

First Home-Grown

Proudly Singaporean  
Owned



Science  
Digest

# SCIENCE ADVENTURES

African River  
Prawn

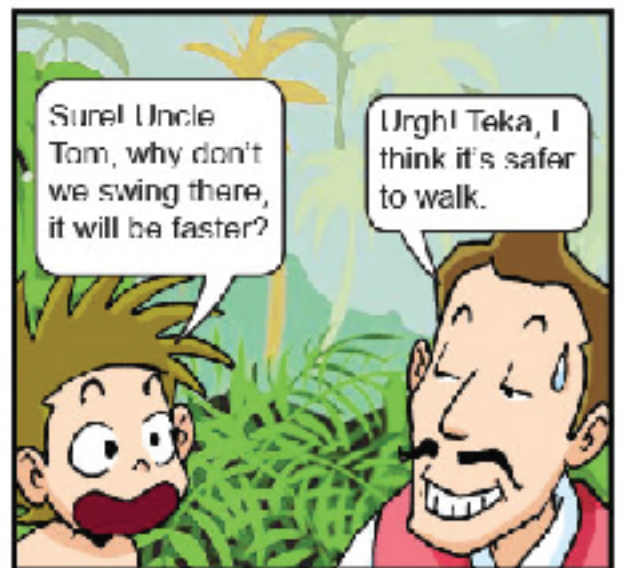
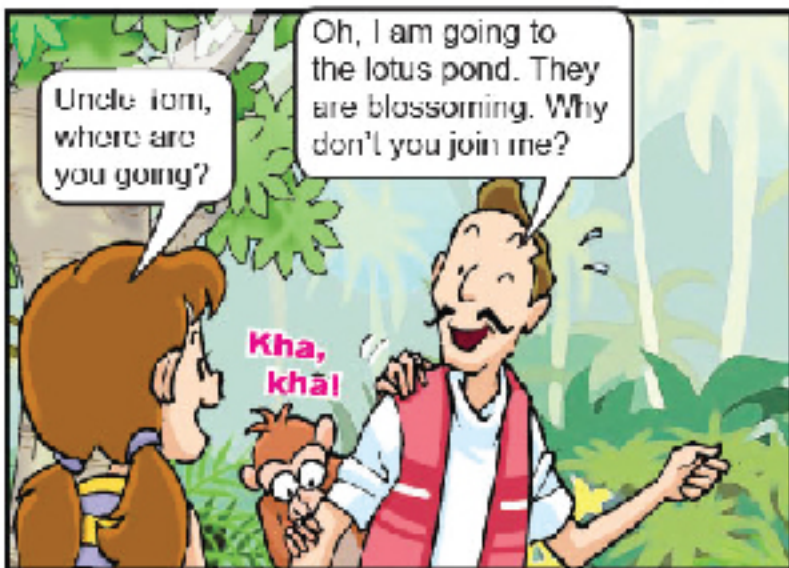
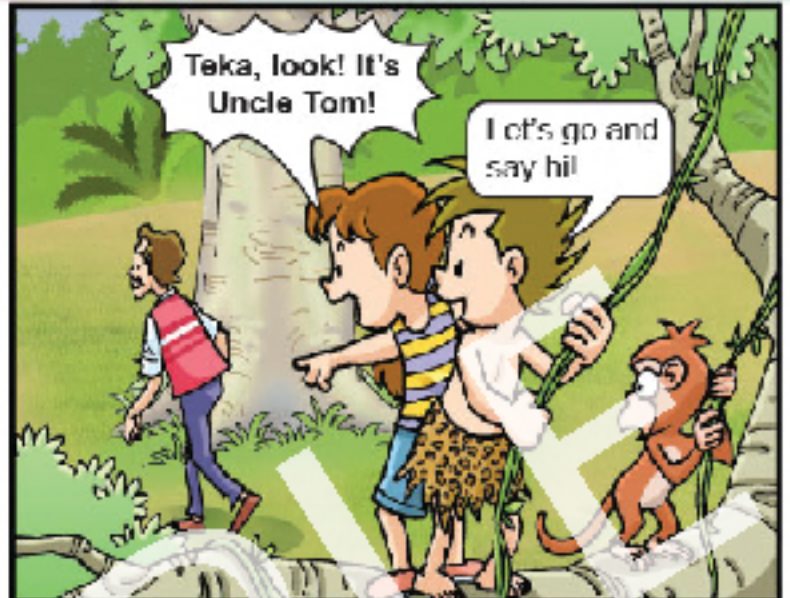
ABC 1234

