

# Teaching English Language Arts with GIS

F r q q h f w l q j # U h d g l q j / # Z u l w l q j # d q g # W k l q n l q j #  
z l w k # 5 4 <sup>w</sup> F h q w k u | # V w k g h q w



**Barbaree Ash Duke**

Veteran Teacher & Educational Consultant

# Why?

“Experience is an author's most valuable asset.”  
~ Mark Twain

Exploring the globe is **NOT** discipline specific.

GIS offers real experiences for a subject that has an ethereal reputation.

Imprinting content material in their minds and showing purpose has powerful implications.





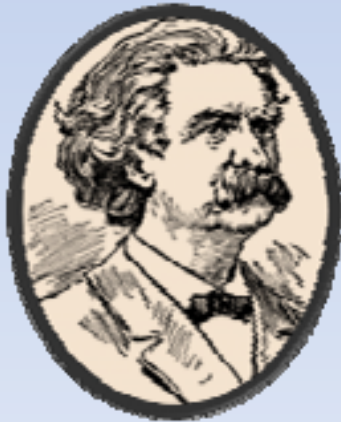
Authors, Setting & Context

# READING

# Understanding an Author's Life

## Mark Twain

- Life on the Mississippi River
- Additional Reading (before the novels) on River Conservation (Chad Pregracke)

