November 1, 2006
PLTW Counselors, Teachers and Administrators Conference
Starved Rock Conference Center Utica, Illinois

Presented: 11/1/2006
Gateway to Technology

Winnebago Middle School
Winnebago, Illinois

Melissa Johnson

Brenda Sojka

Presented: 11/1/2006
Background

- **Melissa**
  - Science teacher
  - Currently 3-8\textsuperscript{th} science, 2-7\textsuperscript{th} GTT, 1-8\textsuperscript{th} GTT
  - 7 years teaching experience, middle school
  - MA-St. Xavier

- **Brenda**
  - Science teacher
  - Currently 3-8\textsuperscript{th} science, 2-6\textsuperscript{th} GTT, 1-8\textsuperscript{th} GTT
  - 23 years teaching experience, high school and middle school
  - MA-Olivet-Nazerene

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Implementation Cycle

- Three year plan
- Each year add new GTT module
- Currently in year 2 of implementation cycle

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Year One

- 6th grade (9 Weeks)
  - Design and Modeling
- 7th grade (9 Weeks)
  - Design and Modeling
- 8th grade (18 Weeks)
  - Design and Modeling
  - Automation and Robotics

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Year 2

- 6th grade (9 Weeks)
  - Design and Modeling
- 7th grade (9 Weeks)
  - Science of Technology
- 8th grade (18 Weeks)
  - Science of Technology
  - Automation and Robotics

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Year 3 – Final configuration

- 6th grade (9 Weeks)
  - Design and Modeling
- 7th grade (9 Weeks)
  - Science of Technology
- 8th grade (18 Weeks)
  - Magic of electrons (parts)
  - Automation and Robotics
  - Flight and space (parts)

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How does GTT fit into the curriculum?

- Stand alone class
- Part of encore or elective offerings

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Encore Rotation Plan:

- 6th grade:
  - GTT-Design and Modeling (9 weeks)
  - Citizenship (9 weeks)
  - Keyboarding (18 weeks)

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Encore Rotation Plan:

7th grade:
- Information Technology (9 Weeks)
- Wood Shop (9 Weeks)
- Art (9 Weeks)
- GTT--Science of Technology (9 Weeks)
Encore Rotation Plan:

- **8th grade--Elective**
  - Automation and Robotics, Magic of Electrons, Flight and Space (18 weeks)
  - Other electives (18 weeks or year long)
    - Art (18 weeks or year)
    - Band (year)
    - Chorus (year)
    - Communications/media (18 weeks)
    - Office or library aide (18 weeks or year)
    - Spanish and French (18 weeks)
    - Woods (18 weeks)

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Student Participation

- All 6th graders…approx 140
- All 7th graders….approx 140
- 8th grade elective…approx 60, about 50% of the class!!

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Prerequisites/accommodations?

- No math prerequisites at this time
- Special education aide for some classes at all grade levels.
- Modifications made for special needs students
  - Reduced research requirements
  - Inventor: More measurements given on Inventor projects, decreased number of practice projects

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Advantages

No loss of science minutes
More choice for electives
Fits well with encore rotation

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Disadvantages

- Requires extra teacher and room
- Harder to schedule as elective
- Long gap between training and actual teaching
- New students miss prerequisite information, specifically, Inventor

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Our Set Up

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Fabrication facilities

- Have band saw and drill press
- Borrow one band saw and drill press
- Across hall from HS PLTW, wood shop and metals shop, easy access.
- Mentored in power tool use/safety by HS shop staff
- Have wide variety of hand tools

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Things we like

- Laptops instead of desktops provide more work space when needed
- Extra table tops for fabrication projects
- Teacher computer in back-can view student monitors
- Rows of desks instead of U-shaped configuration

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What we would change if we could

- More storage space
- Separate fabrication area
Favorite Projects

- 6th grade
  - Air racers

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7th and 8th grade – Dragsters

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Rube Goldberg Projects
8th grade
– Sumo Cars

Presented: 11/7/2006
Questions?
Feel free to contact us

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