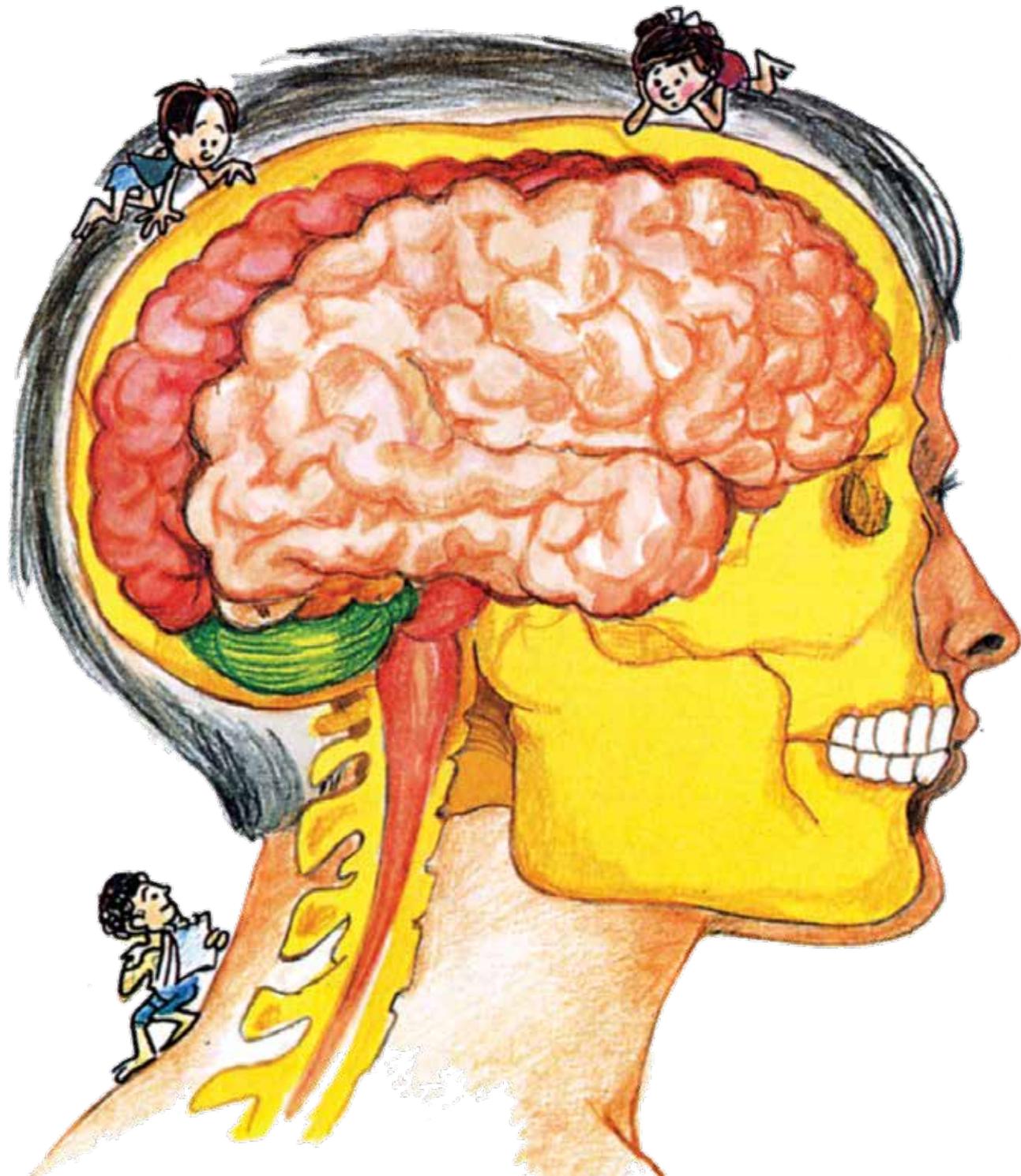


Jyoti Mishra

Art by Sumati



a 300m thinkbook from Katha 



Have you wanted the hands of a doctor whose touch can heal? Or the delicate fingers of a painter that can draw a feather? Have you wanted to kick a football into the sky, or count all the colours in the rainbow?

Well, you can't do any of these things without **BRAIN POWER**. Read this interview with a young brain researcher!

Q. What is the Brain

Your BRAIN is you! Because of your brain you can think, feel, remember and do things. It is right inside us, yet we are still figuring out how it really works!

The brain looks like a large, soft walnut. It weighs about 1.5 kg. As much as a large cauliflower! But it is the most powerful computer we know!

