

## Brain Fun and Exploration for Kids

### The Technology

<http://www.pbs.org/wgbh/nova/body/mapping-the-brain.html>

PBS, provides an introduction to imaging technology that allows you to explore the brain. Shows MRI, PET and other brain scans with ability to look at specific areas of the brain or specific types of scans

<http://learn.genetics.utah.edu/content/addiction/drugs/brainimage.html>

Great visuals on PET scans and MRI

<http://www.nobelprize.org/educational/medicine/mri/about.html>

Nobelprize .org- information on MRI with an MRI video, and an interactive game- for older children

<http://opb.pbslearningmedia.org/resource/nvsn6.sci.bio.mapbrain/mapping-the-brain/>

*Mapping the Brain:* In this interactive activity from the NOVA scienceNOW website, learn about several brain mapping techniques and imaging technology.

### The Neuroscientists

<http://brainsciencepodcast.com/>

The Brain Science Podcast features the latest books about neuroscience as well as interviews with leading scientists from around the world. – with Free transcripts

<http://www.youramazingbrain.org.uk/insidebrain/daylife.htm#>

Your Amazing Brain- What do brain scientists do all day? What do their labs look like? Do they work alone or closely with others? What training do they have? What kind of people are they? And what do they do in their spare time?

<http://opb.pbslearningmedia.org/resource/7d63e8c6-2502-4ca4-a854-0bd9325aac94/7d63e8c6-2502-4ca4-a854-0bd9325aac94/>

Scientist profile of a neurobiologist.

<http://blog.ted.com/2012/09/24/12-talks-on-understanding-the-brain/>

Meet the researchers: A quick look at 12 TED talks on understanding the brain, click and play.

<http://www.youramazingbrain.org.uk/teachers/careers.htm>

Careers and the brain-So you want to be a brain scientist?

## The Brain

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

Dr. Eric Chudler, at the University of Washington, created the site *Neuroscience for Kids* featuring the latest neuroscience news, books, and articles.

Lots of good stuff here: Coloring books, brain games, board games, word search, crosswords, songs, many links to other sites.

<http://faculty.washington.edu/chudler/rhyme1.html>

Things that rhyme with brain:

An aid for walking? Brain Cane

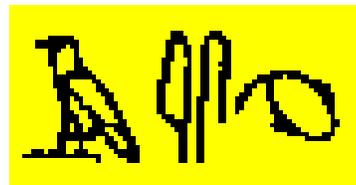
Overworked? Brain Strain

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

Decode hieroglyphics to make a single word out of these pictures! All of the words have to do with the nervous system!



= brain.



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

Brain songs like "I've Been Working On My Neurons" and "Home, Home in the Brain"

[http://kidshealth.org/kid/htbw/brain.html?tracking=K\\_RelatedArticle](http://kidshealth.org/kid/htbw/brain.html?tracking=K_RelatedArticle)

Kids Health- Flash interactive with top and side views of the brain and labeling of brain

Video on nervous system and brain, nerve cells, parts of brain and their jobs

[http://kidshealth.org/kid/closet/activities/brain\\_songs.html](http://kidshealth.org/kid/closet/activities/brain_songs.html)

Left brain Right brain song

<http://www.webmd.com/brain/picture-of-the-brain>

Picture of brain parts and lobes and their functions

<http://www.brainsrule.org/kids/games/>

Brainsrule.org- roll the cursor over brain parts, pop up windows give tutorials on neurons, and a fun little neuron game

[www.pbslearningmedia.org](http://www.pbslearningmedia.org)

PBS learning media.org has many videos complete with discussion questions.

<http://opb.pbslearningmedia.org/search/?q=brain>

This link shows all brain videos, many for 9th grade plus. Some of special interest for younger children are:

*The Brain*: This video examines the anatomy and function of different parts of the brain.

*A Matter of Size*: This video compares the size of a human brain with the brains of other animals.

*Acquiring Language*: A child development expert explains the "built-in" mechanisms very young children have that allow them to acquire and manipulate language.

*Hearing, Touch, Smell...*: A series about the senses.

<http://teach.genetics.utah.edu/content/addiction/jumpgap.html>

University of Utah, Genetic Science Learning Center

Downloadable lesson plans and overheads, students create a giant synapse and act out communication at the neural level by behaving as vesicles, neurotransmitters, receptors, secondary messengers and transporters.

