Directions

1. Go to U2L7 Slide 7 in Code.org
2. Open a new HTML Document and name it Practice1
3. Copy and paste the following text into the code work space
4. Begin coding the text

What Causes Goose Bumps?

February 28, 2014 by *KIDS DISCOVER*

Goose bumps can temporarily rise on parts of your body when you feel a blast of cold air or hear a scary noise coming from outside the window. But what exactly makes your skin get all bumpy?

A physical or emotional feeling (like cold or fear) triggers an automatic surge of a hormone called adrenaline, which is often released when people feel chilly, afraid, or stressed-out in some way. This subconscious response in your nervous system causes tiny muscles in your hair follicles to contract. These hair-erector muscles, technically known as Arrectores pullorum, raise the follicles above the rest of your skin, and voila! You've got bumps.

Directions

1. Go to U2L7 Slide 7 in Code.org
2. Open a new HTML Document and name it Practice2
3. Copy and paste the following text into the code work space
4. Begin coding the text

What's in Blood? A Look at Types of Blood Cells

<!—insert a picture of red blood cells and cite the origin-->

Why is blood red? Because it's mostly made up of red blood cells. These cells get their color from hemoglobin, a bright red protein that contains iron and is very good at collecting and transporting oxygen. When blood is exposed to air, like when you get a cut or scrape, the hemoglobin absorbs lots of oxygen, making it turn a deep red.

<!—insert a different picture of red blood cells and cite the origin-->

Red blood cells are one of three types of blood cells that all float inside a liquid called plasma, which is mostly water. They look like disks with little indentations in the middle, sort of like Smarties candies or hole-less bagels. But they're very flexible and can change shape when they need to — which helps them slip into tight places such as tiny capillaries, where oxygen levels are low and carbon dioxide levels are high.

The hemoglobin in red blood cells picks up oxygen when your blood travels through your lungs, and it releases the oxygen to cells as blood circulates through your body. Hemoglobin then absorbs the carbon dioxide from your capillaries and carries it away.

Directions

1. Go to U2L7 Slide 7 in Code.org
2. Open a new HTML Document and name it Practice3
3. Copy and paste the following text into the code work space
4. Begin coding the text

About Horsetail Falls, One of Yosemite's Ephemeral Waterfalls

June 25, 2014 by *KIDS DISCOVER*

- An ephemeral or temporary waterfall only flows at certain times, and usually not for long. ("Ephemeral" means "lasting a very short time.") This type of waterfall may last for a few hours after a heavy rainstorm or a few weeks due to seasonal runoff.
- One cool example is Horsetail Fall in Yosemite National Park. (The park is home to many ephemeral waterfalls, but only Horsetail Fall and its cousin Staircase Falls have been officially named.) It appears in winter and early spring, fed by snowmelt off the El Capitan mountain. Tumbling down in two side-by-side streams, it drops nearly 1,600 feet — just under three times the height of the Washington Monument — onto steeply angled rocks, kicking up a mist before falling another 500 feet to the ground.
- Horsetail Fall becomes even more spectacular on clear days in mid- to late February, when the setting sun hits it just right and briefly turns it into a glowing orange "fire fall." Photographers flock to Yosemite to snap images of this effect, famously first captured in color pictures shot by Galen Rowell in 1973.

Directions

1. Go to U2L7 Slide 7 in Code.org
2. Open a new HTML Document and name it Practice4
3. Copy and paste the following text into the code work space
4. Begin coding the text

Got Blue Eyes? Blame Your Mutant Ancestor

All blue eyes on Earth were caused by one genetic mutation less than 10,000 years ago, according to Danish scientists. That single change in the gene code created a “switch” that diminishes pigment production in some brown eyes, turning them blue.

<--insert a pictures of a blue eyed baby and cite where you found the picture-->

How this works: The OCA2 gene code affects the P protein, which determines production of melanin — the pigment in our hair, skin, and eyes. The so-called switch we’re talking about — the one that affects the OCA2 gene code (and P protein, and melanin production) — is located not on the OCA2 gene code but right next to it on another gene code. So, this switch doesn’t bring melanin production to a total halt — that would produce albinism, or pink skin and all-white hair — but it does reduce melanin production in the iris, the part of the eye that surrounds the pupil.

<--insert a pictures of a blue eyed teen and cite where you found the picture-->

Brown, hazel, and green eye colors are all caused by wide variations in melanin. But the color differences between blue-eyed people are so tiny that scientists are sure all blue eyes derive from one common ancestor … one common mutant ancestor.

<--insert a pictures of a blue eyed adult and cite where you found the picture-->