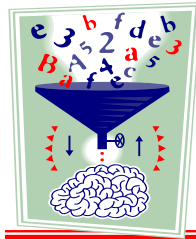
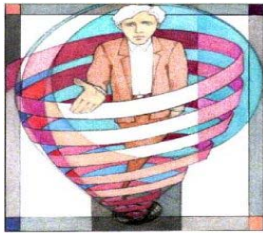
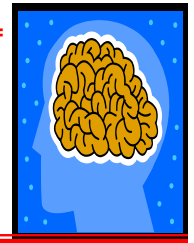


Bibliography & Budget



Brain Matters



DRUG AND ALCOHOL ABUSE

Jeanne Erickson and the
Wisconsin Council of Children & Family

Case Study: Dwight Foster Public Library
in Fort Atkinson, Wisconsin

Recommended Bibliography and Budget Jeanne Erickson and Wisconsin Council Of Children and Families’ *Brain Matters: Drug and Alcohol Abuse*

Community: Fort Atkinson, Wisconsin

The Fort Atkinson Area Chamber of Commerce promotes this community as a “small town with big ideas.” The community has been growing, according to the previous 2 US Census (see appendix for data) for more than the past 20 years. Recently, the downtown area is being redeveloped into retail uses that reflect the turn-of-the-century architecture and charm of old downtowns.

Fort Atkinson is part of Jefferson County and is located about 30 minutes from Madison and 50 minutes from Milwaukee. Chicago is within 2 hours. Janesville and Watertown are about 20 minutes away. The community is well situated along state highways 12, 26, and 106 and is within 15 minutes of I90 or I94.

Many of the local members in the chamber are new to the community and some have been around for more than 100 years. The medical profession is well represented and that presence is growing. Fort Atkinson has one of the only accredited hospitals in the area.

The community has more than 80 civic-minded clubs and organizations and there are more than 20 different churches that residents can worship at. The community features the lazy Rock River lifestyle to the extreme of a 5 star restaurant/dinner theater. The chamber promotes Fort Atkinson as a hard-working community with traditional work ethics and values.

The workforce, according to recent census data, indicates that the population is growing more diverse and that the community is supporting more “non-traditional” households. In addition to the redevelopment that is taking place downtown – local industries are also growing and the employment rates and area incomes compare favorably to the surrounding communities and the rest of the state.

Historically, the community's industry and agriculture have been closely related. There are several major food processing companies among the approximately 40 employers that provide for 4,800 employees. Nine of these firms account for over 300 employees each.

Fort Atkinson features 2 international catalog companies. The Local Municipal Airport has been expanded and can accommodate business and charter aircraft on its 3,800 foot paved and lighted runway. The pay scale for residents is above average and Fort's location provides many convenient advantages.

Last year, Money Magazine identified Fort Atkinson as America's Hottest Little Boomtown. Two years ago bizjournal.com Demographics Daily also recognized the economic growth of the community by calling it one of 141 "Dream towns."

District: Fort Atkinson

The School District is the area's 3rd largest employer, with an annual budget that exceeds 20 million dollars. District spending of \$7,498 compares favorably to similar communities around the state. There are 4 elementary schools in the district: Barrie, Purdy, Rockwell, and JF Luther. There is one Middle School and one High School. Fort Atkinson also has a local branch of MATC (Madison Area Technical College).

Library: Dwight Foster

The library I was asked to look at was Fort Atkinson's Dwight Foster Library. For a small town library, it has a reasonably comprehensive collection. Its home-style architecture communicates a friendly atmosphere. The building has undergone a number of renovations and additions over the years – but still has that look and feel of a community resource.

Jeanne Erickson asked me to specifically look at this library because she frequently works in the area providing curriculum support, training, and working on expanding the units. Because Jeanne works with consultants at DPI, and in a number of different school districts she asked me to look at the Fort Library's resources. The location is convenient and the collection represents a typical community library.

It is here experience that material that relates brain development to alcohol and drug abuse is hard to find in high schools because the information is too specific. Our goal is to find some good sources in public libraries that can be obtained by teachers to supplement their work and development of specific units. A collection analysis of members of the WISCAT (such as Fort Atkinson's Dwight Foster Library) system will be helpful in directing inquiries for additional resources for other types of collections.

