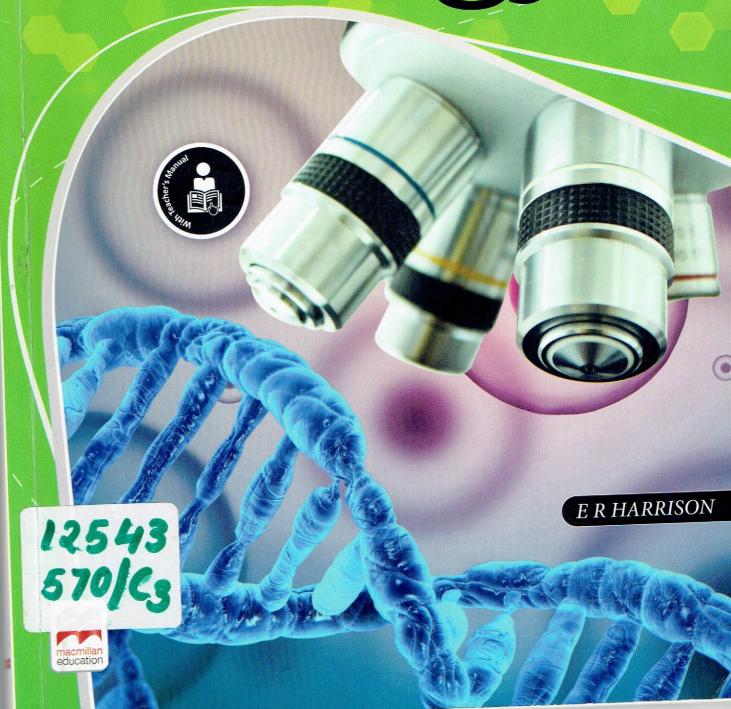




Class

Frank New Certificate
Biology





# Amazing Inventions

### CONTACT LENS TO TREAT GLAUCOMA

Researchers at the Harvard Medical School and the Massachusetts Institute of Technology have developed a contact lens which can slowly release medicine into the eye to treat a disease called glaucoma, which leads to irreversible blindness. At present, those suffering from

glaucoma have to use eye drops for lifetime in order to prevent further damage to the eye.



The contact lens can also be used as a tool for drug delivery to treat various other eye ailments.

#### **SILKEN TONES**

Dr Shigeyoshi Osaki, a Japanese scientist, has created violin strings out of spider silk. Numerous strands of dragline silk (the strong fibres that the spider spins to edge a web) are bundled and twisted together and then treated with a gelatin solution to create the strings.



The silk spun only by female golden orb-weaver spiders is used in the creation of the strings. Spider silk violin strings are

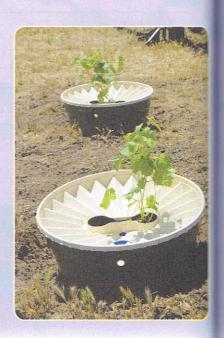
stronger than metallic strings and according to music lovers produce a unique tone.

## **DEVICE FOR PLANTING TREES IN DESERT**

The Groasis Waterboxx, created by Dutchman Pieter Hoff, is an ingenious device that helps plants to grow even in the driest of areas.

The Groasis Waterboxx is a 50-cm-wide plastic bucket with a lid. It is designed to collect water by harvesting rainwater and also produce and catch water from condensation. The bucket has a central vertical tube allowing space for one or two saplings to grow.

The award-winning product is being used to carry out large-scale tree plantation at several places around the world including the desert near Barmer in Rajasthan.



# **МАТЕЯ ВЕСУСЬІИ**В ЗНОМЕЯ

Here is an eco-friendly shower that recirculates the water used while bathing. The recirculated water is filtered three times and heat pasteurised in a very short time to be reused immediately.

Pasteurisation makes the water germ-free.

The shower gives 9 litres of water in one minute at the showerhead by actually using only 2.7 litres to do so, thus saving up to 70% water and energy.

The award-winning product was designed by British innovator Peter Brewin in 2005.



# ORAL YOGHURT VACCINE

In future, it might be possible to get yourself vaccinated against a disease simply by eating a bowl of curd! American researcher Mansour Mohamadzadeh has developed a new oral vaccine against anthrax using probiotics, the vaccine against anthrax using probiotics, the as curd and cheese.

Swallowing the vaccine works more effectively than injecting it into a muscle as the bacteria colonise the small intestine and start to produce the vaccine in the gut, the place where our immune system is designed to encounter and mount a defence against antigens.



# ЯАЭ-ОЭОНЭ

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Biofuel was never so yummy! Scientists at the University of Warwick, London, made a car which runs on chocolate, or rather, on the waste from chocolate factories.

This car, named the 'WorldFirst Formula 3 Racing Car', is believed to be the world's first fully sustainable biodegradable and bio-powered racing car.

The car, which is built to Formula 3 specifications has a body made up of plant fibres, a steering wheel made of vegetable fibres and a seat made of flax fibres and soybean foam.



# Frank New Certificate Biology

Frank New Certificate BIOLOGY 6, 7 and 8 are written in accordance with the latest syllabus prescribed by the Inter-State Board for Anglo-Indian Education and recommended by the Council for the Indian School Certificate Examinations (CISCE).

#### **Key Features**

- You will learn about given at the beginning of each chapter focuses on the key topics of the chapter and helps the teachers planthelesson
- Activities in the form of experiments to enliven the learning process
- Quiz! given at the end of important topics helps to reinforce the concepts learnt in the section
- Get it right! and Do you know? enhance the student's learning and provide some fascinating facts related to the topic
- Quick recap given after important topics helps to reinforce the concepts learnt
- Know your scientist provides information on the work and research done by great scientists
- Let us summarise given at the end of each chapter helps in easy recapitulation and reference
- Evaluation and Practice questions test the students' conceptual grasp of the topics learnt
- Challenge questions to hone problem-solving and analytical abilities of students
- Projects to help students develop the skills of observation, data collection, organisation and analysis
- My notes given at the end of each chapter to help students make connections with the concept learnt
- · Amazing inventions acquaint the students with scientific knowledge based on latest research



E R Harrison, a science teacher with over three decades of teaching experience, was formerly Principal of Ingraham Institute English School, Ghaziabad (UP) and examiner (Biology) for the Council for the Indian School Certificate Examinations (CISCE), Delhi.





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