

# 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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[in K-12 Education](#) (GK-12) DGE 0538555

# GK-12 Goals

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

# Labs

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## 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

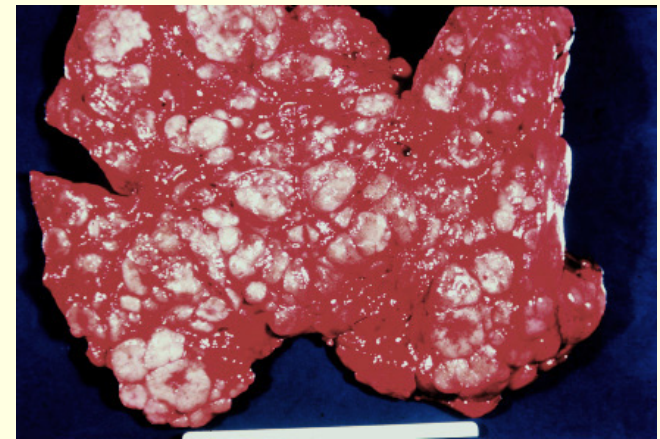
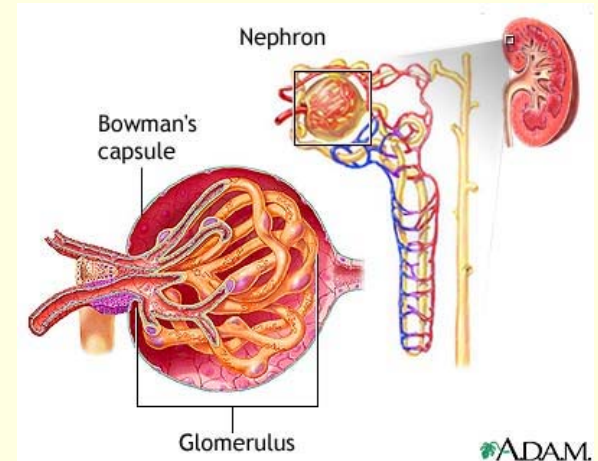
# Activities/Transfer Tasks

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- 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 19<sup>th</sup> century scientists and organize elements into groups
- Games
  - Students were challenge 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

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- 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