Project Lead the Way Correlation to Wisconsin State Standards

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Standards are statements about what students should know and be able to do, what they might be asked to do to give evidence of learning, and how well they should be expected to know or do it. Curriculum is the program devised by local school districts used to prepare students to meet standards http://dpi.wi.gov/standards/questions.html.
Project Lead the Way high school curriculum consists of six courses with 526 objectives. The curriculum has provided a detailed account of how each objective is linked to Wisconsin Science, Mathematics, Information & Technology, and Technology Education Content Standards. The standard statements do not match the PLTW objectives word-for-word, but an association between the two statements can be made. kv
It (district curriculum) consists of activities and lessons at each grade level, instructional materials, and various instructional techniques. In short, standards define what is to be learned at certain points in time, and from a broad perspective, what performances will be accepted as evidence that the learning has occurred. Curriculum specifies the details of the day-to-day schooling at the local level. The Project Lead the Way curriculum targets learning objectives in each of the six high school and one middle school course. Each objective has correlating learning activities and performance assessments indicating what the student should know, be able to do and at what performance level. kv
http://dpi.wi.gov/standards/questions.html

Adopting Wisconsin's Model Academic Standards is voluntary, not mandatory. By law, however, districts must have academic standards in place by August 1, 1998, in reading and writing, geography and history, mathematics, and science. Districts may adopt the model state standards, or standards from other sources, or develop their own standards. Although not required by law to have standards in the other subjects, districts may choose to adopt or develop academic standards in those areas as well. http://dpi.wi.gov/standards/questions.html

Project Summary: The Project Lead the Way curriculum addresses 517/526 objectives across their six high school courses, and 21 objectives within the middle school course curriculum. The entire six-course high school curriculum objectives link to every one of the 179 Wisconsin Mathematics (46), Science (71), Information and Technology (26) and Technology Education (36) content standards and indicators. A breakdown of this association is addressed in the course tables below. kv.

Gateway To Technology: 4 units

Analysis: This course includes 4 units of study addressing 21 objectives. These objectives link to three categories of Wisconsin State Standards for eighth grade. They are Science, Mathematics and Technology Education. The 21 course objectives linked like this:

- **Math:** 3 out of 6 math standards/indicators in Math Process, Geometry, and Measurement, with the strongest association to Geometry at 10 objectives. Number Operations and Relationships, Statistics and Probability, and Algebraic Relationships were not linked to the objectives of this course.
- **Science:** 4 out of 8 science standards/indicators including Connections, Inquiry, Physical Science, and Applications with the strongest association to Physical Science addressing 18 objectives. Standard areas not linked in this course included Nature of Science, Earth and Space and Life & Environmental Science
- **Technology Ed:** 4 out of 4 technology education standards/indicators. The strongest association was Systems, linking to 18 objectives.

Summary: One hundred (100) percent of the objectives linked to a Science, Math or Tech Ed Standard/Indicator. Sixty two (62) percent of all standards in these categories were linked to objectives. The course linked strongly to Math: Geometry, Science: Physical Science, and Tech Ed: Systems

Standards Category	Standards and indicators	# of times standard liked to an objective
Math		
A = Mathematical Processes	8	2
B = Number Operations and Relationships	9	0
C = Geometry	7	10
D = Measurement	6	2
E = Statistics and Probability	9	0
F = Algebraic Relationships	7	0
Science		
A = Science of Connections	9	1
B = Nature of Science	7	0
C = Science Inquiry	12	7
D = Physical Science	11	18
E = Earth and Space Science	9	0
F = Life and Environmental Science	11	0
G = Science Applications	8	10
H = Science Applications	4	0
Technology Education		
A = Nature of Technology	9	3
B = Systems	8	18
C = Human Ingenuity	7	4
D = Impact of Technology	6	6

Introduction to Engineering: 12 units

Analysis: This course includes 12 units of study addressing and 127 course objectives. Standards linked to 122 objectives. The 122 course objectives linked like this:

- **Math**: 5 out of 6 math standards/indicators addressed with Geometry standards linked to 13 objectives. Objectives were not linked to Number Operations and Relationships
- **Science:** 5 out of 8 science standards/indicators. Objectives not linked to the standard categories Nature of Science, Life and Environmental Science or H-Science Applications)
- **Technology:** 4 out of 4 technology education standards/indicators. C-Human Ingenuity linked to 25 objectives showing the strongest association in this category.
- **Information & Technology:** 4 out of 4 standards were linked to the objectives. Independent Learning linked to 20 objectives showing the strongest association in this category

Summary: Ninety-eight percent of the objectives were linked to 79 percent of the standards/indicators. The course linked strongly to (M) Geometry, (TE) Human Ingenuity, and (IT) Independent Learning

