SECOND UPDATE ON STATUS OF IB: MIDDLE YEARS PROGRAMME

IMPLEMENTATION AT PELHAM MIDDLE SCHOOL
FEASIBILITY STUDY AT PELHAM MEMORIAL HIGH SCHOOL

Mr. Sean Llewellyn, *Supervisor of International Baccalaureate*
Ms. Nicole Starvatow, *Middle School Teacher*
Ms. Linda Mancia, *Middle School Teacher*
Ms. Laura Stagliano, *Middle School Teacher*
Dr. Matthew Gonzales, *Independent IB Consultant*

Board of Education Meeting
January 12, 2016

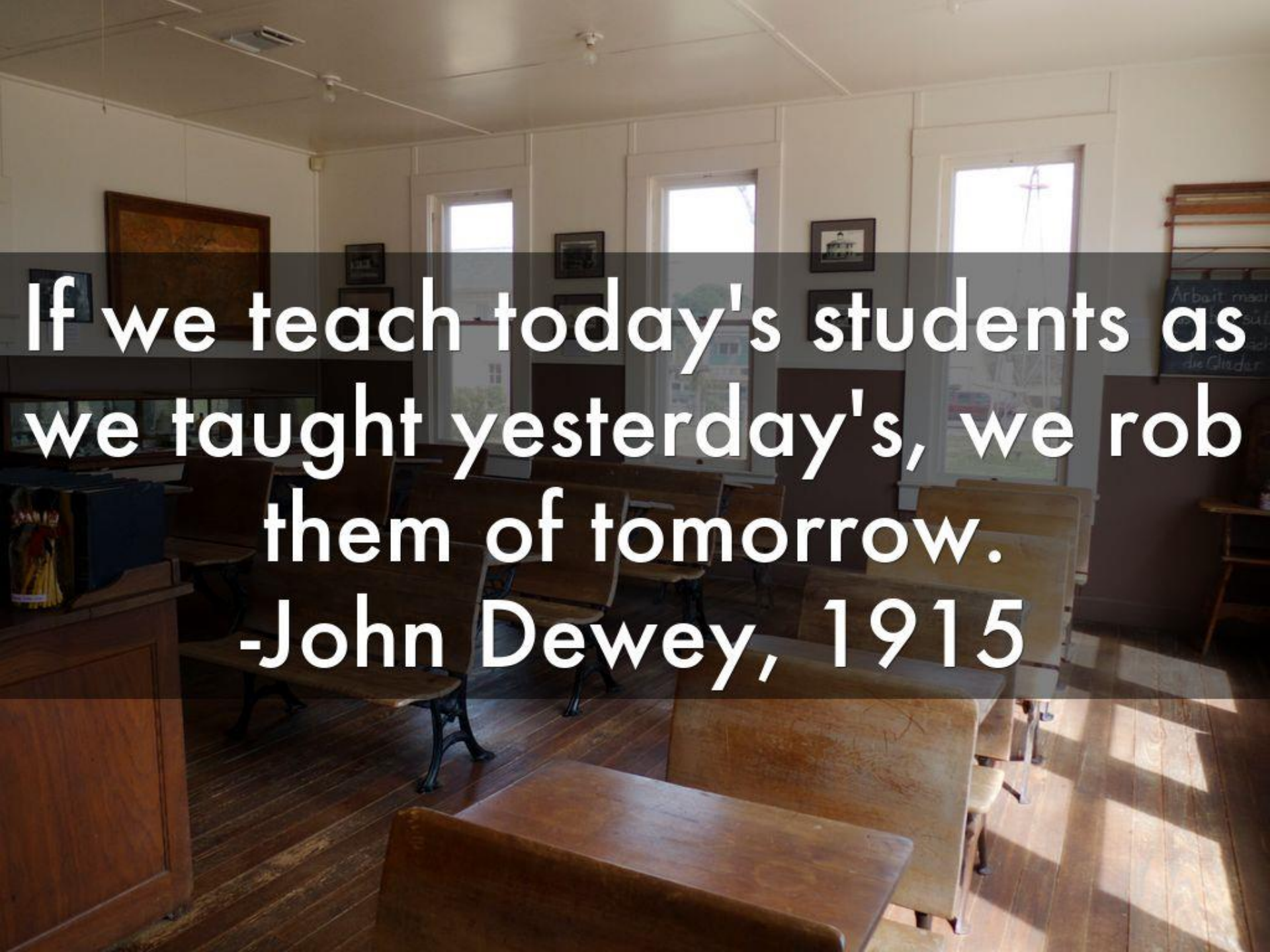
Our Goals Tonight

- To provide an update on the Pelham Middle School authorization process
- To explain unit planning in the Middle Years Programme
- To describe how the Middle Years Programme will impact instruction
- To present preliminary findings regarding PMHS feasibility
- To address challenges associated with the expansion of the Middle Years Programme