STEM

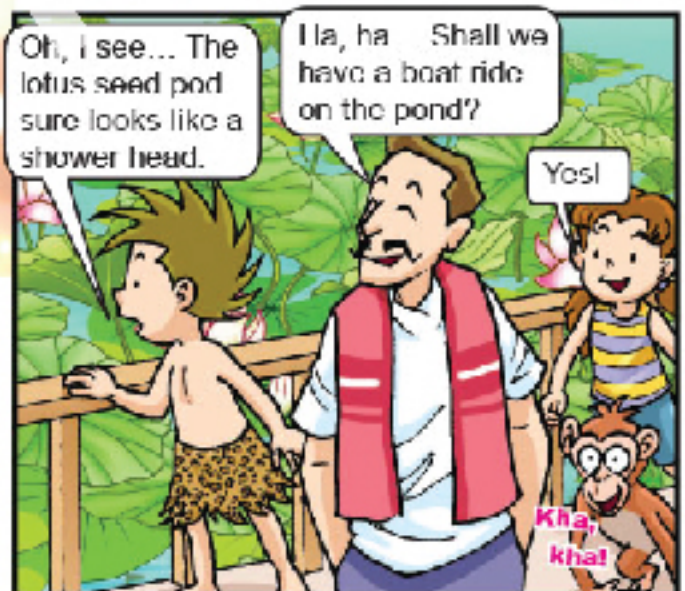
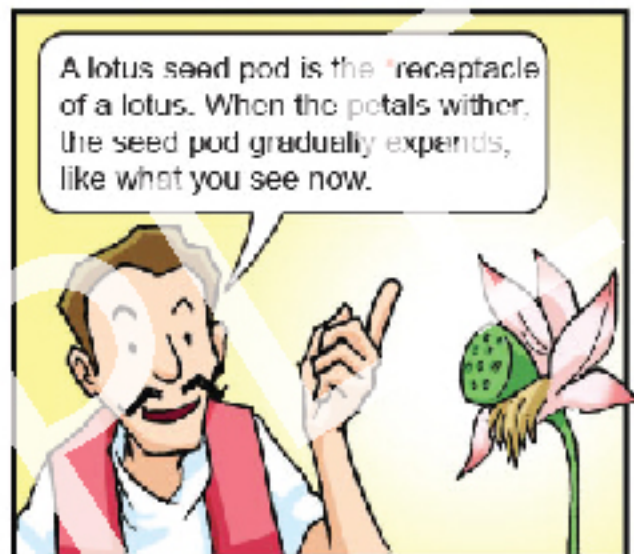