Standards Category	Standards and indicators	# of times standard liked to an objective
Math		
A = Mathematical Processes	7	7
B = Number Operations and Relationships	7	0
C = Geometry	6	13
D = Measurement	4	7
E = Statistics and Probability	6	4
F = Algebraic Relationships	5	1
Science		
A = Science of Connections	8	1
B = Nature of Science	6	0
C = Science Inquiry	8	2
D = Physical Science	13	1
E = Earth and Space Science	6	3
F = Life and Environmental Science	13	0
G = Science Applications	6	2
H = Science Applications	9	0
Technology Education		
A = Nature of Technology	8	1
B = Systems	9	12
C = Human Ingenuity	12	25

D = Impact of Technology	7	3
Information and Technology		
A = Media and Technology	7	9
B = Information and Inquiry	9	8
C = Independent Learning	5	20
D = Learning Community	5	2

Principles of Engineering: 8 units

Summary: This course includes 8 units of study addressing 84 learning objectives. The objectives link to the standards like this:

- **Math**: 4 out of 6 standards/indicators. Mathematical Process showed the strongest association to objectives by linking with 7 objectives. Standards were not addressed by objectives in the areas of Number Operations & Relationships and Statistics & Probability
- **Science**: 5 out of 8 standards/indicators. Physical Science showed the strongest association to objectives by linking with 9 objectives. Standards were not addressed by objectives in the areas of Earth & Space Science, Life & Environmental Science, and H-Science Applications
- **Tech Ed**: 4 out of 4 standards/indicators. Systems showed the strongest association to objectives by linking with 16 objectives. Human Ingenuity also showed a strong association to objectives by linking to 15 objectives.
- **Information and Technology:** 4 out of 4 standards/indicators. Information and Inquiry showed the strongest association to objectives by linking with 6 objectives.

Summary: 100 percent of the objectives were linked to 78 percent of the relative WI standards/indicators. The areas that showed the strongest association were Mathematical Processes (M), Physical Science (S), Systems (T), and Information and Inquiry (IT).

Standards Category	Standards and indicators	# of times standard liked to an objective
Math		
A = Mathematical Processes	7	7
B = Number Operations and Relationships	7	0
C = Geometry	6	1
D = Measurement	4	2
E = Statistics and Probability	6	0
F = Algebraic Relationships	5	1
Science		
A = Science of Connections	8	6
B = Nature of Science	6	1
C = Science Inquiry	8	4
D = Physical Science	13	9
E = Earth and Space Science	6	0
F = Life and Environmental Science	13	0
G = Science Applications	6	3

H = Science Applications	9	0
Technology Education		
A = Nature of Technology	8	9
B = Systems	9	16
C = Human Ingenuity	12	15
D = Impact of Technology	7	2
Information and Technology		
A = Media and Technology	7	5
B = Information and Inquiry	9	6
C = Independent Learning	5	5
D = Learning Community	5	3

Civil Engineering and Architecture: 7 units

Summary: This course includes 7 units of study addressing, 64/65 objectives. The 64 course objectives linked like this:

- **Math**: 5 out of 6 math standards/indicators addressed with Mathematical Process standards linked to the 13 objectives. Objectives were not linked to Number Operations and Relationships
- **Science:** 7 out of 8 science standards/indicators. Science Inquiry was linked to 10 objectives, showing the strongest association in the science area. Objectives were not linked to the Environmental Science standards.
- **Technology:** 4 out of 4 technology education standards/indicators. C-Human Ingenuity linked to 31 objectives showing the strongest association in this standards category
- **Information & Technology:** There was no association between this standard category and the learning objectives in the course.

Summary: Ninety-eight percent of the objectives were linked to 73 percent of the standards/indicators. The course linked strongly to (M) Mathematical Processes, (S) Science Inquiry, and (TE) Human Ingenuity.

Standards Category	Standards and indicators	# of times standard liked to an objective
Math		
A = Mathematical Processes	7	7
B = Number Operations and Relationships	7	0
C = Geometry	6	5
D = Measurement	4	3
E = Statistics and Probability	6	6
F = Algebraic Relationships	5	1
Science		
A = Science of Connections	8	3
B = Nature of Science	6	1
C = Science Inquiry	8	10
D = Physical Science	13	4
E = Earth and Space Science	6	5

F = Life and Environmental Science	13	0
G = Science Applications	6	6
H = Science Applications	9	6
Technology Education		
A = Nature of Technology	8	6
B = Systems	9	13
C = Human Ingenuity	12	31
D = Impact of Technology	7	4
Information and Technology		
A = Media and Technology	7	0
B = Information and Inquiry	9	0
C = Independent Learning	5	0
D = Learning Community	5	0

Computer Integrated Manufacturing: 4 units

Summary: This course includes 4 units of study addressing 119/120 course objectives. The 119 course objectives linked like this:

- **Math**: 6 out of 6 math standards/indicators addressed with the Measurement standards showing the strongest link with 20 objectives begin addressed.
- **Science:** 4 out of 8 science standards/indicators addressed with the Science Connection standards showing the strongest link with 7 objectives being addressed. Objectives were not linked to Nature of Science, Physical Science, Earth and Space Science, and Environmental Science standards.
- **Technology:** 4 out of 4 technology education standards/indicators addressed with the Systems standards showing the strongest link with 43 objectives being addressed.
- **Information & Technology:** There was no association between this standard category and the learning objectives in this course

Summary: Ninety-nine (99) percent of the objectives were linked to 64 percent of the standards/indicators. The course linked strongest to (M) Measurement, (S) Science Connections, and (TE) Systems.

