

Electrical and Power Transmission Installers, Other, Classification of Instructional Program (CIP) 46.0399 Units of Instruction and Task Grid Linked to Pennsylvania Core Standards

| | Secondary Competency Task Grid with Unit and Task Numbers | Common Career Technical Core Standards | Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5 | Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6 | Pennsylvania Core Standards for Mathematics Standard 2.1 |
|--|---|---|---|---|---|
| 100 101 102 103 104 105 106 107 108 109 110 111 | Inspect and use personal protective equipment. Identify causes of job site accidents. RESERVED RESERVED Properly don fall protection. Identify four classes of fire extinguishers. Confirm circuits are de-energized before working on them. Perform lockout/tagout. Inspect and use ladders. Complete jobsite hazard analysis form. Identify Arc-flash hazards and protection. | CAREER CLUSTER Manufacturing Career Cluster (Choose Standards) 1-2-3-4-5-6-7 CAREER PATHWAYS INCLUDE: Maintenance, Installation and Repair Career Pathway (Choose Standards) 1-2-3-4-5-6 NOTE: Refer to the Common Career Technical Core Standards Booklet if you wish to add more Pathways to meet the needs of your local Area. | KEY IDEAS/DETAILS GRADES 9-10-11-12 Standard CC.3.5.9-10. A Standard CC.3.5.11-12 A Cite specific textual evidence, etc. Standard CC.3.5.9-10 B Standard CC.3.5.11-12. B Determine the central ideas or conclusions of a text; etc. Standard CC.3.5.9-10.C Standard CC.3.5.11-12.C Follow precisely a complex multistep procedure, etc. CRAFT & STRUCTURE GRADES 9-10-11-12 Standard CC.3.5.9-10. D Standard CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain specific words. Standard CC.3.5.9-10.E Standard CC.3.5.11-12.E Analyze the structure of the | TEXT TYPES AND PURPOSE GRADES 9-10-11-12 Standard CC.3.6.9-10.A Standard CC.3.6.11-12.A Write arguments focused on discipline specific content. Standard CC.3.6.9-10.B Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc. PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12 Standard CC.3.6.9-10.C Standard CC.3.6.11-12 C Produce clear and coherent writingappropriate to task, purpose, and audience. Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D | |

text, etc.

writing as needed by

Standard CC.3.5.9-10.F Standard CC.3.5.11-12.F

Analyze the author's purpose in providing an explanation, describing a procedure...and
Analyze the structure of the relationships among concepts in a

INTEGRATE KNOWLEDGE & IDEAS

GRADES 9-10

Standard CC.3.5.9-10.G

Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart).

Standard CC.3.5.9-10. H

Assess the reasoning in a text to support the author's claim for solving a technical problem.

Standard CC.3.5.9-10. I

Compare and contrast findings presented in a text to those from other sources, etc.

INTEGRATE KNOWLEDGE & IDEAS

GRADES 11-12

Standard CC.3.5.11-12. G

Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem.

Standard CC.3.5.11-12. H

Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible.

Standard CC.3.5.11-12. I

Synthesize information from a range of sources into a coherent understanding.

RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J Standard CC.3.5.11-12.J

planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.

Standard CC.3.6.9-10.E Standard CC.3.6.11-12.E.

Use technology, including the internet, to produce, publish, and update individual or shared writing products.

RESEARCH GRADES 9-10-11-12 Standard CC.3.6.9-10.F Standard CC.3.6.11-12.F

Conduct short and more sustained research to answer a question or solve a problem.

Standard CC.3.6.9-10.G. Standard CC.3.6.11-12.G

Gather relevant information from multiple authoritative print and digital sources, following a standard format for citation.

Standard CC.3.6.9-10.H. Standard CC.3.6.11-12.H.

Draw evidence from informational texts to support analysis, reflection, and research.

RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I & Standard CC.3.5.11-12.I.

Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiences...etc.

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| - | | | texts independently and proficiently. | | |
| 200 | HAND TOOLS. | | | | |
| 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 | HAND TOOLS. Use screwdrivers. Use pliers. Use keyhole/drywall saw. Use hydraulic knockout/punch tool. Use a tape measure. Use wire strippers. Use wire cutters. Use utility knife. Use torpedo level. Use a hammer. Use a conduit reamer. Use a roto-split. Use adjustable or non-adjustable wrenches. Use ratchet and sockets. Use nut drivers. | CAREER CLUSTER Manufacturing Career Cluster (Choose Standards) 1-2-3-4-5-6-7 CAREER PATHWAYS INCLUDE: Maintenance, Installation and Repair Career Pathway (Choose Standards) 1-2-3-4-5-6 NOTE: Refer to the Common Career Technical Core Standards Booklet if you wish to add more Pathways to meet the needs of your local Area. | By the end of grades 9- 10, AND 11- 12, read and comprehend technical texts independently and proficiently. KEY IDEAS/DETAILS GRADES 9-10-11-12 Standard CC.3.5.9-10. A Standard CC.3.5.9-10 B Standard CC.3.5.9-10 B Standard CC.3.5.11-12. B Determine the central ideas or conclusions of a text; etc. Standard CC.3.5.9-10. C Standard CC.3.5.11-12. C Follow precisely a complex multistep procedure, etc. CRAFT & STRUCTURE GRADES 9-10-11-12 Standard CC.3.5.9-10. D Standard CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain specific words. Standard CC.3.5.9-10.E Standard CC.3.5.11-12.E Analyze the structure of the | | |
| | | | relationships among concepts in a text, etc. Standard CC.3.5.9-10.F Standard CC.3.5.11-12.F Analyze the author's purpose in providing an explanation, describing a procedureand Analyze the structure of the relationships among concepts in a text. INTEGRATE KNOWLEDGE & IDEAS GRADES 9-10 Standard CC.3.5.9-10.G | | |

| Translate quantitative or technical |
|--|
| information expressed in a text into |
| visual form (e.g. a table or chart). |
| Standard CC.3.5.9-10. H |
| Assess the reasoning in a text to |
| support the author's claim for solving |
| a technical problem. |
| Standard CC.3.5.9-10. I |
| Compare and contrast findings |
| presented in a text to those from |
| other sources, etc. |
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| INTEGRATE KNOWLEDGE & |
| IDEAS |
| GRADES 11-12 |
| Standard CC.3.5.11-12. G |
| Integrate and evaluate multiple |
| sources of information presented in |
| diverse formatsto solve a problem. |
| Standard CC.3.5.11-12. H |
| Evaluate the hypotheses, data, |
| analysis, and conclusions in a |
| technical text, verifying the data |
| when possible. |
| Standard CC.3.5.11-12. I |
| Synthesize information from a range |
| of sources into a coherent |
| understanding. |
| RANGE OF READING |
| GRADES 9-10-11-12 |
| Standard CC.3.5.9-10.J |
| Standard CC.3.5.11-12.J |
| By the end of grades 9- 10, AND 11- |
| 12, read and comprehend technical |
| texts independently and proficiently. |
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| 300 | POWER TOOLS. | | | | |
|-------------------|--|---|--|---|--|
| 301 302 | RESERVED Use electric hammer drill. | CAREER CLUSTER Manufacturing Career Cluster | KEY IDEAS/DETAILS GRADES 9-10-11-12 Standard CC.3.5.9-10. A | TEXT TYPES AND PURPOSE GRADES 9-10-11-12 | NUMBERS AND OPERATIONS Standard 2.1.HS.F.2 |
| 303 304 305 | Use reciprocating saw. Use portable hand-held band saw. RESERVED | (Choose Standards) 1-2-3-4-5-6-7 | Standard CC.3.5.11-12 A Cite specific textual evidence, etc. Standard CC.3.5.9-10 B Standard CC.3.5.11-12. B | Standard CC.3.6.9-10.A Standard CC.3.6.11-12.A Write arguments focused on discipline specific content. | Apply properties of rational and irrational numbers to |