Unit: Brain Matters – Alcohol and Drug Abuse

Jeanne Erickson, the lead trainer and presenter for Wisconsin Council on Children and Family's Brain Team works with Wisconsin's DPI to develop units that meet the States science standards within the Great Beginnings: The First Years Last Forever. The foundation of this unit is the biology of brain and how it allows each of us to think, feel and act.

The brain systems that regulate these activities are shaped by experiences. The most important experiential activity occurs during the first three years of life. After the first three years, 85% of core brain structures are in place. The Wisconsin Council On Children and Families, Inc. works to distribute information about early childhood brain development.

Great Beginnings: Four Levels

Level 1. Discusses four main areas of brain development biology of the brain, effects of trauma, abuse and neglect, critical windows of development, and fiscal outcomes based on brain development research. This level discusses financial implications of not investing in early childhood development and anticipated future costs on the criminal justice systems and other socio-economic institutions.

Level 2. Analyze three issues that help shape brain development: attachment, intervention strategies, and what every child needs for healthy development. This portion of the curriculum gives intervention strategies to use and a list of behaviors often associated with problem attachments.

Level 3. Expands information on early childhood brain development research to relate that information to drug and alcohol abuse, violence, and issues related to ADD/ADHD. Included in this level is information related to the physiology of QDD and ADHD.

Level 4. Expands areas such as attachment, ADD/ADHD, and the effects of drugs on brain development. This level examines the effects of drugs, alcohol, and stress on the developing prenatal brain as well as the biology of prenatal development.

Jeanne starts her presentations with an Introduction to the Brain slide show that illustrates brain regions and neuronal pathways, neuronal structures, synapse and synaptic neurotransmissions, dopamine neurotransmission, dopamine and the production of cyclic AMP, and an overview/summary of neuronal transmission.

Then, she reviews the National Institute on Drug Abuse's training materials for Health Practitioners, Teachers, and Neuroscientists. This material also includes how cocaine, opiates, THC, and other drugs of abuse all activate the reward system via increasing dopamine neurotransmissions.

The Key Concepts that Jeanne utilizes for curriculum development and training is included in the appendix as Key Concepts:

1. Maternal Use of Alcohol and Pre/Postnatal Brain Development
2. Maternal Use of Drugs and Pre/Postnatal Brain Development
3. Maternal Use of Tobacco and Pre/Postnatal Brain Development

Pregnant women make life-style decisions that affect their babies. Maternal use of alcohol, drugs and tobacco before, during and after the baby's delivery can be choices that are detrimental to the baby. Use of these substances is a common phenomenon in our society and if used during pregnancy can harm the baby beginning immediately after conception. If mothers are aware of consequences before conception, avoidance of these substances may lead to the birth of a healthier baby.

Unit Objectives:

After completing this unit, students will be able to:

- Identify the main parts of the brain and their functions
- Explain the brain's reward system
- Recognize the effect of drugs on the brain's activities and the reward system
- Identify the effects of alcohol, drugs, and tobacco on the pre/postnatal infant.
- Recognize the correlation between the prenatal use of alcohol, drugs and tobacco and their effect on the fetus.
- Recognize the importance of particular life style choices for the pregnant mother.

Unit Activities

- Brain Curriculum: Have student's research and present to the class information on Fetal Alcohol Syndrome or any other specific affect on the fetus.
- Communications/English: One student or small group of students are assigned to choose the best essay to place in a collection or booklet to be distributed among their school community or community at large.
- FCE: Have students prepare a slide show from the NIDA's web site to present to the class or any group of students in the school or parents' night at school
- Science/Brain Curriculum: Have students do research on any other condition the pregnant might have which would affect the fetus, such as lead poisoning, HIV/AIDS, or use of other specific, illegal drugs.

Unit Assessment(s)

- Have students write an essay on the importance of not using alcohol, drugs, or tobacco during pregnancy. Include examples and documentation to prove the point.
- Choose 12-20 vocabulary terms from the unit and create student-centered definitions.
- Have students create a slide presentation using the slides from the NIDA's web site.
- Have students create a web of ideas using the concepts of alcohol, drugs, or tobacco.

