

## Learning Connections in Math, Science, and Technology



Dave Janosz  
Fair Lawn High School

PT3 Workshop  
Ramapo College  
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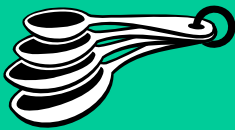
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## What is Technology?



- Technology: the devices and systems that humans create to satisfy wants and needs.
- Computers are technology, but so are spoons!

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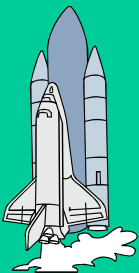
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## Studying Technology



- Interdisciplinary and thematic by nature
- Experiential learning of concepts within a real-world context
- "Just in time" rather than "just in case" learning
- Hands-on problem solving
- "Planting Seeds"

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## Example Activities



- Three example activities within the following themes:
- Electricity
- Mechanical Toys
- Airplanes

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## Electricity



- Elementary school level activity
- Science concepts may include electricity, material properties, etc.
- Math concepts may include proportions, basic calculations, etc.

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## Electricity



- Activity #1:
- Experiment with given materials: wires, switches, buzzers, batteries, motors, etc.
  - Questioning is the key!
- Activity #2:
- Design and make a switch using the given materials

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## Electricity



Comments/Discussion

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## Mechanical Toys



- Middle or high school level activity
- Science concepts may include force, power, types of motion, potential and kinetic energy, etc.
- Math concepts may include ratios, time, measurement, etc.

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## Mechanical Toys



- Activity #1:
- Analyze the control mechanism of a mechanical toy
- Activity #2:
- Design and make a mechanical toy mechanism using LEGOs

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## Mechanical Toys



Comments/Discussion

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## Airplanes



- Middle or high school level activity
- Science concepts may include Bernoulli's principle, forces, center of gravity, etc.
- Math concepts may include ratios, speed calculations, etc.

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## Airplanes



Activity:

- Design and make an "aerobatic" glider using paper, tape, and paper clips

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# Airplanes



Comments/Discussion

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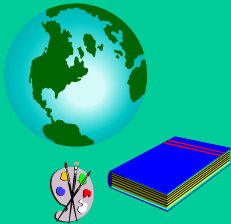
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# Making Other Connections



- The Collateral Curriculum
- What connections to other areas of study could be made within the themes explored today?
- What other "rich" themes could provide students with these types of learning experiences?

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