| 306 | Use a drill. |
|-----|-------------------------------------|
| 307 | RESERVED |
| 308 | RESERVED |
| 309 | RESERVED |
| 310 | Use oscillating multi-purpose tool. |
| 311 | Use impact driver. |
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CAREER PATHWAYS INCLUDE:

Maintenance, Installation and Repair Career Pathway

(Choose Standards) 1-2-3-4-5-6

NOTE:

Refer to the Common Career Technical Core Standards Booklet if you wish to add more Pathways to meet the needs of your local Area. Determine the central ideas or conclusions of a text; etc.

Standard CC.3.5.9-10.C

Standard CC.3.5.11-12.C

Follow precisely a complex multistep procedure, etc.

CRAFT & STRUCTURE GRADES 9-10-11-12 Standard CC.3.5.9-10. D Standard CC.3.5.11-12.D

Determine the meaning of symbols, key terms, and other domain specific words.

Standard CC.3.5.9-10.E Standard CC.3.5.11-12.E

Analyze the structure of the relationships among concepts in a text, etc.

Standard CC.3.5.9-10.F Standard CC.3.5.11-12.F

Analyze the author's purpose in providing an explanation, describing a procedure...and
Analyze the structure of the relationships among concepts in a text.

INTEGRATE KNOWLEDGE & IDEAS

GRADES 9-10

Standard CC.3.5.9-10.G

Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart).

Standard CC.3.5.9-10. H

Assess the reasoning in a text to support the author's claim for solving a technical problem.

Standard CC.3.5.9-10. I

Compare and contrast findings presented in a text to those from other sources, etc.

Standard CC.3.6.9-10.B Standard CC.3.6.11-12.B

Write informative or explanatory texts, including the narration of technical processes, etc.

PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12 Standard CC.3.6.9-10.C Standard CC.3.6.11-12 C

Produce clear and coherent writing...appropriate to task, purpose, and audience.

Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D

Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.

Standard CC.3.6.9-10.E Standard CC.3.6.11-12.E.

Use technology, including the internet, to produce, publish, and update individual or shared writing products.

RESEARCH GRADES 9-10-11-12 Standard CC.3.6.9-10.F Standard CC.3.6.11-12.F

Conduct short and more sustained research to answer a question or solve a problem.

Standard CC.3.6.9-10.G. Standard CC.3.6.11-12.G

Gather relevant information from multiple authoritative print and digital sources.

solve real world or mathematical problems.

Standard 2.1.HS.F.4

Use units as a way to understand problems and to guide the solution of multistep problems.

Standard 2.1.HS.F.5

Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Standard 2.1.HS.F.6

Extend the knowledge of arithmetic operations and apply to complex numbers.

ALGEBRA

Standard 2.2.HS.C.9 Prove the Pythagorean

Prove the Pythagorean identity and use it to calculate trigonometric ratios.

GEOMETRY Standard 2.3.HS.A.7

Apply trigonometric ratios to solve problems involving right triangles.

Standard 2.3.HS.A.3

Verify and apply geometric theorems as they relate to geometric figures.

Standard 2.3.HS.A.13

Analyze relationships between two dimensional and three dimensional objects.

| INTEGRATE KNOWLEDGE & IDEAS GRADES 11-12 Standard CC.3.5.11-12. G Integrate and evaluate multiple sources of information presented in diverse formatsto solve a problem. Standard CC.3.5.11-12. H Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent | following a standard format for citation. Standard CC.3.6.9-10.H. Standard CC.3.6.11-12.H. Draw evidence from informational texts to support analysis, reflection, and research. RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I & Standard CC.3.5.11-12.I. Write routinely over extended time frames and |
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| Evaluate the hypotheses, data, | |
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| understanding. | shorter time frames for a |
| | range of tasks, purposes and |
| RANGE OF READING | audiencesetc. |
| GRADES 9-10-11-12 | |
| Standard CC.3.5.9-10.J | |
| Standard CC.3.5.11-12.J | |
| By the end of grades 9- 10, AND 11- | |
| 12, read and comprehend technical | |
| texts independently and proficiently. | |

| 400 | BLUEPRINT READING. | | | | |
|--|--|--|--|--|---|
| 401 402 403 404 405 406 | Identify types of blueprint plans. Identify blueprint symbols. Interpret blueprint plans. RESERVED Develop electrical details on a residential blueprint. Use a measuring tool to scale. | CAREER CLUSTER Manufacturing Career Cluster (Choose Standards) 1-2-3-4-5-6-7 CAREER PATHWAYS INCLUDE: Maintenance, Installation and Repair Career Pathway (Choose Standards) 1-2-3-4-5-6 NOTE: Refer to the Common Career Technical Core | KEY IDEAS/DETAILS GRADES 9-10-11-12 Standard CC.3.5.9-10. A Standard CC.3.5.11-12 A Cite specific textual evidence, etc. Standard CC.3.5.9-10 B Standard CC.3.5.11-12. B Determine the central ideas or conclusions of a text; etc. Standard CC.3.5.9-10.C Standard CC.3.5.11-12.C Follow precisely a complex multistep procedure, etc. CRAFT & STRUCTURE GRADES 9-10-11-12 Standard CC.3.5.9-10. D Standard CC.3.5.11-12.D | TEXT TYPES AND PURPOSE GRADES 9-10-11-12 Standard CC.3.6.9-10.A Standard CC.3.6.11-12.A Write arguments focused on discipline specific content. Standard CC.3.6.9-10.B Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc. PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12 Standard CC.3.6.9-10.C Standard CC.3.6.11-12 C | NUMBERS AND OPERATIONS Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems. Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems. Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. Standard 2.1.HS.F.6 |

Revised June 2018 6

Standards Booklet if you wish to add more Pathways to meet the needs of your local Area.

Determine the meaning of symbols, key terms, and other domain specific words.

Standard CC.3.5.9-10.E Standard CC.3.5.11-12.E

Analyze the structure of the relationships among concepts in a text, etc.

Standard CC.3.5.9-10.F Standard CC.3.5.11-12.F

Analyze the author's purpose in providing an explanation, describing a procedure...and
Analyze the structure of the relationships among concepts in a text.

INTEGRATE KNOWLEDGE & IDEAS

GRADES 9-10

Standard CC.3.5.9-10.G

Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart).

