

Using Technology to Enhance Science Education
MHS Science Department

MSF Grant Award Ceremony
Monday, March 1st, 4:30 PM

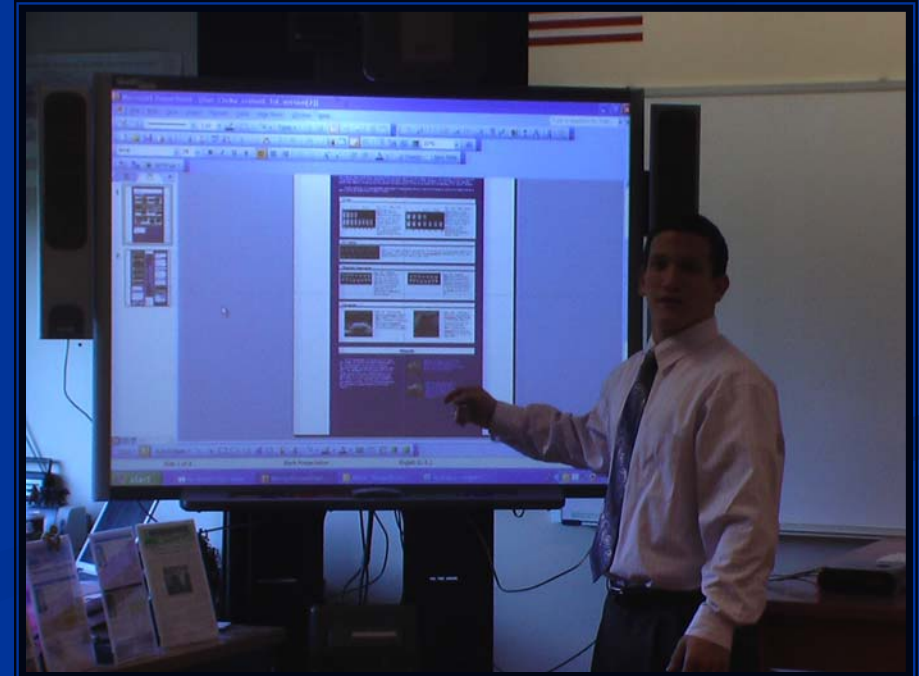
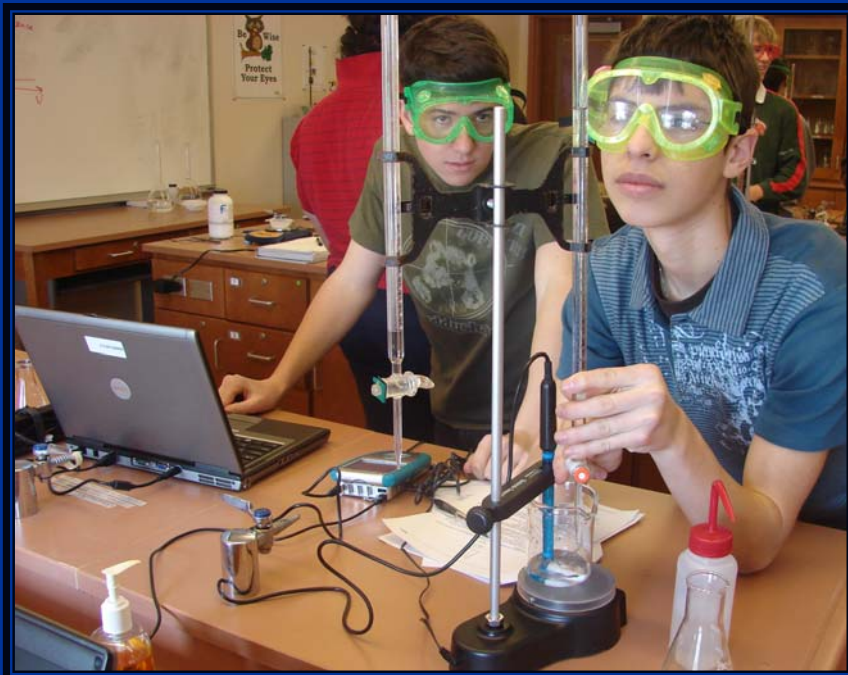
Past MSF Awards in Science

1. Improving Physics Student Lab Experiences using PASCO 750 Interfaces
2. Upgrading the Advanced Biology Laboratory
3. Forensics
4. Classroom Library for Original Science Research
5. Computers for the Physics Laboratory
6. Data Collection Technology for the Chemistry Laboratory
7. Crime Scene Analysis
8. Smartboards for the Science Classroom