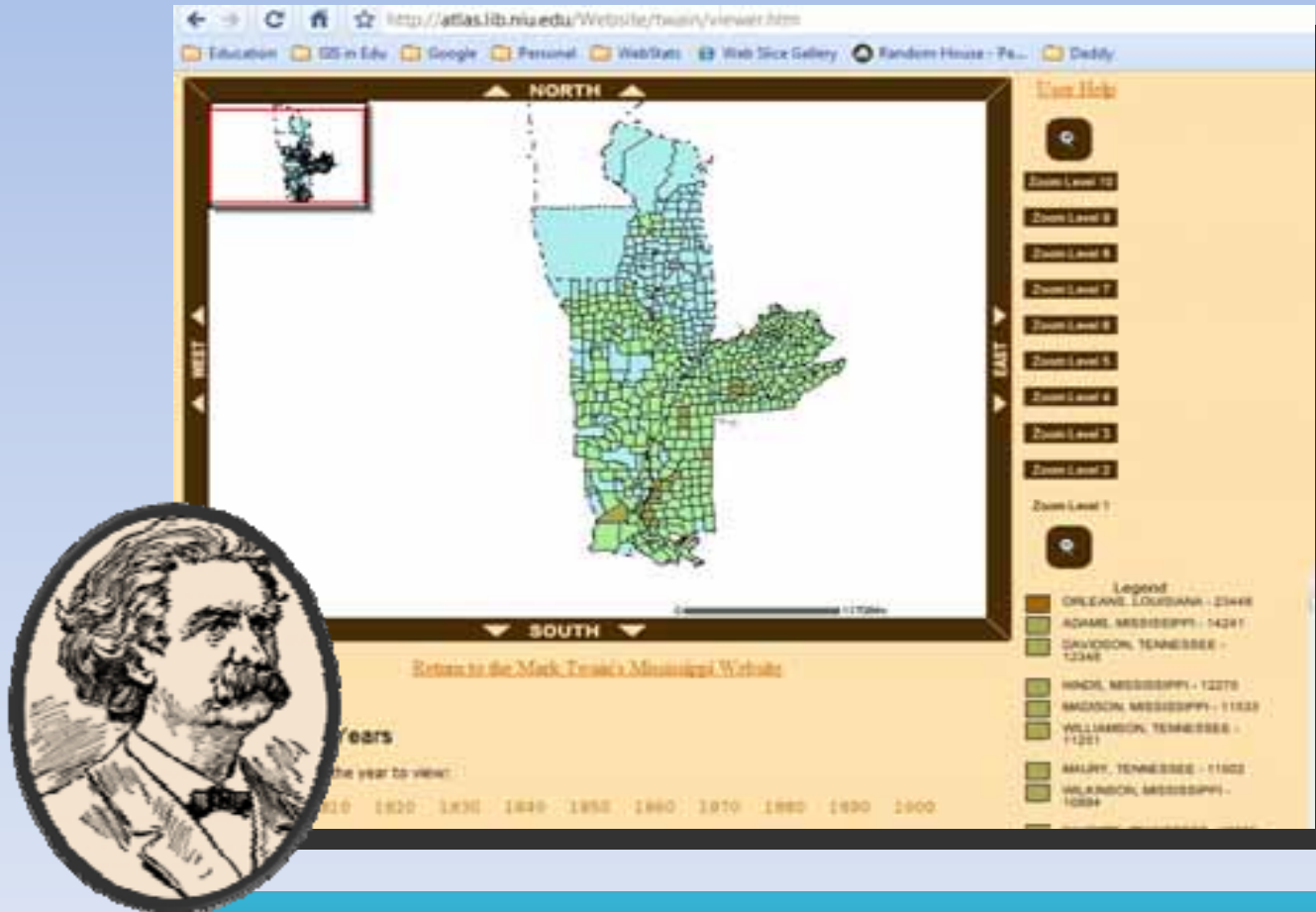


## Charles Dickens

- Child Labor
- Poverty
- Industrial Revolution
- Economics



# Whom Did He Meet?



<http://atlas.lib.niu.edu/Website/twain/viewer.htm>

# Living Lands and Waters

LivingLandsandWaters.org



**Living Lands & Waters' MISSION**

*To aid in the protection, preservation and restoration of the natural environment of the nation's major rivers and their watersheds.*

*To expand awareness of environmental issues and responsibility encompassing the river.*

*To create a desire and an opportunity for stewardship and responsibility for a cleaner river environment.*

This website is devoted to communicating the efforts, successes, and the needs of this project.

**Stats:**

 <b>587 Milk Crates</b>	 <b>83 Toilets</b>	 <b>55,301 Tires</b>
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**Limited Edition Print**  
by Sam Hwang

