

BrainU: Neuroscience Teachers Institute

Winona State University

Oct. 9-10, Nov. 6-7, Dec. 4-5, 2009, Jan. 8-9, 2010

Friday, October 9, 2009 – in SLC 242 – Science Lab Center

THEME FOR DAY... Our brains

- 7:30 am Arrive on campus, Continental Breakfast
- 8:00 am Welcome to BrainU/ Pretest/ Get to Know You - *Jan and Barb*
- 9:15 am Breakout to Discuss Neuroscience Readings - *Barb*
- 10:15 am Break
- 10:30 am What is Thinking? & Investigating Neuroscience through your Questions - *Jan*
- 12:00 pm Lunch
- 1:00 pm Research Ethics, Animal Use, Human Subjects: *Dr. Peter Santi's lecture*
- 2:00 pm Break
- 2:10 pm "Explain Your Brain" Hands-on Exhibit Stations
- "Explain Your Brain" in Your Classroom
- 3:15 pm Discuss Today's Pedagogy
- 3:30 pm Course Registration/ Release Forms/ Reflection and Wrap Up - *Barb*
- 4:00 pm End of scheduled day

Homework: No open shoes tomorrow.



Saturday, October 10, 2009 in SLC 242 – Science Lab Center
THEME FOR DAY...What can a sheep tell us?

7:30 am Arrive on campus, Continental Breakfast

8:00 am Brain Calisthenics - Ways of Knowing - *Barb*

8:30 am Worm to Human: How is a worm's "brain" like a human's? - *Jan*

9:30 am Group Discussion - *Barb*

9:45 am Break

10:00 am Teasing apart a Sheep's Brain - "What is inside the brain?" - *Jan*

12:00 pm Lunch

1:00 pm Beady Neurons - *Barb*

1:45 pm Real Neurons - *Jan*

2:30 pm Neuron Wrap up - *Jan*

3:00 pm Break

3:10 pm Wrap up and Homework: - *Barb*

4:00 pm End of scheduled day

Homework:

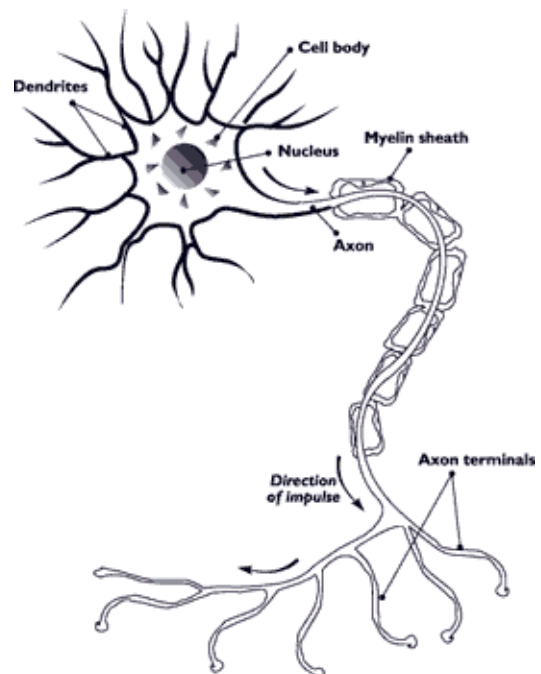
1. Watch The 3 Pound Universe in Your Head: Dr. Timothy Ebner Video
2. Food model due on Saturday, Nov. 7



Friday, November 6, 2009 in Rochester, MN
THEME FOR DAY... Models and Our Senses

- 7:30 am Arrive in Rochester, Continental Breakfast
- 8:00 am Brain Calisthenics - Blind Site/ Videos - Parking Lot Discussion - *Selcen*
- 9:00 am Small Group Discussion:
The 3 Pound Universe in Your Head: *Dr. Timothy Ebner – Jan*
With Connections to Motor Systems
- 10:00 am Connect the Neurons – *Selcen and Jan* – Outside if weather permits
- 10:30 am Break
- 10:45 am Sensory and Motor Systems - *Dr. Jan Dubinsky*
- 11:45 am Group Discussion
- 12:00 pm Lunch
- 1:00 pm Lab Tours - Rochester, MN, Mayo Clinic
- 2:45 pm Break
- 3:00 pm Action Plan Introduction and our Research - *Barb*
- 3:30 pm Wrap up and Homework reminder
- 4:00 pm End of scheduled day

- Homework -*
1. *Bring in food model due tomorrow.*
 2. *Please bring your laptop too.*
 3. *No open shoes tomorrow.*



Saturday, November 7, 2009 in SLC 242 – Science Lab Center in Winona
THEMES FOR DAY...What makes us moooooove?and Plasticity

7:30 am Arrive on campus, Continental Breakfast

8:00 am Homework Gallery - *Barb*

8:45 am Brain Calisthenics - *Barb*

9:00 am Virtual Neurons Activity- *Jan*

10:15 am Break

10:30 am *Manduca sexta* Dissection – *Jan*

12:00 pm Lunch

1:00 pm Learning and Memory - *Dr. Jan Dubinsky*

2:00 pm Discussion

2:15 pm Break

2:30 pm Discussion of Action Plans - Preparing a "shopping list" of potential items- *Gill*

3:30 pm Discussion and Wrap Up – Homework: Dr. Eric Chudler websites list – *Barb and Gill*

4:00 pm End of scheduled day

*Homework: Check out the 4 Flash Animations on BrainU.org before December 4.
Also check out the websites supplied by BrainU and Dr. Eric Chudler.
Watch Dr. Bill Engeland's video on The Brain and Emotions
Please bring your flash drives and laptops next time.*



