JMH Physics 112

Course Outline 2018 – 2019

Mr. Peter MacDonald
Room 525
Peter.macdonald3@nbed.nb.ca
http://jmh.nbed.nb.ca/teacher/mr-macdonald
YouTube: P. MacDonald (Lectures & Example Problems)
Twitter: @mrpmacdonald

Content Units

1: Motion
- Vectors
- Graphical Analysis
- Mathematical Analysis

2: Dynamics in 1D
- Types of Forces
- Newton's Laws
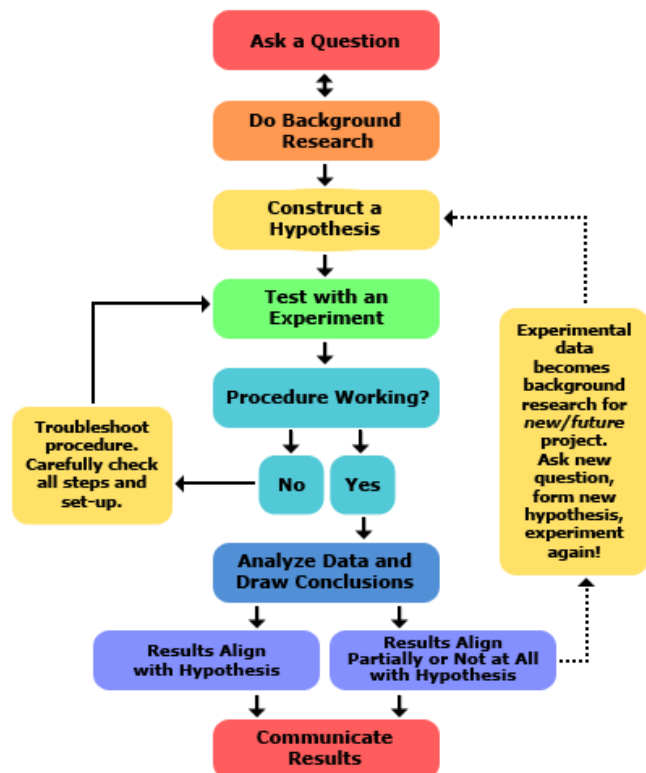
3: Work and Energy
- Work, Power and Efficiency
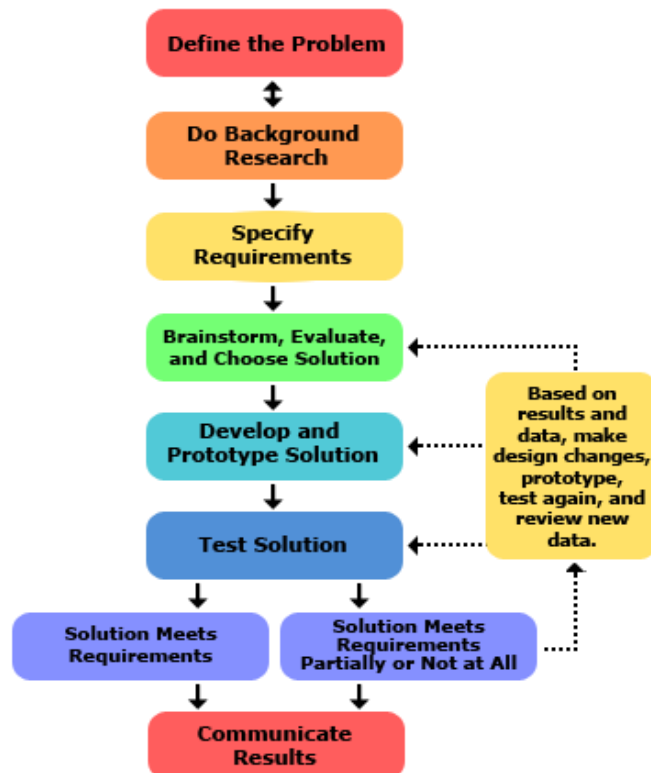- Transformation, Total Energy and Conservation

4: Waves
- Properties
- Sound
- Electromagnetic Radiation

Science Inquiry and Engineering Design Process

Scientific Method

Engineering Design Process

Standards-Based Grading: A Six Point Scale

Each unit listed above will have learning targets that will be graded on a six point scale. As a student, you will keep a portfolio of your work towards understanding course concepts. This will be important in determining a percentage grade (which you will only receive on report cards). Tests, quizzes, concept-checks and the exam will all be scored using the system below:

Expert	**6**	Near perfect demonstration of understanding/skill; high confidence; mastery of learning standard	"You could teach this."
	5	Strong demonstration of understanding/skill; high confidence; slight error involved	"Almost perfect, just one little error."
Apprentice	**4**	Good demonstration of understanding/basic skills; confidence evident; a few errors	"Good understanding with just a few errors."
	3	Satisfactory demonstration of understanding/basic skills; key concepts are lacking; errors common	"You are missing some of the key concepts, but have achieved the bare minimum to pass."
Novice	**2**	Minimal understanding of key concepts and rudimentary demonstration of basic skills; many errors	"You are starting to understand, but have not shown enough to pass."
	1	Inadequate understanding key concepts and little to no demonstration of basic skills; errors throughout	"Credit or pass not possible at this time."

Near report card time we will meet and agree on a percentage score (although, as teacher I do have final say based on your work) using the table below:

Learning Category	Classification Level	Only shortly before report cards will a percentage mark be discussed and determined		
Expert	6	95	97	100
	5	86	90	94
Apprentice	4	73	80	85
	3	60	66	72
Novice	2	50	56	59
	1	0	25	49

Remember, each learning target will be scored 1 – 6 and it will be possible to improve a score through continued practice, conversations, and assignments, projects, re-quizzing and re-testing.

A sample student learning tracking sheet is below:

Learning Target Unit: Kinematics	Score (1 – 6)							
I can identify the frame of reference for a given motion.	**Date:**							
	Score:							
I can use vectors to represent force, velocity, and acceleration.	**Date:**							
	Score:							