

Body Paint

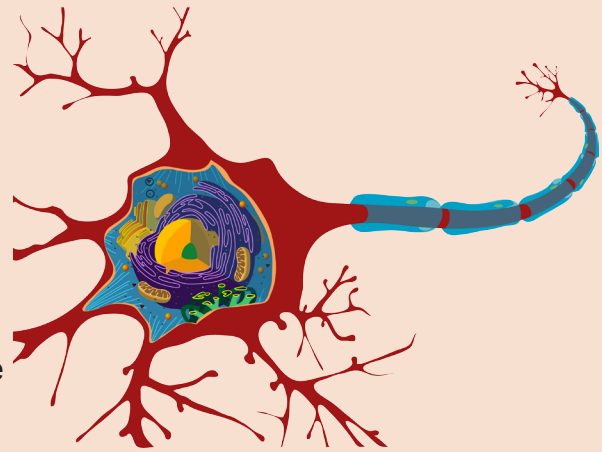


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**Do you need an idea for a scientific study?
Try out one of our ideas or make one of your own.**

Start learning right now about the wonders of the amazing human body. Take the following brief quiz to see how much you already know about human anatomy. See the bottom of page 4 to check your answers.

1. If all of the blood vessels in an average person's body were laid out end-to-end, what would be the approximate total length of the blood vessels?
 - a. 152 centimeters (about 60 inches)
 - b. 305 meters (about 1,000 feet)
 - c. 1,609 kilometers (about 1,000 miles)
 - d. 96,560 kilometers (about 60,000 miles)
2. There are more atoms in an average person's body than there are total stars in the entire Milky Way Galaxy.
 - a. true
 - b. false
3. About how fast does an average nerve impulse travel through the nervous system of a person's body?
 - a. 4.0 kilometers/hour (about 2.5 miles/hour)
 - b. 40 kilometers/hour (about 25 miles/hour)
 - c. 402 kilometers/hour (about 250 miles/hour)
 - d. 4,023 kilometers/hour (about 2,500 miles/hour)
4. About how much skin does the average person shed during her/his lifetime?
 - a. 0.45 kilograms (about 1 pound)
 - b. 18 kilograms (about 40 pounds)
 - c. 181 kilograms (about 400 pounds)
 - d. 453 kilograms (about 1,000 pounds)
5. The average adult human brain accounts for about 2% of the total mass of the body. About what percentage of the entire body's oxygen and calorie intake is used by the brain?
 - a. 2%
 - b. 5%
 - c. 10%
 - d. 20%



Reverse Dissection

The Latin root “sect” means “to cut.” The Latin prefix “dis” means “into pieces,” so the term “dissect” means “to cut to pieces.” Scientists and practitioners of medicine have long used dissection as a tool for studying the structure and function of organisms. While most dissections call for students to cut and remove the pieces from a specimen, in this activity, you will conduct a reverse dissection in which you glue the parts of the skeletal system of the human cranium back into their correct position in the head.

Directions

Make a copy of this page. On your copy, color each cranium part a different color and label each part with its name. Cut out each cranium part on the page and glue them into the cranium on your copy in their correct position. See the bottom of page 4 to check your answer.



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To Dissect or Not to Dissect?

A common activity in many science classes is the dissection of organisms. In fact, millions of students experience dissection during their science studies each year. While some people state the virtues of conducting dissections, others call for these practices to be halted based on their cruelty to animals and a host of other issues. Although not inclusive, the following charts list some pros and cons of using dissections in the science classroom. Based on your previous dissection experiences and after reviewing the chart below, write a one-page position paper on what you think about the use of animal dissection in the science classroom.

Dissection Pros	Dissection Cons
Provides greater multisensory experience	Some students turned off by the experience
Provides greater tactile experience	May lead to callousness towards animals
Provides more memorable experiences	High cost of specimens
Provides more real-world experiences	Effective alternatives exist
Regular inspection of specimen supply companies reduces the likelihood of the poor treatment of organisms	Some specimens raised in unfavorable conditions
Provides a platform for real-world, ethical issues arguments	Some states have made dissection optional for students
Shows the complexity of life	Specimen disposal problems

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Answers: Page 2 Answers: 1) d, 2) a, 3) c, 4) b, 5) d. Page 3 Answers: Reverse Dissection: See image below and A = occipital, B = parietal, C = frontal, D = temporal, E = sphenoid, F = zygomatic arch, G = mandible, and H = maxilla.

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