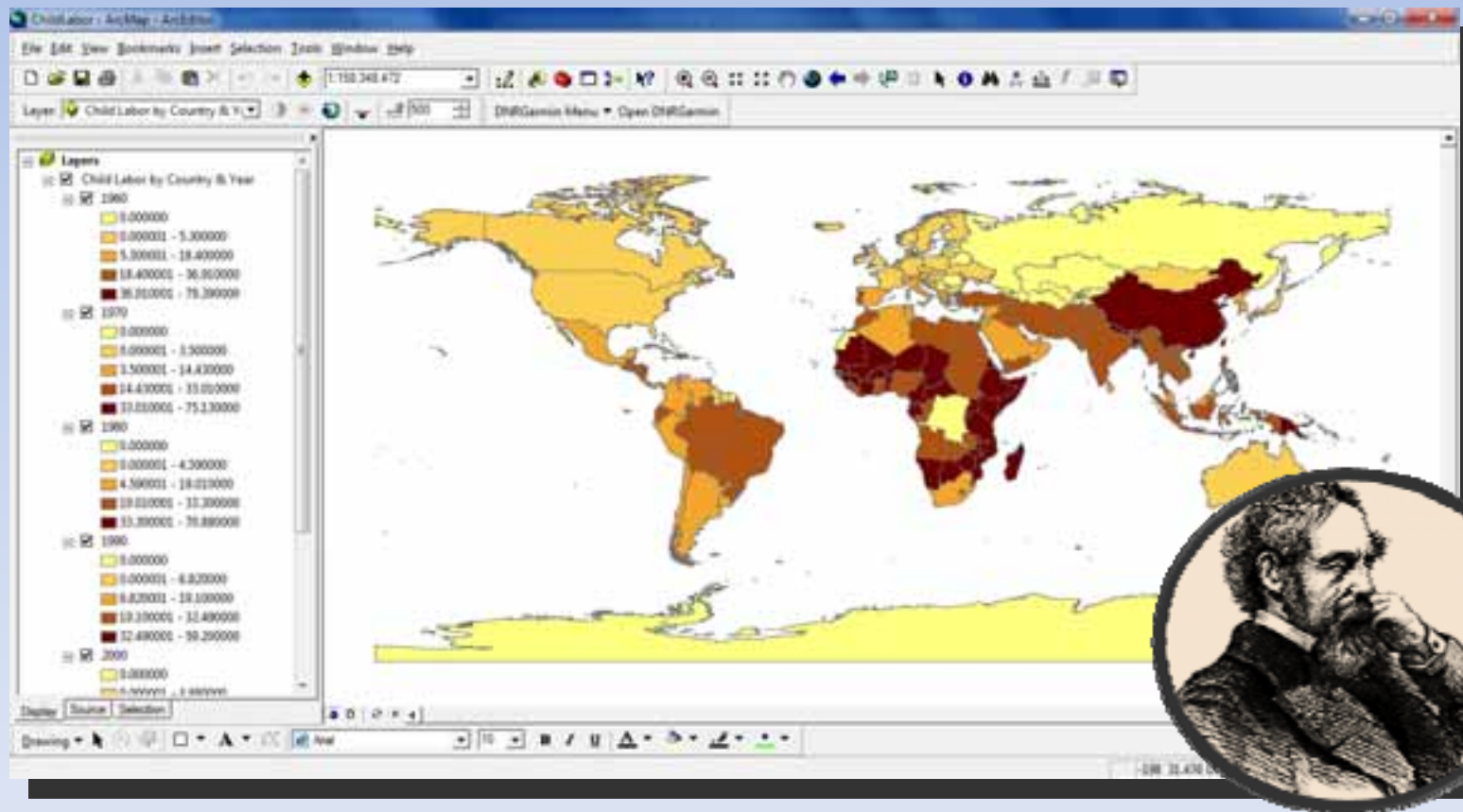
**View Our  
2010 Calendar**



**FROM THE  
BOTTOM  
UP**  
CHAD PRECRACKE  
INTRODUCTION BY TIM WELLS  
ONE MAN'S CRUSADE TO CLEAN AMERICA'S RIVERS

**From the Bottom Up:  
One Man's Crusade to  
Clean America's Rivers**  
(National Geographic Books)  
By Chad Precracke, with Jeff

# Child Labor in the Modern World





# Worldmapper

http://www.worldmapper.org/display.php?selected=135#

u Google Personal WebStats Web Slice Gallery Random House - Pe... Daddy

## WORLDMAPPER The world as you've never seen it before

Search for a map:

[Home](#) [Map Categories](#) [Thumbnail Index](#) [A-Z Map Index](#) [About Worldmapper](#) [Help](#)

[< Previous Map](#) **Child Labour** Map No. 135 [Open PDF poster](#) [Next Map >](#)



Nine of the ten territories with the highest proportions of child labourers are in Africa. The anomaly is Bhutan. At the other extreme, Italy which has the lowest proportion of children living there also has a very low percentage of children who work.

The map shows that most child labour occurs in African and Southern Asian territories. India has the highest number of child labourers, twice as many as China where the second highest population of child labourers lives.

No children work in Japan. There are 13 000 child labourers in the regions with the smallest populations.