Standard CC.3.5.9-10. H

Assess the reasoning in a text to support the author's claim for solving a technical problem.

Standard CC.3.5.9-10. I

Compare and contrast findings presented in a text to those from other sources, etc.

INTEGRATE KNOWLEDGE & IDEAS GRADES 11-12

Standard CC.3.5.11-12. G

Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem.

Standard CC.3.5.11-12. H

Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible.

Produce clear and coherent writing...appropriate to task, purpose, and audience.

Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D

Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.

Standard CC.3.6.9-10.E Standard CC.3.6.11-12.E.

Use technology, including the internet, to produce, publish, and update individual or shared writing products.

RESEARCH GRADES 9-10-11-12

Standard CC.3.6.9-10.F Standard CC.3.6.11-12.F

Conduct short and more sustained research to answer a question or solve a problem.

Standard CC.3.6.9-10.G. Standard CC.3.6.11-12.G

Gather relevant information from multiple authoritative print and digital sources, following a standard format for citation.

Standard CC.3.6.9-10.H. Standard CC.3.6.11-12.H.

Draw evidence from informational texts to support analysis, reflection, and research.

RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I & Standard CC.3.5.11-12.I.

Extend the knowledge of arithmetic operations and apply to complex numbers.

ALGEBRA

Standard 2.2.HS.C.9

Prove the Pythagorean identity and use it to calculate trigonometric ratios.

GEOMETRY

Standard 2.3.HS.A.7

Apply trigonometric ratios to solve problems involving right triangles.

Standard 2.3.HS.A.3

Verify and apply geometric theorems as they relate to geometric figures.

Standard 2.3.HS.A.13

Analyze relationships between two dimensional and three dimensional objects.

| | | | Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent understanding. RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J Standard CC.3.5.11-12.J By the end of grades 9- 10, AND 11-12, read and comprehend technical texts independently and proficiently. | Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiencesetc. | |
|-----|--|---|--|---|---|
| 500 | ANCHORS AND SUPPORTS. | | | | |
| 501 | Identify, select, and install various types of anchors and supports. | CAREER CLUSTER Manufacturing Career Cluster (Choose Standards) 1-2-3-4-5-6-7 CAREER PATHWAYS INCLUDE: Maintenance, Installation and Repair Career Pathway (Choose Standards) 1-2-3-4-5-6 NOTE: Refer to the Common Career Technical Core Standards Booklet if you wish to add more Pathways to meet the needs of your local Area. | KEY IDEAS/DETAILS GRADES 9-10-11-12 Standard CC.3.5.9-10. A Standard CC.3.5.9-10. A Cite specific textual evidence, etc. Standard CC.3.5.9-10 B Standard CC.3.5.11-12. B Determine the central ideas or conclusions of a text; etc. Standard CC.3.5.9-10.C Standard CC.3.5.9-10.C Standard CC.3.5.11-12.C Follow precisely a complex multistep procedure, etc. CRAFT & STRUCTURE GRADES 9-10-11-12 Standard CC.3.5.9-10. D Standard CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain specific words. Standard CC.3.5.9-10.E Standard CC.3.5.11-12.E Analyze the structure of the relationships among concepts in a text, etc. Standard CC.3.5.9-10.F Standard CC.3.5.11-12.F Analyze the author's purpose in providing an explanation, describing a procedureand | TEXT TYPES AND PURPOSE GRADES 9-10-11-12 Standard CC.3.6.9-10.A Standard CC.3.6.9-10.A Write arguments focused on discipline specific content. Standard CC.3.6.9-10.B Standard CC.3.6.9-10.B Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc. PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12 Standard CC.3.6.9-10.C Standard CC.3.6.11-12 C Produce clear and coherent writingappropriate to task, purpose, and audience. Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most | NUMBERS AND OPERATIONS Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems. Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems. Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers. GEOMETRY Standard 2.3.HS.A.13 Analyze relationships between two dimensional and three dimensional objects. |

Analyze the structure of the relationships among concepts in a text.

INTEGRATE KNOWLEDGE & IDEAS

GRADES 9-10

Standard CC.3.5.9-10.G

Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart).

Standard CC.3.5.9-10. H

Assess the reasoning in a text to support the author's claim for solving a technical problem.

Standard CC.3.5.9-10. I

Compare and contrast findings presented in a text to those from other sources, etc.

INTEGRATE KNOWLEDGE & IDEAS

GRADES 11-12

Standard CC.3.5.11-12. G

Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem.

Standard CC.3.5.11-12. H

Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible.

Standard CC.3.5.11-12. I

Synthesize information from a range of sources into a coherent understanding.

RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J

Standard CC.3.5.11-12.J

By the end of grades 9- 10, AND 11-12, read and comprehend technical texts independently and proficiently. significant for a specific purpose and audience.

Standard CC.3.6.9-10.E Standard CC.3.6.11-12.E.

Use technology, including the internet, to produce, publish, and update individual or shared writing products.

RESEARCH GRADES 9-10-11-12 Standard CC.3.6.9-10.F Standard CC.3.6.11-12.F

Conduct short and more sustained research to answer a question or solve a problem.

Standard CC.3.6.9-10.G. Standard CC.3.6.11-12.G

Gather relevant information from multiple authoritative print and digital sources, following a standard format for citation.

Standard CC.3.6.9-10.H. Standard CC.3.6.11-12.H.

Draw evidence from informational texts to support analysis, reflection, and research.

RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I & Standard CC.3.5.11-12.I.

Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiences...etc.

| 600 RESIDENTIAL CABLING TECHNOLO | GY. | | | |
|---|---|---|---|--|
| 601 Install non-metallic (NM) Cable for connectic electrical device. 602 Install metal-clad cable (MC). 603 RESERVED 604 RESERVED 605 Terminate a coaxial cable. 606 RESERVED 607 RESERVED 608 RESERVED 609 Identify telecommunications cable types. 610 Terminate an RJ45 connector. 611 Install SE cable. | CAREER CLUSTER Manufacturing Career Cluster (Choose Standards) 1-2-3-4-5-6-7 CAREER PATHWAYS INCLUDE: Maintenance, Installation and Repair Career Pathway (Choose Standards) 1-2-3-4-5-6 NOTE: Refer to the Common Career Technical Core Standards Booklet if you wish to add more Pathways to meet the needs of your local Area. | KEY IDEAS/DETAILS GRADES 9-10-11-12 Standard CC.3.5.9-10. A Standard CC.3.5.9-10. B Standard CC.3.5.9-10 B Standard CC.3.5.9-10 B Standard CC.3.5.9-10.C Standard CC.3.5.9-10.C Standard CC.3.5.11-12.C Follow precisely a complex multistep procedure, etc. CRAFT & STRUCTURE GRADES 9-10-11-12 Standard CC.3.5.9-10. D Standard CC.3.5.9-10. D Standard CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain specific words. Standard CC.3.5.9-10.E Standard CC.3.5.9-10.E Standard CC.3.5.11-12.E Analyze the structure of the relationships among concepts in a text, etc. Standard CC.3.5.11-12.F Analyze the author's purpose in providing an explanation, describing a procedureand Analyze the structure of the relationships among concepts in a text. INTEGRATE KNOWLEDGE & IDEAS GRADES 9-10 Standard CC.3.5.9-10.G Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart). Standard CC.3.5.9-10. H | TEXT TYPES AND PURPOSE GRADES 9-10-11-12 Standard CC.3.6.9-10.A Standard CC.3.6.9-10.A Write arguments focused on discipline specific content. Standard CC.3.6.9-10.B Standard CC.3.6.9-10.B Write informative or explanatory texts, including the narration of technical processes, etc. PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12 Standard CC.3.6.9-10.C Standard CC.3.6.9-10.C Standard CC.3.6.9-10.D Standard CC.3.6.9-10 D Standard CC.3.6.9-10 E Standard CC.3.6.9-10 D Standard CC.3.6.9-10.E Standard CC.3.6.9-10.F | NUMBERS AND OPERATIONS Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems. Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems. Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers. ALGEBRA Standard 2.2.HS.C.9 Prove the Pythagorean identity and use it to calculate trigonometric ratios. GEOMETRY Standard 2.3.HS.A.7 Apply trigonometric ratios to solve problems involving right triangles. Standard 2.3.HS.A.3 Verify and apply geometric theorems as they relate to geometric figures. Standard 2.3.HS.A.13 Analyze relationships between two dimensional and three dimensional objects. |

