

Wierd Science Questions Answered

Are Redheads Different Than Other People?

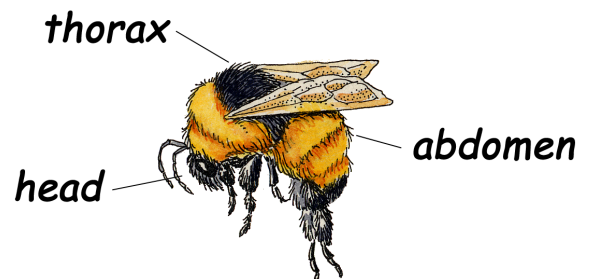
Two recent studies show that redheaded people are different from other people. One way they are different is in how easily they get skin cancer. Skin cancer can result when too much sunlight -- ultraviolet light -- starts changes in the DNA of the pigment melanin. (Melanin is the pigment that darkens our skin when we tan.) Chemistry Professors at Duke University discovered that melanin in redheads is much more easily damaged by sunlight than the melanin in dark-haired people. That damage causes a chemical reaction in the pigment that releases free radicals that can damage the DNA and cause cancer. The other difference, discovered by a geneticist at McGill University, is that redheads can stand more pain than other people. (Don't test this theory at home!) (Mansell Williams, Megan. "Secrets of Redheads" Discover November 2005: P. 13)



Why Do Bees Have 3 Parts?

Bees like all insects have three body parts. The head, thorax and abdomen. The head has sensory organs, like the eyes and antennae and the mouth for collecting food. The thorax is where the legs and wings attach. In most insects 6 legs and 2 pairs of wings are attached to the thorax. The abdomen contains internal organs like the digestive tract and reproductive organs. These 3 body parts are common to all insects and are in fact how we categorize them as insects!

The Bumble Bee - an Insect!
*3 body parts (head, thorax and abdomen),
a pair of antennae, a pair of wings, 6 legs*



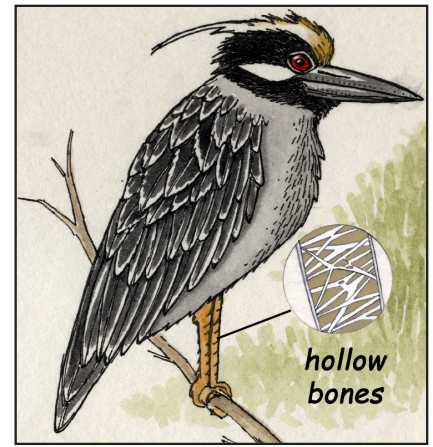
Can Taking a Break From Learning Make You Smarter?

Neuroscientists at MIT studying the brains of rats discovered something interesting. After learning a task the rats took a break and their brains played back repeatedly what they had just learned. In addition they played it back 10 times faster than the actually task took them to learn it. This gives the rest of the brain more of an opportunity to take in all the new information and store it for long term memory. These results support earlier studies, which showed that people and animals learn best when given breaks between tasks. (Kleeman, Elise. "Relax and Think Like Rats." Discover May 2006: P. 20)



How Many Bones are There in a Bird's Body?

Birds have many fewer bones in their skeletons than humans (who have 206). This is because birds are adapted for flying and many of their bones are fused together. Many of their bones are also hollow to lighten their weight for flying. Flightless birds do have solid bones. Unlike humans, different bird species have different numbers of bones in their skeletons.



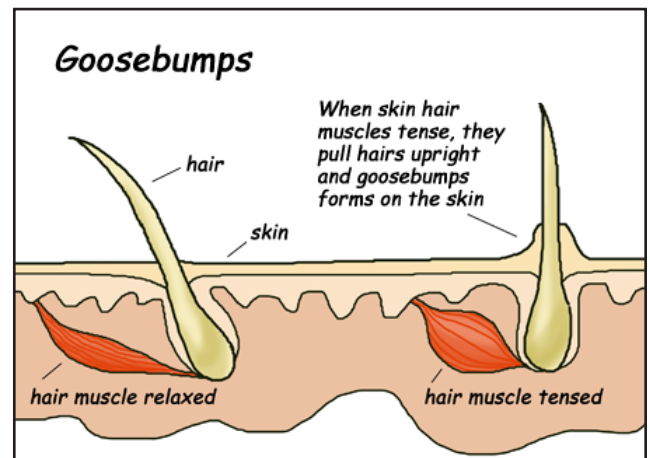
Is the Pangolin a Reptile or a Mammal?

Pangolins are covered with large scales that, when they roll up into a ball, protects them from predators. They have long curved claws for breaking apart termite nests and a long sticky tongue -- 1.5 feet long, for catching ants and termites that they feed on at night. Their long, wide prehensile tail can grip like a hand so they can climb trees. They have a small, pointed head with no teeth. Are they a reptile or a mammal? They are mammals, having one baby after a 4.5-month pregnancy and nursing it with milk. Though they have scales instead of hair, the substance the scales are made of is not unlike hair! They are found in Africa and Asia and are sometimes called a spiny anteater.



What are Goose Bumps?

Some of the smallest muscles in your body are attached to the tiny hairs embedded in your skin. The arrector pili muscle is attached to each hair follicle and when you feel cold or are frightened receptors in the skin cause the muscle to contract pulling the hair upright and forming goose bumps!



What Gives the Venus Flytrap its Snap?

An insect sees the red inside of a Venus flytrap's clamshell shaped leaf and it cannot resist getting a closer look. It could look like a red flower to a bee or an animal's wound to a fly, but all the flytrap has to do is get them inside for a moment. Once inside they trigger something that makes the clamshell leaf snap shut, trapping them. How does the trigger work? Harvard University professor, Mahadevan, believes it is all about water tension. An open flytrap leaf is actually held open by water pressure. When the insect touches tiny hairs on the inside of the leaf, it sends a tiny electrical impulse, which shifts a tiny amount of water, releasing the tension in the leaf so it can snap back in shape (closed). (Selim, Jocelyn. "Snap, Crackle, and Pop!" Discover May 2005: p.12)



What's up With the Exploding Toads?

What's up With the Exploding Toads? In the spring of 2005, toads in Germany and Denmark started to explode. For days it baffled scientists as more than 1,000 toad bodies appeared dead and popped. It was alarming to local residents, as the exploding seemed to be happening at night, each with a loud pop. There were no chemicals or viruses found in the waters and it only seemed to affect toads, not frogs or fish. A veterinarian from Berlin discovered that all the dead toads seemed to have similar cuts across their middles. Then scientists discovered the culprit -- crows. Some crows discovered that they liked the taste of toad livers. Crows learned the hunting technique from other crows and soon the toads were under siege. The toads, trying to frighten off the aggressive predators puffed themselves up. The result was a body popping death epidemic. (Popp, Trey. "Pop Went The Toads." Discover January 2006: P. 25)



Why Do Sea Turtles Cry?

When Sea turtles cry, it is not because they are sad. They have a gland that empties into their eyes that helps them get rid of too much salt that they collect living in the salty ocean. You can only see their tears when they are out of the water on land, of course, and the tears also help keep sand out of the turtle's eyes.