*"At our homes we had done a lot of ploughing, planting, weeding and harvesting; we had hewn wood and drawn water; we had tended sheep, goats and cattle; we had done one hundred and one odd jobs."* Ndabaninga Sithole, 1959

**Territory with the highest proportion of child labourers worldwide**





# Virtual Field Trips to Setting and Context

## Walden Pond



<http://home.windstream.net/ernie.seckinger/ConcordPhotos/replica.jpg>

## Julius Caesar

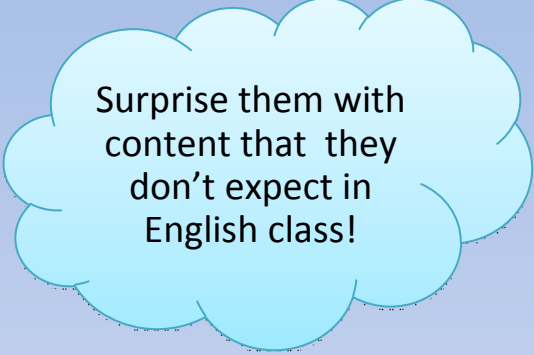
<http://www.emersonkent.com/maps.htm>



# Geography, Math and History of Walden Pond

From Wikipedia...

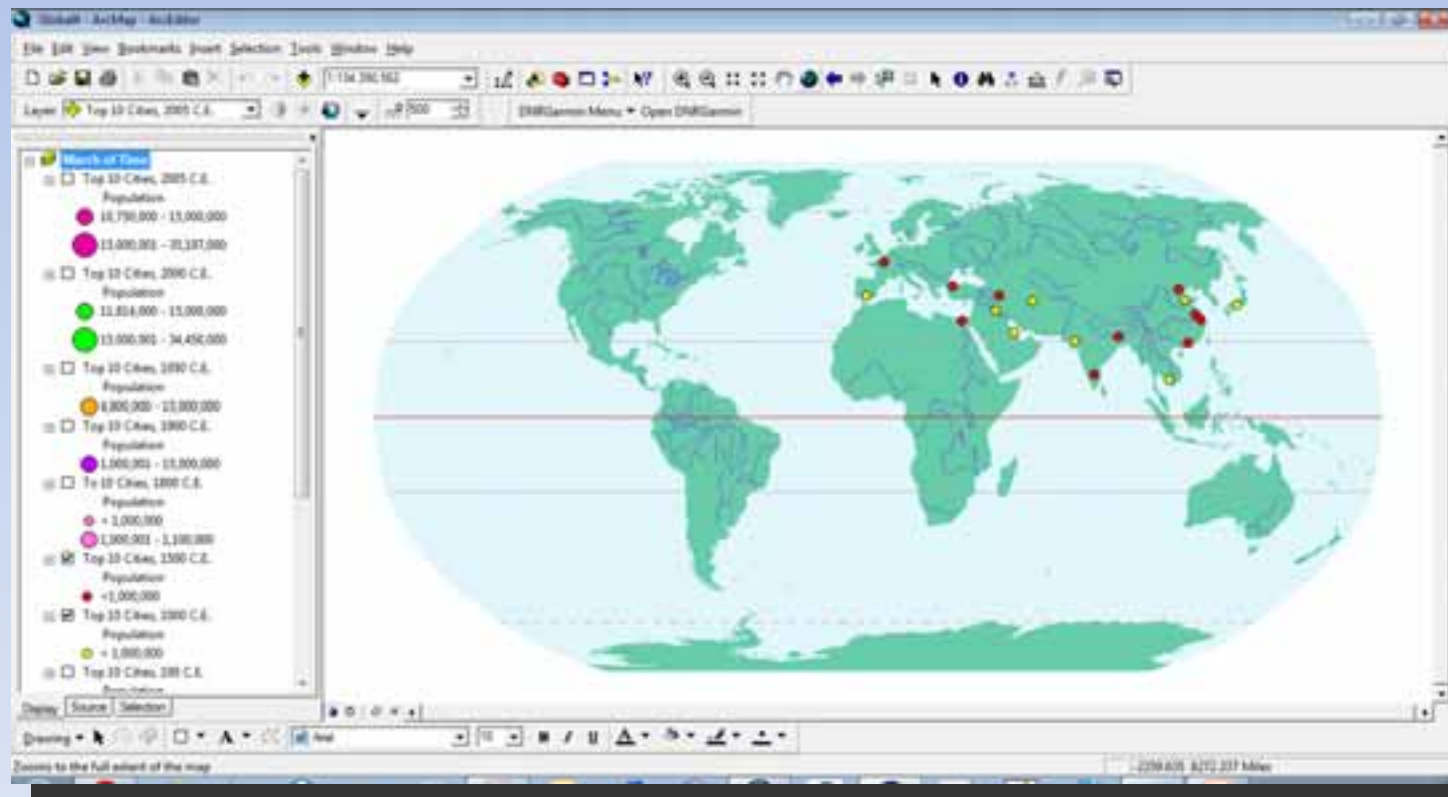
- Walden Pond
  - 42.4384°N 71.3420°W
  - Walden Pond is a glacial, kettle-hole pond, with no surface water flowing in or out. Water levels in the pond are determined by precipitation and surrounding groundwater levels. The pond is the deepest lake in the Commonwealth, measuring nearly 90 feet at its deepest.
- Formed by retreating glaciers 10,000–12,000 years ago.
- Great connection to “Water World” activity in *Our World* Books