| | Assess the reasoning in a tayt to | Conduct short and more |
|-----|--|--------------------------------|
| | Assess the reasoning in a text to | sustained research to answer |
| | support the author's claim for solving | |
| | a technical problem. | a question or solve a |
| | Standard CC.3.5.9-10. I | problem. |
| | Compare and contrast findings | Standard CC.3.6.9-10.G. |
| | presented in a text to those from | Standard CC.3.6.11-12.G |
| | other sources, etc. | Gather relevant information |
| | , | from multiple authoritative |
| | THE COLUMN TO CE O | print and digital sources, |
| | INTEGRATE KNOWLEDGE & | following a standard format |
| | IDEAS | for citation. |
| | GRADES 11-12 | Standard CC.3.6.9-10.H. |
| | Standard CC.3.5.11-12. G | Standard CC.3.6.11-12.H. |
| | Integrate and evaluate multiple | Draw evidence from |
| | sources of information presented in | informational texts to support |
| | diverse formatsto solve a problem. | analysis, reflection, and |
| | Standard CC.3.5.11-12. H | research. |
| | Evaluate the hypotheses, data, | |
| | analysis, and conclusions in a | RANGE OF WRITING |
| | technical text, verifying the data | GRADES 9-10-11-12 |
| | when possible. | Standard CC.3.5.9-10.I & |
| | Standard CC.3.5.11-12. I | Standard CC.3.5.11-12.I. |
| | Synthesize information from a range | Write routinely over |
| | of sources into a coherent | extended time frames and |
| | understanding. | shorter time frames for a |
| | | range of tasks, purposes and |
| | RANGE OF READING | audiencesetc. |
| | GRADES 9-10-11-12 | audioneesetc. |
| | Standard CC.3.5.9-10.J | |
| | Standard CC.3.5.11-12.J | |
| | By the end of grades 9- 10, AND 11- | |
| | 12, read and comprehend technical | |
| | texts independently and proficiently. | |
| L L | texts independently and proficiently. | |

| 700 | SWITCHES AND RECEPTACLES CIRCUITS. | | | | |
|---|---|---|--|--|---|
| 701 702 703 704 705 706 707 708 709 | Install a duplex receptacle. Install a single pole switch. Install a 3-way switch. Install a 4-way switch. Install a split-wired duplex receptacle. Install a Ground Fault Circuit Interrupter (GFCI) Receptacle. Install an Arc-Fault Circuit Interrupter (AFCI). Install a time control switch. Install a range receptacle. | CAREER CLUSTER Manufacturing Career Cluster (Choose Standards) 1-2-3-4-5-6-7 CAREER PATHWAYS INCLUDE: | KEY IDEAS/DETAILS GRADES 9-10-11-12 Standard CC.3.5.9-10. A Standard CC.3.5.11-12 A Cite specific textual evidence, etc. Standard CC.3.5.9-10 B Standard CC.3.5.11-12. B Determine the central ideas or conclusions of a text; etc. Standard CC.3.5.9-10.C Standard CC.3.5.11-12.C | TEXT TYPES AND PURPOSE GRADES 9-10-11-12 Standard CC.3.6.9-10.A Standard CC.3.6.11-12.A Write arguments focused on discipline specific content. Standard CC.3.6.9-10.B Standard CC.3.6.11-12.B Write informative or explanatory texts, including | NUMBERS AND OPERATIONS Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems. Standard 2.1.HS.F.4 Use units as a way to understand problems and to |

| 710 Install a dryer receptacle. | Maintenance, | Follow precisely a complex multistep | the narration of technical | guide the solution of |
|---------------------------------|---|--|---|---|
| | Installation and Repair | procedure, etc. | processes, etc. | multistep problems. |
| | Career Pathway | an | PRODUCTION & | Standard 2.1.HS.F.5 |
| | (Choose Standards) | CRAFT & STRUCTURE | DISTRIBUTION OF | Choose a level of accuracy |
| | 1-2-3-4-5-6 | GRADES 9-10-11-12 | WRITING | appropriate to limitations on |
| | | Standard CC.3.5.9-10. D | GRADES 9-10-11-12 | measurement when reporting quantities. |
| | NOTE: | Standard CC.3.5.11-12.D | Standard CC.3.6.9-10.C | |
| | Refer to the Common | Determine the meaning of symbols, | Standard CC.3.6.11-12 C | Standard 2.1.HS.F.6 |
| | Career Technical Core | key terms, and other domain specific | Produce clear and coherent | Extend the knowledge of arithmetic operations and |
| | Standards Booklet if you wish to add more | words. | writingappropriate to task, purpose, and audience. | apply to complex numbers. |
| | Pathways to meet the | Standard CC.3.5.9-10.E Standard CC.3.5.11-12.E | Standard CC.3.6.9-10 D | upping to complem numbers. |
| | needs of your local Area. | Analyze the structure of the | Standard CC.3.6.11-12.D | GEOMETRY |
| | • | relationships among concepts in a | Develop and strengthen | Standard 2.3.HS.A.7 |
| | | text, etc. | writing as needed by | Apply trigonometric ratios |
| | | Standard CC.3.5.9-10.F | planning, revising, editing, | to solve problems involving |
| | | Standard CC.3.5.11-12.F | rewriting, or trying a new approach, focusing on | right triangles. |
| | | Analyze the author's purpose in | addressing what is most | Standard 2.3.HS.A.3 |
| | | providing an explanation, describing a procedureand | significant for a specific | Verify and apply geometric theorems as they relate to |
| | | Analyze the structure of the | purpose and audience. | geometric figures. |
| | | relationships among concepts in a | Standard CC.3.6.9-10.E | Standard 2.3.HS.A.13 |
| | | text. | Standard CC.3.6.11-12.E. | Analyze relationships |
| | | | Use technology, including the internet, to produce, | between two dimensional |
| | | INTEGRATE KNOWLEDGE & | publish, and update | and three dimensional |
| | | IDEAS | individual or shared writing | objects. |
| | | GRADES 9-10 | products. | |
| | | Standard CC.3.5.9-10.G | RESEARCH | |
| | | Translate quantitative or technical | GRADES 9-10-11-12 | |
| | | information expressed in a text into | Standard CC.3.6.9-10.F | |
| | | visual form (e.g. a table or chart). | Standard CC.3.6.11-12.F Conduct short and more | |
| | | Standard CC.3.5.9-10. H | sustained research to answer | |
| | | Assess the reasoning in a text to support the author's claim for solving | a question or solve a | |
| | | a technical problem. | problem. | |
| | | Standard CC.3.5.9-10. I | Standard CC.3.6.9-10.G. | |
| | | Compare and contrast findings | Standard CC.3.6.11-12.G | |
| | | presented in a text to those from | Gather relevant information from multiple authoritative | |
| | | other sources, etc. | print and digital sources, | |
| | | | following a standard format | |
| | | INTEGRATE KNOWLEDGE & | for citation. | |
| | | IDEAS | Standard CC.3.6.9-10.H. | |
| | | GRADES 11-12 | Standard CC.3.6.11-12.H. | |
| | | Standard CC.3.5.11-12. G | | |