It is the centre of the human nervous system, controlling our thoughts, movements, memories and decisions.

It stores our memory and controls how we as humans think and react. But not every part of the body is given the same amount of attention by the brain.

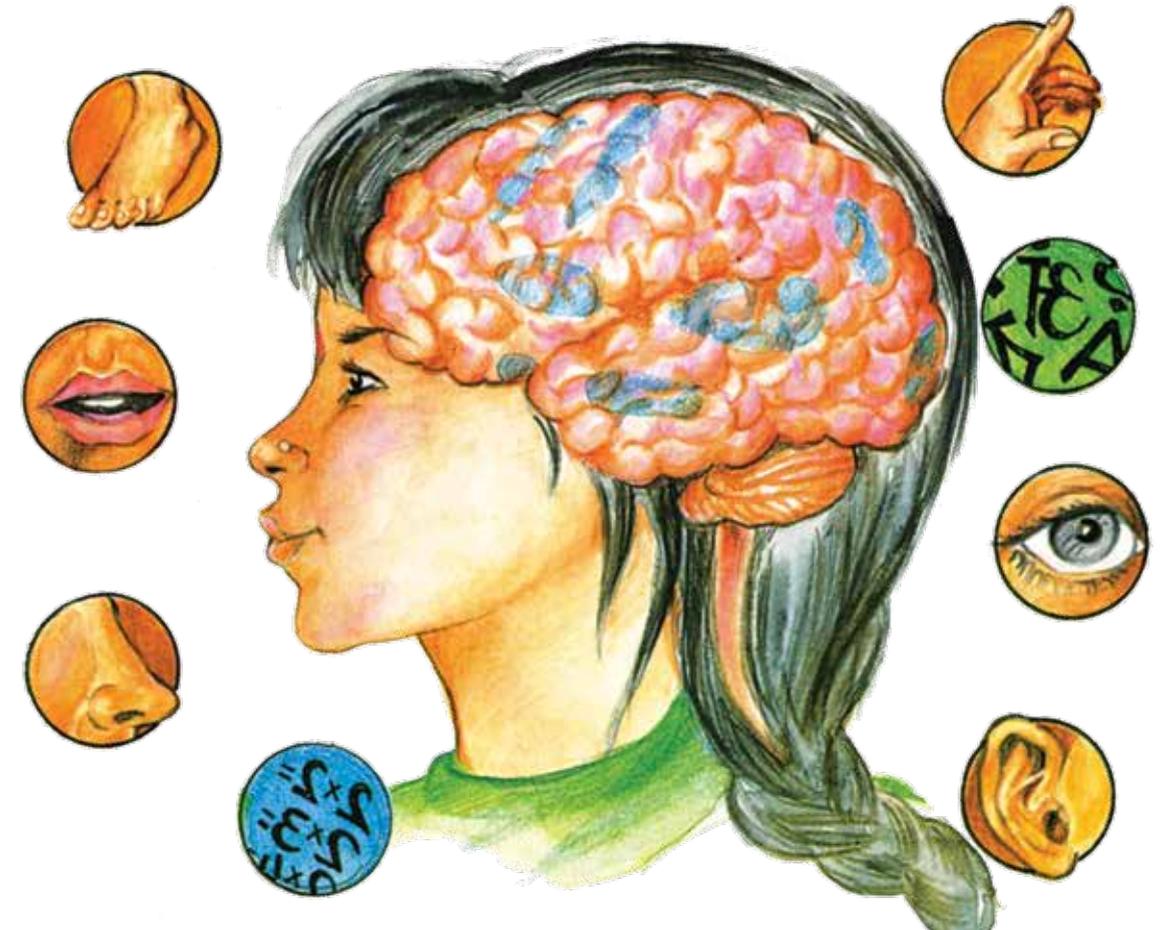
The brain is made up of two parts called hemispheres, that look almost exactly like one another. But, each side of the brain interacts with one half of the body.

The two sides of the brain also talk to each other by a bridge called the corpus callosum. There are 'split brain' people who have this bridge missing and they always feel like they have two minds! Why is the brain made this way? Well, no one really knows but its become this way over five hundred million years of evolution!

Q: How was my brain when I was ten; how will it be when I become eighty?

The brain has an amazing ability to change and form new connections between brain cells (neurons), throughout life. Many brain changes as you grow older, both good and bad.

But doctors say, if you look after yourself well, starting now, you will find that though some brain cells or neurons die, the remaining neurons do learn to take on more roles. New neurons can also grow when you learn. So even when you grow older, you can achieve performance levels similar to those of younger adults, through sustained attention, focus and learning.



Q: Does the brain tell me to feel hungry, or does my stomach?

