HIGH TECH ART
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"If you asked me should people be studying physics, or chemistry or biology or geology in high school, I would say it doesn't make the slightest bit of difference. They should study some topics, of course, but the choice is wide open — I'm interested in depth, not breadth. I'm not talking about college education; I'm just taking on K to 12. What I want when kids get through a K to 12 education is for them to have a sense of what their society thinks is true, beautiful and good; false, ugly and evil; how to think about it and how to act on the basis of your thoughts." Howard Gardner [2]

1. In 1986 Southmont introduced computers, the newest art medium, to students in the art room as a vital part of the art curriculum.[1]
2. Since 1986 these classes have grown—students are interested in learning.
3. The art budget has shifted dramatically to require much less consumables but more long-lasting equipment: computers, software, printers and ink.
4. The complex level of thinking in a high tech art room creates a magnet for creative, motivated thinkers, i.e. for an Core 40, Honors Diploma or AP credit.
5. Grades 9 through 12, students from all academic levels and from all ability levels learn together.
6. The same course work is taught to high school freshmen that is taught to doctoral level students who receive Indiana University academic credits. Young people are adept at learning the same material—they appreciate the challenge.
7. Career oriented art students are drawn to this class because of the creative problem solving. Because of the "*knowledge explosion*" in the new millennium, students must learn more math, science, language arts and compete with better S. A. T. scores to get into college. In this class they must think creatively in methods that encourage their seven sides of the brain: [2]
   a. spatial visualization
   b. musical
   c. inter-personal communications
   d. intra-personal communications
   e. mathematical
   f. scientific
   g. bodily kinesthetic
8. Bloom's Taxonomy[3] is used in solving problems.
   a. knowledge
   b. comprehension
   c. application
   d. analysis
   e. synthesis
   f. evaluation

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[1] Leonardo da Computer Art, Eleanor K. Brewer, published in ERIC, Clearinghouse for Social Studies/Social Science Education, Development Center, Bloomington, IN (812-855-3838)
B. A. E. & M. A. E. Herron School of Art, Indiana University, Indianapolis/Bloomington, Indiana (1985).
[2] FRAMES OF MIND, Howard Gardner
[3] BLOOM'S TAXONOMY, Bloom, Benjamin (1956).

HOW TO think CREATIVELY IN ART, MUSIC, SCIENCE, LANGUAGES, IN LIFE

Computer Graphics classes are creative-problem-solving classes with high tech materials and techniques. Students soon learn that what appear to be insurmountable problems—*chaos if you will*—can most times be fixed with a simple variation or variable. *It's just like LIFE.* Students find a great amount of self-esteem by taking charge of their own creation and making it into something useful for mankind, or to communicate a sentiment, idea or bit of beauty for themselves or for others. Students learn:

STRUCTURE
1. ELEMENTS and PRINCIPLES of good design. They learn to push back the unimportant, delete the parts that they don't like, the parts and pieces that do not work for them, to repeat pieces, shapes, objects that are good, and soon learn to create an EMPHASIS, A FOCAL POINT, the GOAL.
2. Students soon learn that their first idea, their first attempt might not be their best one. They learn to use Variations, VARIABLES. They learn that CREATIVITY IS INFINITE. They learn to BALANCE their artwork, just as they learned to balance and play on the playground in grade school on the teeter-totter: eg. a BIG DAD must be balanced with THREE LITTLE KIDS. (TWO BIG DADS on a teeter-totter DON'T MAKE FOR VERY MUCH FUN—they are **too symmetrically** balanced).
3. Variables can be variations of **any** of the elements and/or principles.
4. Most important, students learn to vary **any or all** of the Structural (elements or principles), Historical (style influence), Formation (materials and techniques), Relational (function), Philosophical (their own personal value system) and critique their own work.

HISTORY
1. Lessons begin by researching a famous artist's work as a catalyst for ideas.
2. Using Variables in different style periods students soon learn there is *nothing new under the sun,* only variations of ideas already begun by artists in a different way or artists who are unable to complete their work in another culture. E.g. Leonardo da Vinci's inventions.

FORMATION
1. Each lesson requires a project, a finished product.
2. Work is finished, most work is matted, displayed. We critique our work.

RELATIONSHIP
1. Each student must finish an assignment that is functional. My requirement is that each student must think of an idea that would be *good for mankind*.
2. Students are a part of this humanity, and therefore may develop an idea that is for their own use. E.g.Therapy is good. Envisioning the future is good.
3. Art Records History. More importantly, **Art Starts Movements.**

PHILOSOPHY
1. Students are required to think creatively.
2. Students must express their own sentiments, ideas "statement of the times."
3. Students become aware of their own value system.
4. Students learn to communicate their own moods, emotions, actions.
5. Students learn to change the moods, emotions, and actions of others via art.