| Integrate and evaluate multiple sources of information presented in diverse formatsto solve a problem. Standard CC.3.5.11-12. H Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent understanding. RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J Standard CC.3.5.11-12.J By the end of grades 9- 10, AND 11-12, read and comprehend technical | Draw evidence from informational texts to support analysis, reflection, and research. RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I & Standard CC.3.5.11-12.I. Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiencesetc. |
|---|--|
| texts independently and proficiently. | |

| 800 | FIXTURES. | | | |
|---------------------------------|---|---|---|---|
| 801 802 803 804 805 | Install surface-mounted lighting fixture. Install recessed lighting fixtures. Install a ceiling fan. Install LED lighting. Identify IC and non-IC recessed lighting fixtures. | CAREER CLUSTER Manufacturing Career Cluster (Choose Standards) 1-2-3-4-5-6-7 CAREER PATHWAYS INCLUDE: Maintenance, Installation and Repair Career Pathway (Choose Standards) 1-2-3-4-5-6 NOTE: Refer to the Common Career Technical Core Standards Booklet if you wish to add more Pathways to meet the needs of your local Area. | KEY IDEAS/DETAILS GRADES 9-10-11-12 Standard CC.3.5.9-10. A Standard CC.3.5.9-10. A Cite specific textual evidence, etc. Standard CC.3.5.9-10 B Standard CC.3.5.11-12. B Determine the central ideas or conclusions of a text; etc. Standard CC.3.5.9-10. C Standard CC.3.5.11-12. C Follow precisely a complex multistep procedure, etc. CRAFT & STRUCTURE GRADES 9-10-11-12 Standard CC.3.5.9-10. D Standard CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain specific words. Standard CC.3.5.9-10.E Standard CC.3.5.9-10.E Standard CC.3.5.11-12.E | NUMBERS AND OPERATIONS Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems. Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems. Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers. |

| | Analyze the structure of the relationships among concepts in a |
|----------|--|
| | text, etc. |
| | Standard CC.3.5.9-10.F |
| | Standard CC.3.5.11-12.F |
| | Analyze the author's purpose in providing an explanation, describing |
| | a procedureand |
| | Analyze the structure of the |
| | relationships among concepts in a |
| | text. |
| | INTEGRATE KNOWLEDGE & |
| | IDEAS |
| | GRADES 9-10 |
| | Standard CC.3.5.9-10.G |
| | Translate quantitative or technical |
| | information expressed in a text into |
| | visual form (e.g. a table or chart). |
| | Standard CC.3.5.9-10. H |
| | Assess the reasoning in a text to |
| | support the author's claim for solving |
| | a technical problem. |
| | Standard CC.3.5.9-10. I |
| | Compare and contrast findings presented in a text to those from |
| | other sources, etc. |
| | oner sources, etc. |
| | INTEGRATE KNOWLEDGE & |
| | IDEAS |
| | GRADES 11-12 |
| | Standard CC.3.5.11-12. G |
| | Integrate and evaluate multiple sources of information presented in |
| | diverse formatsto solve a problem. |
| | Standard CC.3.5.11-12. H |
| | Evaluate the hypotheses, data, |
| | analysis, and conclusions in a |
| | technical text, verifying the data |
| | when possible. |
| | Standard CC.3.5.11-12. I |
| | Synthesize information from a range of sources into a coherent |
| | understanding. |
| | |
| <u>'</u> | · · · · · · · · · · · · · · · · · · · |

| 900 901 902 | RACEWAYS. Install Electrical Metallic Tubing (EMT). Install Poly-Vinyl Chloride conduit (PVC). | CAREER CLUSTER Manufacturing Career Cluster | RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J Standard CC.3.5.11-12.J By the end of grades 9- 10, AND 11- 12, read and comprehend technical texts independently and proficiently. KEY IDEAS/DETAILS GRADES 9-10-11-12 Standard CC.3.5.9-10. A | TEXT TYPES AND PURPOSE GRADES 9-10-11-12 | NUMBERS AND OPERATIONS Standard 2.1 HS F.2 |
|--|---|---|--|--|---|
| 903 904 905 906 907 908 909 910 911 912 | Identify surface metal and non-metal raceways (Wiremold). Identify flexible raceway. RESERVED RESERVED Bend a stub 90°. Bend an offset. Bend a back to back 90°. Cut, ream, and deburr raceway systems. Install conductors in a raceway system. | Cluster (Choose Standards) 1-2-3-4-5-6-7 CAREER PATHWAYS INCLUDE: Maintenance, Installation and Repair Career Pathway (Choose Standards) 1-2-3-4-5-6 NOTE: Refer to the Common Career Technical Core Standards Booklet if you wish to add more Pathways to meet the needs of your local Area. | Standard CC.3.5.11-12 A Cite specific textual evidence, etc. Standard CC.3.5.9-10 B Standard CC.3.5.9-10 B Determine the central ideas or conclusions of a text; etc. Standard CC.3.5.9-10.C Standard CC.3.5.9-10.C Standard CC.3.5.11-12.C Follow precisely a complex multistep procedure, etc. CRAFT & STRUCTURE GRADES 9-10-11-12 Standard CC.3.5.9-10. D Standard CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain specific words. Standard CC.3.5.9-10.E Standard CC.3.5.11-12.E Analyze the structure of the relationships among concepts in a text, etc. Standard CC.3.5.9-10.F Standard CC.3.5.11-12.F Analyze the author's purpose in providing an explanation, describing a procedureand Analyze the structure of the relationships among concepts in a text. | Standard CC.3.6.9-10.A Standard CC.3.6.9-10.A Standard CC.3.6.11-12.A Write arguments focused on discipline specific content. Standard CC.3.6.9-10.B Standard CC.3.6.9-10.B Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc. PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12 Standard CC.3.6.9-10.C Standard CC.3.6.11-12 C Produce clear and coherent writingappropriate to task, purpose, and audience. Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. Standard CC.3.6.9-10.E Standard CC.3.6.11-12.E Use technology, including the internet, to produce, | Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems. Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems. Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers. ALGEBRA Standard 2.2.HS.C.9 Prove the Pythagorean identity and use it to calculate trigonometric ratios. GEOMETRY Standard 2.3.HS.A.7 Apply trigonometric ratios to solve problems involving right triangles. Standard 2.3.HS.A.3 |

