THE HINDU IN SCHOOL
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30-MINUTE ACTIVITY FOR CHILDREN - 48
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Know the scientist

Alexander Fleming (1881 - 1955) was a Scottish doctor and microbiologist, who discovered the first effective antibiotic penicillin, for which he, along with Howard Florey and Ernst Chain, won the Nobel Prize in 1945.

Fleming was born in Ayrshire, Scotland, in 1881. In 1895, he moved to London to complete his basic education. Fleming pursued medicine at St. Mary's Hospital Medical School and took up a temporary position in the Inoculation Department, where he worked under bacteriologist and immunologist Sir Almroth Edward Wright and became interested in the new field of bacteriology.

During World War I, Fleming served in the Royal Army Medical Corps. He conducted research on wound infections and antiseptic treatment of soldiers in a makeshift lab set up in Boulogne, France.

In 1921, Fleming discovered lysozyme, an enzyme present in body fluids such as saliva and tears that has a mild antiseptic effect. This was a significant contribution to the understanding of how the body fights infection.

Fleming's discovery of penicillin came about in 1928, when he was investigating staphylococcus, a common type of bacteria that causes infections in people. Fleming left behind a petri dish containing a staphylococcus culture before going on a two-week vacation. When he returned, he found that a green mould called Penicillium notatum had contaminated petri dishes in his lab and had prevented the growth of staphylococci. Though Fleming was not able to produce the antibiotic in large quantity, he published his research.

In 1938, Oxford Pathologist Howard Florey discovered Fleming's research and expanded on it, working with a biochemist named Ernst Boris Chain. Later, British biochemist Norman Heatley developed the work, vigorously growing and purifying penicillin.

Fleming was knighted for his scientific achievements in 1944.

Credit: Wellcome Library, London

Now that you have read about Alexander Fleming, try answering the following questions.

1. What enzyme did Fleming discover in 1921?

.....

2. Name the antibiotic discovered by Alexander Fleming.

.....

Answers: 1. lysozyme, 2. Penicillin

War of words

Strike up a debate on the given topic

Parents, teachers often mete out punishments to children to prevent them from repeating mistakes, but are they really effective? Put on your thinking cap and get ready to argue both sides:

Does punishment help in correcting our behaviour?

Yes	No
_____	_____
_____	_____
_____	_____

Fun facts

1 Insect with the longest lifespan

It is the African mound-building termite queen that lives longer than any other insect we know of. These termites are known for building spectacular mounds that can reach five metres or higher. Some termite queens can live for over 60 years. What does the termite queen do? She constantly lays eggs, between 20,000 and 30,000 every day.

Q. Can you guess the size of the termite queen?

_____

2. Chewing gum?

Chewing sugarless gum for 20 minutes after a meal can help protect teeth. It not only removes food particles stuck between teeth but also increases saliva flow. Besides, the saliva produced by chewing gum relieves acid reflux which is responsible for heartburn, and soothes the oesophagus. Chewing gum is said to increase blood flow to the brain, thereby improving memory. It can also help fight sleepiness.

Q. Chewing gum is designed to be chewed, and not

_____.

Answer
1. It can grow up to 10 cm in length.
2. swallowed

What's the good word?

Many words have more than one meaning. In the sentences below, write down one word that fits both the descriptions

1. To fish; the place where two lines meet. _____

2. The land boundary of a river; a place to deposit money. _____

3. The only one; the base of footwear. _____

4. The call of a duck; a fake doctor. _____

5. The remaining bit of something; to take a break to relax. _____

Nissar Ahmad

Answers: 1. Angle 2. Bank 3. Sole 4. Quack 5. Rest.

Bits & Bytes

Given below are a few terms with something in common. Guess what it is.