Middle Years Programme

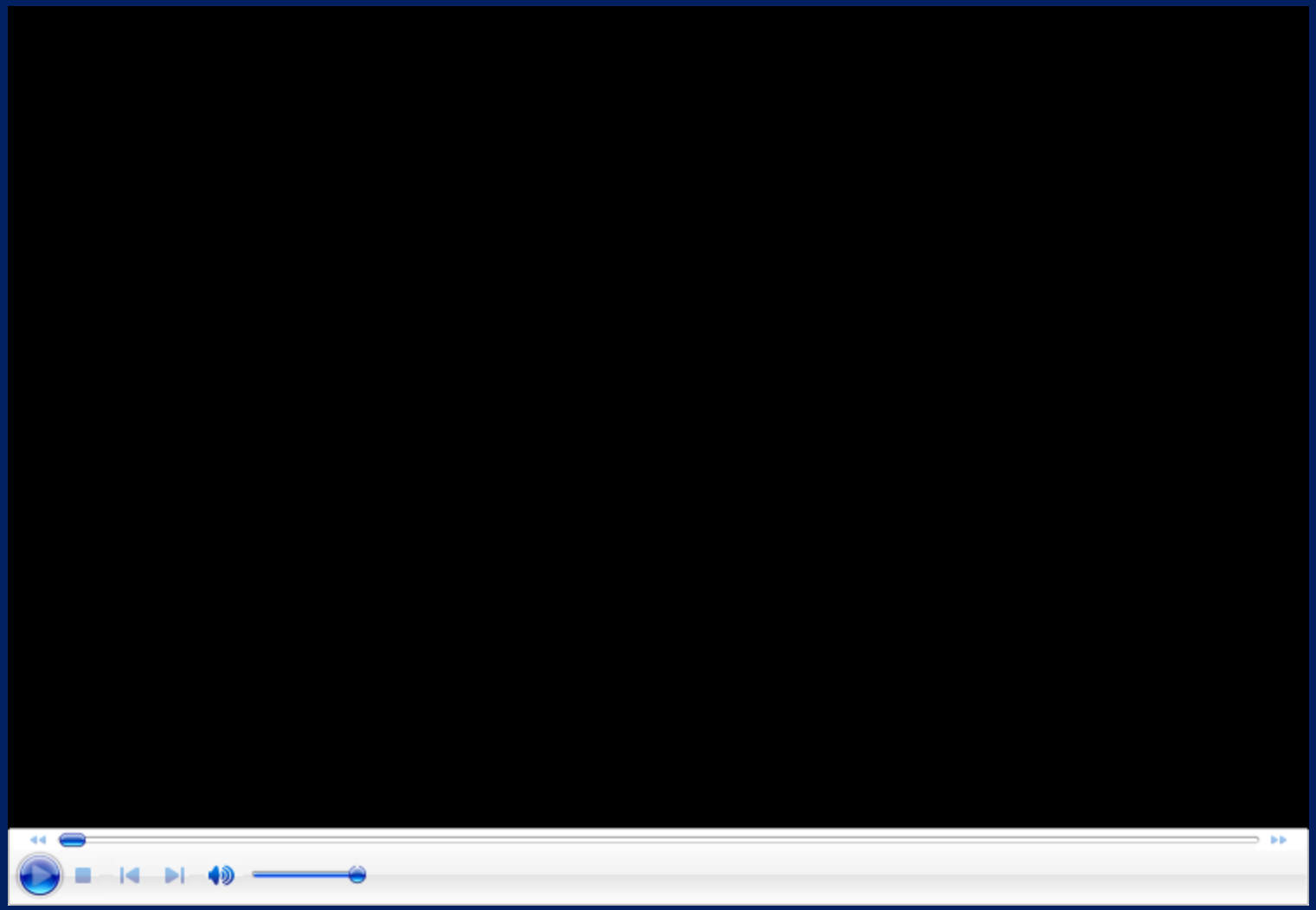
Update

- IB Steering Committee has met three times
  - 21 members
  - 6 subcommittees – meet each month
    - Assessment Policy
    - Academic Honesty Policy
    - Language Policy
    - Inclusion/ Special Needs Policy
    - Service and Action
    - Community Outreach
- Informal classroom observations
- Outreach to other IB schools
- Administrative PLC working on applications
- 10 Professional Development sessions to date