<http://teach.genetics.utah.edu/content/addiction/pompom.html>

Students visualize how an action potential travels down a neuron.

<http://learn.genetics.utah.edu/content/addiction/>

*The New Science of Addiction: Genetics and the Brain* interactive module which includes: a great little video Make a Mad, Mad, Mad, Neuron: an instructional video of Neurons, Synapses, Neurotransmitters; plus, The Other Brain Cells- great info about glial cells

[http://www.brainline.org/multimedia/interactive\\_brain/the\\_human\\_brain.html?gclid=COe50ZHN2rACFUFo4AodYydl2Q](http://www.brainline.org/multimedia/interactive_brain/the_human_brain.html?gclid=COe50ZHN2rACFUFo4AodYydl2Q)

Brainline.org deals with traumatic brain injury

Different views of the brain, move the mouse over the brain and parts of brain light up with a good description of that brain part plus info on what happens if that area of the brain is damaged

<http://www.reachoutmichigan.org/funexperiments/agesubject/lessons/other/injury.html>

This activity designed for elementary school students will demonstrate basic methods to care for your brain. Make a helmet for an egg and perform a simple egg drop test

<http://www.wisc-online.com/Objects/ViewObject.aspx?ID=OTA502>

Wisconsin Technical College System- Select and view parts, lobes, and systems of the brain, both external and internal views, and read about what they do—and what the result of possible problems in the areas of the brain

<http://www.enchantedlearning.com/subjects/anatomy/brain/label/lateralbrain/label.shtml>

Enchanted Learning- an activity to Label the parts of the Brain Anatomy Diagram

<http://ebhb.morphonix.com/parents-teachers/brainstem/animals-have-brains/animals-have-brains-overview/>

Morphonix- Lesson plans for animals and their brains with some downloadable prints of the animals with brain size and brain location superimposed

<http://www.cyh.com/HealthTopics/HealthTopicDetailsKids.aspx?p=335&np=152&id=1528>

Women and Children's Health Network, Kid's Health- information about what a brain is, what a brain does, main areas of the brain, interesting facts about brains, and a quiz

<http://science.howstuffworks.com/life/inside-the-mind/human-brain/brain.htm>

How Stuff Works- a nice tutorial on brain and neurons, for older children

<http://www.bbc.co.uk/scotland/brainsmart/>

BBC-Brainsmart- Some brain games and a few short videos

<http://thebrain.mcgill.ca/index.php>

The Brain from Top to Bottom- has beginner, intermediate and advanced tutorials about the brain, parts, functions, senses, emotions, sleep, etc.

[www.savethisbrain.org](http://www.savethisbrain.org)

Save This Brain- provides a "build a brain" activity

<http://brainu.org/>

BrainU - Professional development resources, neuroscience lessons, and materials, printable images of the human brain, flash movie on the synapse, videos showing how to create bead neurons

[http://www.nbcnews.com/id/10401930/ns/technology\\_and\\_science/t/brain/](http://www.nbcnews.com/id/10401930/ns/technology_and_science/t/brain/)

The brain: An interactive road map to the mind- tutorial of parts and functions of brain

<http://www.brainfacts.org>

The Society for Neuroscience produces and reviews resources for primary and secondary educators interested in teaching about the brain.

<http://neuromorpho.org/neuroMorpho/index.jsp>

NeuroMorpho.Org is a centrally curated inventory of digitally reconstructed neurons associated with peer-reviewed publications. It contains contributions from over 100 laboratories worldwide and is continuously updated as new morphological reconstructions are collected, published, and shared. To date, NeuroMorpho.Org is the largest collection of publicly accessible 3D neuronal reconstructions and associated metadata. To interest and wonder-scroll through thousands of images of different types of neurons

[http://www.youtube.com/watch?v=7y\\_7pJBhdIc&feature=youtu.be](http://www.youtube.com/watch?v=7y_7pJBhdIc&feature=youtu.be)

BrainU Neurons video on you tube

<http://www.youtube.com/watch?v=k2OwDYF4MVo>

BrainU Action Potential video on you tube

<http://www.youtube.com/watch?v=RODo7wCB-eA>

Neuron song to tune of Call Me Maybe

<http://www.youtube.com/watch?v=XTvJ4PnTScs>

I'm a little neuron song to the tune of I'm a little teapot

<http://www.youtube.com/watch?v=fh5hjbQWQ78>

Brain parts song to the tune of Camptown Ladies

<http://www.brainfacts.org/sensing-thinking-behaving/senses-and-perception/articles/2012/day-in-the-life-of-a-brain/>