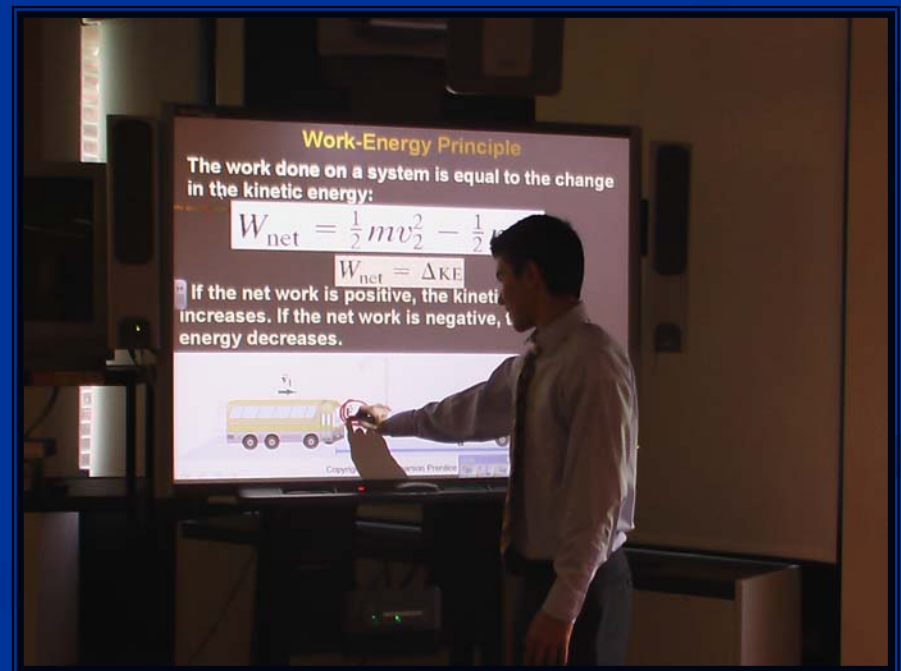
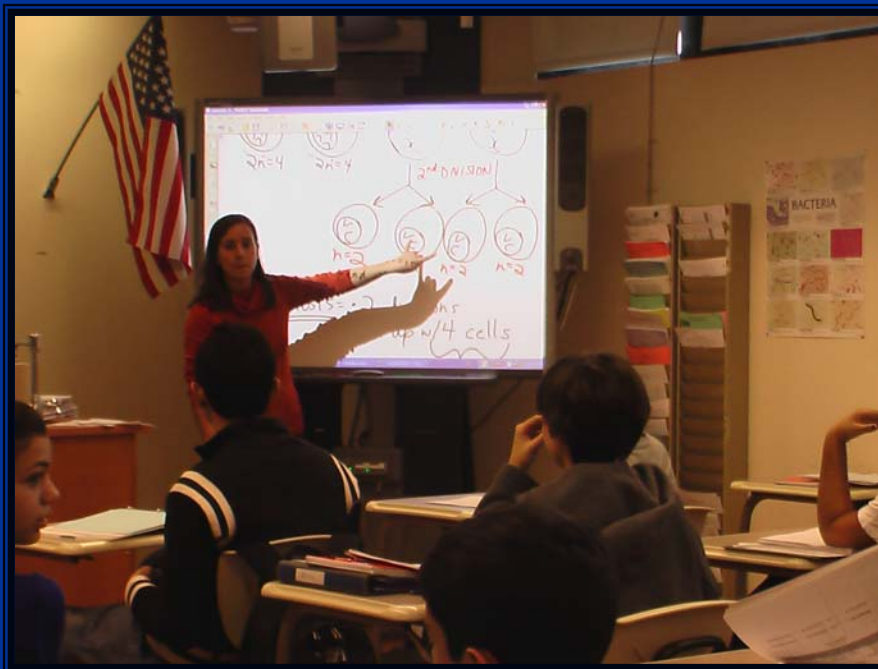
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Smartboards for the Science Classroom

1. Nine Smartboards w/floor stands and audio equipment
2. Improved instruction:
 - a. Show process, so that students can better understand concepts.
 - b. Manipulate detailed, complex diagrams
 - c. Make graphs and charts interactive.
 - d. Perform virtual laboratory activities and demonstrations
 - e. Explore internet resources.
 - f. Use interactive games and Powerpoint activities



