Visual Teaching Tools for the Classroom:

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Notes from presentation:

Stages of Learning:

- Unconscious Incompetent:

You don't know and you don't know you don't know.

- Conscious Incompetent:

You are aware that you lack certain skills and Knowledge.

- Conscious Competent

You are very certain you can obtain this knowledge and skill
A commitment to learn
A confidence

- Unconscious Competence

Total subject mastery
Being in the 'zone'.

- Reflective competence:

In search of the understanding behind theories models and beliefs.

- Re-Conscious Competence (Complacency)

An expert fails to update a skill.
Becomes careless. Makes a mistake.
Skills aren't as relevant.
Complacency provides a useful warning.

"Approximately 65% of the population is visual learners who relate most effectively to written information, notes diagrams & pictures."
- Kranzler, 1999

"The brain processes visual information 60,000 times faster than text."
- 3M Corporation, 2001

The *Visual Teacher* is an educator who embraces and models full spectrum visual literacy.
The *Visual Teacher* avoids passive learning experiences by bridging *seeing* and *doing* using appropriate projects, activities, and technologies.
The *Visual Teacher* utilizes graphic, image-rich technologies in his or her teaching.
Most of what is learned in your class is *not* in your lesson plan… in other words, there is a documented, enormous difference between presenting and learning.

Direct Societal Effects

∞ We are no longer a reading society
∞ 80 % of books published in the U.S. are read by 20% of the population
∞ Average American reads 4 minutes a day
∞ Modernization of books, magazines, newspapers
∞ Visual entertaining

Today's students…

- spend 3 to 5 times as much time in front of a TV set.
- have less than 1/2 the amount of unstructured play time.
- spend 1/3 of the amount of time outdoors.
- spend 100% more time on computer games and video game toys.
- have 3 times as much adult-manged play time.

Today's students learn…

∞ 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 discuss with others.
∞ 80% of what they experience personally.
∞ 95% of what they teach to someone else.

The *Visual Teacher* understands the brain circuits involved in humor. Humor

- breaks the ice.
- achieves closeness.
- bonds us.
- generates goodwill.
- creates a bridge and facilitates amicable behavior.

Brain Compatible Strategies

Our brain…

∞ is only 2% of our body weight, yet it consumes 20% of our body's energy.
Recommended brain foods are proteins and sugars: fish, eggs, leafy greens, wheat germ, chicken and fruits.
∞ Is 80% water. Drinking water greatly increases oxygen levels. Recommended: 8-12 glasses per day.
∞ craves natural light. It suppresses melatonin and increases endorphins.
∞ learns best in a 68-72 degree learning environment, while avoiding pollutants and strong fragrances.
∞ needs adequate deep sleep. Without it, students will have trouble paying sustained attention, their creativity will suffer, and they will have difficulty retaining material.
∞ needs to avoid drugs, alcohol and stress. Depression affects 1 in every 33 children, and 1 in every 8 teenagers.
∞ responds best when we are relaxed, however alert.
∞ craves patterns.
∞ responds best to emotional experiences.
∞ responds best when we have movement and downtime.
∞ is geared for optimized learning: peer interaction and role-play.
∞ responds to various aromas: peppermint refreshes and invigorates; vanilla relaxes and soothes; lavender reduces stress; apple relaxes brain waves and lowers blood pressure; lemon induces a positive mood.

EPA 402-K-95-001 Indoor Air Quality Tools for Schools Action Kit.
Household plants that clean the air of Formaldehyde, Benzene, Trichloroethylene
Gerbera Daisy
English Ivy
Peace Lily
Spider plant
Bamboo Palm
Mother's-in-law Tongue
Dracaena deremensis
Philodendron

Neurological Development

∞ Birth to 2 years: social attachment and visual/auditory acuity.
∞ Birth to 3 years: regulation of emotions and vocabulary development.
∞ Birth to 5 years: motor development and coordination.
∞ Birth to 10 years: first and second language development.
∞ 1 year to 5 years: mathematical and logical thinking.
∞ 5 years to 10 years: music appreciation and learning.

How does music affect the learner?

∞ Physical relaxation – reducing stress: 30-60 beats per minute (bpm)
∞ Inspirational – artistic expression: 60-70 bpm.
∞ Mood setting: 40-60 bpm or 90-120 bpm.
∞ Creative problem solving – brainstorming: 70-90 bpm.
∞ Recommended for classroom use: "Piano Concerto #5" by Mozart; "Etudes" by Chopin; "Piano Concerto # 26 & 27" by Mozart.

The *Visual Teacher* understands the effects of visual stimulation of the brain.

Early Brain Growth

∞ During the first month of life, the number of connections or synapses increases from 50 trillion to 1 quadrillion.
∞ If an infant's body grew at a comparable rate, his weight would increase from 8.5 pounds at birth to 170 pounds at 1 month old.
∞ Doing everyday actions differently causes dendritic branching in brain cells.
∞ Exercise spurs growth in a brain structure associated with memory.

Recommended book: "Brain-based Learning" by Eric Jensen.

When relying solely on the auditory cortex…

∞ in 1 hour, you will forget 50% of what you learn.
∞ in 24 hours, you will forget 60% of what you learn.
∞ in 1 week, you will forget 75% of what you learn.
∞ in 3 weeks, you will forget 85-90% of what you learn.