Surprise them with  
content that they  
don't expect in  
English class!

<http://www.mass.gov/dcr/parks/walden/>

# Applying Context



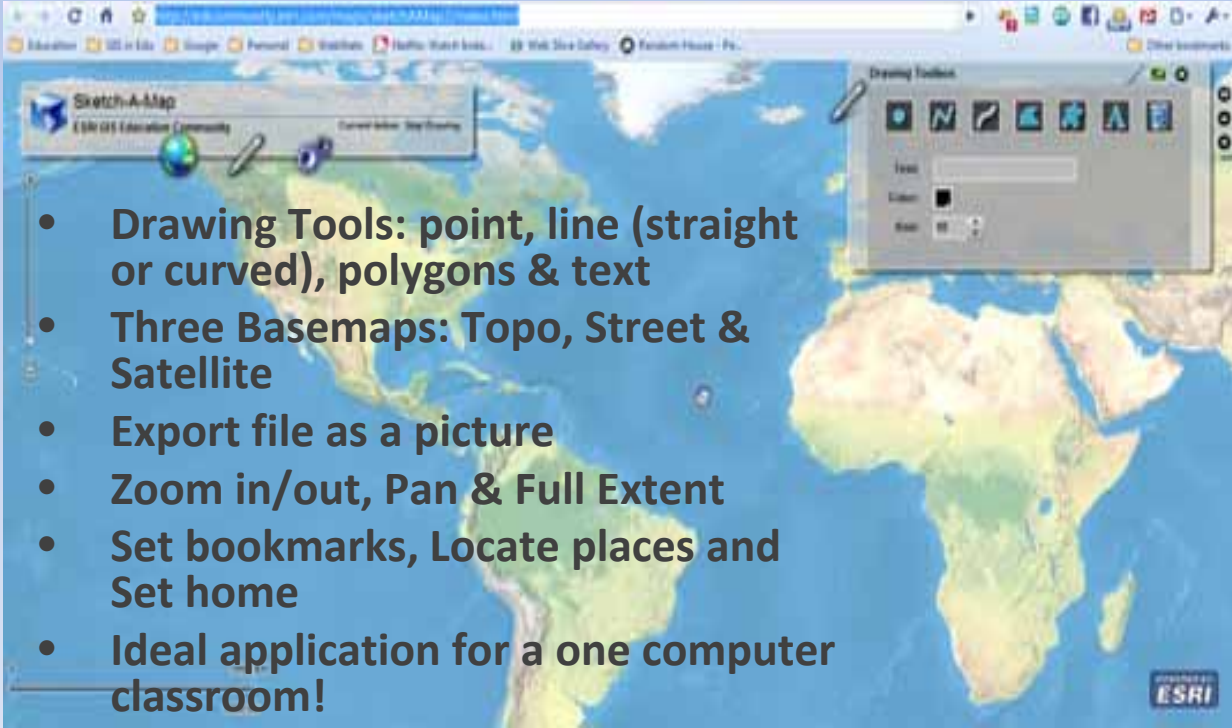
Our World Series, Book 2, Module 4, March of Time