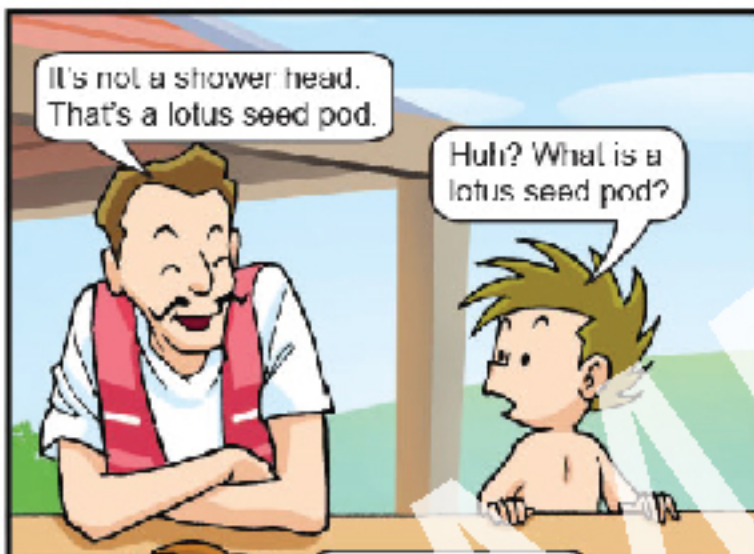
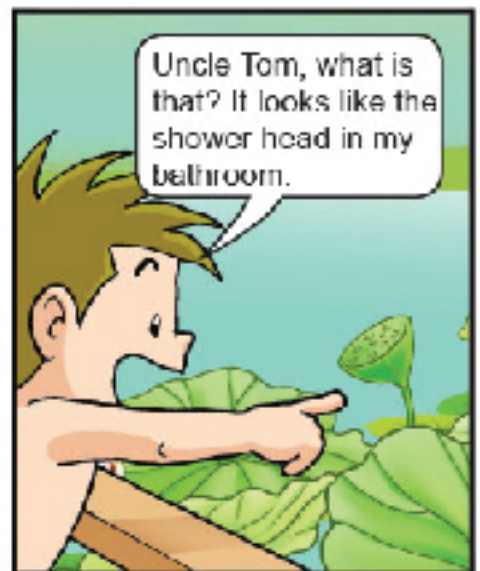
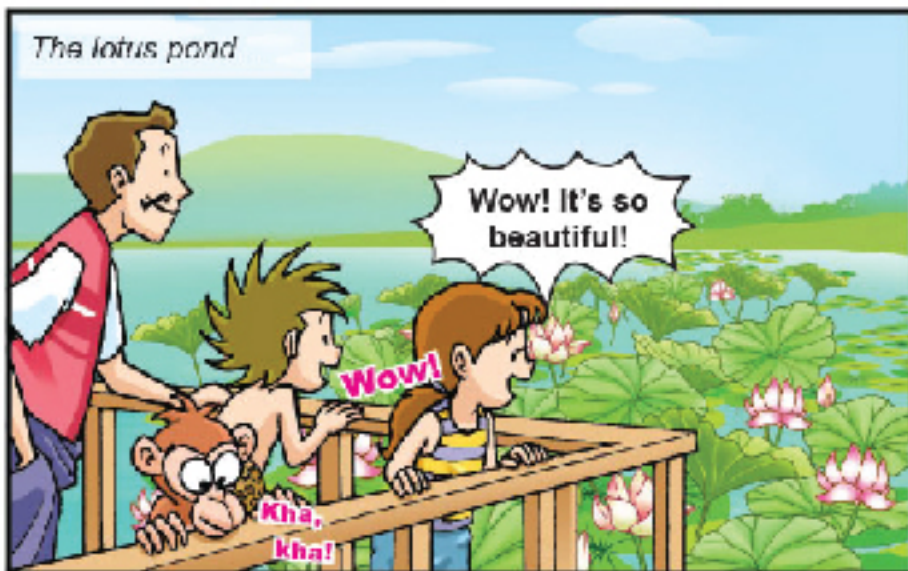
51