Standards Category	Standards and indicators	# of times standard liked to an objective
Math		
A = Mathematical Processes	7	13
B = Number Operations and Relationships	7	1
C = Geometry	6	11
D = Measurement	4	20
E = Statistics and Probability	6	5
F = Algebraic Relationships	5	1
Science		
A = Science of Connections	8	7
B = Nature of Science	6	0

C = Science Inquiry	8	2
D = Physical Science	13	0
E = Earth and Space Science	6	0
F = Life and Environmental Science	13	0
G = Science Applications	6	4
H = Science Applications	9	3
Technology Education		
A = Nature of Technology	8	2
B = Systems	9	43
C = Human Ingenuity	12	27
D = Impact of Technology	7	7
Information and Technology		
A = Media and Technology	7	0
B = Information and Inquiry	9	0
C = Independent Learning	5	0
D = Learning Community	5	0

Digital Electronics: 10 units

Summary: This course includes 10 units of study addressing and 79 course objectives. The 79 course objectives linked like this:

- **Math**: 6 out of 6 math standards/indicators addressed with the Mathematical Processes standards showing the strongest link with 38 objectives being addressed.
- **Science:** 5 out of 8 science standards/indicators addressed with the Science Inquiry standards showing the strongest link with 6 objectives being addressed. Objectives were not linked to Science of Connections, Life and Environmental Science, and H-Science Applications standards.
- **Technology:** 2 out of 4 technology education standards/indicators addressed with the Human Ingenuity standards showing the strongest link by addressing 13 objectives. Objectives were not linked to the Nature of Technology or Impact of Technology
- **Information & Technology:** 1 out of 4 standards were linked in this category. Independent Learning was the only standards in this category, linking to one objective.

Summary: Ninety-nine (99) percent of the objectives were linked to 64 percent of the standards/indicators. The course linked strongest to (M) Measurement, (S) Science Connections, and (TE) Systems.

Standards Category	Standards and indicators	# of times standard liked to an objective
Math		
A = Mathematical Processes	7	38
B = Number Operations and Relationships	7	8
C = Geometry	6	5
D = Measurement	4	5
E = Statistics and Probability	6	4

F = Algebraic Relationships	5	6
Science		
A = Science of Connections	8	0
B = Nature of Science	6	1
C = Science Inquiry	8	6
D = Physical Science	13	4
E = Earth and Space Science	6	1
F = Life and Environmental Science	13	0
G = Science Applications	6	3
H = Science Applications	9	0
Technology Education		
A = Nature of Technology	8	0
B = Systems	9	11
C = Human Ingenuity	12	13
D = Impact of Technology	7	0
Information and Technology		
A = Media and Technology	7	0
B = Information and Inquiry	9	0
C = Independent Learning	5	1
D = Learning Community	5	0

Engineering Design and Development : 5 units

Summary: This course includes 5 units of study addressing 49/51 course objectives The 49 course objectives linked like this:

- **Math**: 4 out of 6 math standards/indicators addressed with the Mathematical Processes standards showing the strongest link with 4 objectives being addressed. Objectives did not link to Number Operations and Algebraic Relationships
- **Science:** 4 out of 8 science standards/indicators addressed with the Science of Connection showing the strongest link by addressing 7 objectives. Objectives were not linked to Physical Science, Earth & Space, Life & Environmental and H-Science Applications
- **Technology:** 3 out of 4 technology education standards/indicators addressed with the Human Ingenuity standards showing the strongest link by addressing 6 objectives. Objectives were not linked to Nature of Technology **Information & Technology:** 1 out of 4 standards were linked in this category. Media Technology showed the only association to an objective.

Summary: Ninety-nine (99) percent of the objectives were linked to 64 percent of the standards/indicators. The course linked strongest to (M) Measurement, (S) Science Connections, and (TE) Systems.

Standards Category	Standards and indicators	# of times standard liked to an objective
Math		
A = Mathematical Processes	7	4
B = Number Operations and Relationships	7	0
C = Geometry	6	1

D = Measurement	4	1
E = Statistics and Probability	6	3
F = Algebraic Relationships	5	0
Science		
A = Science of Connections	8	7
B = Nature of Science	6	1
C = Science Inquiry	8	6
D = Physical Science	13	0
E = Earth and Space Science	6	0
F = Life and Environmental Science	13	0
G = Science Applications	6	1
H = Science Applications	9	0
Technology Education		
A = Nature of Technology	8	0
B = Systems	9	4
C = Human Ingenuity	12	6
D = Impact of Technology	7	1
Information and Technology		
A = Media and Technology	7	1
B = Information and Inquiry	9	0
C = Independent Learning	5	0
D = Learning Community	5	0