part of medicine that treats disease and injury by doing operations. In an operation, a surgeon makes a cut in a person's body and then removes the diseased part or makes a repair. The surgeon then sews up the cut and, hopefully, the person gets better.

Anaesthetics

When we have an operation, these days, we are given an anaesthetic. This is a type of chemical that makes a patient unconscious (sleep deeply) so that he/she doesn't feel pain.

Until anaesthetics were discovered, people had nothing to stop the pain during operations. In Britain, John Simpson discovered, in 1847, that a substance called *ether* worked well as an anaesthetic. He used it to help relieve pain during childbirth. He later used another substance called Chloroform.

Today, anaesthetists are highly skilled specialist doctors that train for many years. During an operation, a number of gases are mixed to make sure that the patient is not only pain free but that the muscles are also relaxed. Anaesthetics also slow down your heart rate and drop your body temperature so that your body cannot respond with shock to what is happening to it.



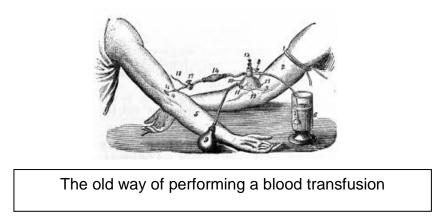
Modern anaesthetic

Avoiding infections

Once the problem of pain during operations was solved by anaesthetists, surgeons were able to perform operations for longer periods of time and work carefully. However, many patients continued to die after operations because their wounds went septic. Septic means that the wounds were infected with bacteria. In 1865, John Lister read about the work done by Louis Pasteur. Lister came to the conclusion that germs must be the cause of the wound infections that caused people to die. Lister made a decision to clean and sterilise everything that had to do with an operation – the patient's skin, the instruments and the surgeon's hands. As a result of this fewer patients died from infected wounds.

Blood transfusions

During an operation, in the past, a person could die from losing too much blood. Surgeon's tried to replace the patient's lost blood with the blood from a healthy person by giving them a transfusion. Sometimes this worked, but sometimes the new blood reacted badly with the blood of the patient and the patient died. In 1901, it was discovered that there are four types of blood namely **O**, **A**, **B** and **AB**. You cannot mix two blood types in one body as this can cause a patient to die. Also, if one person's blood has germs or diseases in it, this could also be transferred to the person receiving the blood.



Today, blood transfusions are often given when necessary. National blood banks are set up in most countries. This is a place where healthy people go to donate blood and this blood is tested for diseases like HIV or hepatitis that could make the blood unhealthy. Blood that does not have diseases is then stored for future use. With advanced technology, it can be stored in powder form and rehydrated (by adding liquid) when it is needed.



Blood being donated to The South African National Blood Service (SANBS)

X-rays

Wilhelm Rontgen, a German scientist, discovered X-rays in 1895. This discovery happened by accident. Rontgen was busy experimenting with electricity when he realised that he had found a kind of invisible light or a ray that could shine through black paper. Rontgen called these rays **"X" rays** as he did not know what he had found. He found that these rays could pass through the flesh of his hand, but it would show the bones of his fingers. He realised that X-rays would help doctors to see into a person's body and show broken bones, infection in soft tissues like lungs and hard things like tumours. Being able to see inside a person's body made it easier for doctors to decide what sort of operation would help the patient.

Christiaan Barnard and the world's first heart transplant

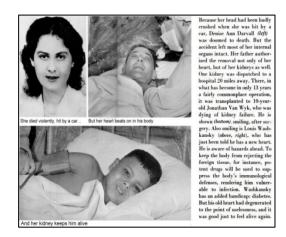
Christiaan Barnard was born in 1922 in Beaufort West, in the Cape Province. He was one of four boys but one of his brothers died at the age of five as a result of a heart problem. He studied medicine at the University of Cape Town and later went to the United States for graduate studies. In 1958, he returned to South Africa to work at the Groote Schuur Hospital, as a surgeon.

Louis Washansky, a 54-year-old grocer was suffering from an incurable heart disease and diabetes. He needed a heart transplant in order to survive. Denise Darvall, a 25-year-old bank clerk had been knocked down by a car as she crossed the road and her father had given permission for her heart to be taken out and to be transplanted into Louis Washkansky.

In December 1967, Christiaan Barnard, a 45-year-old surgeon, completed the world's first successful human heart transplant. It took a team of 30 people nine hours to perform this heart transplant operation. They removed the heart from Darvall and then put it into Washansky. It was one of the most important operations that have ever been performed.



This operation would not have been possible if it were not for all the scientific discoveries of the previous 300 years. Sadly, Washansky only survived 18 days. The cause of his death was pneumonia, an infection of the lungs. But, his new heart beat strongly until he died.



The link between holistic (traditional) and Western forms of healing today

Many different types of healers exist in South Africa today. People often see more than just one type of healer. Traditional healers and western medical doctors also work together. This is especially important in rural areas as there are limited health facilities. Some healers combine scientific understanding of the body with a more holistic understanding of health. They treat the symptoms and also give advice about lifestyle, stress management and nutrition. Western medicine has also applied a great deal of information about healing properties of plants from traditional healers throughout the world. Thus, many accepted medicines that can be bought from pharmacies are made from indigenous plants.

Bibliography:

1. L. Dilley, M. Monteith, D. Nunneley, A. Proctor, G. Weldon - Oxford Successful Social Sciences grade 6

2. K. Angier, D. Carr, J. Cockburn, J. Wallace - Our World, Our Society grade 6