Upper Primary

# Beautiful Lotus Flowers



The lotus pond



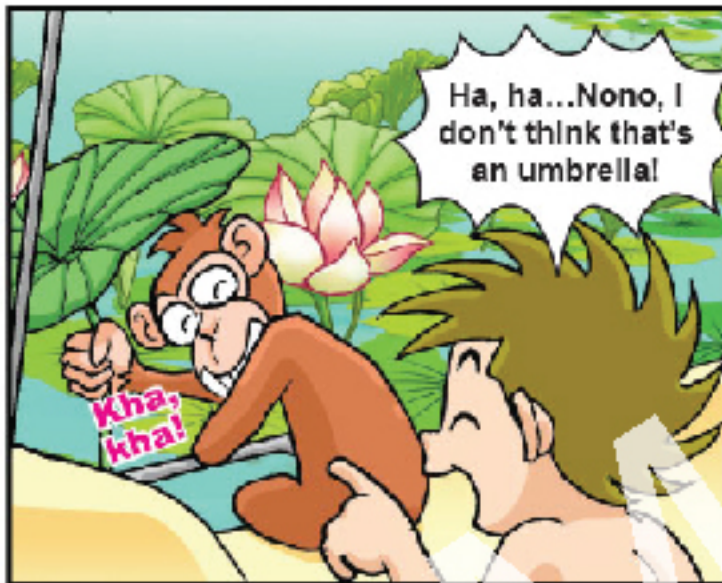
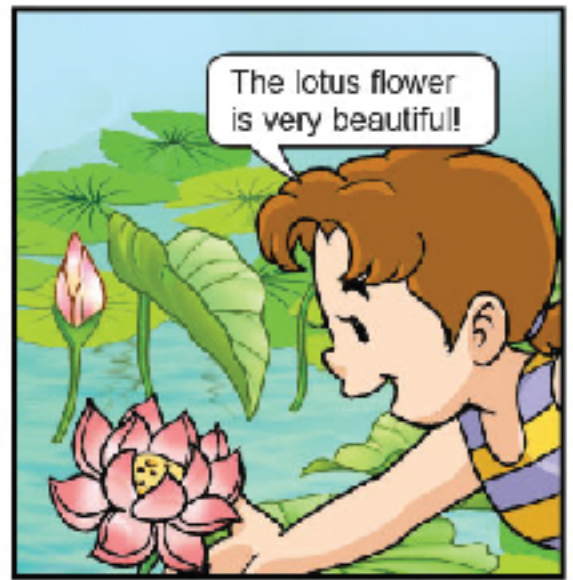
Tell Me More

The lotus is a \*perennial water plant distributed in tropical Asia. It is the national flower of India.



Vocabulary

- \*perennial: a plant that lives for several years
- \*receptacle: the enlarged area at the top of a stem that contains the organs of a flower



**Tell Me More**

Lotuses like calm and shallow water, such as ponds or swamps. Lotuses can also be grown in shallow containers as ornamental potted plants.



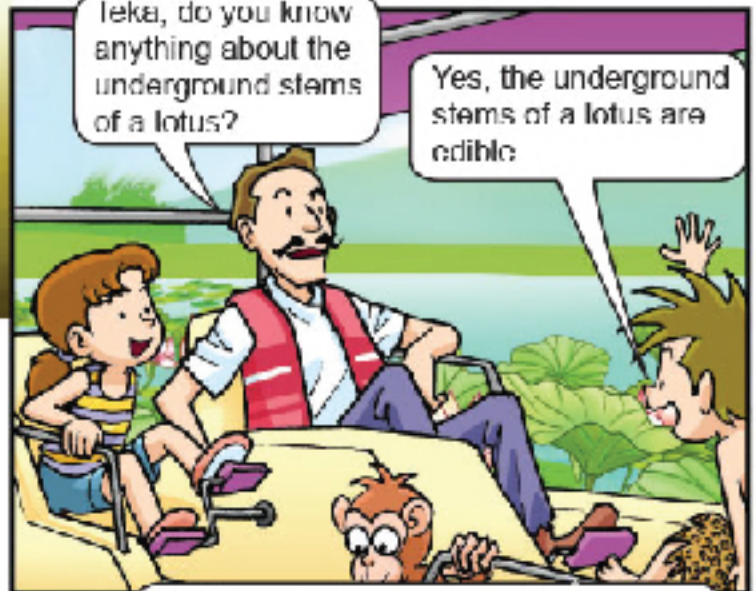
**Ornamental:** something intended to be decorative

You may, but you would kill the lotus plant. Without its leaves, the lotus will wither



Ieka, do you know anything about the underground stems of a lotus?

Yes, the underground stems of a lotus are edible



Oh, why is that?



Yes. So do you know why the stem has many holes?

Huh? Nope!