Day in the Life of a Brain, a professor at Oxford University, explains a day in the life of the brain, and discusses the areas involved in waking up, speaking, walking, and making coffee. This video took first place in the 2011 Brain Awareness Video Contest

<http://www.brainfacts.org/brain-basics/neuroanatomy/articles/2011/brain-brain-the-magical-fruit/>

Brain, Brain, The Magical Fruit- Neuroscience terminology flows better in rap form- this video took second place in the 2011 Brain Awareness Video Contest

<http://clinicalcharts.com/products/anatomy-of-the-brain-anatomical-chart.html>

Source for the Brain Anatomical Chart

<http://harbaugh.uoregon.edu/Brain/index.htm>

The Museum of Scientifically Accurate Fabric Brain Art-putting the “A” in STEM=STEAM. This is the world’s largest collection of anatomically correct fabric brain art. Inspired by research from neuroscience, dissection and neuroeconomics, our current exhibition features a rug based on fMRI imaging, a knitted brain from dissection, and three quilts with functional images from PET

[http://prezi.com/d\\_0wmtm6uvaz/preschool-stem-presentation/](http://prezi.com/d_0wmtm6uvaz/preschool-stem-presentation/)

Presentation on why to have preschool STEM in libraries- lots of good links

<http://libraries.idaho.gov/STEM-Resources>

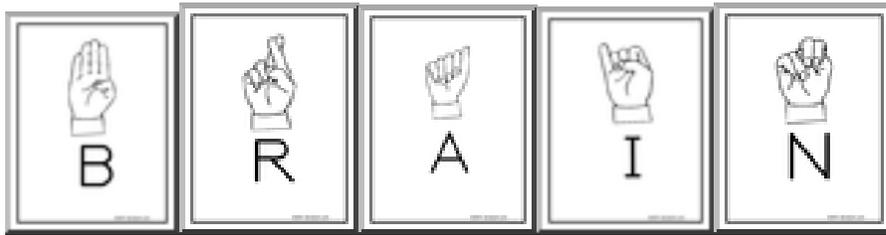
Idaho Commission for Libraries-Lots of general links to STEM websites for preschoolers- Not brain specific

***“You have brains in your head.  
You have feet in your shoes.  
You can steer yourself  
Any direction you choose.”***

Dr. Seuss (from *Oh, the places you’ll go!*,  
1990)

**If the human brain were so simple  
That we could understand it,  
We would be so simple  
That we could not.**

Emerson M. Pugh (as quoted by George E. Pugh,  
Emerson’s son in G.E. Pugh, *The Biological Origin of  
Human Values*, 1977, p. 154)



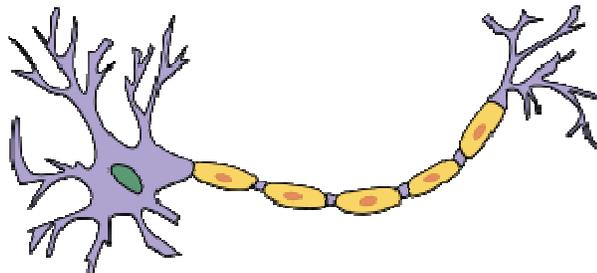
### **Home, Home in the Brain"**

(sung to the tune of "Home, Home on the Range"

lyrics by Matt Owens, Mary Jo Loffelmacher, Sharon Martin, and Lisa Owens - all Illinois teachers)

Oh, give me a brain  
with the dendrites free reign  
to connect and forever to play;  
Where music is heard  
to reinforce every word,  
and all sorts of knowledge to gain!

Home, home in the brain  
Where the dendrites have free reign  
to connect every thought  
just the way they were taught  
without any struggle or strain.



### **"I've Been Working On My Neurons"**

(sung to the tune of "I've Been Working On the Railroad"

lyrics by Linda Lubhart, Vicki Wielgopalan, Debora Parisot, Kathy Despain and Bev Richardson -  
teachers in Mendota, Illinois)

I've been working on my neurons,  
All the livelong day.  
I've been working on my neurons,  
Just to make my dendrites play.

Can't you hear the synapse snapping?  
Impulses bouncing to and fro,  
Can't you tell that I've been learning?  
See how much I know!