- **Over 90% of all information that comes to the brain is visual.**
- **40% of all nerve fibers connected to the brain are linked to the retina.**
- **36,000 visual messages may be registered to the brain in 1 hour.**
- **30 million neurons in the visual cortex are activated by the single image of a face.**

Visual Areas of the Cortex

There are 30 specialized areas in the visual cortex alone; each area links up
(communicates) with its neighbors with over 200 linkages.

Affecting the Brain With Color

Recommended Web site: http://www.mariaclaudiacortes.com/

∞ ***Red*** is an engaging and emotive color. It is considered disturbing by anxious subjects, and exciting to those who are calm. It triggers the pituitary gland, adrenal gland and finally, adrenaline is released. Blood pressure may elevate, increased breathing, stronger appetite and smell.
∞ ***Yellow*** is the first color a person distinguishes in the brain.
∞ ***Orange*** has the characteristics halfway between red and yellow.
∞ ***Blue*** calms the tense subjects, increasing feelings of well-being. ***Sky blue*** is the most tranquilizing color. When you see blue, your brain releases 11 neurotransmitters that bring relaxing calmness to the body. Effects can lower body temperature, reduce perspiration and appetite.
∞ ***Green*** is also a calming color. The body reacts in many ways: blood histamine levels are elevated; less sensitivity to food allergies; antigens are stimulated for overall better immune system healing.
∞ ***Darker*** colors lower stress and increase feelings of peacefulness.
∞ ***Brown*** promotes a sense of security, relaxation and reduces fatigue.
∞ ***Gray*** is the most neutral color.

"How does color affect the learner?

∞ ***Blue*** – studying, thinking, concentration
∞ ***Purple*** – Tranquilizing, good for appetite control.
∞ ***Pink*** – restful, calming.
∞ ***White*** – disrupting.
∞ ***Red*** – creative thinking, short-term energy boosts.
∞ ***Green*** – productivity, long-term energy.
∞ ***Light Color, Pastels*** – minimum disruption across all moods/activities.
∞ ***Yellow, Orange, Coral*** – physical work, exercising, positive moods."

The *Visual Teacher* uses lateral thinking techniques by understanding
left brain dominance vs. right brain dominance.

The brain switches dominance every 90 to 120 minutes.

Recommended book: "Drawing From the Right Side of the Brain" by Betty
Edwards.

Learning Styles

∞ ***Cognitive***: psychological (left brain/right brain, analytical/relational, reflective/impulsive) and sociological (concept of self, partner, group).

Fostering Cognitive Diversity

∞ Design tasks which learners can complete within their ability to pay attention.
∞ Include active tasks involving tactile-kinesthetic, as well as analytical behaviors.
∞ Encourage or allow students to reflect before oral or written answers.
∞ Provide sufficient array of tasks requiring organization and analysis.

Blog : http://visualteaching.ning.com

∞ ***Affective***: emotional (motivation, persistence and self-confidence).

Fostering Affective Diversity

∞ Promote a personal approach with students.
∞ Relate concepts to personal interests and experiences.
∞ Model what is taught whenever possible.
∞ Use materials to elicit expression of feelings.
∞ Emphasize holistic explanations first before focusing on specific details.
∞ Personalize the curriculum.
∞ Use humor where appropriate.
∞ Use role-play and drama.
∞ Use cooperative learning.
∞ ***Physiological***: environmental (light, sound, temperature, design structure) and physical (perception, time, posture, mobility, food intake).

Fostering Physiological Diversity

∞ Modify seating, temperature, sound and light in the classroom.
∞ Check frequently for comprehension.
∞ Allow wait time for students' responses.
∞ Encourage physical mobility through varied tasks involving different modalities (visual, auditory, tactile-kinesthetic).

***Imagery* invokes the part of our brain that assembles symbols and visual elements into stories.**

The Visual Teacher encourages the student to encode and/or make more effective images through passive, neutral and active visual communication

Passive Communication

∞ Decide what your subject will be.

Neutral Communication

∞ Fill your viewfinder.
∞ Keep your background simple.

Active Communication

∞ Change your point of view.
∞ Turn your camera.
∞ Tell a story.

***Imagery* communicates in an emotional and pre-rational style that can bypass logical thought.**

The *Visual Teacher* encourages the understanding of decoding still and moving images to understand their conscious and unconscious meaning.

General Photo Tips

∞ Pay close attention to composition.
∞ Give students something to do.
∞ Shoot outside pictures in the morning and late afternoon.
∞ Capture the flavor of the place.
∞ Don't be afraid to experiment.
∞ Look for the extraordinary in the ordinary.

Digital Photo Tips

∞ Don't erase too quickly.
∞ Take pictures through the viewfinder and not the LCD.
∞ Take extra batteries with you at all times.
∞ Use the flash override for people pictures.
∞ Take lots of pictures.
∞ Consider a digital photograph as a starting point (recommended Web site: www.worth1000.com).
∞ Carry plenty of storage media.

Selecting a Digital Camera

∞ How big do you want the finished picture to be?
∞ Why size camera do you want?
∞ Optical or digital zoom lens?
∞ What size is the LCD display?

How to Kill Creativity

∞ Encourage renting (borrowing) instead of owning ideas.
∞ Assign grades without informative feedback.
∞ Demonstrate instead of having students practice.
∞ Praise nestness and conformity more than expressive original work.
∞ Give freedom without focus.
∞ Give suggestions intead of asking open-ended questions.
∞ Give an answer intead of teaching problem solving strategies.

Want to schedule the next workshop in the series? Call for information on Level II or III.

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