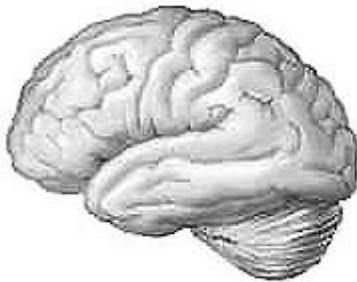


Brain Facts Daily Planner (2001)



FROM: Neuroscience for Kids

<http://faculty.washington.edu/chudler/neurok.html>

Instructions:

1. Print all of the pages on "regular" letter-sized (8.5" x 11") paper.
2. Cut all of the pages in half, right down the middle.
3. Put the title page at the front.
4. Put the other pages in order by month, January through December.
5. Place the "Notes" page at the end.
6. Staple all the pages on the left side.
7. Throw away this instruction page.

January 2001

February 2001



BRAIN FACTS

The cortex gets its name from the Latin word for "bark" (of a tree).

There are approximately 100 billion neurons in the human brain.¹

The average human brain weighs about 3 pounds (1.4 kilograms).

Unlike humans, the octopus does not have a blind spot.

The average length of the adult spinal cord is 45 cm for men and 43 cm for women.

The skin of an adult human covers about 18-20 square feet (~2 square meters) and weighs about 6 lb (2.7 kg).

The sponge is the only multicellular animal without a nervous system.

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January 2001

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BRAIN FACTS

The word "hypnosis" comes from the Greek word meaning "sleep."

A butterfly can taste with its feet.

The pufferfish, eaten as a delicacy in Japan, contains a potent neurotoxin called "tetrodotoxin."

Stroke ("brain attack") is the 3rd leading cause of death in the United States.

The Greek philosopher Aristotle believed that the heart was the seat of mental processes, not the brain.

In 1891, Wilhelm von Waldeyer coined the term "neuron."

The heaviest human brain ever recorded weighed 5 lb., 1.1 oz or about 2.3 kg.²

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March 2001



BRAIN FACTS

400 to 500 ml of cerebrospinal fluid is produced each day.

The smallest bone in the human body is the "stapes." This bone, found in the ear, is only 0.25 to 0.33 cm long (0.10 to 0.13 inches) and weighs only 1.9 to 4.3 milligrams.

Neurological illnesses affect over 50 million American each year.³

Each of your eyeballs is moved by six muscles.

If people sleep 8 hours each day, they sleep the equivalent of 122 days per year.

An average yawn lasts about 6 seconds.

March 2001

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April 2001



BRAIN FACTS

Most people dream about 5 times during each 8-hour period of sleep.

Based on this number, people have about 1,825 dreams every year.

The distance separating two neurons at a synapse is 20-40 nanometers. (1 nanometer is equal to one-billionth of a meter.)

People blink about 12 times per minute. If you are awake for 16 hours in one day, that is about 11,520 blinks per day!

Bicycle helmets reduce the risk for head injury by as much as 85% and reduce the risk for brain injury by as much as 88%.⁴

Percentage of total cerebral cortex volume (human): frontal lobe = 41%; temporal lobe = 22%; parietal lobe = 19%; occipital lobe = 18%.⁵

April 2001

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May 2001

BRAIN FACTS



People can distinguish between 3,000 and 10,000 different smells.

Bees and butterflies can see ultraviolet light.

Each year in the United States, about 200,000 people require hospitalization for head injury and 52,000 people die due to head injuries. Another 1.74 million people have mild traumatic brain injury that requires them to visit a doctor or disables them for at least one day.⁶

Epilepsy affects about 2.5 million people in the US.⁷

There are about 300 million neurons in the octopus brain.

Many spiders have eight eyes.

May 2001

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June 2001

BRAIN FACTS



Caffeine is on the International Olympic Committee list of

prohibited substances. Athletes who test positive for more than 12 micrograms of caffeine per milliliter of urine may be banned from the Olympic Games. This level of caffeine may be reached by drinking 4 or 5 cups of coffee.

The human cerebellum weighs about 150 grams.

The human eye weighs about 7.5 g.⁸

The brain of the great physicist Albert Einstein weighed 1,230 grams.⁹

The brain of a goldfish makes up 0.3% of its total body weight. An adult human brain is about 2% of total body weight.¹⁰

June 2001

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July 2001

BRAIN FACTS



Sounds as loud as 130 dB can cause pain. Listening to sounds louder than 90 dB for an extended period of time can cause hearing damage. The loudness of normal speech is between 50 and 60 dB.

The brain of the fly contains 337,856 neurons.¹¹

In the United States, one third of all adults complain about sleep problems.¹²

Each eye of a dragonfly has about 30,000 lenses.

The channel catfish has 100,000 taste buds on the outside of its body.¹³

The word "glia" comes from the Greek word meaning "glue."

July 2001

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August 2001

BRAIN FACTS



The corpus callosum, the fiber tract that connects the right and left hemispheres of the brain, contains more than 300 million axons.¹³

The venom of the black widow spider is called "latrotoxin." This toxin results in the massive release of the neurotransmitter "acetylcholine" from neuromuscular junctions of its victims and may cause muscle spasms, pain, increased blood pressure, nausea and vomiting.

The X-ray was invented by Wilhelm Konrad Roentgen in 1895.

About 4 million people in the US have Alzheimer's disease. The annual cost of caring for these people is estimated to be \$90 billion.³

August 2001

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September 2001

BRAIN FACTS



The eardrum (tympanic membrane) is only 0.1 millimeter thick and

weighs only 14 milligrams.¹⁴

The "four-eyed" fish ("Anableps") has TWO pupils in each of its eyes. Therefore it can see above and below the water simultaneously.¹⁵

The human cerebral cortex has an area of about 2.5 square feet, has 25 billion neurons, is interconnected by over 100,000 kilometers of axons and receives 300 trillion synapses.¹³

Approximately 50% of the population of the United States is nearsighted.¹⁶

The human hypothalamus weighs about 4 grams.

September 2001

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October 2001

BRAIN FACTS



A giraffe sleeps only two hours each day.

The adult human spinal cord weighs about 35 grams (0.1 lb).

There are about 1,200,000 nerve fibers in each human optic nerve.

The human eyeball is about 24.5 mm (~ 1 in) long.

The brain of a cat weighs about 30 grams.

Odin, a central character in Norse mythology, used two ravens named "Thought" and "Memory" to bring him news from around the world.

Head injuries account for 62% of bicycle-related deaths.¹⁷

October 2001

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November 2001

BRAIN FACTS



As many as one in five Americans will be affected by a mental illness sometime in their lives.¹⁸

There are about 3 million miles of axons in the human brain.¹⁸

Of the 31,000 suicides in the United States each year, 60-80% are associated with depression or manic-depression.¹⁸

The economic cost of stress and stress-related disorders in the United States is \$200 billion each year.¹⁸

The aplusia ("sea hare") has a nervous system with only 20,000 neurons.¹⁸

The National Institutes of Health was established in 1887.

November 2001

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December 2001

BRAIN FACTS



The gene responsible for Huntington's disease was discovered in 1993.

In 1904, US President Theodore Roosevelt threatened to outlaw football after 19 college football players were killed or paralyzed from brain or spinal cord injuries.¹⁹

Humans can hear sounds with frequencies between 20 and 20,000 Hz; cats can hear frequencies between 100 and 60,000 Hz; elephants can hear frequencies between 1 and 20,000 Hz.

Written about 1,700 B.C., the Edwin Smith surgical papyrus contains the first recorded use of the word "brain."

Charles Scott Sherrington coined the term "synapse" in 1897.

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