If we teach today's students as we taught yesterday's, we rob them of tomorrow.
-John Dewey, 1915

About 20 Years

- It takes about twenty years to progress from kindergarten through graduate school.
- A lot can happen in twenty years . . .
- *The Today Show*, 1994

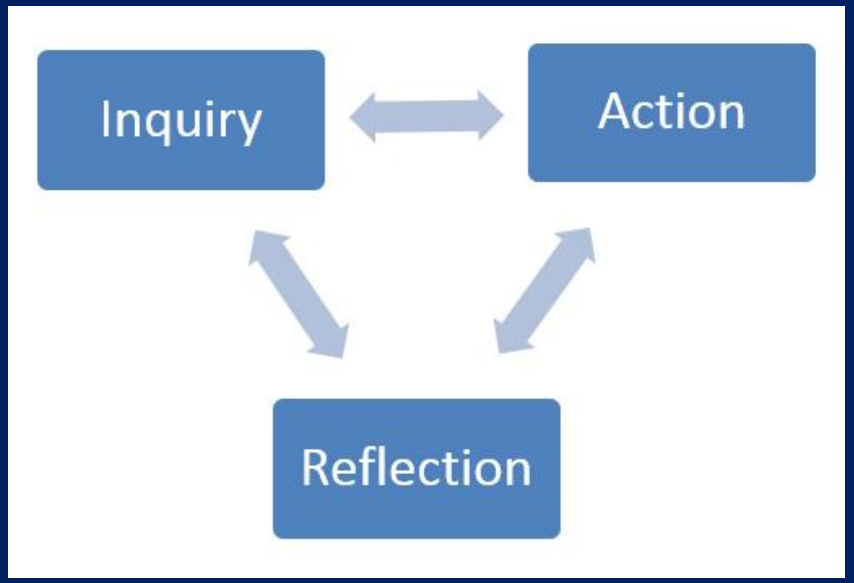


The Challenge

- How do you educate students for a world with . . .
  - Instant access to knowledge?
  - Rapid technological advancement?
  - Dramatic environmental, economic, political, and social change?

Teaching and Learning in the MYP

- Inquiry
  - Student curiosity + careful curriculum design = engaging, relevant, challenging, significant learning
- Action
  - Learning through practical, real-world experience
- Reflection
  - Critical awareness of how we use evidence, methods, and conclusions



MYP Unit Planning (the "Quick Version")

- Since September, all Pelham Middle School Teachers have been engaged in a collaborative process of creating more than 30 MYP Units.
- This process is significantly different from the lesson or unit planning they have undertaken in the past.

What Does a MYP Unit Look Like?

A **Key Concept**

+ two **Related Concepts**

+ a **Global Context**

= a **Statement of Inquiry**

Which leads to:

Questions

Objectives

Experiences

Assessment

and

Reflection

For Example:

Relationships (**Key Concept**)

+ Patterns, Representation (2 **Related Concepts**)

+ Scientific and Technical Innovation (**Global Context**)

=

“A representation of a pattern reveals relationships that we can model and analyze.”

(**Statement of Inquiry**)

Which leads to authentic,

summative assessment . . .

Authentic Summative Assessment

- Your goal is to explain how a representation of a pattern reveals relationships that we can model and analyze.
- You are a meteorologist who analyzes geographic data to determine if cities need to be evacuated.
- You work for the Weather Channel, specializing in detailing the likely paths of hurricanes and the dangers they present to specific cities.

Authentic Summative Assessment

- A hurricane is about to hit the eastern seaboard of the U.S. and evacuation notices may need to be given.
- You will create a written report for the Weather Channel and will present your findings.
- Your report needs to include the two graphs (longitude vs. time and latitude vs. time) with detailed calculations of the lines of best fit, predictions of where the hurricane will be in 6 and 12 hours and suggestions as to which cities may need evacuating.

What Subject Was This For?

Answer:

8^{th} Grade Math

Unit Title: The Hunger Games #6

Global Contexts

Fairness & Development

Significant Concepts

Key Concept
- Systems

Related Concept(s)
- Power
- Equity

Concept Statement:
Systems influence power and equity

Statement of Inquiry

As systems develop, power and equity shifts.

Inquiry (Essential) Questions

- How does one group's success impact other groups?
- How is "power" determined?
- What is the relationship between fairness and equity?

How Does the MYP Impact Instruction?