Friday, December 4, 2009 in SLC 242 – Science Lab Center
THEME FOR DAY... Drugs effects on the brain

7:30 am Arrive on campus, Continental Breakfast

8:00 am www whirlwind – Report out on Neuroscience Internet Resources – *Selcen and Gill*

9:00 am The Brain and Emotions - *Jim*

10:30 am Dendritic Spines and Morphine Dry Lab - *Jim*

12:00 pm Lunch

1:00 pm Comparative Neuroanatomy - Brain Molds - *Jim*

1:45 pm Brain Calisthenics and Card Game – *Jim and Gill*

2:15 pm Break

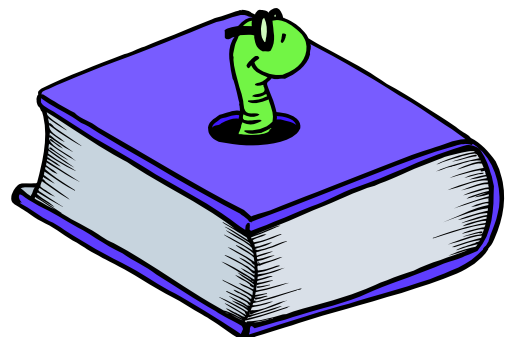
2:30 pm Inquiry, Neuroscience, Your Curriculum and The New Standards – *Gill*
Action Plan Work Time

3:30 pm Wrap up and Pedagogy Discussion - *Gill*

4:00 pm End of scheduled day

Homework -

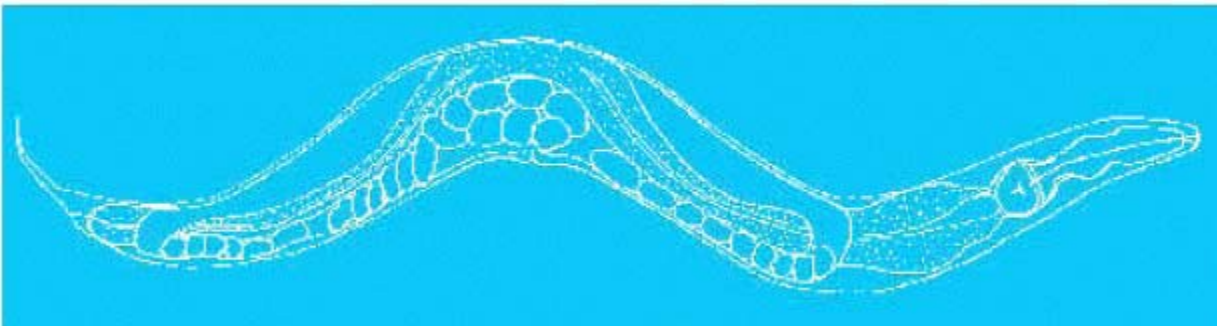
- 1. Check out the Teen Brain articles in your binders.*
- 2. Start your Action Plan*
- 3. No open shoes tomorrow*



Saturday, December 5, 2009 – in SLC 242 – Science Lab Center
THEME FOR DAY... Drugs effects on the brain and WORMS

- 7:30 am Arrive on campus, Continental Breakfast
- 8:00 am Brain Calisthenics and Journal Swap - *Selcen*
- 9:00 am *C. elegans* as a model system – *Jim and Selcen*
- 9:30 am Break
- 9:45 am *Caeno* What? –*Jim and Selcen*
- 12:00 pm Lunch
- 1:00 pm Gallery Walk of Posters of your Findings - *Gill*
- 2:00 pm Worm Maintenance and Kits and discussion of Open Inquiry using worms – *Jim*
- 2:20 pm Break
- 2:30 pm Work time on Action Plans - *Selcen and Gill*
- 3:30 pm Wrap up and Pedagogy Discussion- *Gill*
- 4:00 pm End of scheduled day

- Homework:*
1. *Action Plan*
 2. *Watch: Neurodevelopment: Dr. Monica Luciana Video*



Friday, January 9, 2010 – SLC 242 – Science Lab Center
THEME FOR DAY...Neuroengineering and the new science standards

- 7:30 am Arrive on campus, Continental Breakfast
- 8:00 am Brain Calisthenics - Myth - *Barb*
- 8:15 am Discuss the Dr. Luciana Video and its importance in education – *Barb and Gill*
- 9:00 am Card Game from NIH Curriculum – *Barb and Gill*
- 10:00 am Break
- 10:15 am Neuroengineering Activity - *Barb*
- 12:00 pm Lunch
- 1:00 pm Gallery Walk of Neuroengineering - *Barb*
- 1:30 pm Action Plan Work Time - *Gill*
- 3:30 pm Wrap Up and Pedagogy Discussion- *Gill*
- 4:00 pm End of scheduled day

Homework: Action Plan due tomorrow



January 9, 2010 – in SLC 242 – Science Lab Center
THEME FOR DAY... What We Learned

7:30 am Arrive on campus

8:00 am Brain Calisthenics - Myths - Propaganda Literature - *Jan*

8:15 am Parking Lot Discussion - *Gill and Jan*

9:00 am The Social Aspects of Drug Use – *Jan*

10:00 am Discussion - *Jan*

10:15 am Break

10:30 am Finalize Action Plans - *Gill*

11:30 pm Lunch

1:00 pm Gallery Walk and Group Presentation of Action Plans/ Pedagogy Discussion
– *Barb and Gill*

3:00 pm Evaluation/ Post Test - *Barb*

3:30 pm Cake and Graduation - Everyone

4:00 pm End of scheduled day

