



# Madawaska Middle/High School

*Home of the Owls*



## Syllabus for Science 8 (SCI8)

# of students: 61

**Instructor:** Linda McDermott

**Room:** 101

**Email:** [lindamcd@madawaskaschools.org](mailto:lindamcd@madawaskaschools.org)

**Webpage:**

[http://www.madhs.mad.k12.me.us/middle\\_high/teachers/middleschool/lindamcdermott.cfm](http://www.madhs.mad.k12.me.us/middle_high/teachers/middleschool/lindamcdermott.cfm)

**Class Schedule:**

BLUE DAY (B)		WHITE DAY (W)	
Block	Class	Block	Class
TT	Team Time	TT	Team Time
1 (1-2)	SCI8	1 (1-2)	SCI7
2 (3-4)	SCI8	2 (3-4)	PLAN
3 (5-6)	SCI7	3 (5-6)	SCI7
4 (7-8)	SH / PLAN	4 (7-8)	SCI8

**Text:**

- 1.) [Physical Science](#)
- 2.) [Chemical Interactions Resources](#)
- 3.) [Force and Motion Resources](#)
- 4.) [Electronics Resources](#)

**Supplies Needed:**

**Mandatory:** Sturdy 1 ½ inch binder with dividers and pockets; writing tools, book cover.

**Optional but extremely handy:** basic (but sturdy) calculator with simple arithmetic functions, colored pencils, ruler, eraser, scissors, nice durable stretchy book cover for 9X12 book.

**State of Maine 2007 Grade Span Expectations**

**Science and Technology**

**Grade Span 6-8:**

- Cluster 2 -[Physical Science](#):
  - E.4. Describe how a substance can combine with different substances in different ways, depending on the conditions and the properties of each substance.
  - E5- Describe how the motion of the particles of matter determines the state of that matter (e.g., solid, liquid, gas, plasma) and vice versa.
  - E.7. Investigate the similarities and differences between elements, compounds, and mixture
  - I.1. Describe the motion of objects using knowledge of Newton's Laws.
  - I.2. Use mathematics to describe the motion of objects (e.g., speed, distance, time, acceleration).
- Cluster 4-[Nature and Implications of Science](#):



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J1-*Make accurate observations using appropriate tools and units of measure.*

J2-*Design and conduct scientific investigations which include controlled experiments and systematic observations. Collect and analyze data, and draw conclusions fairly.*

J3-*Verify and evaluate scientific investigations and use the results in a purposeful way.*

K6-*Support reasoning by using a variety of evidence.*

K8-*Construct logical arguments.*

K9-*Apply analogous reasoning.*

L4-*Make and use scale drawings, maps, and three-dimensional models to represent real objects, find locations, and describe relationships*

M4-*Describe an individual's biological and other impacts on an environmental system.*

M6-*Give examples of actions which may have expected or unexpected consequences that may be positive, negative, or both.*

## **Classroom Rules and Expectations:**

- Respect the rights of others to learn in a supportive environment:
  - *Listen openly to other ideas.*
  - *Avoid side conversations and all other forms of interruption during whole group instruction.*
  - *Treat others with kindness and understanding.*
  - *Respect school property and others' belongings.*
- Come to class prepared:
  - *Be punctual. Take care of tasks such as pencil sharpening, toilet, and drinks between classes.*
  - *Bring binder, text, homework, and writing tool.*
- Safety first:
  - *Listen, pay attention, and follow instructions.*
  - *Stay seated as much as possible.*
  - *No food or drinks allowed due to chemical safety laws.*

## **Grading/Evaluation Policies:**

Students will earn points based on meeting learning expectations. After each investigation there will be a 20-point quiz. During investigations there may be response sheets or quick-writes worth 4 points each based on level of self-assessment. Quick checks of homework and participation are worth 1 point each. At the end of each unit there will be an exam worth 50 pts. There may be other assignments associated with projects or extensions worth 4-20 points. The overall grade is derived from the percentage of points earned out of total points available. Students in danger of failing may be required to re-do assignments.