- More open-ended, student-centered, hand-on activities.
- More meaningful connections between subjects.
- Moving from the “what” to the “why.”
- Students managing their own learning and learning by doing.
- Students encouraged to be “academic risk takers.”
- Teachers planning more at the “front end” and giving up some control once the unit begins.
- Connections between the classroom and the “real world.”
- Students thinking more independently and engaging globally.
- **Inquiry-Based Instruction**

It’s Not Inquiry-Based If . . .

- Students know what results they’re supposed to get.
- The steps are predetermined for students.
- The teacher is working harder than the students.
- Everyone ends up with the same result.
- There are no new questions raised.
- It feels finished at the end of the period.

Quotes from Our Teachers

"MYP has made a huge difference in learning and engagement."

"The students seem so excited and are really taking ownership."

"We are breathing new life into old units."

"We're creating more engaging and meaningful lessons for our students."

"I think we came up with a great unit plan!"

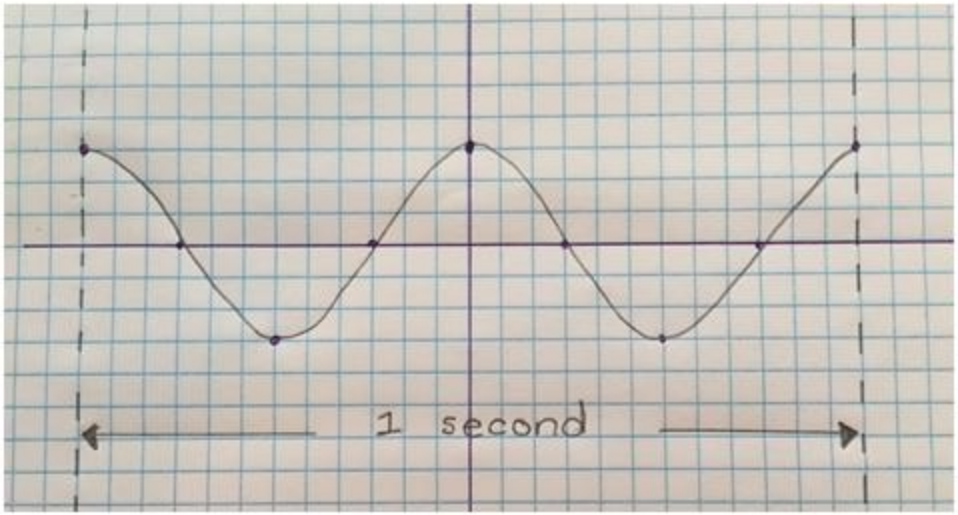
Ms. Starvatow – 6th Grade Math

Title:	*"Are We On the Same Wavelength?"*
Subjects:	Mathematics Year 1, Sciences Year 1
Key Concept:	Relationships
Related Concepts:	Energy, Patterns
Global Context:	Scientific and Technical Innovation
Statement of Inquiry:	"The relationship between patterns and energy allows for the modernization of technical innovations."

Name _____ Date _____

Math/Science Waves Assessment

1) Use the diagram below to answer the following questions.



a) Use arrows to label one wavelength, one crest, one trough, and each ordered pair (9 in total) **on the diagram.**

b) If one box on the graph is equal to 12,500 meters, find the wavelength in meters.

c) What is the frequency of the given wave? _____

d) Use the formula to calculate the speed of the wave. Label your answer with appropriate units.

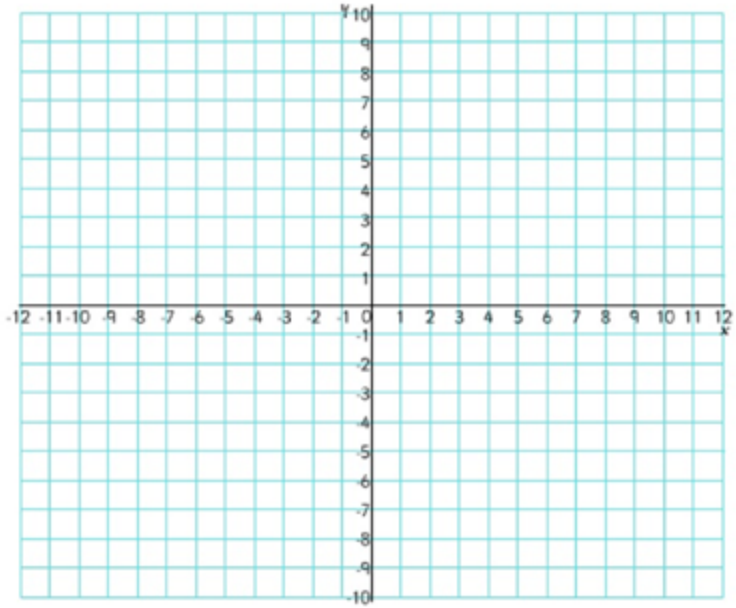
Speed = wavelength X frequency

2) Use the Cartesian Plane below.

a) **Plot and label** the following points on the Cartesian Plane

(-12, -3), (-10, 0), (-8, 3), (-6, 0), (-4, -3), (-2, 0), (0, 3), (2, 0),

(4, -3), (6, 0), (8, 3), (10, 0), (12, -3)



b) Connect the points to draw the wave.

c) Use arrows to label one wavelength, one crest, one trough on the diagram

d) If one box on the graph is equal to 12,500 meters, find the wavelength in meters.

