

Modeling Curriculum Activities in unit two, in order of the NYSS

| Activity number and title | New York State Standards | Description | |
|--|--------------------------|---|---|
| | Standard 1 | | |
| 12) E & M Unit 2 Review | M1.1 | Abstract representation to communicate mathematically | |
| 13) Unit Test | M1.1 | | |
| 6) Quiz 1 | M1.1 | Deductive and inductive reasoning to reach mathematical conclusion | |
| 12) E & M Unit 2 Review | M2.1 | | |
| 12) E & M Unit 2 Review | M2.1 | | |
| 13) Unit Test | M2.1 | | |
| 7a) Worksheet 3a: With EM Field Software | M2.1 | Explain physical relevance of a graph of real world data | |
| 9) Lab/Demo: Bridge to Circuits | M2.1 | | |
| 9) Lab/Demo: Bridge to Circuits | M2.1 | | |
| 4) Lab: Mapping Electric Potential | M3.1 | | |
| 9) Lab/Demo: Bridge to Circuits | M3.1 | | |
| 9) Lab/Demo: Bridge to Circuits | M3.1 | | |
| 1) Activity: Defining Potential | S1.1 | Develop explanation of natural Phenomena | |
| 4) Lab: Mapping Electric Potential | S1.1 | | |
| 5) Worksheet 2: Potential in Non Uniform Fields | S1.1 | | |
| 7a) Worksheet 3a: With EM Field Software | S1.1 | | |
| 8) Worksheet 4: Applications of Electric Potential in Uniform Fields | S1.1 | Design experiment to investigate relationship between physical Phenomena | |
| 9) Lab/Demo: Bridge to Circuits | S1.1 | | |
| 3) Lab/Demo/Discussion: Topographic Maps | S2.1 | | |
| 4) Lab: Mapping Electric Potential | S2.1 | | |
| 7a) Worksheet 3a: With EM Field Software | S2.1 | Develop, predict, and explain proposed relationships for physical Phenomena | |
| 9) Lab/Demo: Bridge to Circuits | S2.1 | | |
| 9) Lab/Demo: Bridge to Circuits | S2.1 | | |
| 3) Lab/Demo/Discussion: Topographic Maps | S2.3 | | |
| 4) Lab: Mapping Electric Potential | S2.3 | | |
| 7a) Worksheet 3a: With EM Field Software | S2.3 | | |
| 9) Lab/Demo: Bridge to Circuits | S2.3 | Carry out research to test theories | |
| 3) Lab/Demo/Discussion: Topographic Maps | S2.4 | | |
| 4) Lab: Mapping Electric Potential | S2.4 | | |
| 9) Lab/Demo: Bridge to Circuits | S2.4 | | |
| 3) Lab/Demo/Discussion: Topographic Maps | S3.1 | Scientific data-graphs, diagrams charts, equations | |
| 4) Lab: Mapping Electric Potential | S3.1 | | |
| 9) Lab/Demo: Bridge to Circuits | S3.1 | Explain data to validate results Reach a conclusion on whether your data supports your explanation of the experiment | |
| 9) Lab/Demo: Bridge to Circuits | S3.2 | | |
| 4) Lab: Mapping Electric Potential | S3.3 | | |
| 7a) Worksheet 3a: With EM Field Software | S3.3 | | |
| 9) Lab/Demo: Bridge to Circuits | S3.3 | Discuss relationships with class revise if necessary | |
| 3) Lab/Demo/Discussion: Topographic Maps | S3.4 | | |
| 4) Lab: Mapping Electric Potential | S3.4 | | |
| 7a) Worksheet 3a: With EM Field Software | S3.4 | | |
| 9) Lab/Demo: Bridge to Circuits | S3.4 | | |
| 9) Lab/Demo: Bridge to Circuits | S3.4 | | |
| | Standard 2 | | |
| 4) Lab: Mapping Electric Potential | 1.1 | Understand features of word processors spreadsheets and database software Prepare multimedia presentation Use software to model and extend lab experiences | |
| 9) Lab/Demo: Bridge to Circuits | 1.1 | | |
| 4) Lab: Mapping Electric Potential | 1.2 | | |
| 4) Lab: Mapping Electric Potential | 1.5 | | |
| | Standard 4 | | |
| 12) E & M Unit 2 Review | 4.1i | Describe and explain conservation of energy from potential energy to kinetic energy | |
| 3) Lab/Demo/Discussion: Topographic Maps | 4.1i | | |
| 9) Lab/Demo: Bridge to Circuits | 4.1i | Observe/explain energy conservation | |
| 1) Activity: Defining Potential | 4.1v | | |
| 12) E & M Unit 2 Review | 4.1v | | |
| 13) Unit Test | 4.1v | | |
| 3) Lab/Demo/Discussion: Topographic Maps | 4.1v | Recognize conversions among different forms of energy in real world devices Compare power developed with work done to different objects determine acceleration due to gravity near the Earths surface Draw force diagrams to scale Sketch the path of projectiles Use vector diagrams to analyze systems | |
| 7) Worksheet 3: Fields, Potential, and Energy | 4.1v | | |
| 9) Lab/Demo: Bridge to Circuits | 4.1v | | |
| 9) Lab/Demo: Bridge to Circuits | 4.1v | | |
| 9) Lab/Demo: Bridge to Circuits | 4.1vi | | |
| 8) Worksheet 4: Applications of Electric Potential in Uniform Fields | 4.1vii | | |
| 3) Lab/Demo/Discussion: Topographic Maps | 5.1iii | | |
| 8) Worksheet 4: Applications of Electric Potential in Uniform Fields | 5.1v | | |
| 8) Worksheet 4: Applications of Electric Potential in Uniform Fields | 5.1vii | | |
| 8) Worksheet 4: Applications of Electric Potential in Uniform Fields | 5.1viii | | |
| | Standard 6 | | |
| 1) Activity: Defining Potential | 1.1 | | Define boundary conditions when doing system analysis |
| 2) Worksheet 1: Potential and Uniform Fields | 1.1 | | |
| 3) Lab/Demo/Discussion: Topographic Maps | 1.1 | | |
| 1) Activity: Defining Potential | 2.1 | Revise a model to make an improved representation of a system | |
| 12) E & M Unit 2 Review | 2.1 | | |
| 3) Lab/Demo/Discussion: Topographic Maps | 2.1 | Use observations of behavior of a system to develop a model | |
| 1) Activity: Defining Potential | 2.2 | | |
| 3) Lab/Demo/Discussion: Topographic Maps | 2.2 | | |
| 9) Lab/Demo: Bridge to Circuits | 2.2 | | |
| 4) Lab: Mapping Electric Potential | 2.2 | | |
| 9) Lab/Demo: Bridge to Circuits | 2.2 | | |
| 1) Activity: Defining Potential | 2.3 | Use mathematical and physical models | |

