What Your Brain Can Do

Your child has just completed module 2 of the NIDA Junior Scientists Program. He or she put together a three-dimensional model of the brain, identified its four key parts, and learned about what each part does.

Our goal is to show children how amazing the brain really is. Most children this age know that the brain helps them think, but they don’t realize that the brain is also responsible for just about everything else, too—from regulating heartbeat and breathing to controlling emotions and artistic expression. By teaching them about “Brain Power!,” we hope that they will think twice about doing anything that might harm their brains.

The Brain is Truly Amazing
Here’s a quick summary of what your child learned about the brain:

<table>
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<th>Part of the Brain</th>
<th>Function</th>
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<tr>
<td>Left hemisphere, cerebral cortex</td>
<td>Responsible for analytical thinking such as solving problems and comparing information needed to make decisions. It also is the brain’s language center.</td>
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<tr>
<td>Right hemisphere, cerebral cortex</td>
<td>Responsible for artistic expression and understanding relationships in space.</td>
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<tr>
<td>Cerebellum</td>
<td>Controls posture, movement, and the sense of balance. Such activities as playing ball, picking up objects, and playing musical instruments fall under its control.</td>
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<tr>
<td>Brain stem</td>
<td>Controls heart rate, breathing, blood circulation, and digestion.</td>
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<td>Limbic system</td>
<td>Responsible for emotions and also involved in memory and memory storage. Drugs can change how the limbic system works.</td>
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Science at Home
Ask your child what he or she learned about the brain. See how many parts he or she can identify. Throughout the day, as you perform different activities together, ask your child which part of the brain is being used. Then ask your child to draw a picture of the brain and label it.

What Does Your Child Think?
Have your child draw or write something about the brain.

Additional Resources
The books and Web sites listed below have more information about the brain.

National Institute on Drug Abuse (NIDA)
www.drugabuse.gov, 301-443-1124
This Web site contains information about drug abuse and a section designed specifically for parents, teachers, and students.

NIDA Drug Pubs
drugpubs.drugabuse.gov, 1-877-NIDA-NIH (1-877-643-2644)
Drug Pubs is NIDA's research dissemination center. Visitors can order hard copies of NIDA publications or download electronic versions in multiple formats.

National Clearinghouse for Alcohol and Drug Information (NCADI)
http://store.samhsa.gov, 1-800-729-6686
NCADI provides information and materials on substance abuse. Many free publications are available here.

Friedman, D. Focus on Drugs and the Brain. Frederick, MD: Twenty-First Century Books, 1990. This book is part of the "Drug-Alert Book" series. It provides a good overview of the brain, neurotransmission, the effects of drugs on the brain, and addiction.


Neuroscience for Kids
http://faculty.washington.edu/chudler/neurok.html
This Web site contains information on the brain and neurotransmission, activities, experiments, pictures, and other resources for students and educators.

How Your Brain Works
www.howstuffworks.com/brain7.htm
Pictures and descriptions of the history of neuroscience and different parts of the brain.

Are We Unique?
www.fi.edu/qa97/spotlight5/spotlight5.html
This subpage from the Franklin Institute Web site talks about the science of the human mind.

Bill Nye the Science Guy
nyelabs.kcts.org/flash_go.html
See Episode #34 on the brain.

Brain Briefings
www.sfn.org/briefings
This page is part of the Society for Neuroscience Web site. It provides scientific information on different parts of the brain and brain disorders.