

Now match the following words that rhyme. One is done for you. Add two more words to each pair that rhyme with them.

| Part –A | Part – B | Correct Pair of Words |            |            |            |
|---------|----------|-----------------------|------------|------------|------------|
| plot    | go       | <i>plot</i>           | <i>rot</i> | <i>cot</i> | <i>lot</i> |
| sheep   | rot      | _____                 |            | _____      |            |
| grow    | leap     | _____                 |            | _____      |            |
| earth   | birth    | _____                 |            | _____      |            |
| bones   | learn    | _____                 |            | _____      |            |
| concern | clones   | _____                 |            | _____      |            |

## Project

I. Collect information about ten world famous Indian scientists and write it in your notebooks in the format given below:

| Sl. No. | Name of the Scientist | Indian State | Discovery / Invention | Award |
|---------|-----------------------|--------------|-----------------------|-------|
| 1       |                       |              |                       |       |

\*II. Now talk to other members of your group about one scientist whose discovery /invention has changed our life.

## C. Reading

Read the following story:

### Susruta, an Ancient Plastic Surgeon

It was midnight when Susruta was awakened by a frantic knocking at the door.

“Who’s out there?” asked the aged doctor, taking a lighted torch from its socket in the wall and approaching the door.

“I’m a traveller, my revered Susruta,” was the anguished reply. “A tragedy has befallen me. I need your help....”

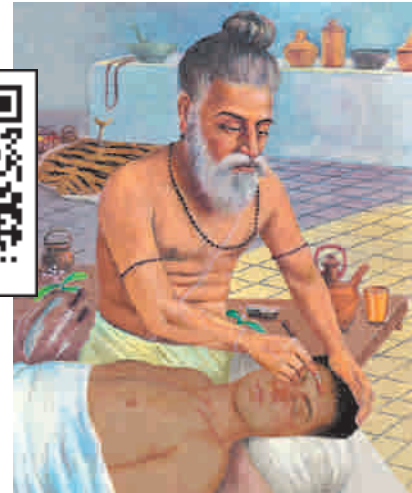
Susruta opened the door. What he saw was a man kneeling before him, tears flowing from his eyes and blood from his disfigured nose.

“Get up, my son, and come in,” said Susruta. “Everything will be all right. But be quiet, now.”

He led the stranger to a neat and clean room, with surgical instruments on its walls. He washed his face with water and the juice of a medicinal plant. He then offered him a mug of wine and began preparing for the operation.

With a large leaf of a creeper brought from the garden, he measured the size of the stranger's nose. Taking a knife and forceps from the wall, he held them over a flame and cut a strip of flesh from the stranger's cheek. The man moaned, but the wine had numbed his senses.

After bandaging the cut in the cheek, Susruta cautiously inserted two pipes into the stranger's nostrils and transplanted the flesh to the disfigured nose. Moulding the flesh into shape he dusted the nose with powdered liquorice, red sandalwood and an extract of Indian barberry. He then enveloped the nose in cotton, sprinkled some refined oil of sesame on it and finally put a bandage.



Before the traveller left, he was given instructions on what to do and what not to and a list of medicines and herbs he was to take regularly. He was also asked to come back after a few weeks to be examined.

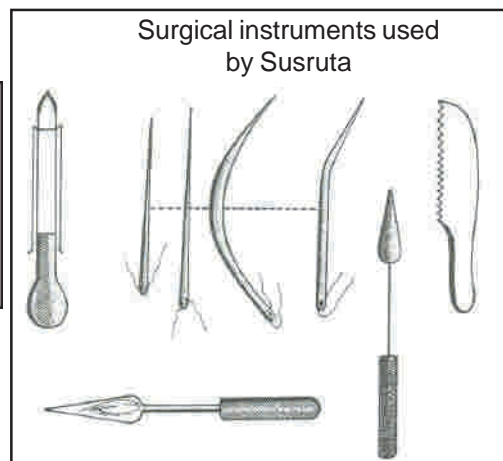
In this manner Susruta mended a nose some 26 centuries ago. And what he did is not greatly different from what a plastic surgeon would do today. In fact, Susruta is today recognised as the father of plastic surgery all over the world. His treatise, *Susrutasamhita*, has considerable medical knowledge of relevance even today. It indicates that India was far ahead of the rest of the world in medical knowledge.

Born in the sixth century B.C., Susruta was a descendant of the Vedic sage Viswamitra. He learnt surgery and medicine at the feet of *Divodasa Dhanvantari* in his hermitage at Varanasi. Later, he became an authority in not only surgery but also in other branches of medicine.

He was the first physician to advocate what is today known as the 'caesarean' operation. He was also an expert in removing urinary stones, locating and treating fractures and doing eye operations for cataract. His suggestion to give wine to patients about to be operated upon makes him also the father of anaesthesia.

In his treatise, Susruta lists 101 types of instruments. His *Samdamsa Yantras* are the first forms of the modern surgeon's spring forceps and dissection and dressing forceps. In fact, his system of naming surgical tools after the animals or birds they resemble in shape, for example crocodile forceps, hawkbill forceps, is adopted even today.

Susruta was also an excellent teacher. He told his pupils that one could become a good physician only if one knew both theory and practice. He advised his pupils to use carcasses and models for practice before surgery.



(Adapted from *SCIENTISTS OF INDIA* published by Children's Book Trust, New Delhi)



**I. Answer the following questions:**

1. Why did Susruta offer the traveller a mug of wine?
2. Why was Susruta recognized as the father of plastic surgery today?
3. What made him the father of anaesthesia?
4. Who could become a good physician according to Susruta?
5. What was his advice to his pupils?

**Do You Know?**

1. It takes about 20 seconds for a red blood cell to circle the whole body.
2. It has been proven that people can lessen reactions to allergies by laughing.
3. Six-year-olds laugh on an average of 300 times but adults laugh only 15-100 times a day.
4. Water freezes at 32°F and boils at 212°F. There are 180 degrees between freezing and boiling because there are 180 degrees between the north and the south.

**Share This Joke**

The surgeon told his patient who woke up after having been operated: "I'm afraid we're going to have to operate on you again. Because, you see, I forgot my rubber gloves inside you."

"Well, if it's just because of them, I'd rather pay for them if you just leave me alone."

**Do You Know?**

1. The average human body contains enough Sulphur to kill all fleas on an average dog, Carbon to make 900 pencils, Potassium to fire a toy cannon, Fat to make 7 bars of soap, Phosphorus to make 2,200 matchheads, and enough Water to fill a ten gallon tank.
2. Your fingernails grow four times as fast as your toenails.
3. Babies are born with 300 bones and adults have 206.
4. The smallest bone in your body is in your ears.
5. A sneeze blows air out of your nose at 100 miles per hour.
6. Children have more taste buds than adults.
7. Bones are 4 times stronger than concrete.
8. The human body has approximately 37,000 miles of capillaries.
9. A square of human skin has 32 million bacteria on it!
10. The liver is the body's chemical factory. It has over 500 functions!

