Next Gen Tech: Raspberry Pi, 3D Printing, Google Expeditions, and More

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Start ‘Em Small:
3D Printing and Design in the Elementary Classroom

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Project Goals

- Creative and innovative problem solving.
- Productive failure.
- Engineering design process.
- STEAM disciplines skills.
- Core subject objectives.
- Give students authentic experiences with cutting edge technologies.
Getting Started: Materials

Hardware:
  Dremel Idea Builder 3D20 printers ($970)
  Extra filament

Software:
  Dremel firmware
  Dremel3D

Web-based:
  TinkerCAD
  Project Ignite
  3DTin
  3DSlash
Printer Management Craziness

Potential demand for 500 or more projects

Year 1 focus -- grades 3-5

Staggered start (Class A--Week 1; Class B--Week 2; etc.)

Classroom teachers--scheduled**

Yeah, if you could just come and and finish printing on Saturday and Sunday... that would be great.
Feedback and Observations

TinkerCAD/Project Ignite: 75% very satisfied; 25% Somewhat satisfied

Dremel Printer: 50% very satisfied; 25% somewhat satisfied; 25% somewhat dissatisfied

At times the printer will knock over the project during printing. Other times it had a system error message that stop the printing midway.

Projects thus far: fall items; items we are thankful for; Halloween; buttons

This is great for my kiddos! They love it and it teaches them to problem solve, work in a collaborative group setting, be creative, and complete the revising and editing process in a tangible way. My students see their item printed, and can revise any mistakes and edit them. Then print it again. This is a concrete example of the writing process is action.

Some of my students were so excited to work from home. Those who did, had completed their projects early.
Raspberry Pi Camp
What is it?

What can it do?
Two years of Pi!

Three years of Pi!

Four years of Pi!
Vision

Skills

Project Management
Resources

Camp Application

Pi Camp Pictures