

Table 8: All of the Material not Adequately Represented in the Modeling Curriculum as Compared to the NYSS

Descriptions of the Standards

Standard 1	count
T1.1	0
Standard 2	count
1.3	0
1.4	0
Standard 4	
Key Idea 4	
4.1ii	0
4.1iii	0
4.1xiii	3
4.3iv	3
4.3v	0
Key Idea 5	count
5.1i	0
5.1ii	0
5.1iii	1
5.1iv	1
5.1ix	0
5.1x	0
5.1xi	0
5.1xii	0
5.1xiii	0
5.3i	0
5.3ii	0
Standard 7	count
Key Idea 2	0

Standard 1

T1.1: Engineering Design

The students engage in several steps of a design process:

Initiate and carry out an investigation of unfamiliar situations.

Identify needs and opportunities for technological innovation.

Generate creative solutions, and explore possible refinements.

Predict possible outcomes, using mathematical and functional models

Develop work schedules and working plans which include optimal

use and cost of materials, processes, time, expertise.

Design a test of the solution according to the design criteria.

Standard 2

1.3: Use knowledge of physics to evaluate articles in popular press on contemporary scientific topics.

1.4: Utilize electronic networks to share information.

Standard 4 Key idea 4

***Note Key ideas 4.1ii, 4.1iii, as well as Key idea 5.1 are not part of second semester modeling, they are however part of first semester modeling (Fooks 2004)

4.1xiii: Draw and interpret circuit diagrams which include voltmeters and ammeters.

4.3iv: Predict the superposition of two waves, including all wave properties

4.3v: Determine the speed of sound in air

Standard 4 Key idea 5

5.3i: Interpret energy - level diagrams

5.3ii: Correlate spectral lines with an energy - level diagram