Persuasion, Research & Experience

**WRITING**

# Picturing Vocabulary



The screenshot shows the Sketch-A-Map web application. The interface includes a top navigation bar with the application name and a search bar. A left sidebar contains a vertical list of map basemap options. The main area displays a world map. A 'Drawing Tools' panel is open on the right, showing icons for point, line, polygon, and text tools, along with color and fill options. The ESRI logo is visible in the bottom right corner of the map area.

- Drawing Tools: point, line (straight or curved), polygons & text
- Three Basemaps: Topo, Street & Satellite
- Export file as a picture
- Zoom in/out, Pan & Full Extent
- Set bookmarks, Locate places and Set home
- Ideal application for a one computer classroom!

<http://edgis.org/sketch>

# Persuasion

We often hear about literacy issues in countries beyond the USA. Organizations work hard to insure more children and adults learn to read and communicate. Should we allocate more resources within the USA or in other countries? Why?



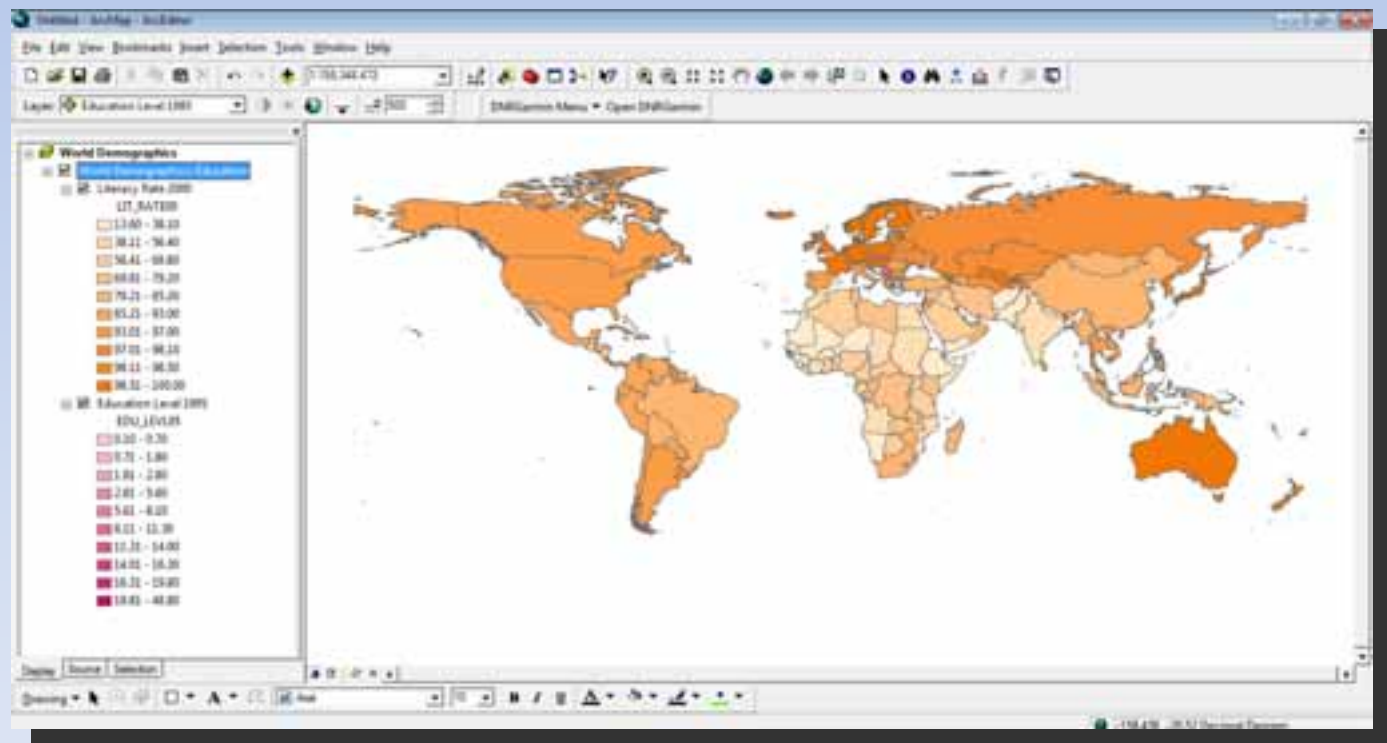
The screenshot shows the WorldMapper website interface. At the top, there's a search bar and navigation links. The left sidebar lists various map categories. The main content area is titled 'Education Maps' and contains a table of educational indicators.

