Technology Infused Ideas for Learning-Centered Classrooms

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Making the Shift

Redefinition of how students learn is the goal of the 2016 International Society for Technology in Education (ISTE) Standards for Students

How have the ISTE Standards for Students evolved?

1998 Learning to use technology
2007 Using technology to learn
2016 Transformative learning with technology
SAMR Framework that helps teachers infuse technology into teaching and learning with the goal of transforming learning to meaningful experiences that promote greater achievement.

S - Substitution
A - Augmentation
M - Modification
R - Redefinition
Turn and Talk
Today’s Focus

We will share how we infused technology in the following learning opportunities…

1. Genius Hour
2. Engineering Design Process
3. Interdisciplinary Coding/Robotics
Genius Hour Research Project

1. Research (LiveBinder, Evernote, Diigo)
2. Regular updates (FlipGrid)
3. Presentation (Haiku Deck, VoiceThread, Adobe Spark Notes)
4. Share, discuss, reflect, collaborate (VoiceThread, Google Blogger/Kidblog, FlipGrid, Discussion forum)
LiveBinder

Organize information by category into “containers” or files - just as you would with paper files on your desk.

Example: Leveraging Social Media In the Schools

Leveraging Social Media for Schools

By: Ginger Lewman

Take a look at the hottest social media apps and how we might leverage these tools for learning, not only with our students, but also for free 24/7 professional learning for teachers.
Collect - bookmark and tag web-based resources
Annotate - highlight, add sticky notes (active reading)
Organize - by tagging, outlining
Share/Collaborate - with groups, the world, etc.
(problem solving)

Educator accounts available
VoiceThread

Create and share a presentation and open it up for asynchronous discussion.

5 Free Limited VoiceThreads
Students respond to prompts you create with brief videos

One free grid - unlimited topics

Enter Code: Angiekalthoff

Try It!
Engineering Design Process

1. Brainstorm (Padlet)
2. 3D printing (TinkerCad, Cura)
3. Assessment (Blogger)
PADLET

Interactive dashboard to collaborate live online

Free

Try it

3D Printing

Prototype to Product
TinkerCAD

3D Design software that you can download files to print.

_________
Free
_________
Works on any device, one login for the entire class.
Cura

Slicing software to put files in gcode to print.

Free

Works with the Ultimakers printers.
Blogger

Blog software from Google

Free

Allows students to share with the world.
3.6.3.3 Write narratives and other creative texts to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

3.1.2.2 Use addition and subtraction to solve real-world and mathematical problems involving real numbers. Use various strategies, including the relationship between addition and subtraction, the use of technology, and the context of the problem to assess the reasonableness of results.

3.1.1.2.1 Generate questions that can be answered when scientific knowledge is combined with knowledge gained from one’s own observations and investigations.

1. Unplugged/Plugged Lessons - (Code.org)
2. Computer programming - Blocky
3. Robotics (Ozobots)
4. Video - iPad (Explain Everything)
## Code.org - Unplugged

Coding lessons for students that do not require a device.

- **Free**

Hands-on approach to coding concepts.

### New Word!

<table>
<thead>
<tr>
<th><strong>Persistence</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Say it with me: Per-sis-tence</td>
</tr>
<tr>
<td>Trying again and again, even when something is very hard</td>
</tr>
</tbody>
</table>

### New Word!

<table>
<thead>
<tr>
<th><strong>Algorithm</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Say it with me: Al-go-ri-thm</td>
</tr>
<tr>
<td>A list of steps that you can follow to finish a task</td>
</tr>
</tbody>
</table>

### Features

- No computer required
- Collaborative activities
- Computational Thinking
- Algorithms
- Loops
- Conditionals
- Variables
- Functions
Code.org

Coding courses for students.

Free

Teachers can monitor students progress.

Free training - bit.ly/codewithangiews

<table>
<thead>
<tr>
<th>Course 1</th>
<th>Course 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages 4-6</td>
<td>Ages 6+</td>
</tr>
</tbody>
</table>

- Early-readers
- Sequences
- Loops and events
- Meaningful collaboration with others
- Problem-solving and perseverance techniques
- Internet safety

- Beginner readers
- Conditionals
- Algorithms
- Binary Code
- Debugging
- Societal impacts of computing
Blockly coding for students.

Free

Internet based. No login. Can program robots.
Robotics

Ozobot

Sphero

Dash and Dot
<table>
<thead>
<tr>
<th>Do Less</th>
<th>Do More</th>
<th>With This...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telling</td>
<td>Questioning</td>
<td>Research (LiveBinder, Diigo, Evernote)</td>
</tr>
<tr>
<td></td>
<td>Thinking</td>
<td>Discussion/Sharing (FlipGrid, Discussion Forums, KidBlog)</td>
</tr>
<tr>
<td></td>
<td>Research</td>
<td>Presentation (Haiku Deck, Adobe Spark)</td>
</tr>
<tr>
<td></td>
<td>Collaboration</td>
<td>Collaboration (VoiceThread, FlipGrid)</td>
</tr>
<tr>
<td>Solo/Quiet Work</td>
<td>Choice</td>
<td>Brainstorming (Padlet)</td>
</tr>
<tr>
<td></td>
<td>Creativity</td>
<td>Reflecting (Blogger)</td>
</tr>
<tr>
<td></td>
<td>Failure</td>
<td>3D Printing (TinkerCad)</td>
</tr>
<tr>
<td>Textbook as</td>
<td>Standards-Based</td>
<td>Robotics/Coding (Code.org, Blockly)</td>
</tr>
<tr>
<td>Curriculum</td>
<td>Interdisciplinary</td>
<td>Video (iMovie, Explain Everything)</td>
</tr>
</tbody>
</table>
For More Ideas

1. See our articles:
   ○ ASCD - Try This, Not That: Make Over Your Lessons to Promote Student Understanding & Curiosity
   ○ MiddleWeb - Are We Covering Or Are Students Discovering?

2. Twitter:
   ○ @dianafenton1
   ○ @IfNotUsThnWho
Questions?
Contact Us


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Workshops


July 24th - Beyond the Hour of Code - College of St. Benedict (Free) (9am-3pm)

https://www.ermarie.com/opportunities/opportunitysearch

July 25th - 3D Printing - College of St. Benedict (Free) email dfenton@csbsju.edu (9am-3pm)

July 28th - Scratch Day - College of St. Benedict (Free) (9am-12pm)

https://www.ermarie.com/opportunities/opportunitysearch