Delaware GK-12 Program
Howard High School

Fayth Miles
Special Education Co-instruction: Physical Science and Biology
Teacher Partner: Sharon Horrocks

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GK-12 Goals

- Identify science needs in classroom
- Create “thinkers”
- Help students understand relevance and have better appreciation of science
Labs

Oobleck Lab
- Students had to determine the state of matter of “Oobleck”, a non-Newtonian fluid using a problem-based approach
- Students had to create and justify experimental approach
- “Hands on” and critical thinking

Separating Mixtures Lab
- Students designed and carried out a physical mixture separation to separate a mixture into its original components

Enzymes Lab
- Students designed and conducted an original experiment to investigate enzyme activity
Activities/Transfer Tasks

- Cell Analogy Activity
  - Students created an original analogy to the cell and its organelles
    - Brainstorming ideas, creating poster, writing 1 page report
- Periodic Table Organization
  - Students had to act as 19th century scientists and organize elements into groups
- Games
  - Students were challenged to assess comprehension of previous lessons and review for exams
Presentations/Discussions – “Physiology Corner”

- **Diffusion**
  - Diffusion in physiological system
  - Examples: kidney and lung

- **Cell Cycle & DNA replication**
  - Cancer relatedness to cell division and DNA replication
  - Students engaged in discussion, answered questions, short web clips
Reflections

- Deeper appreciation for challenges faced by high school science teachers
- Better understanding of science needs and how to address them
- Opportunity to serve as mentor for students