Resource Needs

Jeanne has indicated that she gets many requests for information to support this curriculum. While a great deal is available, one of the main points of this curriculum is to integrate biology, FACE, and as many other subject areas as possible. (For example, Jeanne has worked with me to create projects that incorporate some of this curriculum into projects for computer classes. Please refer to the Appendix A, Brain Matter a series of "newsletters" that I have students create to learn Desktop Publishing). We will focus our efforts on locating materials that address two areas (1). how drugs affect the physiology of the brain. (2). The implications that substance abuse has on the development of children.

Budget Amount

For this project – we will proceed on the assumption that \$525 dollars is available. This would be a large sum of money for one unit of this type. In order to more fully justify this amount, we will focus on materials that can also support other subject areas, especially biology. Our goal will be to identify appropriate resources that will cost no more than this amount.

Criteria for Item Selection

This topic area represents an alternative approach to alcohol and drug abuse education. While programs such as DARE stress the unsocial aspects of drug use, peer pressure, and its impact on families, communities, and individuals – they have not consistently provided students with clear, up-front, and credible information about how drugs affect the brain. Many communities are eliminating programs such as DARE because their effectiveness cannot be documented and does not support the academic missions of schools in a meaningful way. The current widespread use of drugs and alcohol among teens seems to suggest that the “*just say no*” approach does not work.

The goal of this unit is to teach about drugs and alcohol from a biological perspective and tie the curriculum with other courses, especially biology classes. With this in mind – the following list ranks the factors that Jeanne is most interested in:

1. Appropriate reading/activity levels for high school students (age 16). While Jeanne is concerned about having resources for lower level readers – her first priority is to get material together that a “typical” high school student can reasonably work with. Because this is a fairly technical subject – finding high interest/high content material written at lower reading levels may be difficult, but teacher’s can often use higher level material resources with diverse educational needs by apply appropriate strategies/techniques to address the needs of many learning styles
2. Current information about brain biology and neurotransmission
3. Factual (non-judgmental) information about how drugs of abuse affect the brain
4. Colorful, creative presentations
5. Emphasis on mechanics of drug addiction and abuse and not on other social/legal issues.
6. Resources should be straightforward, stick to the facts, and not rely emotional language/images to make its points about the effects of drugs.

Recommended Bibliography and Budget Log:

Print Media (Books). In order of usefulness, I consulted: Senior High Library Catalog, Middle & Junior High School Library Catalog, Books for You, Best Books for Young Adults, Children’s Catalog. The first two represent excellent, comprehensive guides for secondary students that are well organized in a useful manner. The other resources I checked contained less (or no) information that was both on-topic and at an appropriate reading level. Please see Appendix B for list of books that might be appropriate.

Print Media (Periodicals). Using UW-W's link to Ulrichweb, I searched for appropriate serial selections. Having used this resource before for another class project -- I find their Web site well organized and efficient. Searching for keywords such as drug abuse, alcoholism, brain development, and brain biology; I found many listings – however they tended to be targeted to scientific audiences, people in the treatment community, or represented specific organizations such as AA. These keyword searches resulted in large numbers of “hits” (sometimes in the hundreds).

It was obvious that I was going to have to refine my search to obtain information I could work with. Using the AND operator, I refined these searches for addiction AND brain, brain AND alcoholism, and drugs AND brain. While this considerably narrowed the selections – these serials would probably not meet Jeanne's needs (too technical and primarily written for professionals).

Then, I tried to refine my search by adding the keyword *teens* (and then *teenagers*). This produced no listings at all. After consulting with Jeanne, we decided that it would be best to focus our efforts on other types of print selections because the periodicals we located were not likely to be used by students (or teachers that wanted additional background information for their lessons).

Web Resources. Because this unit represents a new, integrated approach to drug abuse and the biology of the brain; finding traditional resources that meet Jeanne's needs can be difficult. In general, anything that is over a couple of years old probably does not have adequate information about the brain, neurotransmitters and the effect of drugs. Internet resources may represent Jeanne's best option because of the dynamic nature of this subject and the ability of Web pages to be easily updated to reflect current views of the scientific community.

