

Table 1a: Unit one Modeling Curriculum Activities on NYSS Order

Activity Number and title	New York State Standard	Description
	Standard 1	
11) Class Activity	M1.1	Abstract representation to communicate mathematically
2) Sticky Tape Activity	M1.1	
7) Lab: Coulomb's Law/Alternative to lab	M1.1	Deductive and inductive reasoning to reach mathematical conclusion
9) Worksheet 3: Coulomb's Law	M1.1	
11) Class Activity	M2.1	
14) Quantitative Problems	M2.1	
7) Lab: Coulomb's Law/Alternative to lab	M2.1	Explain physical relevance of a graph of real world data
11) Class Activity	M3.1	
7) Lab: Coulomb's Law/Alternative to lab	M3.1	
12) Electric Field Due to a Dipole	S1.1	Develop explanation of natural phenomena
2) Sticky Tape Activity	S1.1	
3) Worksheet 1: Behavior of sticky tape	S1.1	Design experiment to investigate relationship between physical phenomena
9) Worksheet 3: Coulomb's Law	S1.1	
1) Introductory Demonstration-Balloon	S2.1	
13) Deployment Lab: Activity Seeing E-field	S2.1	
2) Sticky Tape Activity	S2.1	
4a) Activity: Electrophorus	S2.1	
5) Activity: Conductors and Insulators	S2.1	
7) Lab: Coulomb's Law/Alternative to lab	S2.1	
1) Introductory Demonstration-Balloon	S2.3	
13) Deployment Lab: Activity Seeing E-field	S2.3	
4a) Activity: Electrophorus	S2.3	Develop, predict, and explain proposed relationships for physical phenomena
5) Activity: Conductors and Insulators	S2.3	
7) Lab: Coulomb's Law/Alternative to lab	S2.3	
7) Lab: Coulomb's Law/Alternative to lab	S2.4	Carry out research to test theories Use Various means to represent Scientific data-graphs, diagrams charts, equations
1) Introductory Demonstration-Balloon	S3.1	
13) Deployment Lab: Activity Seeing E-field	S3.1	
4b) Activity: Beyond Sticky Tape	S3.1	
6) Worksheet 2: Conductors and insulators	S3.1	
6) Worksheet 2: Conductors and insulators	S3.2	
1) Introductory Demonstration-Balloon	S3.4	Explain data to validate results Discuss relationships with class Revise if necessary
13) Deployment Lab: Activity Seeing E-field	S3.4	
4a) Activity: Electrophorus	S3.4	
5) Activity: Conductors and Insulators	S3.4	
	Standard 2	
12a) Worksheet 4a: Exploration Using EM Field	1.1	Understand features of word processors spreadsheets and database software
7) Lab: Coulomb's Law/Alternative to lab	1.1	
12a) Worksheet 4a: Exploration Using EM Field	1.5	Use software to model and extend lab experiences
7) Lab: Coulomb's Law/Alternative to lab	1.5	
	Standard 4	
12) Electric Field Due to a Dipole	4.1v	Observe/explain energy conservation
12) Electric Field Due to a Dipole	4.1viii	
14) Quantitative Problems	5.1iv	Measure current and voltage in a circuit vector addition
10) Quiz 2	5.1v	
11) Class Activity	5.1v	Draw force diagrams to scale
14) Quantitative Problems	5.1v	
15) Test	5.1v	
4b) Activity: Beyond Sticky Tape	5.1v	
7) Lab: Coulomb's Law/Alternative to lab	5.1v	
9) Worksheet 3: Coulomb's Law	5.1v	
10) Quiz 2	5.1vi	
7) Lab: Coulomb's Law/Alternative to lab	5.1vi	
9) Worksheet 3: Coulomb's Law	5.1vi	

10) Quiz 2	5.1vii	Sketch the path of projectiles Use vector diagrams to analyze systems
11) Class Activity	5.1viii	
14) Quantitative Problems	5.1viii	
15) Test	5.1viii	
3) Worksheet 1: Behavior of sticky tape	5.1viii	
4b) Activity: Beyond Sticky Tape	5.1viii	
7) Lab: Coulomb's Law/Alternative to lab	5.1viii	
9) Worksheet 3: Coulomb's Law	5.1viii	
	Standard 6	
12) Electric Field Due to a Dipole	1.1	Define boundary conditions when doing system analysis
5) Activity: Conductors and Insulators	1.1	
2) Sticky Tape Activity	2.1	Revise a model to make an improved representation of a system
9) Worksheet 3: Coulomb's Law	2.1	
2) Sticky Tape Activity	2.2	Use observations of behavior of a system to develop a model
4b) Activity: Beyond Sticky Tape	2.2	
5) Activity: Conductors and Insulators	2.2	Use mathematical and physical models to represent real world systems
7) Lab: Coulomb's Law/Alternative to lab	2.2	
11) Class Activity	2.3	Use mathematical and physical models to represent real world systems
7) Lab: Coulomb's Law/Alternative to lab	2.3	
8) Quiz 1: Charge Behavior	2.3	compare predictions with observations to validate or reject predictions
9) Worksheet 3: Coulomb's Law	2.3	
11) Class Activity	2.4	compare predictions with observations to validate or reject predictions
13) Deployment Lab: Activity Seeing E-field	2.4	
2) Sticky Tape Activity	2.4	Changes in scales effect the system
5) Activity: Conductors and Insulators	2.4	
7) Lab: Coulomb's Law/Alternative to lab	2.4	Changes in scales effect the system
11) Class Activity	3.1	
2) Sticky Tape Activity	3.1	Estimate solutions using orders of magnitude and scientific notation
9) Worksheet 3: Coulomb's Law	3.1	
11) Class Activity	3.2	Estimate solutions using orders of magnitude and scientific notation
14) Quantitative Problems	3.2	
9) Worksheet 3: Coulomb's Law	3.2	Describe how disturbances may effect a systems equilibrium
10) Quiz 2	4.1	
14) Quantitative Problems	4.1	Describe how disturbances may effect a systems equilibrium
3) Worksheet 1: Behavior of sticky tape	4.1	
4a) Activity: Electrophorus	4.1	Describe how disturbances may effect a systems equilibrium
6) Worksheet 2: Conductors and insulators	4.1	
8) Quiz 1: Charge Behavior	4.1	Describe how disturbances may effect a systems equilibrium
9) Worksheet 3: Coulomb's Law	4.1	
10) Quiz 2	4.2	Give examples of dynamic equilibrium
14) Quantitative Problems	4.2	Give examples of dynamic equilibrium
3) Worksheet 1: Behavior of sticky tape	4.2	
7) Lab: Coulomb's Law/Alternative to lab	4.2	Give examples of dynamic equilibrium
9) Worksheet 3: Coulomb's Law	4.2	
11) Class Activity	5.1	Predict systems behavior based on mathematical models and graphs
12a) Worksheet 4a: Exploration Using EM Field	5.1	
14) Quantitative Problems	5.1	Predict systems behavior based on mathematical models and graphs
7) Lab: Coulomb's Law/Alternative to lab	5.1	
9) Worksheet 3: Coulomb's Law	5.1	Predict systems behavior based on mathematical models and graphs
11) Class Activity	5.2	
11) Class Activity	6	Search for trends in data
9) Worksheet 3: Coulomb's Law	6	
14) Quantitative Problems	6	Determine optimal solutions that can be solved quantitatively
	6	
	Standard 7	
14) Quantitative Problems	7.1	Address real world problems using scientific methodology
3) Worksheet 1: Behavior of sticky tape	7.1	
6) Worksheet 2: Conductors and insulators	7.1	