| 1000 WIRED DEVICES. | INTEGRATE KNOW IDEAS GRADES 9-10 Standard CC.3.5.9-10. Translate quantitative or information expressed in visual form (e.g. a table Standard CC.3.5.9-10. Assess the reasoning in support the author's class a technical problem. Standard CC.3.5.9-10. Compare and contrast figures presented in a text to the other sources, etc. INTEGRATE KNOW IDEAS GRADES 11-12 Standard CC.3.5.11-11. Integrate and evaluate in sources of information in diverse formatsto solve Standard CC.3.5.11-12. Evaluate the hypothese analysis, and conclusion technical text, verifying when possible. Standard CC.3.5.11-12. Synthesize information of sources into a cohere understanding. RANGE OF READIN GRADES 9-10-11-12 Standard CC.3.5.9-10. Standard CC.3.5.9-11. By the end of grades 9-12, read and compreher texts independently and | individual or shared writing products. RESEARCH GRADES 9-10-11-12 Standard CC.3.6.9-10.F Standard CC.3.6.11-12.F Conduct short and more sustained research to answer a question or solve a problem. Standard CC.3.6.9-10.G. Standard CC.3.6.9-10.G. Standard CC.3.6.11-12.G Gather relevant information from multiple authoritative print and digital sources, following a standard format for citation. Standard CC.3.6.9-10.H. Standard CC.3.6.9-10.H. Standard CC.3.6.11-12.H. Draw evidence from informational texts to support analysis, reflection, and research. RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I & Standard CC.3.5.11-12.I. Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiencesetc. | Verify and apply geometric theorems as they relate to geometric figures. Standard 2.3.HS.A.13 Analyze relationships between two dimensional and three dimensional objects. |
|----------------------|--|---|--|
| TOUC WIRED DE VICES. | | | |

KEY IDEAS/DETAILS TEXT TYPES AND 1001 Install a hard-wired smoke detector. CAREER CLUSTER NUMBERS AND **GRADES 9-10-11-12 PURPOSE** 1002 Install door-bell system. **OPERATIONS Manufacturing Career** Standard CC.3.5.9-10. A GRADES 9-10-11-12 1003 Trim out electrical devices. Cluster Standard 2.1.HS.F.2 Standard CC.3.5.11-12 A **Standard CC.3.6.9-10.A** 1004 Install an occupancy sensor. (Choose Standards) Apply properties of rational Cite specific textual evidence, etc. Standard CC.3.6.11-12.A 1005 Install a photocell. and irrational numbers to 1-2-3-4-5-6-7 Standard CC.3.5.9-10 B Write arguments focused on solve real world or discipline specific content. Standard CC.3.5.11-12. B mathematical problems. **Standard CC.3.6.9-10.B** Determine the central ideas or **CAREER PATHWAYS** Standard 2.1.HS.F.4 Standard CC.3.6.11-12.B conclusions of a text; etc. **INCLUDE: Standard CC.3.5.9-10.C** Write informative or Use units as a way to Maintenance. Standard CC.3.5.11-12.C explanatory texts, including understand problems and to **Installation and Repair** Follow precisely a complex multistep the narration of technical guide the solution of Career Pathway procedure, etc. processes, etc. multistep problems. (Choose Standards) Standard 2.1.HS.F.5 1-2-3-4-5-6 PRODUCTION & **CRAFT & STRUCTURE** Choose a level of accuracy DISTRIBUTION OF GRADES 9-10-11-12 appropriate to limitations on WRITING NOTE: Standard CC.3.5.9-10. D measurement when reporting GRADES 9-10-11-12 Refer to the Common quantities. Standard CC.3.5.11-12.D Standard CC.3.6.9-10.C **Career Technical Core** Standard 2.1.HS.F.6 Standard CC.3.6.11-12 C Determine the meaning of symbols, Standards Booklet if you Extend the knowledge of key terms, and other domain specific Produce clear and coherent wish to add more arithmetic operations and words. writing...appropriate to task, Pathways to meet the purpose, and audience. apply to complex numbers. Standard CC.3.5.9-10.E needs of your local Area. **Standard CC.3.6.9-10 D** Standard CC.3.5.11-12.E Standard CC.3.6.11-12.D Analyze the structure of the Develop and strengthen relationships among concepts in a writing as needed by text, etc. planning, revising, editing, Standard CC.3.5.9-10.F rewriting, or trying a new Standard CC.3.5.11-12.F approach, focusing on Analyze the author's purpose in addressing what is most providing an explanation, describing significant for a specific a procedure...and purpose and audience. Analyze the structure of the **Standard CC.3.6.9-10.E** relationships among concepts in a Standard CC.3.6.11-12.E. Use technology, including the internet, to produce, INTEGRATE KNOWLEDGE & publish, and update **IDEAS** individual or shared writing **GRADES 9-10** products. **Standard CC.3.5.9-10.G** RESEARCH Translate quantitative or technical GRADES 9-10-11-12 information expressed in a text into **Standard CC.3.6.9-10.F** Standard CC.3.6.11-12.F visual form (e.g. a table or chart). Conduct short and more Standard CC.3.5.9-10. H sustained research to answer

| texts independently and proficiently. | | Assess the reasoning in a text to support the author's claim for solving a technical problem. Standard CC.3.5.9-10. I Compare and contrast findings presented in a text to those from other sources, etc. INTEGRATE KNOWLEDGE & IDEAS GRADES 11-12 Standard CC.3.5.11-12. G Integrate and evaluate multiple sources of information presented in diverse formatsto solve a problem. Standard CC.3.5.11-12. H Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent understanding. RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J Standard CC.3.5.9-10.J Standard CC.3.5.9-10.J By the end of grades 9- 10, AND 11-12, read and comprehend technical |
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| 1100 | TESTING EQUIPMENT. | | | | |
|--|---|---|--|--|---|
| 1102 1103 1104 1105 1106 1107 | Use a multimeter. Use a continuity tester. Use a plug-in circuit tester. Use a clamp-on ammeter. RESERVED Use a circuit tracer. Use a network cable tester. Apply Ohm's/Watt's Law calculations to electrical applications. | CAREER CLUSTER Manufacturing Career Cluster (Choose Standards) 1-2-3-4-5-6-7 CAREER PATHWAYS INCLUDE: | KEY IDEAS/DETAILS GRADES 9-10-11-12 Standard CC.3.5.9-10. A Standard CC.3.5.11-12 A Cite specific textual evidence, etc. Standard CC.3.5.9-10 B Standard CC.3.5.11-12. B Determine the central ideas or conclusions of a text; etc. Standard CC.3.5.9-10.C Standard CC.3.5.11-12.C | TEXT TYPES AND PURPOSE GRADES 9-10-11-12 Standard CC.3.6.9-10.A Standard CC.3.6.11-12.A Write arguments focused on discipline specific content. Standard CC.3.6.9-10.B Standard CC.3.6.11-12.B Write informative or explanatory texts, including | NUMBERS AND OPERATIONS Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems. Standard 2.1.HS.F.4 Use units as a way to understand problems and to |

Maintenance, Installation and Repair Career Pathway

(Choose Standards) 1-2-3-4-5-6

NOTE:

Refer to the Common Career Technical Core Standards Booklet if you wish to add more Pathways to meet the needs of your local Area. Follow precisely a complex multistep procedure, etc.