To locate Web resources, I used 2 approaches. (1). I started with Google (keywords: *addiction brain neurotransmitters education teenagers*). This yielded thousands of “hits.” Starting at the top of the list, I checked the links that sounded like they might meet Jeanne's needs. (2). As I located appropriate links – I looked for lists of additional resources or links. In general, sites that had good information tended to have good links for more information. I reviewed many sites and presented Jeanne with 9 of them. While I could have presented her with more – I did not want to “overload” her with more information than she could reasonably work with. It seems to me that Web resources need to be carefully selected and quality is more important than quantity. I pointed out to her that there were many additional links to appropriate resources within these sites and that I thought they represented a great “portal” to allow teachers or students to locate additional, current information about this topic. She agreed that these sites would be. In many ways – these are the best resources for her unit because:

- These Web pages are written to be reasonably easy for a young adult to read.
- These Web pages “chunk” information in a way that allows users to pick and choose the information they are seeking.
- Many of these sites are colorful, full of graphics, attractively laid out, and some even contain animations of how drugs affect the brain.
- Integrating computer skills/activities is a great way to get students actively involved.
- Many great resources are available online FREE!

Please see Appendix C for a listing of some useful Web sites.

Videos. Checking with Libraryvideo.com, I was able to locate 2 videos that look appropriate.

1. **Secret Life of the Brain Collection** (VHS 79.99 or DVD 59.99). This PBS series reveals the processes involved in brain development across a lifetime. The series features new information in the brain sciences, introduces the foremost researchers in the field, and utilizes dynamic visual imagery and human stories to help viewers understand otherwise difficult scientific concepts. Past experience tells me that the PBS programming represents some of the best classroom videos from both a content and production standpoint. It is likely that this will be an item I would include because it would be used in Biology, FACE, or Health classes in addition to supporting Jeanne's curriculum.
2. **Drug Use and Addiction** (VHS 149.00) MTV productions presents this hard-hitting program that focuses on two self-absorbed teens who turn to drugs for the fun of getting high and "flips" them into the lives of hard-core users. Eva's chief goal in life is to have fun, while Cory's is to avoid his mother's nagging. When they are flipped, Cory is emancipated from his mom and Eva is asked to host an MTV program. The teens subsequently become involved with heavy drug users who steal to support their habit, suffer withdrawal, and overdose themselves into the hospital. This and additional revelations about HIV infection and drug-induced brain damage cause the teens to swear off drug use and reconcile with their families. Perhaps this video strays from Jeanne's selection criterion of being a straightforward, fact based approach – but a more dramatic presentation might be a useful supplement that connects with students in a different manner than strictly brain biology. This item will not support many other curriculum areas, so while this might be an interesting selection, but would not be my first choice.

Next, I used FIRSTSEARCH from UW-W's Library Web page to access Media Review Digest (keywords: *brain AND addiction*). This located 4 videos – but all were far too old for Jeanne to use (all were at least 6 years old). I checked again to see what I could find that would focus on the biology of the brain (keywords: *brain AND biology*). This also yielded a few resources that were all too old for Jeanne's needs.

Checking the Web site for *I Am Your Child Foundation* (iamyourchild.org) I located a complete video Package of the boxed set of videos (The First Years Last Forever, Quality Child Care, Ready to Learn, Discipline, Safe from the Start, and Your Healthy Baby) in either English or Spanish for \$25.00. (Buy 5 get 1 free). Jeanne has seen these before and agreed that these were reasonably priced and represented a good starting point for this unit (especially The First Years Last Forever, Ready to Learn, Safe from the Start, Your Healthy Baby the first video The First Years Last Forever. Because this package represents a significant discount and could be utilized in her unit, Biology and Health classes – she thought it was appropriate to consider obtaining the entire set.

Lastly, using Google, I located another source for educational videos called BHWorld Store (<http://www.bhworld.com>) it had 3 videos – all too old for Jeanne's unit. While I was able to locate other sources for videos online, I didn't find anything that was new enough or specific enough for this topic. Because in my experience some videos produced for schools are of too low quality to maintain student's attention, Jeanne and I decided that it would not be a good idea

to search too hard for videos – there are plenty of other good resources we can use. The PBS series looks like the best choice based on both of our past experiences.

