

Planning and Implementation for Effective Technology Use in Education

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In Preparing to Use Technology in Classrooms it Helps to Think through the Process

- ◆ Preparation
- ◆ Planning
- ◆ Software & Hardware Evaluation
- ◆ Strategic Technology Integration Plan in Mind
- ◆ Consider Stages of Adoption for Educators
- ◆ Aligning Resources
- ◆ Other Critical Points



I. Prepare: What Are Expected Outcomes?

- ◆ Motivation
 - ◆ attention, involve - production, control
- ◆ Unique instructional capabilities
 - ◆ linking, visualizing, tracking
- ◆ Supports new instructional approaches
 - ◆ coop. learning, shared intelligence, HOTS
- ◆ Greater teacher productivity
 - ◆ Time, accurate info., better materials

II. Prepare - Planning Guide

- ◆ Merged vision- organization mission and philosophy, then technology
- ◆ Assess current status . school and indiv. Goal setting - based on data
- ◆ Develop activities to implement
- ◆ Implement the plan
- ◆ Evaluate and revise the plan as needed
 - ◆ Based on Robyler (2002)



Ila. Software & Hardware Evaluation

- ◆ Factors- software and hardware)

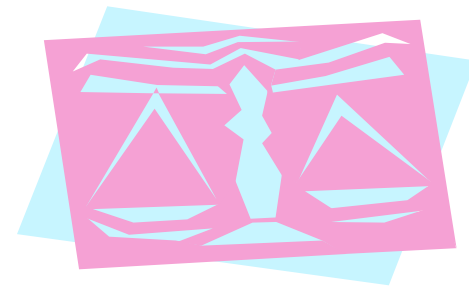
- ◆ Software

- ◆ Match curriculum with students
- ◆ Quality products
- ◆ Product reviews by educators
- ◆ Number of copies
- ◆ Source of best price

- ◆ Hardware

- ◆ Type of hardware platforms (PC, Mac, Linux, etc)
- ◆ How many computers?
- ◆ Individual computer configs.
- ◆ Other equipment

- ◆ Your recommendations – to come....



Let's Look at a Few Examples Simulation Software

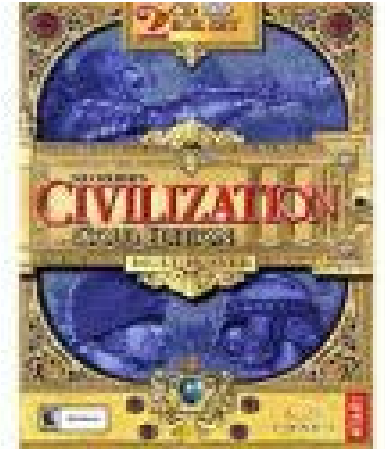


◆ SimCity

http://simcity.ea.com/play/simcity_classic.php

- ◆ Very popular simulation of urban development
- ◆ Have you played SimCity, Simearth, or SimPeople?
- ◆ What skills did you learn?
- ◆ How did it work?
- ◆ What age group do you think can do SimCity?
- ◆ My experience - ____ yrs old learn it, problem solve, and even apply the information to daily life!

Civilization



- ◆ <http://www.answers.com/topic/civilization-iii>
- ◆ %**Sid Meier's Civilization III** is a turn-based strategy computer game by Firaxis Games %o
- ◆ %*Civilization III*, like the other *Civilization* games, is based around building an empire, from the ground up, beginning in prehistoric times and continuing through the modern day.
- ◆ The player's civilization is centered around a core of cities, which provide the resources necessary to grow the player's cities, construct city improvements, wonders, and units, and advance the player's technological development.
- ◆ **The player must balance a good infrastructure, resources, diplomatic and trading skills, technological advancement, city and empire management, culture, and military power to succeed.”**
- ◆ (Good summary from Wikipedia)

BioBLAST® a NASA Funded Project



View the **BioBLAST** introductory video to see why BioBLAST is right for your classroom.

Website--

<http://www.cet.edu/products/bioblast/overview.html>

Video clip--

<http://www.cet.edu/products/bioblast/intro.html>

BioBLAST® takes students down on the farm (to study biology). Man cannot live on bread alone. And freeze-dried astronaut food isn't much better.

In **BioBLAST®** students use their human and plant biology know-how to become space farmers of sorts. Their goal is to design and test a model for a life support system that is plant based. These plants have to sustain a crew of six for three years. (BioBLAST homepage)

Key Features and Topics Include:

- Virtual reality interface.
- Laboratory investigations.
- Computer simulations.
- Online resources.
- Ask the NASA Expert.
- Experts in Science companion CD.