Map	Title	World Total	Unit	Year
135	Youth Literacy	783	million people aged 15-24	2002
136	Adult Literacy	3608	million people over 15	2002
197	Literate Young Women	19	million women aged 15-24	2002
198	Literate Women	211	million women over 15	2002
199	Primary Education	101	million children per year group	2002
200	Secondary Education	73	million children per year group	2002
201	Girls not at Primary School	3	million girls per year group	2002
202	Girls not at Secondary School	3	million girls per year group	2002
203	Tertiary Education	105	million people	2002
204	Women not in Tertiary Education	6	million women	2002
205	Science Research	644436	science papers published per year	2001
206	Science Growth	155560	science papers published per year	1990-2001
207	Primary Education Spending	764108	million PPP US\$	2001
208	Primary Education Spending Growth	248971	million PPP US\$	1990-2001
209	Secondary Education Spending	807187	million PPP US\$	2001
210	Secondary Education Spending Growth	172885	million PPP US\$	1990-2001
211	Tertiary Education Spending	455334	million PPP US\$	2001
212	Tertiary Education Spending Growth	155316	million PPP US\$	1990-2001

[http://www.worldmapper.org/textindex/text\\_education.html](http://www.worldmapper.org/textindex/text_education.html)

# Persuasion

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# Research

- Upper High School & College  
(some topics are controversial)
  - <http://www.midway.edu/library/topics>
  - <http://www.tcc.edu/students/resources/writcent/handouts/writing/restopics.htm>
  - <http://www.nwmissouri.edu/library/courses/english2/termindex.htm>
- All Middle and High School
  - <http://mail.avon.k12.ct.us/~kbolch/researchtopics>

# NATIONAL ATLAS



<http://www.nationalatlas.gov>



How Do You Teach Your Students to think?

or

Do you expect them to think?

# THINKING

# Thinking...

- Guided Inquiry
- Analyzing connections and patterns in history
- Analyzing how setting and environment affects people
- Drawing conclusions from research
- Appreciating context and why it's important in analysis

**...the REAL MAGIC.**

# Resources

- Resources and Downloads and Free stuff...oh my!  
[www.barbareeduke.com](http://www.barbareeduke.com)
- STEM Lessons ([www.isat.jmu.edu/stem/curriculum.html](http://www.isat.jmu.edu/stem/curriculum.html) )
  - Collection of 14 lessons which are all available in versions for ArcMap, AEJEE and My World GIS
- ArcLessons (<http://edcommunity.esri.com>)
- Blogs (<http://gisined.blogspot.com>)
- Tweeting Tidbits
- New Publications:
  - *Reading, Writing and Thinking Around the Globe: Geospatial Technologies for the English Language Arts Classroom and Beyond* (Available at [www.gisetc.com/shop/](http://www.gisetc.com/shop/))
  - *20 Minute GIS* (Available at [www.gisetc.com/shop/](http://www.gisetc.com/shop/))
    - Collection of Activities for ArcGIS Explorer with ArcGIS Online content

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