Thinking and Learning Styles…a brief review

Six Thinking Hats: Different ways of looking at an issue *It is possible to wear more than one hat, and one hat is not better or worse than the other!

1. **White –** Focuses on observable data, what is known and what could be missing, "just the facts"
2. **Yellow –** The positive perspective, focuses on advantages or opportunities, "the optimist"
3. **Black –** Focuses on risks, problems and challenges, "the pessimist"
4. **Red –** The emotional perspective, does not need to explain or rationalize, "feelings, intuition and emotions"
5. **Green –** Innovation and thinking outside the box, the brainstormer, "creativity and imagination"
6. **Blue –** Systemic thinking, seeing the integrated whole as more than a sum of the parts, oversight and management, "the big picture"

Gardner's Multiple Intelligences: How one learns or solves problems *It is possible to utilize more than one method!

1. **Linguistic/Auditory –** Sounds, rhythms, meanings of words, written and spoken language, "tell me"
    - Discussions, Q & A, word games, journals, and record information to audio/visual formats
2. **Logical-mathematical –** Numerical patterns, inductive and deductive reasoning
    - Lists or processes with patterns, timelines, codes, logic puzzles, and compare/contrast activities
3. **Musical –** Rhythm, tone, pitch
    - Music, rhythm activities and pod casts
4. **Spatial –** Transformation of concepts, perceptions and mental images into visual examples, "show me"
    - Maps, color coding, flow charts, graphic notetaking and flash cards
5. **Kinesthetic/Tactile –** Movement and handling of objects, practical experience, "let me try"
    - Role playing, field trips and artistic activities
6. **Interpersonal –** Responsive to mood, motivations and desires of others
    - Peer collaborations, interviews, blogging and role playing
7. **Intrapersonal –** Understanding and utilization of one's own feelings, strengths, weaknesses, intelligences
    - Reflection, self-evaluation and independent activities
8. **Naturalist –** Recognition and classification of the natural world
    - Field trips and observation

The benefits in knowing these ways of thinking and learning…

- Understanding and appreciating the different thinking perspective can tease out creative energy within your group
- It can generate momentum and strengthen the group's productivity
- It gives validation to all perspectives
- It suspends judgment so more ideas can be brought out
- It improves communication and decision making
- Overall thinking becomes clearer when different perspectives are brought to light

Multiple Intelligences Activities Chart

How do you ensure all of your students' intelligences are being tapped? Here is a list of activities that speak to each intelligence.

Verbal-Linguistic	Logical-Mathematical	Visual-Spatial	Bodily-Kinesthetic
▪ choral speaking ▪ storytelling ▪ retelling ▪ speaking ▪ debating ▪ presenting ▪ reading aloud ▪ dramatizing ▪ book making ▪ nonfiction reading ▪ researching ▪ listening ▪ process writing ▪ writing journals	▪ problem solving ▪ measuring ▪ coding ▪ sequencing ▪ critical thinking ▪ predicting ▪ playing logic games ▪ collecting data ▪ experimenting ▪ solving puzzles ▪ classifying ▪ using manipulatives ▪ learning the scientific model ▪ using money ▪ using geometry	▪ graphing ▪ photographing ▪ making visual metaphors ▪ making visual analogies ▪ mapping stories ▪ making 3D projects ▪ painting ▪ illustrating ▪ using charts ▪ using organizers ▪ visualizing ▪ sketching ▪ patterning ▪ visual puzzles	▪ hands on experiments ▪ activities ▪ changing room arrangement ▪ creative movement ▪ going on field trips ▪ physical education activities ▪ crafts ▪ dramatizing ▪ using cooperative groups ▪ dancing

