CityLab and Urban Squash: A New Pathway to Achieve STEM Success

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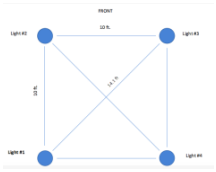
Overarching Project Goals

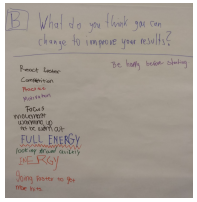
- Inspire URM/low SES students to enter the STEM workforce
- Engage students in STEM through personally-relevant STEM applications in sport

Science on the Court

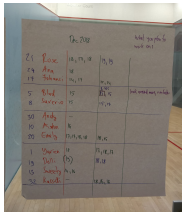
Goal:
To leverage students' interest in athletic performance to inspire participation in STEM education

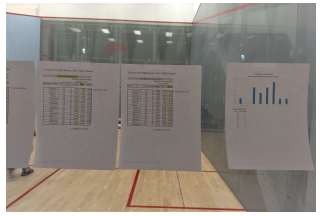
NGSS Practice: Planning and Carrying Out Investigations





NGSS Practice: Analyzing and Interpreting Data





Students debrief, record, and analyze their personal data outside the squash court as soon they finish their drills.

Science in the Lab

Goals:

1. Through hands-on activities, data collection, and data analysis, students will design a training and nutrition program for a case study patient based on their understanding of how the human body compensates for and adapts to exercise.
2. Students will deepen their understanding about the physiology of several human systems.

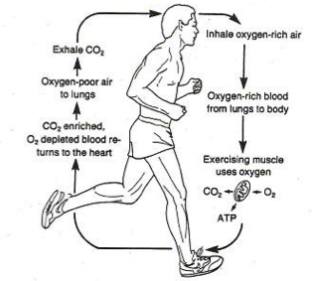
Storyline:
A team, composed of a physician, a coach, and a nutritionist, must create an effective and appropriate exercise and nutrition plan for a patient with a specific medical condition.

Students will approach this challenge through the perspective of their assigned profession (physician, coach, or nutritionist) and will apply their knowledge by proposing an exercise and nutrition plan for their patient. Students will examine how physiological systems work at rest and examine the immediate and long-term adaptations of these systems in response to changes in nutrition and exercise.

Science off the Court

Goals:

1. To connect personally-relevant data to nutrition, health, and sports
2. Understand the science of nutrition (NGSS LS1.C):
   - As matter and energy flow through different organizational levels of living systems, chemical elements are recombined in different ways to form different products.
   - As a result of chemical reactions, energy is transferred from one system of interacting molecules to another.
   - Carbohydrates, proteins, and lipids are the energy currency of the body



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