

# Multiple Intelligences and Technology

*Multiple Intelligences theory, as described by Howard Gardener, can help us make good decisions about **creative and appropriate** uses of educational and assistive technology, whether we want to tap into a student's learning styles and strengths or support students who struggle with a particular approach to learning.*



## Bodily•Kinesthetic

- These learners need frequent breaks from the computer in order to move around.
- Choose interactive software with an active focus or theme (e.g. Living Books).
- Provide related hands-on props and manipulatives at the computer.
- Consider using animation & digital photography for class projects.
  
- For learners with *poor* bodily-kinesthetic awareness (especially students with physical disabilities), creativity software (e.g. Kid Pix, Blocks in Motion) and computer simulations (e.g. Oregon Trail) can provide new opportunities for “hands-on” learning.



## Interpersonal

- Interpersonal learners work best in cooperative groups, and computers are excellent tools for cooperative learning.
- Have 2 to 4 students work together on one computer by assigning and rotating roles, e.g. keyboarder, mouser/author, captain/time-keeper, and reporter.
- Or, students can work sequentially on a common project by taking on different tasks (captain, outliner, writer, illustrator, editor, producer, etc.)
  
- Students with *weaker* interpersonal and academic skills can successfully contribute to cooperative learning activities by using computer-based tools and strategies such as alternative keyboards, word-prediction software, and even spell-checkers.



## Intrapersonal

- These learners enjoy independent computer time for research and journaling.
- Interactive tutorials let students explore and work at their own pace.
- E-mail or a class listserv (on-line discussion group) allows quieter students time to reflect and contribute without demanding an immediate response in front of a group.
  
- Learners who have *difficulty* working independently can benefit from a computer-based reading & writing activity with prompts for reflection embedded in the text.



## Linguistic

- Let these learners delve into advanced tools for researching, outlining, editing, etc.
- Your linguistic learners can serve as editors and writing coaches for their peers.
  
- For students who *struggle* with language, try multimedia encyclopedias & interactive storybooks which enhance the text with sound, pictures and animation.
- Word processors let students experiment and edit without erasing a hole in the paper.
- Talking word processors (e.g. IntelliTalk, Write Outloud) let kids hear what they type.

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## Logical•Mathematical

- These learners may be your best (or worst!) allies when technical difficulties arise.
- Use open-ended tools (e.g. The Cruncher) to formulate & analyze real-life problems.
- For answers to endless “why” questions, try web sites like [www.madsci.org/](http://www.madsci.org/) — e-mail a question, and one of a network of scientists will respond.
- Students can hone critical thinking skills with open-ended software which features both exploration and Q&A modes (e.g. Thinkin’ Things), provides a motivating storyline (e.g. Logical Journey of the Zoombinis), or combines math with creativity (e.g. Tesselmania).



## Musical•Rhythmic

- These learners enjoy — and benefit from — the endless variety of sounds used to alert, entertain, & inform computer users.
- Use text-to-speech software to hear text read in a variety of musical & novelty voices.
- Software and hardware abounds for composing and playing music on the computer.
- Multimedia creativity tools (e.g. Digital Chisal, HyperStudio, IntelliPics) allow students to incorporate voice, sound and music into their projects.
- Many software titles provide structure and support for exploring and experimenting with music and rhythms (e.g. Math Patterns, Thinkin’ Things).
- Tip: Evaluate software for students with *hearing impairments* by turning off your computer’s sound — are there visual as well as auditory prompts & feedback?



## Naturalist

- These learners may shun technology until they realize they can use the Internet to learn about weather, endangered animals, plants and distant places on the planet (& beyond) with Internet expeditions (e.g. [www.globalearn.org](http://www.globalearn.org)) and live Internet cameras.
- Environmental simulations (e.g. Sim Earth) let kids try their hand at making things work.
- Many kids lack opportunities to explore the natural environment. Science & environmental web sites and software titles (e.g. Bill Nye the Science Guy) open a window on the world for urban, disabled, low-income or just plain squeamish kids.



## Visual•Spatial

- Cognitive organizers (e.g. Inspiration) allow students to brainstorm webs or mind maps and move back and forth between visuals and written outlines.
- Multimedia tools (e.g. HyperStudio) allow students to create reports and activities which incorporate text, drawings, animations, video, sound, and more.
- Students who have *difficulty* creating visual models can use clip art, drawing & painting tools, and desktop publishing programs (e.g. the PrintShop).
- Many CDs (e.g. The Way Things Work, A.D.A.M.) provide interactive visual models.