Well, it is your brain. A part of the brain called the hypothalamus controls hunger as also body temperature, thirst, tiredness, sleep, amongst other things. The hypothalamus is just as big as an almond, but it does some very important work and is key for your survival!



Q: If my brain was a computer, how much storage space will it have?

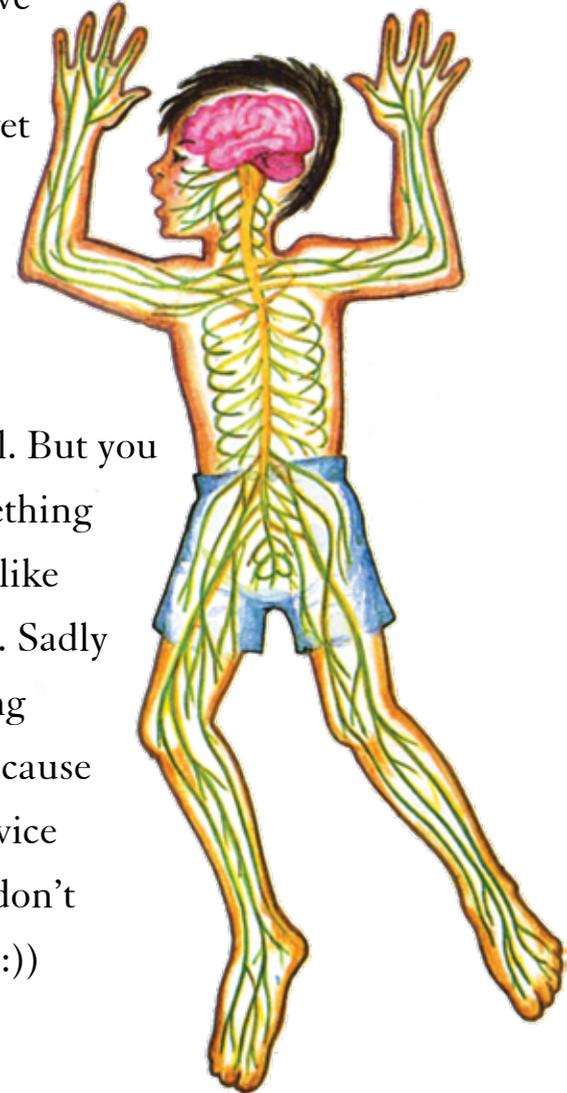
Brain scientists estimate that the human brain has roughly hundred billion neurons, actually eighty-six billion, to be exact. Our primate cousins, gorillas have a third of the neurons as in humans and that's one reason why we are so much smarter! Each of these neurons can make about 1,000 connections. These connections are called 'synapses' where information is transferred through chemical from one neuron to the other. So multiply each of the hundred billion neurons by approximately a thousand connections it can make, and you get hundred trillion data connections, or about hundred terabytes of information. Moreover, these data connections are not static, they are very dynamic, one neuron can transfer information to another in a millisecond, i.e. a thousandth of a second and in a day of 24 hours you have 86,400,000 milliseconds! With so many data connections buzzing so fast - that is how you experience the large and rich diversity of thoughts everyday.

Q: Will I always remember my friends and what I did when I was ten?

Some people do, some people don't. But does it matter? As Maya Angelou, a great writer, once said, "I've learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel." And that is scientifically true too – brain scientists have shown that memories that are linked to emotions last much longer than others – so you probably won't forget your bestest friends or your family if you stay healthy throughout life.

Q: How can I protect my brain?

Your awesome brain is protected by your bony skull. But you could still hurt it badly if you hit your head into something hard. Always wear a helmet if you are playing games like cricket, and definitely when riding bikes and scooters. Sadly in India many people injure their brain by not wearing helmets on motor-bikes. So take care of your brain because it is what gives you all your experiences. Also think twice before you dive into water. Is it deep enough? If you don't know, stop and ask your BRAIN! It generally knows! :))



Q: What does my brain need?

Lots of healthy food like fresh green vegetables, peanuts, lentils, soya beans, nuts, milk, eggs and fish.

Exercise! The brain is invigorated by exercises – when the heart pumps fast during a workout, the brain gets more blood flow and oxygen and has renewed energy to learn and to focus. Exercise has also been shown to grow more neurons in your brain. Make it part of your daily routine and you'll see lifelong benefits.

Learn and experience new things and try to remember them. Play 'brainy' games like chess and logic puzzles. Make it super special by playing with your grandparents — it will help them keep their brains nimble too! In fact the brain remembers better any activity you do with others.