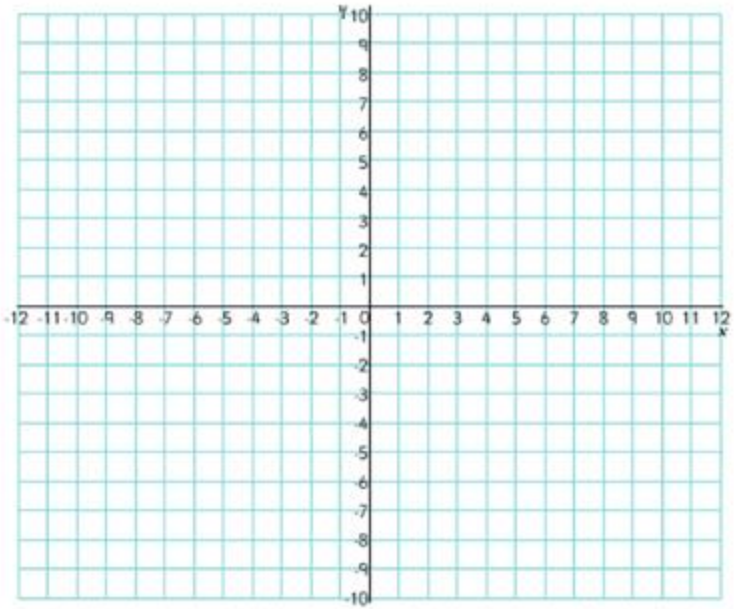
e) What is the frequency of the given wave if the distance from -12 to 12 represents 1 second?

_____

f) Use the formula to calculate the speed of the wave. **Speed = wavelength X frequency**

g) Compare the waves in questions 1 and 2. Which wave has more energy? Explain how you know.

3) If the wave in question 1 represents visible light and the wave in question 2 represents ultraviolet rays**, plot and label points** on the Cartesian plane to show what a **gamma wave** would look like.



a) Connect the points to draw the wave.

b) Use arrows to label one wavelength, one crest, one trough on the diagram

c) If one box on the graph = 12,500 meters, find the wavelength in meters.

d) What is the frequency of the given wave if the distance from -12 to 12 represents 1 second?

_____

e) Use the formula to calculate the speed of the wave. **Speed = wavelength X frequency**

f) Is the use of high – energy waves necessary in our world? Support your answer.

Rubric

Criterion A: Knowledge and Understanding

Achievement Level	Descriptor
0	**Math/science:** The student does not reach a standard described by any of the descriptors given below.
	Comments:
1–2	**Math:** The student **attempts to** demonstrate understanding of, and make simple deductions with, basic concepts in **familiar** contexts **Science:** The student attempts to apply scientific knowledge and understanding to **suggest solutions** to problems set in **familiar situations**
	Comments:
3–4	**Math:** The student **sometimes demonstrates understanding and** makes **appropriate** deductions when solving **simple and more-complex** problems in **familiar** contexts. **Science:** The student sometimes applies scientific knowledge and understanding to **solve problems** set in **familiar situations.**
	Comments:
5–6	**Math:** The student **generally** makes **appropriate** deductions when solving problems in a **variety** of **familiar and unfamiliar** situations including those in real life context. **Science:** The student applies scientific knowledge and understanding to **solve problems** set in **familiar situations** and **suggests solutions** to problems set in **unfamiliar situations.**
	Comments:
7-8	**Math:**The student **consistently** makes **appropriate** deductions by correctly applying basic rules when solving problems in a **variety** of contexts including **unfamiliar and real-life** situations **Science:** The student applies scientific knowledge and understanding **to solve problems** set in **familiar and unfamiliar situations**.
	Comments:

Criterion D

Achievement Level	Descriptor
0	The student does not reach a standard described by any of the descriptors given below.
	Comments:
1–2	**Math:** The student will apply mathematical strategies to **find a solution** to the authentic real life situation **with limited success.** **Science:** The student will **apply** scientific language to communicate understanding **with limited success.**
	Comments:
3–4	**Math**: The student will apply mathematical strategies to **reach a solution** to the authentic real life situation**.** **Science:** The student will **sometimes apply** scientific language to communicate understanding.
	Comments:
5–6	**Math**: The student will apply mathematical strategies to **reach a valid solution** to the authentic real life situation**.** **Science:** The student will **usually apply** scientific language to communicate understanding **clearly and precisely.**
	Comments:

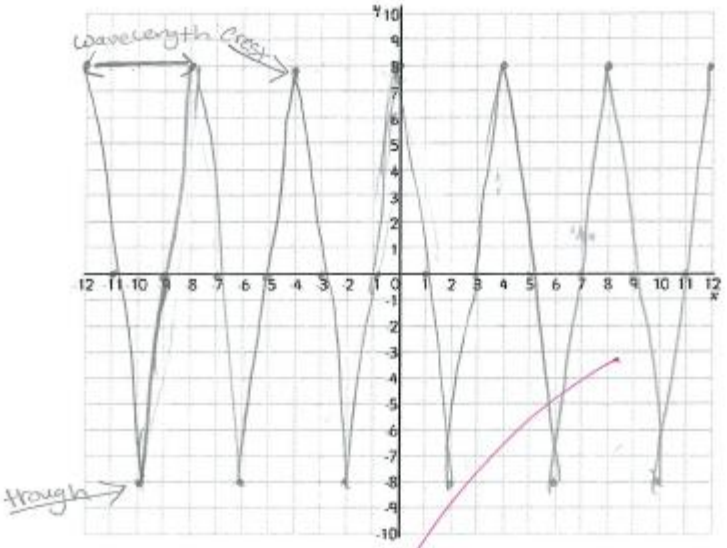
DO NOW: Waves Check for Understanding

10/10 ☺

Plot and label the following points on the Cartesian plane below

(-12, 8), (-11, 0), (-10, -8), (-9, 0), (-8, 8), (-7, 0), (-6, -8), (-5, 0), (-4, 8), (-3, 0), (-2, -8), (-1, 0), (0, 8)

2) Reflect each point over the y-axis



3) Connect the points to draw the wave pattern.

4) Use arrows to label one wavelength, one crest, one trough on the diagram

5) If one box on the graph is equal to 12,500 meters, find the wavelength in meters.

12500
× 4
50,000

Wavelength = 50,000 meters

6) What is the frequency of the given wave if the distance from -12 to 12 represents 1 second?

Frequency = 6

7) Use the formula to calculate the speed of the wave. **Speed = wavelength X frequency**

50,000
× 6
Speed = 300,000

Ms. Mancia – 7th Grade Social Studies

Title:	*"Is Violence Necessary for Change to Happen?"*
Subject:	Individuals & Societies Year 2
Key Concept:	Change
Related Concepts:	Conflict, Identity
Global Context:	Identities and Relationships
Statement of Inquiry:	"Individuals can be agents of change, either alone or in collaboration with others, to resolve conflict."

Name_____ **REFLECTION SHEET**

EVENTS LEADING TO REVOLUTION

Is Violence Necessary for Change to Happen?

1750///1755///1760 1765 1770 1775

ACTION/EVENT **On a scale of 1 to 10, with 1 being the most peaceful and 10 being the most violent, rate the colonists' reactions and on a scale of 1 to 10. Then reflect on action or event.**	**REFLECT:** *Do you think the colonial reaction to this British action/reaction was justified?* *[Keep in mind the unit focus question....]*
Proclamation of 1763 10 9 8 7 6 5 4 3 2 1	
Sugar Act 10 9 8 7 6 5 4 3 2 1	
Quartering Act 10 9 8 7 6 5 4 3 2 1	
Stamp Act 10 9 8 7 6 5 4 3 2 1	

Events Leading to Revolution
WRITTEN RESPONSE
Is Violence Necessary for Change to Happen?

about what. Make a general statement about violence with reasons you will prove.

Dear Mr. Burke:

I cannot help but disagree with you. While sometimes, power and authority can be obtained by using love and kindness, it was almost impossible to get the British to listen to the colonies! Take for example, the Quartering Act. The British invaded the colonists' privacy by enforcing their soldiers on the colonists, making them provide for the soldiers when the soldiers should be able to provide for themselves. Of course, this angered the colonists and they protested against it. The British could care less, but of course when the New York legislure refused to pay them because of this, they were suspended. The peaceful protests weren't working! A little while later, after the colonists

why?

boycotting a lot of... repeal...