Sumo Paint

PicMaster

GIMP

CorelDraw

Polarr

Answer: They are photo editing software

Mirror, mirror

Choose the mirror image of the number given here – 232454

A. 232454

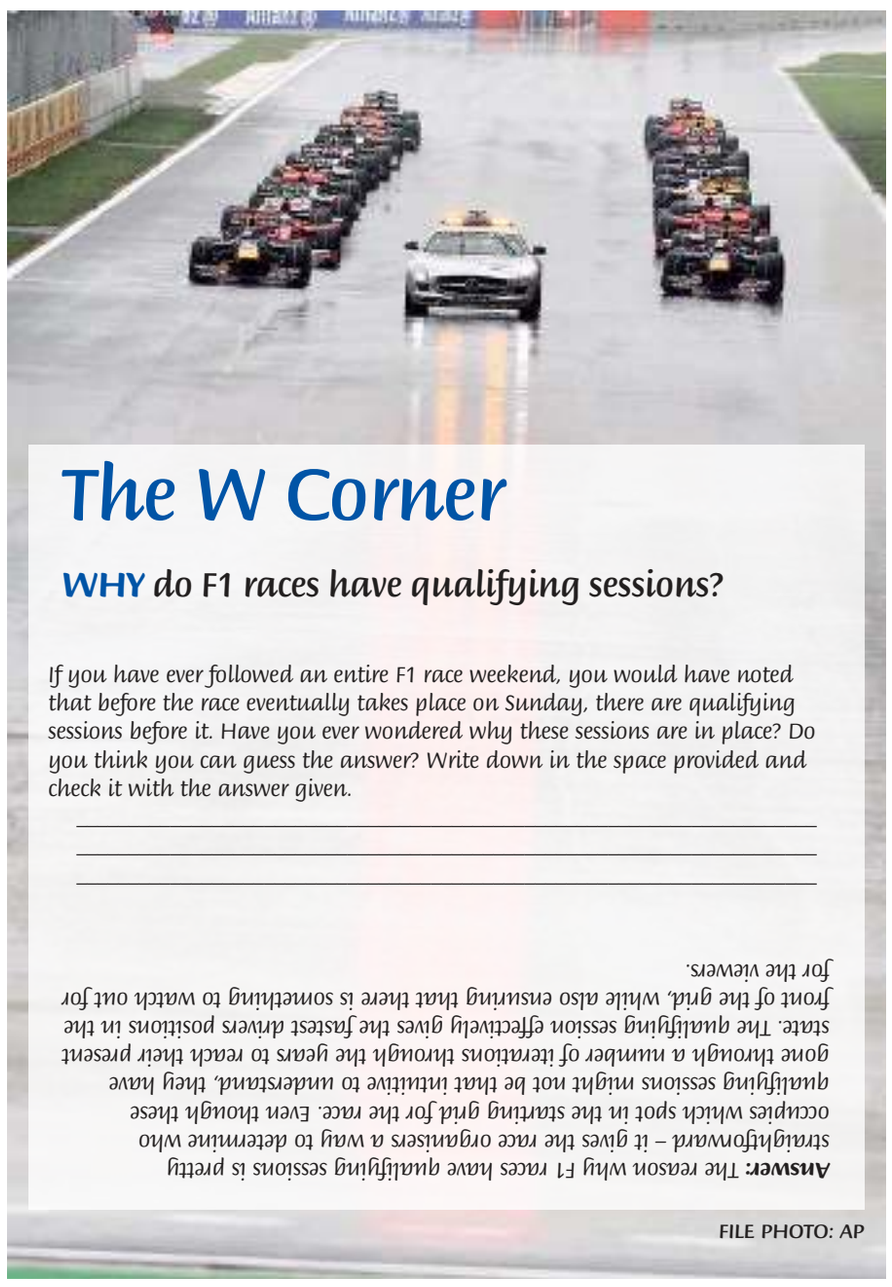
B. 232423

C. 232454

D. 232454

answer: A

(Content provided by Amrita Bharati)



The W Corner

WHY do F1 races have qualifying sessions?

If you have ever followed an entire F1 race weekend, you would have noted that before the race eventually takes place on Sunday, there are qualifying sessions before it. Have you ever wondered why these sessions are in place? Do you think you can guess the answer? Write down in the space provided and check it with the answer given.

_____

_____

_____

Answer: The reason why F1 races have qualifying sessions is pretty straightforward – it gives the race organisers a way to determine who occupies which spot in the starting grid for the race. Even though these qualifying sessions might not be that intuitive to understand, they have gone through a number of iterations through the years to reach their present state. The qualifying session effectively gives the fastest drivers positions in the front of the grid, while also ensuring that there is something to watch out for for the viewers.

FILE PHOTO: AP

Word of the day

Insouciance

Meaning: Insouciance is a feeling of careless indifference. It is lack of concern shown by someone towards something they might be expected to take seriously. The term conveys a certain degree of light-heartedness.

Origin: Originating from the French in the late 18th Century, the word is a combination of the negative prefix *in-* and *soucier*, meaning "to trouble or disturb." *Soucier* in turn came from the Latin *sollicitus* meaning "anxious". The word "insouciance" is a noun and has been part of the English language since the 1800s.

Example sentence: *She entered the meeting room with complete insouciance to the fact that she was late.*

Activity: Use the word of the day in a sentence of your own.

_____

_____

_____

Journal Writing

Dear Diary

Today, I'm going to write about myself in 150 words...

Use your imagination and write a note in 150 words. Mail it to **school@thehindu.co.in** with the subject line: Journal Writing. The best pieces will be published on Page 3 in the Inbox column from Monday to Friday.