TOPICS

Problem-based learning, bioregenerative life support, plant growth, recycling, requirements of life

PFT Episodes where we talk about gaming, simulations and education

- ◆ Podcast for Teachers . Co-produced and co-hosted by myself and my colleague Mark Gura
- ◆ Over the last 2 years we have had 3.07 million listeners
- ◆ For the complete list of our archives (all our shows go to <http://www.podcastforteachers.org/TechpodArchives.html>)

- ◆ Episode 77

- ◆ 72

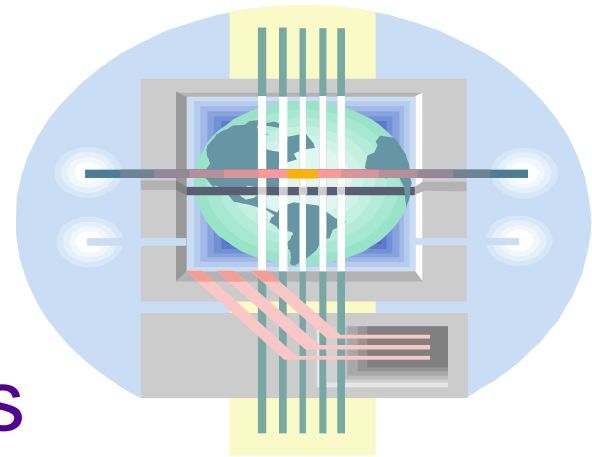
- ◆ 64

- ◆ 44

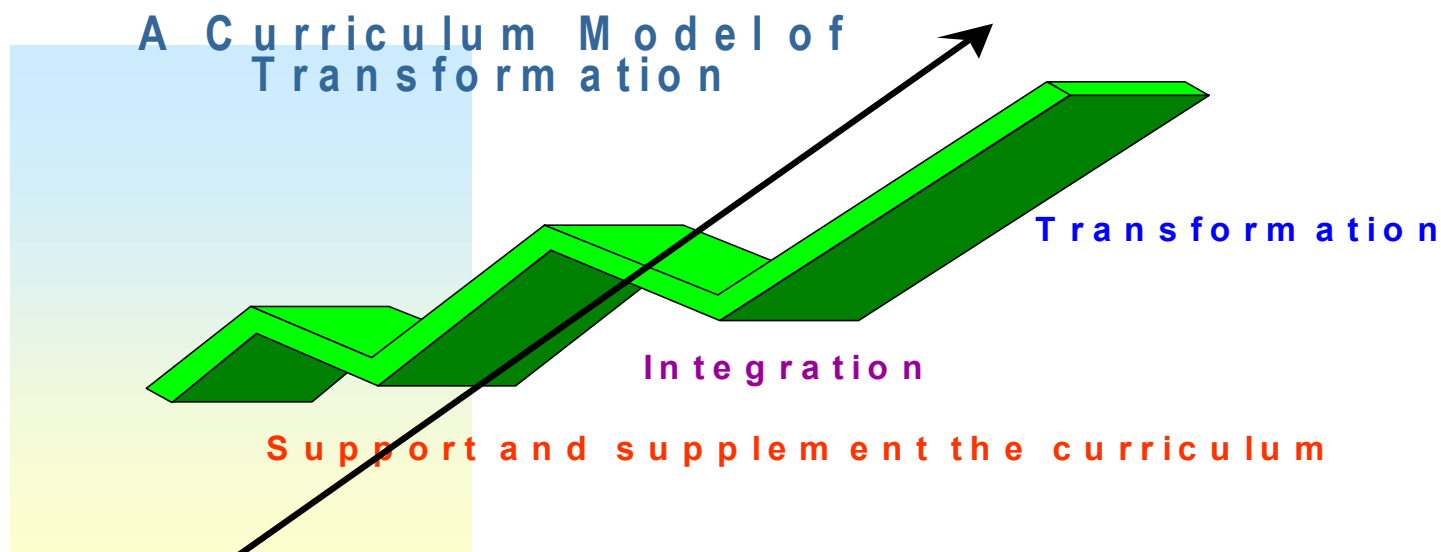


IIc. Have A Strategy for Technology Integration

- ◆ Needs assessment
- ◆ Planning instruction
- ◆ Logistics
- ◆ Prepare to use resources
- ◆ Try it! Evaluate and revise



IId. Consider the stages educators go through as they use technology more in their educational practice.



King, K. P. (2002) *Keeping Pace with Technology: Educational Technology that Transforms: Vol 1*. Cresskill, NJ: Hampton Press.

III. Aligning Resources

- ◆ While we want to focus on educational applications, we have to keep an eye on aligning resources and making selective choices
- ◆ Research funding options
- ◆ Hardware & software choices- fit the need
- ◆ Layout, setup/assembly - environment, acquisition, administration
- ◆ PD & In-service . technology learning, methods, integration



IV. Protecting Your Investment

- ◆ Don't forget about planning for calamity!
 - ◆ Rules and procedures
 - ◆ Maintenance issues
 - ◆ Security
 - ◆ Internet firewalls & filters
 - ◆ Viruses



V. Also Consider these Critical Points

- ◆ Equity - economic, ethnic, gender
 - ◆ Opportunities to increase diversity awareness & access
- ◆ Ethical and legal issues 
 - ◆ Copyrights and Intellect Property Ownership
 - ◆ Legal liabilities with young learners
- ◆ Keeping up with change
 - ◆ Professional development
 - ◆ **Personal and organizational efforts**
 - ◆ **Planned upgrade monies and timetable**