Additional Educational Resources. Fort Atkinson is the home for a major school supply catalog, Nasco. I stopped into their retail store and inquired what they might have available. While their Science catalog is currently unavailable until December, they were able to supply me with catalogs for Family and Consumer Science, Hands on Health, and Anatomical and Nursing. While some of these resources might seem unusual for a library to purchase (instead being purchased by individual departments), because of the broad application of some of this curriculum material, Jeanne and I decided it might be worthwhile to look at these options. Here are some resources that might be useful:

Complete Health Connections including Alcohol and Other Drug Question Quest Set. This is a game that is sold as a Nasco Question Quest Board (34.95) and Nasco’s Spinquest (74.95). Nasco provides sets of cards with questions on different topics that can be used with each game board/spinner, to create educational games. For this unit, the Complete Health Connections IV Alcohol and Other Drug Quest Set (49.95) could be a worthwhile, hands-on activity. Other sets of questions are also available so that this board can be used for a wide variety of other topics.

Dangerous Drugs: Risks and Realities (Interactive Computer Game \$79.95). This interactive drug prevention program provides information about different classes of drugs including stimulants, narcotics, hallucinogens, inhalants, designer drugs, and how they affect the brain and body. Nasco recommends it for grades 5-12. This resource might not be focused enough on brain issues and may use emotional images/language in its presentation – Jeanne does not want this.

Steroids and Sports (Interactive Learning Program, CD-Rom \$98, Site license \$200, Network \$300). This program provides an in-depth look at anabolic steroids including what they are, what they do to male and female bodies, effects on behavior, and effects of the body. Recommended for grades 9-12.

Drug Awareness Guide (colorful wall chart, \$79.00). Shows eight categories of abused substances and various examples of each type. Sixty-six substances and their paraphernalia are pictured and cross-referenced with their street names, uses, and effects.

Consequences of Drug and Alcohol Abuse Displays (life sized, hand-painted models of organs, \$299 for drug abuse, \$299 for alcohol abuse). Shows what actually happens to the body as a result of substance abuse.

Drugs and the Unborn Child (Interactive Computer Program, CD-ROM \$98, Site License, \$200, Network (\$300). Details the effects of drug use to the fetus. Includes pre-post-tests, interactive self-discovery questions, and learning-in-action activities.

List of Recommended Materials

Books

Elizabeth Henderson-Connell, *Understanding Addiction*, University Press of Mississippi 2000,

Grade/Reading Level: High School to Adult

Annotation: The author writes about the process of addiction and how it affects the brain. This book also includes information about the effects of major addictive drugs on genetics, psychological, and behavioral factors.

Usefulness to Unit: Because this book specifically addresses how addictions affect the brain, it represents an excellent supplement to this unit – effects of substances of abuse on the brain is the main point of this unit.

Review: Senior High School Library Catalog

Price from BIP: USD \$45

John J. Ratey, *A User's Guide to the Brain; Perception, Attention, and the Four Theaters of the Brain*, Pantheon 2001

Grade/Reading Level: High School to Adult

Annotation: This author examines how the brain works in detail. It is organized along functional categories: Development, Perception, Attention, Memory, Emotions, Language, and Socialization.

Usefulness to Unit: This unit uses a biological approach to substance abuse education. This book covers the basic foundation of this unit. While not directly addressing substance abuse, the material on the brain would be useful to supplement the main theme of this unit.

Source: Senior High School Library Catalog

Price from BIP: USD \$22

Rita Carter, *Mapping of the Mind*, University of California Press 1998,

Grade/Reading Level: High School to Adult

Annotation: Ms. Carter examines the effect of brain chemistry on human behavior. Includes presentations on: Love, Addiction, Religion, Homosexuality, Gender Differences, Eating Disorders, and Obsessions.

Usefulness to Unit: The presentation on how brain chemistry affects human behavior would be extremely useful in supplementing the main emphasis of this unit; how substances of abuse affect the biology of the brain and how this, in turn, affects behavior.

Review: Senior High School Library Catalog

Price from BIP: USD \$45 Retail Price

Richard M. Restak, *Mysteries of the Mind* National Geographic Society 2000

Grade/Reading Level: High School to Adult

Annotation: Modern neuroscience is presented with numerous illustrations and photographs. The author also includes real-life case studies.

