## Term Two Curriculum Training Agenda

**Saturday, October 17th 9am-3pm**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Location</th>
<th>Facilitators</th>
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</thead>
<tbody>
<tr>
<td>9am</td>
<td>Arrival &amp; Welcome</td>
<td>Waterford Mott HS Cafe</td>
<td>Tansi &amp; Don</td>
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<tr>
<td>9:15am</td>
<td>Human Genetic Variation</td>
<td>Waterford Mott HS Cafe</td>
<td>Amanda &amp; Sandy</td>
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<tr>
<td>10:45am</td>
<td>Break</td>
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<tr>
<td>11:00am</td>
<td>Curriculum Networking #1</td>
<td>Waterford Mott HS</td>
<td>Amanda</td>
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<td></td>
<td>• Anatomy in Clay (Computer Lab 240)</td>
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<td>• SAT Prep (Computer Lab 240)</td>
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<td></td>
<td>• Need for Green Speed (fka Alt. Trans.) (Room 342)</td>
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<td>• Chess (Room 342)</td>
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<td>• Empowerment Improv (Room 332)</td>
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<td>• Math Carnival (Room 332)</td>
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<tr>
<td>12:00pm</td>
<td>Lunch</td>
<td>Waterford Mott HS Cafe</td>
<td>Provided by C2P</td>
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<td>12:30pm</td>
<td>Curriculum Networking #2</td>
<td>Waterford Mott HS</td>
<td>Amanda</td>
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<td>• Rube Goldberg (Room 324)</td>
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<td>• College &amp; Finance (Computer Lab 240)</td>
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<td>• Chemical Engineering (Room 324)</td>
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<td>• Explore It, Design It (Room 324)</td>
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<td>• Stem Busters (Room 332)</td>
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<td>• STEM Debate (Computer Lab 240)</td>
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<td>• Traumatic Brain Injury (Room 332)</td>
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<td>1:30pm</td>
<td>Break</td>
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<tr>
<td>1:45pm</td>
<td>Quad-copter Training</td>
<td>Waterford Mott HS</td>
<td>Jessie, Joe &amp; Peter</td>
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<td>2:45pm</td>
<td>Closing Remarks</td>
<td>Waterford Mott HS Café</td>
<td>Tansi &amp; Don</td>
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<td>3pm</td>
<td>Dismissal</td>
<td>Waterford Mott HS</td>
<td>Tansi &amp; Don</td>
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HUMAN GENETIC VARIATION

C2 Pipeline Curriculum

Term Two Curriculum Training
Waterford Mott High School
Saturday, October 17th
Human Genetic Variation

• Need to Know – Facilitators
  • Goals:
    • Basic Scientific Principles related to HGV
    • Process of Inquiry
    • Enhanced Understanding of Nature/Method of Science
    • Recognize the Role of Science in Society
    • Relationship between Science and Personal & Public Health
  • Teaching in Order (Lesson Plan Overview) HIGHLY SUGGESTED
  • Where to Find Curriculum
    • Blackboard
  • Background Knowledge
    • See “Activity Directions,” page 29
  • How to Use Student Lessons
    • See “Activity Directions,” page 15
  • Using the Website
    • See “Activity Directions,” page 17
Human Genetic Variation

• What Students SHOULD Already Know:

  • According to MI GLCE’s for 7th Grade Science:
    • Life Science
    • Inherited and Acquired Traits
    • Reproduction
Human Genetic Variation

- Curriculum Overview
- 8 Weeks of Activities
  - Week 1 – Alike, But Not the Same
  - Week 2 – Gummy Bear Genetics
  - Week 3 – The Language of Life
  - Week 4 – The Meaning of Genetic Variation
  - Week 5 – Explore Sickle Cell Disease
  - Week 6 – Molecular Medicine Comes of Age
  - Week 7 – Are You Susceptible?
  - Week 8 – Making Decisions in the Face of Uncertainty
HGV
Alike, But Not the Same
Things To Know

• Trait
  • Specific characteristic of an organism; can be inherited or acquired

• Genotype
  • A collection of genes; contributes to observable traits

• Phenotype
  • An individual’s observable trait; scientific word for trait
Human Genetic Variation
Human Genetic Variation
Data Collection

• Lime Green – Sex
• Pink – Noses
• Purple – Height
• Salmon – Hair Color
# of Traits = Uniqueness (Examples)

- (Freckles)
- (Hitch Hiker Thumb)
- (Innie or Outie)
HGV
Gummy Bear Genetics

• Mendel’s Punnett Squares