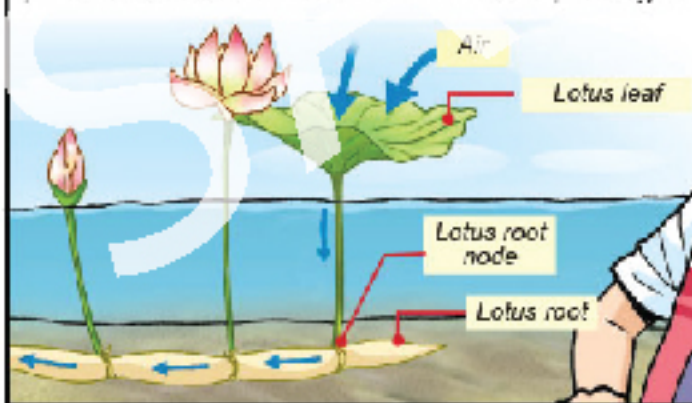


The lotus roots are a type of underground stem. They are submerged in water, so the holes provide a pathway for air from above the water surface to reach the underwater parts of the plant.



When the air goes into the *\*stomata* on the lotus leaves and through the *\*petioles* and holes connecting the lotus, air is transported throughout the whole plant. Lotus holes are similar to an air passage.

A lotus root uses its leaves to breathe like a diver uses a snorkel. If its petiole is broken, it will not be able to breathe and will die from suffocation.

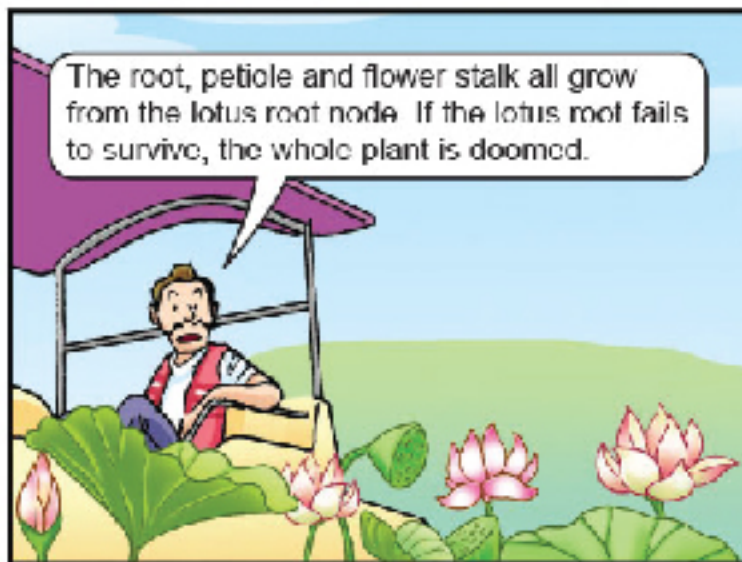


### Tell Me More

Lotus flowers like sunshine and cannot tolerate cold weather. Thus, lotus flowers do not blossom in the winter. The colours of a lotus flower are mostly pink or white.



- \*petioles*: the stalk that joins a leaf to a stem
- \*stomata*: the minute pores in the skin of the leaf or stem of a plant



**Tell Me More**

Lotuses, which are often grown in water gardens, have elegant flowers and leaves. Lotus flowers are very ornamental.



# Beautiful Lotus

The lotus is an *\*emergent plant* whose underground stems grow in waterlogged soil. Its flower and leaves stick out of the water. The lotus is so valuable that its whole plant can be used.



Lotus petals can be used as an ornament. Lotus leaves give off pleasant smells and can be used to wrap food and increase the smell of the food. When lotus fruit ripens, its shell turns dark brown. The fruit has a seed in it. Lotus seeds are edible and are often used to cook sweet soup or as a filling for mooncakes.



A lotus root is divided into a few nodes. It grows *\*horizontally* in soil and is a reproductive organ that stores nutrients. Lotus roots are rich in starch, vitamin C and minerals such as copper and iron. They have high nutritional value and can be eaten raw or cooked.



**\*emergent plant:** plants that are rooted in a lake bottom, but their leaves and stems extend out of the water

**\*horizontally:** parallel to (in line with) the horizon (where the earth's surface and the sky appear to meet)