Usefulness to Unit: In order for this unit to be effective, students need a working understanding of how the brain works. This book reviews that material in a clear manner with lots of graphics and photos.

Review: Senior High School Library Catalog

Price from BIP: USD \$35

Jim Barmeier, *The Brain*, Lucent Books 1996

Grade/Reading Level: 7 and Up

Annotation: This book explores how the brain works. It covers memory, sleep, dreaming, and dysfunctions. New technologies that are helping scientists learn more about the brain are also presented.

Usefulness to Unit: This book directly addresses the foundation of this unit – how the brain works. The material about technologies that are being developed to gain further understanding of how the brain works may also be useful.

Review: Middle and Junior High School Library Catalog

Price from BIP: USD \$22.45

Faith Brynie-Hickman, *101 Questions Your Brain Has Asked About Itself But Couldn't Answer... Until Now*, Millbrook Press 1998

Grade/Reading Level: 7 and Up

Annotation: The author presents information about the physical aspects of the brain and how it functions. It includes analysis the effects of diseases and drugs on the brain, memory, and senses in a “question and answer” format. Bibliographic al references are included.

Usefulness to Unit: This book is written at a level that even many high school students with reading problems will understand and specifically addresses many of the key issues presented in this unit. Delivering this material to those that have trouble reading can be a challenge, so this book can fill an important role in the curriculum.

Review: Middle and Junior High School Library Catalog

Price from BIP: USD \$23.90

Seymour Simon, *The Brain; Our Nervous System*, Morrow Junior 1997

Grade/Reading Level: 7 and Up

Annotation: This book describes how the brain and nervous system work with an emphasis on how they function to enable use to think, feel, move, and remember. The writing is direct and concise. Colorful pictures and images taken with radiological scanners such as CAT, MRI, and SEM are included. **Usefulness to Unit:** The stunning pictures and graphics in this book are sure to get students' attention and the book covers the biological foundation of this unit.

Review: Middle and Junior High School Library Catalog

Price from BIP: USD \$6.95

Videos

I Am Your Child Foundation Boxed Set (*The First Years Last Forever, Quality Child Care, Ready to Learn, Discipline, Safe from the Start, and Your Healthy Baby*)

Annotation: Hosted by popular celebrities and featuring well-known child development experts, the videos present the most up-to-date parenting advice in an engaging and accessible manner. IAYC videos are available in both English and original Spanish.

Review: Amazon.com

Price: (from I am Your Child Foundation) \$25

Secret Life of the Brain Collection

Annotation: This PBS series reveals the processes involved in brain development across a lifetime. The series features new information in the brain sciences, introduces the foremost researchers in the field, and utilizes dynamic visual imagery and human stories to help viewers understand otherwise difficult scientific concepts.

Review: www.funjournal.org

Price: 79.99 (VHS)

Interactive Computer Program

Drugs and the Unborn Child

Annotation: Details the effects of drug use to the fetus. Includes pre-post-tests, interactive self-discovery questions, and learning-in-action activities.

Price: (Interactive Computer Program, CD-ROM \$98, Site License, \$200, Network (\$300)).

Review: This can be tricky – in the past, I have worked as a salesperson and worked with Nasco to provide products for their catalog. They often repackage/re-label products to hide their sources to give them marketing advantages (it becomes difficult to compare products, prices, and sources). I was unable to find a review of this program – I used general Internet searches and some educational sites. These were not productive. T

his makes me wonder if the product wasn't produced in-house or is being repackaged as a Nasco exclusive. This will make locating reviews difficult. I called Nasco's sales line and told them that I needed an independent review so that I could process a purchase order. They have not gotten back to me – while I could continue to follow up with them, I am concerned that it might no be appropriate to follow up too aggressively – after all, this is not a real purchase!!!

I would follow up with this vendor, however, because I am sure their marketing department has some information that they can pass along if I can get hold of the right person – of course, one might wonder about the legitimacy of this review, depending on the source that is used. Because they are a local organization and I have found them easy to work with in the past, if approached, they might also let us sit down with this program and spend some time specifically reviewing it – after all, if Jeanne is impressed with it – she would probably tell the teachers that are using this curriculum about it which could generate additional sales for Nasco.