CRAFT & STRUCTURE GRADES 9-10-11-12 Standard CC.3.5.9-10. D Standard CC.3.5.11-12.D

Determine the meaning of symbols, key terms, and other domain specific words.

Standard CC.3.5.9-10.E Standard CC.3.5.11-12.E

Analyze the structure of the relationships among concepts in a text, etc.

Standard CC.3.5.9-10.F Standard CC.3.5.11-12.F

Analyze the author's purpose in providing an explanation, describing a procedure...and
Analyze the structure of the relationships among concepts in a

INTEGRATE KNOWLEDGE & IDEAS GRADES 9-10

Standard CC.3.5.9-10.G

Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart).

Standard CC.3.5.9-10. H

Assess the reasoning in a text to support the author's claim for solving a technical problem.

Standard CC.3.5.9-10. I

Compare and contrast findings presented in a text to those from other sources, etc.

INTEGRATE KNOWLEDGE & IDEAS GRADES 11-12 Standard CC.3.5.11-12. G

the narration of technical processes, etc.

PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12 Standard CC.3.6.9-10.C Standard CC.3.6.11-12 C

Produce clear and coherent writing...appropriate to task, purpose, and audience.

Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D

Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.

Standard CC.3.6.9-10.E

Standard CC.3.6.11-12.E. Use technology, including the internet to produce

the internet, to produce, publish, and update individual or shared writing products.

RESEARCH GRADES 9-10-11-12 Standard CC.3.6.9-10.F Standard CC.3.6.11-12.F

Conduct short and more sustained research to answer a question or solve a problem.

Standard CC.3.6.9-10.G. Standard CC.3.6.11-12.G

Gather relevant information from multiple authoritative print and digital sources, following a standard format for citation.

Standard CC.3.6.9-10.H. Standard CC.3.6.11-12.H. guide the solution of multistep problems.

Standard 2.1.HS.F.5

Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Standard 2.1.HS.F.6

Extend the knowledge of arithmetic operations and apply to complex numbers.

| | Integrate and evaluate multiple sources of information presented in diverse formatsto solve a problem. Standard CC.3.5.11-12. H Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent understanding. RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J Standard CC.3.5.9-10.J | Draw evidence from informational texts to support analysis, reflection, and research. RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I & Standard CC.3.5.11-12.I. Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiencesetc. |
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| 1200 ELECTRICAL SERVICE. | | | |
|---|---|--|---|
| 1201 Install an overhead service. 1202 Identify parts of an underground service. 1203 RESERVED 1204 RESERVED 1205 RESERVED 1206 RESERVED 1207 RESERVED 1208 RESERVED 1209 Identify types of safety disconnect switches. 1210 Terminate a service panel/load center. | CAREER CLUSTER Manufacturing Career Cluster (Choose Standards) 1-2-3-4-5-6-7 CAREER PATHWAYS INCLUDE: Maintenance, Installation and Repair Career Pathway (Choose Standards) 1-2-3-4-5-6 NOTE: Refer to the Common Career Technical Core Standards Booklet if you wish to add more Pathways to meet the needs of your local Area. | KEY IDEAS/DETAILS GRADES 9-10-11-12 Standard CC.3.5.9-10. A Standard CC.3.5.9-10. A Cite specific textual evidence, etc. Standard CC.3.5.9-10 B Standard CC.3.5.11-12. B Determine the central ideas or conclusions of a text; etc. Standard CC.3.5.9-10. C Standard CC.3.5.11-12. C Follow precisely a complex multistep procedure, etc. CRAFT & STRUCTURE GRADES 9-10-11-12 Standard CC.3.5.9-10. D Standard CC.3.5.9-10. D Standard CC.3.5.9-10. E | NUMBERS AND OPERATIONS Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems. Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems. Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers. |

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| Analyze the structure of the relationships among concepts in a text, etc. Standard CC.3.5.9-10.F Standard CC.3.5.11-12.F Analyze the author's purpose in providing an explanation, describing a procedureand Analyze the structure of the relationships among concepts in a text. |
| INTEGRATE KNOWLEDGE & IDEAS GRADES 9-10 |
| Standard CC.3.5.9-10.G |
| Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart). Standard CC.3.5.9-10. H |
| Assess the reasoning in a text to support the author's claim for solving a technical problem. |
| Standard CC.3.5.9-10. I |
| Compare and contrast findings presented in a text to those from other sources, etc. |
| INTEGRATE KNOWLEDGE & IDEAS GRADES 11-12 Standard CC.3.5.11-12. G Integrate and evaluate multiple sources of information presented in diverse formatsto solve a problem. Standard CC.3.5.11-12. H Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent understanding. |

| 1300 NATIONAL ELECTRICAL CODE. | | RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J Standard CC.3.5.11-12.J By the end of grades 9- 10, AND 11- 12, read and comprehend technical texts independently and proficiently. | | |
|--|---|---|---|---|
| Identify the purpose of the National Electrical Code (NEC). Use Chapter 9 Tables. Use the NEC as a reference to questions and competencies that students perform for all electrical installations. Identify the publisher of the National Electrical Code (NEC). Identify the code cycle of the National Electrical Code (NEC). Identify NFPA70E (Arc Flash). | CAREER CLUSTER Manufacturing Career Cluster (Choose Standards) 1-2-3-4-5-6-7 CAREER PATHWAYS INCLUDE: Maintenance, Installation and Repair Career Pathway (Choose Standards) 1-2-3-4-5-6 NOTE: Refer to the Common Career Technical Core Standards Booklet if you wish to add more Pathways to meet the needs of your local Area. | KEY IDEAS/DETAILS GRADES 9-10-11-12 Standard CC.3.5.9-10. A Standard CC.3.5.9-10. A Cite specific textual evidence, etc. Standard CC.3.5.9-10 B Standard CC.3.5.9-10 B Determine the central ideas or conclusions of a text; etc. Standard CC.3.5.9-10.C Standard CC.3.5.9-10.C Standard CC.3.5.11-12.C Follow precisely a complex multistep procedure, etc. CRAFT & STRUCTURE GRADES 9-10-11-12 Standard CC.3.5.9-10. D Standard CC.3.5.9-10. D Determine the meaning of symbols, key terms, and other domain specific words. Standard CC.3.5.9-10.E Standard CC.3.5.9-10.E Standard CC.3.5.11-12.E Analyze the structure of the relationships among concepts in a text, etc. Standard CC.3.5.11-12.F Analyze the author's purpose in providing an explanation, describing a procedureand Analyze the structure of the relationships among concepts in a text. | TEXT TYPES AND PURPOSE GRADES 9-10-11-12 Standard CC.3.6.9-10.A Standard CC.3.6.9-10.A Write arguments focused on discipline specific content. Standard CC.3.6.9-10.B Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc. PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12 Standard CC.3.6.9-10.C Standard CC.3.6.9-10.C Standard CC.3.6.11-12 C Produce clear and coherent writingappropriate to task, purpose, and audience. Standard CC.3.6.11-12.D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. Standard CC.3.6.9-10.E Standard CC.3.6.11-12.E. Use technology, including the internet, to produce, | NUMBERS AND OPERATIONS Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems. Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems. Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers. |