**Office Hours:** Available Monday through Thursday after school until 3:00 or by appointment.



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**Course Theme:** Grade 8 Science is focused on Physical Science but is also richly integrated with other branches of science and math. There are 3 main units called *Chemical Interactions, Force and Motion, and Electronics*. Extensions will be introduced throughout the course.

**Methods of Instruction:** The class is taught in an inquiry-based, hands-on manner, with strong emphasis on group collaboration. We use a program called Full Option Science System ([FOSS](#)).

**Writing Policy:** Most student writing will be expected to be of best effort, first draft quality. Spelling mistakes and minor grammar errors are overlooked in favor of evidence of growing understanding. If the piece is intended for public display, the writing should be carefully edited and polished.

**Attendance and Make-Up:** Students are responsible for being on time, prepared for class, and finding out about their missed work if they are absent. "ASSIST" sheets will be provided as needed or upon request or students can find out from peers what has to be made up. Parents are encouraged to contact the teacher if they have concerns or if a student has to miss several days. If a student does not complete any assignment on time, parents will be contacted and the student will be held after school to complete the work. ***This is a 'hands-on' class with much collaborative work. Attendance is very important, because individual make-up assignments cannot replace the class activities.***



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**Course Calendar: (This is for blue days, white days will closely follow the same schedule)**

Term	Week:	Investigations:	Other:
First Quarter: Chemical Interactions	1. August 28-31	2 blocks- Energy Resources	
	2. September 4-7	1 block- Energy and the Environment 1 Block- Chemical Technology	Monday is a holiday
	3. September 10-14	2 blocks- Substances	
	4. September 17-20	1 block- Substances 1 Block- Elements	Friday is a workshop day
	5. October 10-12	1 block- Elements 1 block- Particles	Holiday on Monday, workshop on Tuesday
	6. October 15-19	2 blocks- Particles	
	7. October 22-26	2 blocks- Kinetic Energy	Wednesday is Early Release
	8. October 29-November 2	2 blocks- Energy Transfer	
	9. November 5-9	1 block- Energy Transfer 1 block- Heat of Fusion	Grades close on Friday
Second Quarter	10. November 13-16	2 blocks- Phase Change	Monday is a holiday
	11. November 19-20	To be announced (TBA)	Early Release Conference on Tuesday,
	12. November 26-30	2 blocks- Phase Change	
	13. December 3-7	2 blocks- Solutions	
	14. December 10-14	1 block- Solutions 1 block- Reaction	
	15. December 17-21	2 blocks- Reaction	Early Release Tuesday
	16. January 2-4	1 block- more reactions	
	17. January 7-11	2 blocks- More Reactions	
18. January 14-18	1 Block – Chemical Interactions test 1 block- Here to There		



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	19. January 22-25	1 block- Here to There 1 block- Speed	Holiday Monday, Early Release Thursday
	20. January 28 –February 1	2 blocks- Speed	Grades close Tuesday
Third Quarter	21. February 4-8	2 blocks- Comparing Speeds	
	22. February 11-15	2 blocks- Comparing Speeds	
	23. February 25-29	2 Blocks- representing Motion	Early Release Wednesday
	24. March 3-7	1 block- Representing Motion 1 block- Acceleration	
	25. March 10-13	2 blocks- Acceleration	Early Release Friday
	26. March 17-21	1 block- Acceleration 1 block- Force	
	27. March 24-28	2 blocks- Force	
	28. March 31-April 4	1 block- Force 1 block- Gravity	Workshop on Sunday, March 30
	29. April 7-11	2 blocks- Gravity	Grades close on Wednesday
Fourth Quarter	30. April 14-18	2 blocks- Momentum	
	31. April 28 – May 2	2 blocks- Momentum	
	32. May 5-9	1 block- Force and Motion test 1 block- Circuits	
	33. May 12-16	2 blocks- Resistors	
	34. May 19-23	2 blocks- Voltage	
	35. May 27-30	1 block- Electronic Dissection 1 block- Resistors 2	Holiday on Monday
	36. June 2-6	2 blocks- Diodes	
	37. June 9-13	2 blocks- Capacitors	Graduation Thursday
	38. June 16-19	TBA	Workshop on Friday
39. June 23-24		Snow days	



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