Eureka! Daily discoveries for the scientifically bent

by Scott_LaFee

VERBATIM

"One is always a long way from solving a problem until one actually has the answer."

- Stephen Hawking, English theoretical physicist

PRIME NUMBERS

13: Maximum velocity, in miles per hour, at which a woodpecker's head (and brain) travel before striking a tree

100: Amount of heat energy, measured in watts, that a sedentary human gives off per second

PRIME NUMBERS - A woodpecker's head goes 13 mph before pecking a tree. CNS Photo.

WHAT IS IT? - This bizarre hexagonal shape was recently photographed at the north pole of Saturn by NASA's Cassini orbiter. CNS Photo.

TRUE FACTS - Canadian scientists observed tonguefish skipping across pools of molten sulfur near undersea volcanoes in the western Pacific Ocean. CNS Photo.

MOVE TO TIBET - If an asteroid were to hit the Earth, Tibet may be the only place you'd be relatively safe. CNS Photo.

5 billion-10 billion: Estimated number of water droplets that go into the air each time a toilet is flushed

Source: "The Sizesaurus" by Stephen Strauss (Kodansha, 1995)

JUST ASKING

Where does the white go when snow melts?

BRAIN SWEAT

You have one large pepperoni pizza and eight hungry people, each of whom demands a slice. How can you divide the pizza into eight equal slices using only three cuts? Each cut must be in a straight line.

ELECTRON INK

YouTube on science

www.youtube.com/view_play_list?p=218220F6C5BD650E

Science can be cool, too. Check out this collection of science-related videos at YouTube.

BRAIN SWEAT ANSWER

Cut the pizza in half. Then slice it in half again in the other direction. Now you have four quarters. Stack the four quarters on top of each other and cut the stack in half. Three cuts, eight slices.

LET'S MOVE TO TIBET

Inevitably, something big from outer space - a comet or asteroid - is going to smash into Earth. Looming closest is 99942 Apophis, a 1,350-foot-long asteroid that scientists project may hit Earth in 2036, though the current odds are just 1 in 45,000.

The consequences of a cosmic collision depend upon the size of the impacting object, but it's safe to say there's no upside. Researchers have estimated that a stony asteroid traveling at 12,000 miles per second with a diameter of 328 feet would likely cause significant loss of life and damage, but that the effects would be limited to the region where it struck. However, an asteroid twice as big, if it landed in the ocean, might generate global tsunamis. Now, using data derived from multiple impact simulations, scientists at the University of Southhamptom have developed a list projecting which countries are at greatest risk of suffering significant population loss and/or economic damage from an asteroid impact.

In terms of lost lives, China topped the list, followed by Indonesia, India, Japan and the United States. In terms of greatest economic damage incurred, the United States was first, followed by China, Sweden, Canada and Japan.

Overall, the researchers said the countries at most risk from an asteroid impact were China, Indonesia, India, Japan, the United States, the Philippines, the United Kingdom, Brazil and Nigeria.

"Our results highlight those countries that face the greatest risk from this most global of natural hazards and thus indicate which nations need to be involved in mitigating the threat," said Nick Bailey, one of the study authors.

'TRUE FACTS'

A 20-year English study found that obese men are less prone to suicide, but its authors also cautioned that overeating does not equate with happiness.

Astronomers say the Large and Small Magellanic clouds (two nearby galaxies) are moving twice as fast as previously believed and may eventually leave the area altogether.

Canadian scientists observed tonguefish skipping across pools of molten sulfur near undersea volcanoes in the western Pacific Ocean.

POETRY FOR SCIENTISTS

Digging for fossils, old Ned.

A geologist, sadly who's dead.

His shovel hit bone.

"You leave that alone!"

Said a dinosaur, biting Ned's head.

WHAT IS IT ANSWER

This bizarre hexagonal shape was recently photographed at the north pole of Saturn by NASA's Cassini orbiter. The outer, lighter ring represents high-altitude emissions of atmospheric molecules excited by charged particles smashing together along the planet's powerful magnetic field lines - in effect, an aurora. The interior light is caused by heat generated from deeper within Saturn's gaseous interior. The reason for thehexagonal shape is a mystery.

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