Smartboards in the Science Classroom

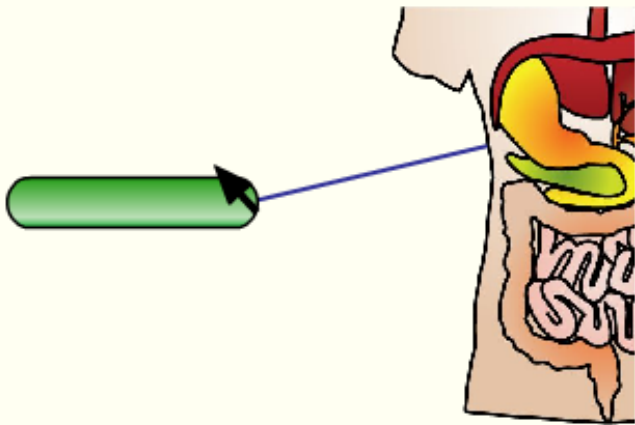
1. **Biology:** *Assessment and the Digestive System*

Cell Division Movies

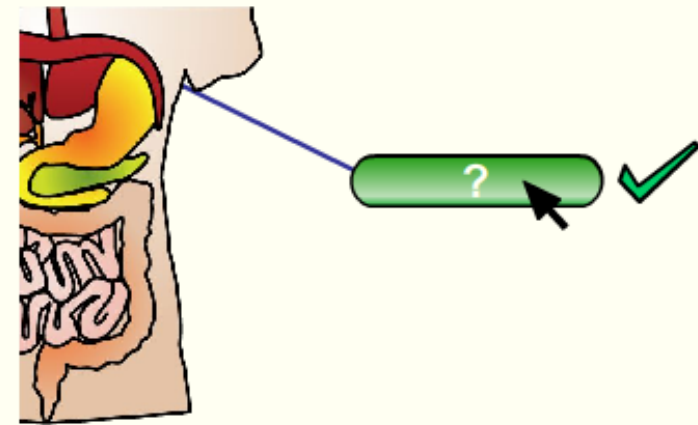
2. **Chemistry:** *Interactive Period Table*

3. **Physics:** *Waves Assessment*

Light Review



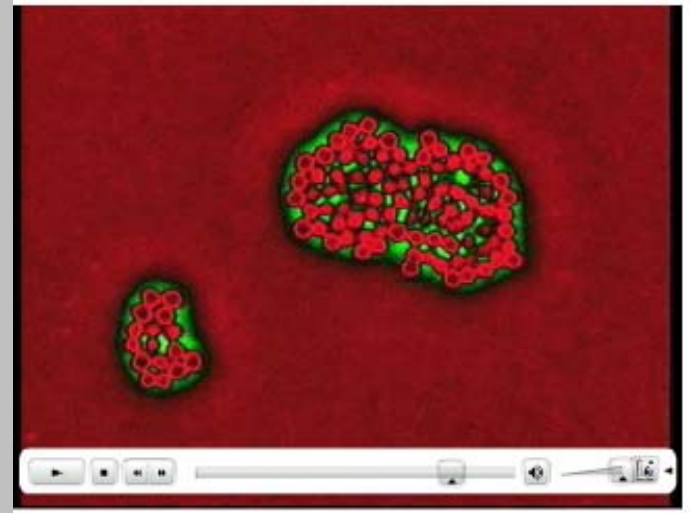
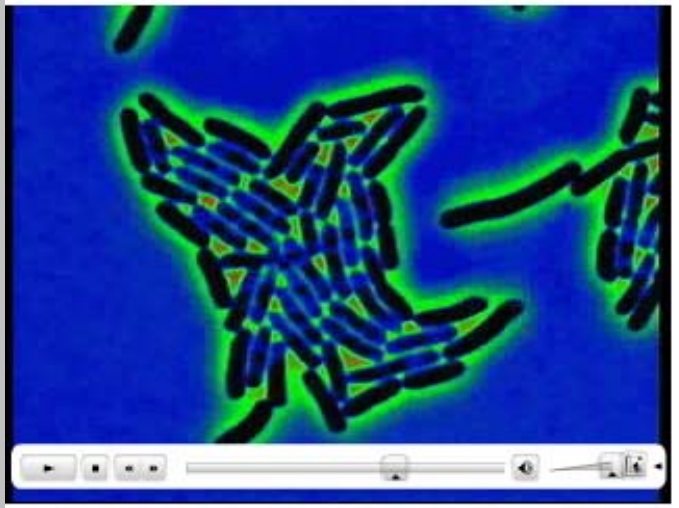
Click and
reveal



Drag and
drop

Choose the activity by selecting 'Click and reveal' or 'Drag and drop'

Cell Division Movies



The Periodic Table represents elements in such a way as to highlight their similarities and differences.

INSTRUCTIONS

Explore the Periodic Table below by clicking on the elements.