Name_____

FREEDOM AWARD
Biographical Research Project

Task: The Pelham Middle School teachers and staff have suggested that an award be granted each year at Recognition Night to the 8th grade student who did the most to foster a spirit of cooperation and fairness to settle conflict among students during his or her time at the middle school.

The principal has decided that the "Freedom Award" should be named after an American Revolutionary leader. In addition, PMS students will select the leader who best reflects these characteristics in their fight for freedom for all to enjoy life, liberty, and the pursuit of happiness.

Goal: The purpose of the Freedom Award will be to show younger middle school students that individuals can act as agents of positive change. As a member of the PMS G.O., your goal will be to(1) **research** and then to use the information you gather to (2) **write a nominating speech** that tries to persuade PMS students that the Freedom Award should be named after....

HOW DO I DO THIS PROJECT?

Step 1: Developing the Research Questions

To meet the goal of this project, you will need to do research to answer these questions:

- Which Revolutionary **events or activities** did this person participate in?
- For **how long** was this individual involved in these activities?
- What **methods** were used in this event/activity to bring about change in the relationship between Britain and the colonies?
- How did these activities **change the relationship** between Britain and the colonies?
- Should this individual be selected for the Freedom Award?

Step 2: Gathering Information

- In the PMS Library, you are required to use 2-3 sources for research, including an **online biographical database, a web site, and a print source**.
- As you read each source, take notes on the "Research Notes Sheet" on any information that will answer the research questions.
- Remember to cite the source you use in the "Source Citation" column on the "Research Notes Sheet."

Step 3: Synthesizing Evidence to Support Your Claim

Use the information on the "Research Notes Sheets" to answer the questions on the "Evidence Planning Sheet." These questions will help you plan your nomination speech to persuade your PMS audience to vote for your Revolutionary figure.

Step 4: Writing Your Nomination Speech
Use the information on your planning sheet to guide you in writing a draft of your speech.

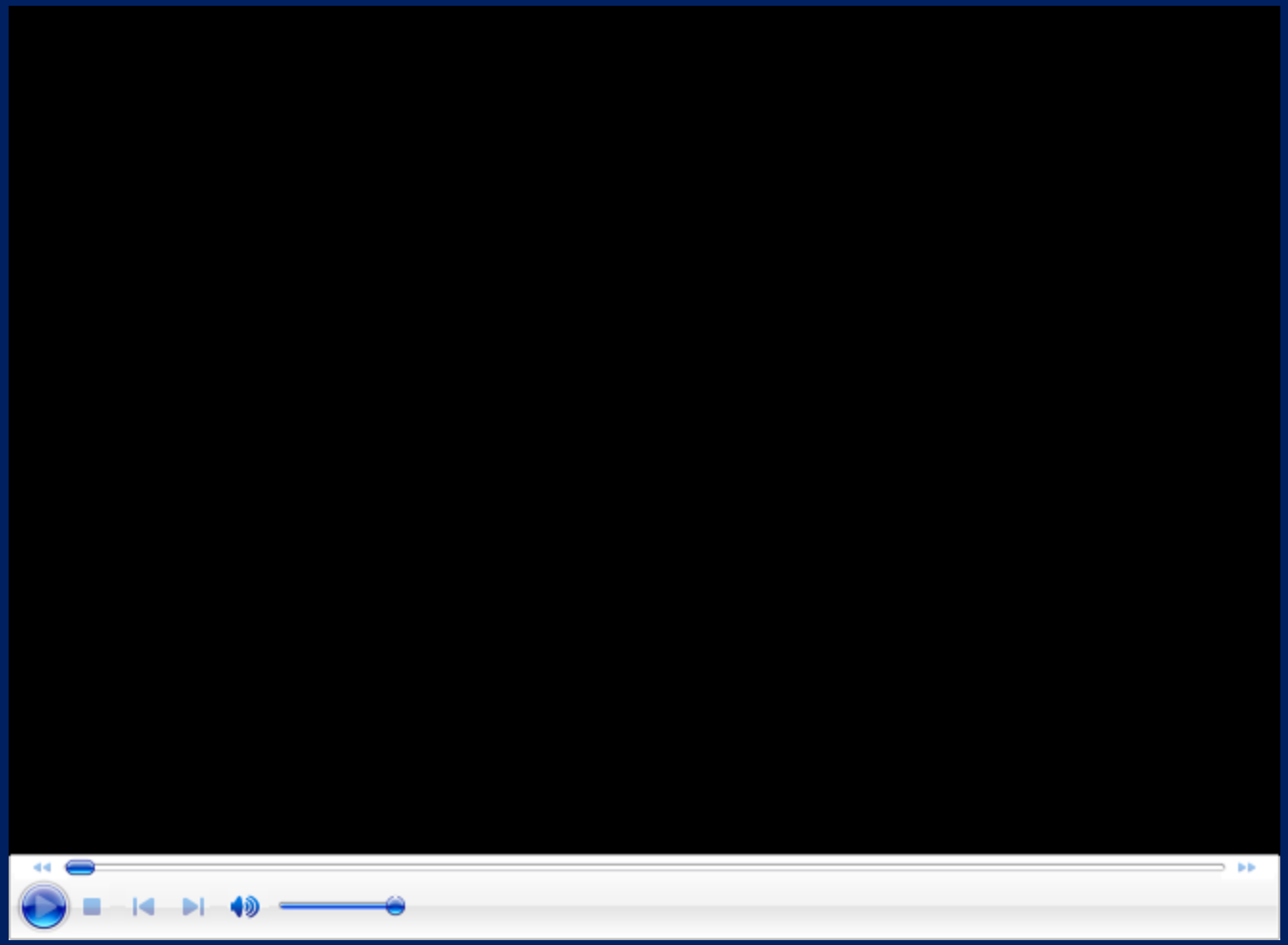
Step 5: Complete the Freedom Award Nomination Application
Download a picture of the individual to insert in the space provided on the application, and include your speech typewritten in the space that follows.