| | INTEGRATE KNOWLEDGE & IDEAS GRADES 9-10 Standard CC.3.5.9-10.G | publish, and update individual or shared writing products. |
|------------------------|---|---|
| | Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart). Standard CC.3.5.9-10. H Assess the reasoning in a text to support the author's claim for solving a technical problem. Standard CC.3.5.9-10. I Compare and contrast findings presented in a text to those from other sources, etc. | RESEARCH GRADES 9-10-11-12 Standard CC.3.6.9-10.F Standard CC.3.6.11-12.F Conduct short and more sustained research to answer a question or solve a problem. Standard CC.3.6.9-10.G. Standard CC.3.6.11-12.G Gather relevant information from multiple authoritative print and digital sources, following a standard format |
| | INTEGRATE KNOWLEDGE & IDEAS GRADES 11-12 Standard CC.3.5.11-12. G Integrate and evaluate multiple sources of information presented in diverse formatsto solve a problem. Standard CC.3.5.11-12. H Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent understanding. RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.11-12.J By the end of grades 9- 10, AND 11-12, read and comprehend technical texts independently and proficiently. | for citation. Standard CC.3.6.9-10.H. Standard CC.3.6.11-12.H. Draw evidence from informational texts to support analysis, reflection, and research. RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I & Standard CC.3.5.11-12.I. Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiencesetc. |
| 1400 GREEN TECHNOLOGY. | | |

1401 Identify renewable energy sources. 1402 Identify procedures for installing a wind turbine system. 1403 RESERVED 1404 Identify procedures for installing a solar energy source system. 1405 RESERVED 1406 RESERVED 1407 Evaluate the demand and consumption of electrical

CAREER CLUSTER **Manufacturing Career** Cluster

(Choose Standards) 1-2-3-4-5-6-7

CAREER PATHWAYS INCLUDE:

Maintenance. **Installation and Repair** Career Pathway

(Choose Standards) 1-2-3-4-5-6

NOTE:

Refer to the Common **Career Technical Core** Standards Booklet if you wish to add more Pathways to meet the needs of your local Area.

KEY IDEAS/DETAILS **GRADES 9-10-11-12** Standard CC.3.5.9-10. A Standard CC.3.5.11-12 A Cite specific textual evidence, etc. Standard CC.3.5.9-10 B Standard CC.3.5.11-12. B Determine the central ideas or conclusions of a text; etc. **Standard CC.3.5.9-10.C** Standard CC.3.5.11-12.C Follow precisely a complex multistep

CRAFT & STRUCTURE GRADES 9-10-11-12 Standard CC.3.5.9-10. D Standard CC.3.5.11-12.D

procedure, etc.

Determine the meaning of symbols, key terms, and other domain specific words.

Standard CC.3.5.9-10.E Standard CC.3.5.11-12.E

Analyze the structure of the relationships among concepts in a text, etc.

Standard CC.3.5.9-10.F Standard CC.3.5.11-12.F

Analyze the author's purpose in providing an explanation, describing a procedure...and Analyze the structure of the relationships among concepts in a

INTEGRATE KNOWLEDGE & **IDEAS GRADES 9-10**

Standard CC.3.5.9-10.G

Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart).

Standard CC.3.5.9-10. H

TEXT TYPES AND **PURPOSE** GRADES 9-10-11-12 Standard CC.3.6.9-10.A Standard CC.3.6.11-12.A Write arguments focused on discipline specific content. **Standard CC.3.6.9-10.B** Standard CC.3.6.11-12.B Write informative or explanatory texts, including

PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12 Standard CC.3.6.9-10.C Standard CC.3.6.11-12 C

the narration of technical

processes, etc.

Produce clear and coherent writing...appropriate to task, purpose, and audience.

Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D

Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. **Standard CC.3.6.9-10.E**

Standard CC.3.6.11-12.E.

Use technology, including the internet, to produce, publish, and update individual or shared writing products.

RESEARCH GRADES 9-10-11-12 Standard CC.3.6.9-10.F Standard CC.3.6.11-12.F Conduct short and more

sustained research to answer

NUMBERS AND **OPERATIONS**

Standard 2.1.HS.F.2

Apply properties of rational and irrational numbers to solve real world or mathematical problems.

Standard 2.1.HS.F.4

Use units as a way to understand problems and to guide the solution of multistep problems.

Standard 2.1.HS.F.5

Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Standard 2.1.HS.F.6

Extend the knowledge of arithmetic operations and apply to complex numbers.

ALGEBRA Standard 2.2.HS.C.9

Prove the Pythagorean identity and use it to calculate trigonometric ratios.

GEOMETRY Standard 2.3.HS.A.7

Apply trigonometric ratios to solve problems involving right triangles.

Standard 2.3.HS.A.3

Verify and apply geometric theorems as they relate to geometric figures.

Standard 2.3.HS.A.13

Analyze relationships between two dimensional and three dimensional objects.

Assess the reasoning in a text to a question or solve a support the author's claim for solving problem. a technical problem. Standard CC.3.6.9-10.G. Standard CC.3.6.11-12.G Standard CC.3.5.9-10. I Gather relevant information Compare and contrast findings from multiple authoritative presented in a text to those from print and digital sources, other sources, etc. following a standard format for citation. INTEGRATE KNOWLEDGE & Standard CC.3.6.9-10.H. **IDEAS** Standard CC.3.6.11-12.H. **GRADES 11-12** Draw evidence from Standard CC.3.5.11-12. G informational texts to support Integrate and evaluate multiple analysis, reflection, and sources of information presented in research. diverse formats...to solve a problem. Standard CC.3.5.11-12. H RANGE OF WRITING Evaluate the hypotheses, data, **GRADES 9-10-11-12** analysis, and conclusions in a Standard CC.3.5.9-10.I & technical text, verifying the data Standard CC.3.5.11-12.I. when possible. Write routinely over Standard CC.3.5.11-12. I extended time frames and Synthesize information from a range shorter time frames for a of sources into a coherent range of tasks, purposes and understanding. audiences...etc. RANGE OF READING **GRADES 9-10-11-12** Standard CC.3.5.9-10.J Standard CC.3.5.11-12.J By the end of grades 9- 10, AND 11-12, read and comprehend technical texts independently and proficiently.

Revised June 2018 25