THE HINDU IN SCHOOL

INDIA'S NATIONAL NEWSPAPER SINCE 1878

30-MINUTE ACTIVITY FOR CHILDREN - 13

CONTACT US school@thehindu.co.in

KNOW YOUR SCIENTIST

Science in her DNA

Rosalind Franklin (1920 – 1958) is an English chemist, best known for her role in the discovery of the structure of DNA, a constituent of chromosomes that serves to encode genetic information. Her work on the X-ray diffraction images of DNA, particularly Photo 51, led to the discovery of the double helix shape of DNA. Since Nobel Committee does not recognise work posthumously, the Nobel Prize in Physiology or Medicine in 1962 went to Francis Crick, James Watson, and Maurice Wilkins, who based their work on her data.

Rosalind was a topper and an all-rounder in school. Her interests were in maths, sports and languages. Born to a prominent British Jewish family in 1920, Franklin studied the Natural Sciences Tripos at Newnham College, Cambridge, from which she graduated in 1941. She joined the University of Cambridge physical chemistry laboratory as a research fellow. Since this was during World War II, she worked on the porousity of coal for fuel purposes and other wartime devices

After finishing her work on DNA, Franklin led pioneering work at Birkbeck, University of London, on the molecular structures of the Tobacco Mosaic virus (TMV), an RNA virus that infects tobacco plants. Her work provided new insights into the structure of viruses.

RORI!/ WIKIMEDIA COMMONS

Read the bio? Now answer the questions.

1. Which virus did Rosalind Franklin study, soon after completing work on DNA?
2. The Nobel Prize in Physiology or Medicine 1962 was awarded jointly to Francis Crick, James Watson, and Maurice Wilkins for the discovery of _____ _____

Answers: 1. Tobacco Mosaic virus 2. The double helix structure of the DNA molecule

Word of the day

Neocolonialism

Neocolonialism is the control of less-developed countries by developed countries through indirect means. Developed countries maintain a stronghold on developing and under-developed countries through economic, socio-political, cultural or even linguistic means.

The term 'neocolonialism' was introduced after World War II, to refer to the post-colonial global powers.

Neocolonialism is seen as the practice of using capitalism, globalisation and migration to control the lesser-developed countries. According to this concept, these countries are seen as reservoirs of cheap labour and raw materials.

ACTIVITY

Use the word of the day in a sentence.

_____

_____

Magic square

Fill in the missing numbers such that the numbers in each row, column and diagonal add up to 30.

12		16
4		8

Answer:

8	18	4
6	10	14
16	2	12

(Content provided by Amrita Bharati)

Fun facts

*** Rafflesia, the largest flower in the world, has no leaves or stem**

Rafflesia, native to Indonesia's rainforests, is a parasite plant which produces the largest single flower that stinks. With no leaves, stem or roots, it lacks chlorophyll to aid photosynthesis. It attaches itself to a vine called Tetrastigma from which it absorbs water and nutrients.

Q: Can you name another smelly flower?

A: Titan arum also known as corpse flower. Endemic to Sumatra, it blooms every 4-6 years.

*** Orchids don't need soil to grow**

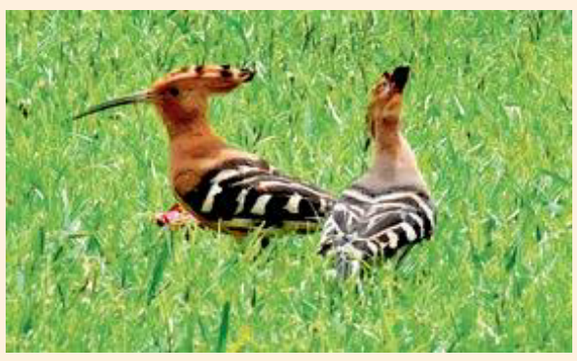
Native to the tropics, most orchid species are epiphytes which means they grow on the surface of other plants. But they are not parasitic - they do not harm the host. They have fleshy roots covered by a spongy tissue that absorbs moisture and other nutrients from the air and organic debris.

Q: Find out three additional facts about orchids.

1. _____
2. _____
3. _____

Unscramble...

...to discover bird species



M. Sathyamoorthy

1. PEOOOH _____
2. REEGT _____
3. GINPAWL _____
4. TREDRA _____
5. LOPVRE _____

Answers: 1. Hoopoe, 2. Egret, 3. Lapwing, 4. Darter, 5. Plover.

War of words

Strike up a debate on the given topic

Videos, e-books and online classes have made it possible for students to learn from the comfort of their homes amid the COVID-19 lockdown. But are virtual classrooms effective? Can they replace school? Put on your thinking caps and get ready to argue for both sides.

Virtual Classroom vs Real Classroom

_____ _____

_____ _____

_____ _____

Easy search

Revisit your school chemistry lab and spot five commonly used apparatus. Write your answer in the space provided

_____

_____

_____

_____

_____

G	W	A	Q	B	L	B	T	S	S
B	G	A	R	A	K	O	Q	C	T
E	P	O	T	W	B	K	P	R	E
A	I	K	E	C	E	T	R	U	S
K	P	K	W	W	L	U	G	C	T
E	E	T	K	J	L	P	W	I	T
R	T	H	R	J	J	X	U	B	U
L	T	Y	P	J	A	T	P	L	B
Y	E	U	U	K	R	V	R	E	E
S	B	F	J	Q	J	C	X	A	A

Answer: 1. Beaker 2. Test tube 3. Bell jar 4. Crucible 5. Pipette

Journal Writing

Ah finally, I am given a chance to change our canteen menu....

_____

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You may even type a note and mail it to us at **school@thehindu.co.in.** We will select a few for publication when we resume printing In School broadsheet.

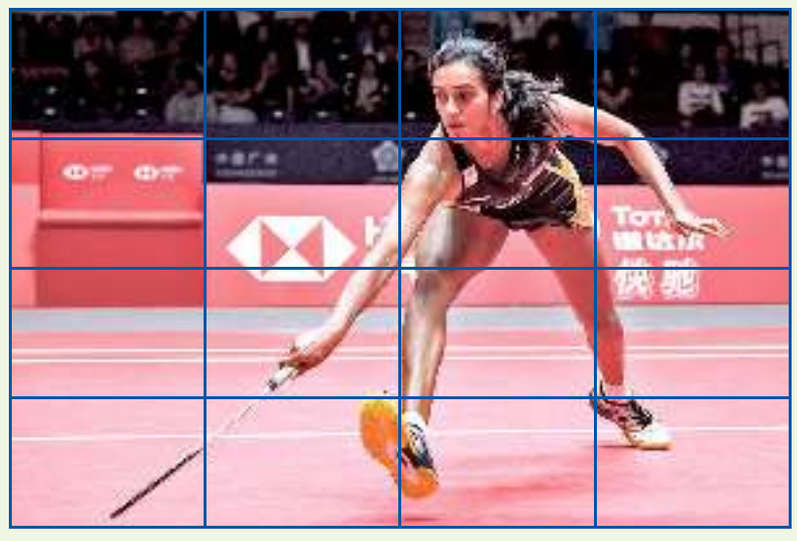
The W Corner

WHERE is the shuttlecock that P V Sindhu played during her game against Chen Yufei of China at the BWF World Tour Finals in 2019?

The grid lines are only to help you and parts of the shuttlecock might be in more than one box too! Find that one box where the shuttlecock is or find them all if you think it is in more than one box...

Answer: _____

According to the grid lines, the shuttlecock can be found in A3



	A	B	C	D
1				
2				
3				
4				

PHOTOS: AFP

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