You can use the '- Select Element -' drop-down menu to quickly jump straight to an element. More information can be found out about periods (rows) and groups (columns) by clicking on the relevant button along the left-hand side or along the top of the table.

There is also a game you can play to test your knowledge.

The interface shows a periodic table with elements color-coded by groups. The top of the table is labeled with Roman numerals I through VIII. The left side is labeled with Period 1 through Period 7. A callout box points to the Lanthanide and Actinide series, which are shown below the main table. At the bottom, there is a dropdown menu for selecting an element, an 'Instructions' button, a 'Find the Elements' button, and an 'Unlock the Code' button.

	I	II	Transition metals										III	IV	V	VI	VII	VIII
Period 1																	He	
Period 2	Li	Be										B	C	N	O	F	Ne	
Period 3	Na	Mg										Al	Si	P	S	Cl	Ar	
Period 4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Period 5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Period 6	Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Period 7	Fr	Ra	Ac															
			Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu		
			Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr		

Metals Non-metals

- Select Element - Instructions Find the Elements Unlock the Code

Light Jeopardy.ppt

Drag the labels into their correct positions.

BEGIN GAME

wavelength

amplitude

trough

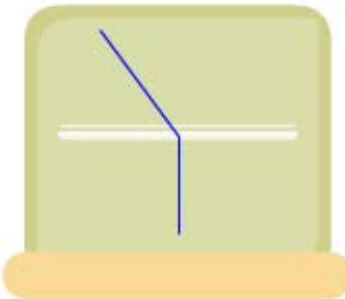
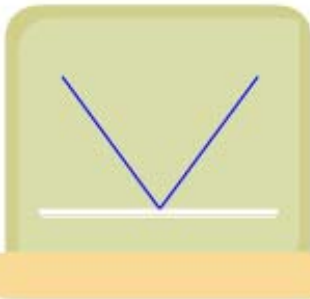
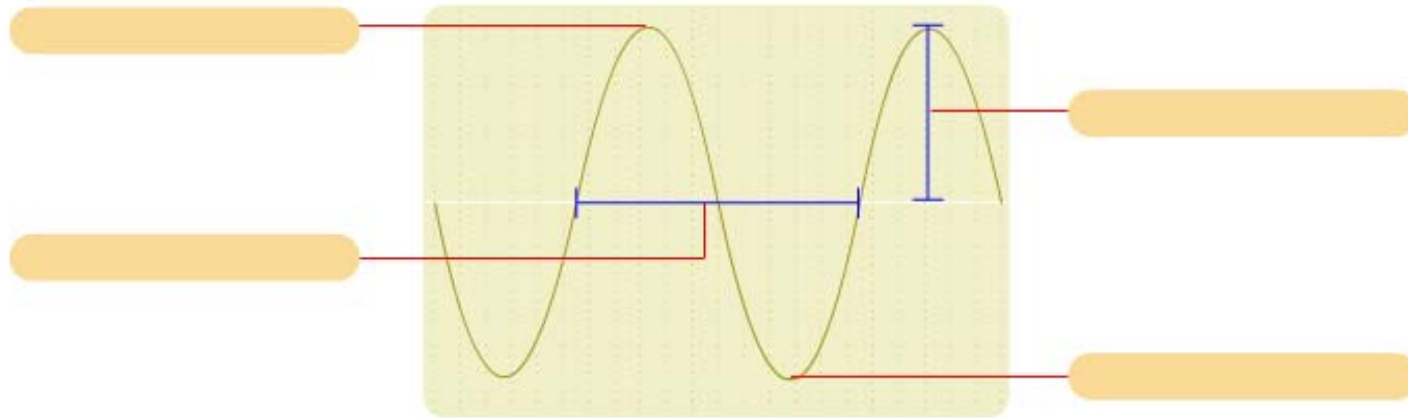
crest

reflection

diffraction

total internal reflection

refraction



Reflection	Refraction I	Other Phenomena	Refraction II	Pot Luck
<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>
<u>300</u>	<u>300</u>	<u>300</u>	<u>300</u>	<u>300</u>
<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>
<u>500</u>	<u>500</u>	<u>500</u>	<u>500</u>	<u>500</u>

The MHS Science Department would like to thank the Mamaroneck Schools Foundation for their generous support of science education at the high school. The grant awards we've received over the past few years have enabled students to acquire data using laptops and hand-held computers in the physics and chemistry laboratories, analyze crime scenes in Forensics, perform sophisticated AP Biology labs, and enjoy technologically-enhanced science instruction. Your hard work is greatly appreciated. Thank you.