THE KINESTHETIC CLASSROOM

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SESSION OBJECTIVES

- Recognize opportunities to add physical activity to lessons
- Make connections between patterns and lessons
WEB RESOURCES

- Active Learning Activities for Elementary:
  http://www.emc.cmich.edu/BrainBreaks/default.htm

- Active Learning Activities for Upper Elementary and Middle School:
  http://www.eatsmartmovemorenc.com/Energizers/Middle.html

- Brain Breaks Blog:
  http://brainbreaks.blogspot.com/

- 20 Three-Minute Brain Breaks:
WHY DOES MOVEMENT ENHANCE THE LEARNING PROCESS?

- Enhances brain function
- Increased circulation
- Refocuses attention
- It changes the brain chemically
- Reduces sitting time
- Reduces stress
- Can stimulate neurogenesis (prolonged aerobic activity)
- Provides a break from learning
- Enhances episodic memory
- Provides opportunity for implicit learning
- Provides for motivation and the meeting of basic human needs
- It’s the best available manager of state
- Provides an opportunity to differentiate instruction
- Sensory engagement
- Finally, because the research says so . . .
OTHER PNEMONIC IDEAS

- Brain Gym
- Kagan Cooperative Learning
- Classroom management programs
  - Follow directions quickly! (the gesture: make your hand shoot forward like a fish)
- Name game
WORD ROOTS

- Stand up / Sit down on each word that has a root of “at”:
  - Cat
  - Hat
  - Bat
  - Deer
  - Pat
  - Here
BALANCE

- Balance and count to 20, switch leg on multiples of 5

- Switch balance on a vowel:
  - Mississippi
  - Alaska
  - Koyukuk
IMPORTANCE OF ACTIVE LEARNING...

People generally remember...
(learning activities)

- 10% of what they read
- 20% of what they hear
- 30% of what they see
- 50% of what they see and hear
- 70% of what they say and write
- 90% of what they do.

People are able to...
(learning outcomes)

- Define
- Describe
- Explain
- Demonstrate
- Apply
- Practice
- Analyze
- Define
- Create
- Evaluate

Passive Learning

Active Learning
CENTER OR STATIONS

- Loose Parts Theory – use those single pieces of equipment
- Toss a bean bag from one hand to the other while counting by 2s
- Use giant puzzles
  - Circulatory system (science)
  - Scrabble (vocabulary)
  - Hop scotch (counting)
  - Bowling (addition)
BRAIN PRINCIPLES RELATED TO MOVEMENT

- The Brain Responds to Novelty
- The Brain Responds to Movement
- The Brain is Always Trying to Make Meaning
- The Brain Thrives on Concrete Experience
- Emotions Help the Brain Remember Experiences
- The Brain Needs Social and Environmental Interaction
SIX MORE. . .

- The Brain Needs Glucose as Food for the Brain
- The Brain Automatically Searches for Patterns
- The Brain Connects Old Experiences to New
- The Brain Needs Incubation Time for Memories to Form
- The Brain Needs Choice/Control of Experiences
- Primary Needs Get Served first Under Stress
RHYTHM

- Jump rope rhymes
- Drums Alive
- Rap it out
- Cultural dances
HAND TO FIST

- Level One
  - Face partner
  - One partner holds up two fists, the other partner holds up two open palms.
  - They push their palms and fists toward each other, then bring them away and switch. The partner with the palms now makes fists, and the partner that had the fists now opens his/her palms, and they push their hands together again.

- Level Two
  - Partners face
  - Each partner makes a fist with the right hand and holds up the left hand with the palm open.
  - Partners push their hands together so that palm meets fist and fist meets palm.
  - They pull their hands apart and then push their hands together again.

- Level Three
  - Same as above, but alternate right and left so palm becomes fist, fist becomes palm.
Dr. John Ratey (2008) states that research on exercise and cognition shows that:

- In one landmark study aerobic exercise was as effective as antidepressants.
- Women who exercise lower their chances of developing dementia by 50%.
- Aerobic exercise sparks new brain-cell growth.
- A revolutionary fitness program helped put one U.S. school district of 19,000 kids first in the world in science.
- Aerobic exercise really is the best defense from everything from mood disorders to ADHD to addiction to menopause to Alzheimer’s.
- Aerobic exercise needs to be re-framed as benefitting the brain just as much, if not more than, the body. Examples of easy-to-use exercises in the classroom include jumping jacks, mountain climbers, scissor kicks, jog in place, and crisscrosses.
RELAYS

- **BASIC**
  - W W W W
  - X X X X
  - X X X X
  - X X X X

- **BACK & FORTH**
  - W W W W
  - X X X X
  - O O O O
  - W W W W

- **CONTINUOUS**
  - X X X X
  - X X X X
  - O O O O
  - (X) (X) (X) (X)