And at the end of the day, make sure to get plenty of sleep! Sleep not only reboots and recharges the brain, it also helps to strengthen the memory of what you have learned today. Then wake up with renewed vigour take on a world full of new activities and new learnings.

Jyoti Mishra is a children's-book enthusiast and an occasional writer. She has lived in five continents and all her experiences there influence her writing. She now lives in Sydney, Australia with her husband and a collection of ever-growing and much-loved collection of children's books.

Sumati is an illustrator who brings dreams alive through her artworks. She has illustrated many books for young readers.

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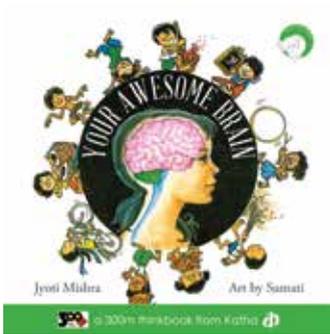
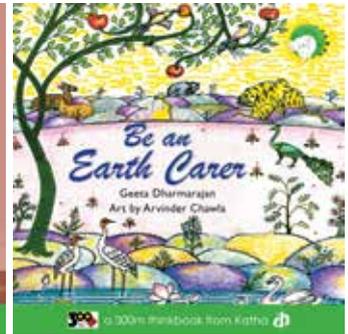
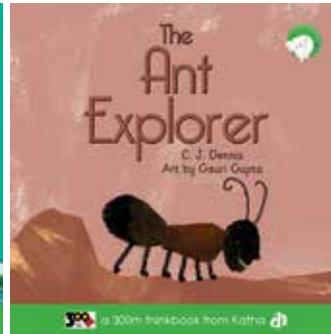
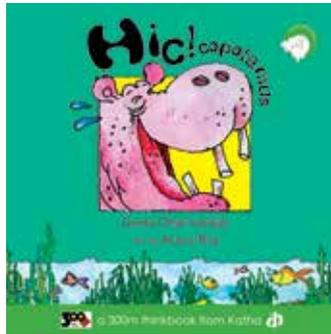
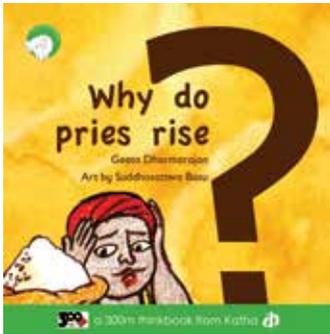
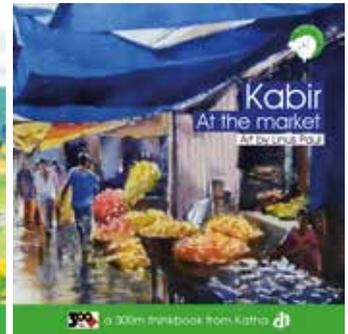
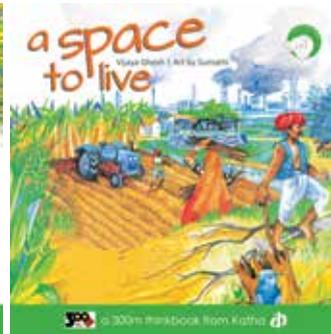
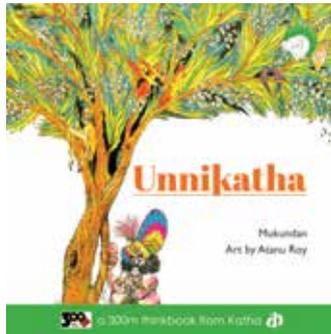
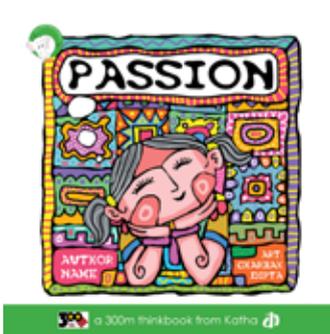
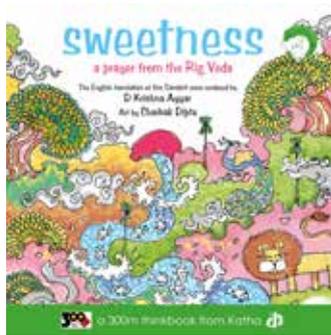
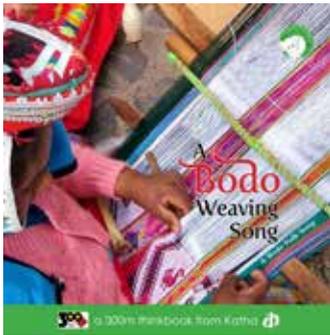
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