PROJECT COMPLETION CHECKLIST
Your work needs to include a completed…

- ✓ **Freedom Award Nomination Application**, including a **downloaded picture** of your individual, activity **timeline**, plus **typewritten nomination speech.**
- ✓ **Research Notes Sheets** that include citations for **2-3 sources**, one of which must be a biographical data base
- ✓ **Evidence Planning Sheet**

Ms. Stagliano – 8th Grade English

Title:	*"Genocide Awareness Project"*
Subject:	Language & Literature Year 3
Key Concept:	Global Interactions
Related Concepts:	Purpose, Point of View, Style, Theme
Global Context:	Identities and Relationships
Statement of Inquiry:	"A community's sustainability is dependent upon the need to monitor power groups within a global content in order to act as agents of change."



MYP Impact at PMHS

- Student-centered classrooms
- Assessment criteria and rubrics
- Performance-based assessments
- Multiple ways to demonstrate understanding
- Capstone project in grade 10 (Personal Project)

MYP Examples

History

Content - Explore the concept of change through a study of British colonial rule through the first term of George Washington.

Assessment - Create a webpage/website that discusses a particular aspect of change that the colonists experienced.

Mathematics

Content - Explore the concept of relationships through a study of quadratic equations by investigating how the equations look when presented algebraically and graphically.

Assessment – Create a document (paper or online) investigates three real life situations from students' personal experiences where the quadratic equation was used (or could be used).

Music

Content - Explore the concept of aesthetics through a study of the effect of music on an audience.

Assessment - Create a document (paper or online) where students reflect on their aesthetic perception(s) of a particular song (from the current choir repertoire) and then interview two audience members about that same song following the concert.

Initial Findings – PMHS MYP Process

Standard A: Philosophy

- The philosophy of PMHS compliments the philosophy of the IB MYP.

Next steps:

- Continue to inform community.
- Align PMHS requirements with IB MYP requirements.
- Align PMHS policy documents with IB MYP policy documents.

Initial Findings – PMHS MYP Process

Standard B: Organization

- There is strong support for the IB MYP, both at the district and building levels.
- PMHS administrators have been trained and teachers are being trained/ scheduled for training.
- The master schedule meets the programme requirements.

Next steps:

- Develop specific plans to implement IB MYP requirements.

Initial Findings – PMHS MYP Process

Standard C: Curriculum

- PMHS administration have a philosophy of curriculum and assessment that aligns with the IB MYP curriculum and assessment philosophy.
- Curriculum leaders will be developing the IB MYP curriculum standards with teachers next year.

Next steps:

- Continue to develop professional development plan.
- Develop MYP units of instruction.

Preliminary Assessment:

We anticipate that Pelham Memorial High School will be prepared to submit its Application for Candidacy on April 1, 2016

The final assessment of PMHS feasibility will be presented to the Board of Education on February 23, 2016.

MYP Expansion into 9 & 10 - Challenges

- Differences between the middle and high schools
- High school teachers working collaboratively to look at curriculum, teaching, and assessment in a new way
- Less meeting time available for PMHS teachers
- PMHS staff teach a variety of courses
- Balancing MYP expansion with other curricular responsibilities and agendas
- Supervision of the Personal Project
- Grade Reporting Process

Questions?