Musical	Interpersonal	Intrapersonal	Naturalistic
▪ humming ▪ rapping ▪ playing background music ▪ playing instruments ▪ tapping out poetic rhythms ▪ rhyming ▪ singing	▪ classroom parties ▪ peer editing ▪ cooperative learning ▪ sharing ▪ group work ▪ forming clubs ▪ peer teaching ▪ social awareness ▪ conflict mediation ▪ discussing ▪ cross age tutoring ▪ study group ▪ brainstorming	▪ personal response ▪ individual study ▪ personal goal setting ▪ individual projects ▪ journal log keeping ▪ personal choice in projects ▪ independent reading	▪ reading outside ▪ cloud watching ▪ identifying insects ▪ building habitats ▪ identifying plants ▪ using a microscope ▪ dissecting ▪ going on a nature walk ▪ build a garden ▪ studying the stars ▪ bird watching ▪ collecting rocks ▪ making bird feeders ▪ going to the zoo

Reference: TeacherVision: http://www.teachervision.fen.com/intelligence/teaching-methods/2204.html
Innovative Teaching Concepts: http://www.todaysteacher.com/MILearningActivities.htm

Technology-Specific Activities

Verbal-Linguistic	Logical-Mathematical	Visual-Spatial	Bodily-Kinesthetic
▪ word processing and desktop publishing ▪ video scripting and recording ▪ voice annotation in word processing ▪ using comment features in word processing ▪ story-creation software ▪ multimedia authoring and presentation ▪ audio recorders for recording oral histories and/or interviews ▪ email, chat, social networking ▪ discussion forums for talk and debating ▪ reading and evaluating Web information ▪ use of electronic reference tools and interactive books - encyclopedia, dictionaries, CD's	▪ organizational tools (databases, calendars) ▪ calculation tools (spreadsheets) ▪ scientific equipment (probes) ▪ science and math software ▪ spreadsheets ▪ graphing calculators and software ▪ using multimedia authoring to display results ▪ videotaping experiments, demonstrations, data gathering ▪ using animation to demonstrate an experiment ▪ online data collection ▪ problem solving software ▪ strategy, logic, and critical thinking software	▪ creating comics and sequential art ▪ creating with CAD - Computer-Aided Design ▪ using animation software ▪ building online puzzles ▪ drawing and painting programs ▪ using timeline software ▪ desktop publishing ▪ concept mapping tools and diagrams ▪ computer-generated charts, graphs, and tables ▪ spreadsheets for charts and graphs ▪ web development tools ▪ digital drawing pads ▪ 3D and morphing software ▪ map making ▪ video conferencing ▪ scrapbooking, photo albums, and slide shows ▪ presenting visual information materials: photographs, clipart, charts, graphs, tables ▪ color-coding projects and ideas ▪ matching pictures to vocabulary words ▪ Websites with visual or color organizers ▪ creating visual artwork ▪ using computer-generated board games ▪ working with digital cameras	▪ keyboarding, mouse, joystick, and other devices for movement ▪ using scientific probes and microscopes ▪ producing videos skits, dances, sports, role playing, demonstrations with video or digital cameras ▪ animation ▪ claymation - sequence of movement ▪ using handheld palms ▪ using or creating virtual field trips ▪ creating with Lego Logo and Robotics or other construction kit projects ▪ virtual worlds and gaming
Musical	**Interpersonal**	**Intrapersonal**	**Naturalistic**
▪ using video and audio recorders to digitize singing and musical instruments ▪ working with sound and music files ▪ generating music clips ▪ using music generation software ▪ creating animation with musical elements ▪ using music composition software ▪ creating audio DVDs and CDs ▪ working with interactive books and audio elements ▪ using audio notation in word processors	▪ blogging and email projects ▪ use of chat ▪ word processing ▪ forums and discussions ▪ video and teleconferencing ▪ group decisions software ▪ social networks ▪ video recording - sharing with others through skits, debates, role plays ▪ collaborative computer software or games ▪ group presentations (PowerPoint) ▪ peer tutoring ▪ virtual worlds	▪ computer-based journaling and blogging ▪ creating concept maps ▪ using problem solving software ▪ conducting Internet research ▪ creating video projects to record personal ideas ▪ creating multimedia portfolios	▪ using audio, video or digital cameras to record natural world ▪ word processing - journaling, natural information ▪ data organization and calculation (database, spreadsheet) of observations ▪ use microscopes and probes to show nature up close ▪ geocaching with GPS equipment

Reference: Teacher Tap, Technology and Multiple Intelligences: http://eduscapes.com/tap/topic68.htm