W – Wall
X or O – person
Arrow – direction of travel
SAFETY RELAY

4 tasks:

a) Press smoke alarm,
b) Call 911,
c) Stay low and go, (go under something),
d) Stop, drop and roll
A BRIEF OVERVIEW OF RESEARCH ON MOVEMENT, FITNESS, COGNITION AND ACADEMIC PERFORMANCE

- 17 of the 250 action research designs from the 2009 Master of Arts in Education graduating class of Gratz College focused on using movement in the classroom. Taken as a whole this research informs us that using kinesthetic activity increases motivation, creates positive learning states and classroom environments, can raise test scores, prepares the brain and body for learning, increases levels of student participation, attention, and engagement, and helps students to more easily retain and recall information; as cited in The Kinesthetic Classroom (Kuczala and Lengel, 2010).

- Students involved with the Learning Readiness PE program used in the Naperville (IL) School District have shown significant increases in reading ability and comprehension, and math. Initially, students voluntarily took the 7:00 a.m. physical education class before attending their regular reading and math classes. In one semester, those with LRPE improved their reading and comprehension scores by 0.5 grade levels more than those students in the study who took the literacy class alone. The results were just as compelling with the students who took LRPE before math class. These students increased their algebra readiness by an average of 20.4% compared to 3.87% in the students without LRPE. Currently, the program is mandatory; as cited in The Kinesthetic Classroom (Kuczala and Lengel, 2010).

- In 2002, A California Department of Education study matched scores from 954,000 students on the spring 2001 administration of the Stanford 9 Test (SAT-9) with the results of the same students’ performance on the state-mandated 2001 physical fitness test and found that academic achievement is related to their levels of physical fitness (Winger and Thomas, 2002) as cited in Action-Packed Classrooms (Summerford).

- Hyperactive children who run before class have improved their behavior so significantly that doctors were able to decrease stimulant doses in children who ran every day (Putnam, 2003) as cited in Action-Packed Classrooms (Summerford).

- Mental focus and concentration levels in young children improve significantly after engaging in structured physical activity (Caternio and Polak, 1999) as reported in the Action Based Learning Lab Manual (Hess and Madigan).

- A 2009 study found that of 2.4 million Texas students those who are physically fit are more likely to do well on the state’s standardized test, have good school attendance and are less likely to have disciplinary referrals (Texas Education Agency, 3/9/2009).

- Researchers at the University of Illinois found that after acute bouts of walking students are better able to allocate attentional resources and also results in better performance on academic achievement tests (U of Illinois, 3/31/2009).

- Sacrificing physical education for classroom time does not improve academic performance. In fact, one study showed that a reduction in class time for academics to enable an increase in physical activity leads to consistently higher mathematics scores (Active Education Fall 2007 Research Brief).

- The Prince William County (Virginia) Public Schools have also reported dramatic success in using the Action Based Learning Lab with first graders in need of intervention and remediation; as cited in The Kinesthetic Classroom (Kuczala and Lengel, 2010).
CREATE A STORY

- Meet with a partner, equal distance from the walls
- Partner one travels to the wall behind him/her, picks up a slip of paper and returns to partner.
- Partner one chooses a word that is the part of speech on the slip of paper.
- Partner two then travels to the wall behind him/her, picks up a slip of paper and returns to partner.
- Partner two chooses a word that is the part of speech on the slip of paper and begins a sentence.
- Continue until a story has been created.
VICTOR BORGE PHONETIC PUNCTUATION

- A period sounds like, “ppt”
- A dash, “ffsttt”
- An explanation mark is a vertical dash with a period underneath, “ffsttt ppt”
- A comma is a tongue in cheek clicking sound
- Quotation is two commas..click in each cheek (tick, tock)
- A question mark is rather difficult, gutteral sound followed by “ppt”
- Finally the colon, two little dots you can have them either over or under each other, “fst”
COMMAS CHANGE THE MEANING…

Jump up when we read to the place where you think the comma(s) belong:

- He finds inspiration in cooking his family and his dog.
- Let’s eat grandpa.

As can periods …
- Thank you!  Your donation just helped someone.  Get a job.
VOCABULARY

The students each find 2 paper plates, one with a term and one with the matching definition.

Students self-check using the answer sheet posted on the wall, and return to their desk.

The students should define the term in their own words, draw it and/or use it in a sentence.

Return the plates to the middle and repeat with a new term or definition.
LANGUAGE ARTS: DEFINING PARTS OF A STORY

Using a novel you have read in class, post questions on cones around the room related to plot, settings, characters, and resolution.

The students go to an assigned cone, read and answer the question and do the locomotive activity to the next cone.

Repeat until all questions are answered.

Close with large or small group discussions or hand in their work.
FORM A LINE

- Take a playing card, find a group of three
- Stand side by side and total your cards.
- Now mix up the order and total your cards.
- Change to standing front to back. Does your total change?
REFERENCES

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