

Skilled and Technical Sciences (STS) 8

Course Description

This course will prepare students with the knowledge and skills needed for an introductory high school course

Code:

Program(s) of Study to which This Applies

- Listed here, bulleted list, Arial 11 – no effect

Course Framework	Reference Standards	Academic Crosswalk to Common Core Standards	Academic Crosswalk to Nebraska Standards	Comments
Standard 1. Students will understand and accurately apply measurement.				
Benchmark 1.1 Demonstratelinear measurement <u>Sample performance indicators:</u> <ul style="list-style-type: none"> Read a ruler to an accuracy of 1/16” Read a ruler to an accuracy of 1 mm Manipulate fractions accurately 	KS – ESS01.03.01-05 KS - ACC01.01.01 KS – ACC01.01.03 KS - MNC10.01.01 STL12.I STL13.F	MTH.8.NS.2	MA.6.2.5.a MA.8.1.3.a	
Standard 2. Students will know and model safe lab procedures and techniques.	KS – TRC06 KS - NMC06.01			
Benchmark 2.1 The student will know safety requirements. <u>Sample performance indicators:</u>	KS - ESS06.01.01.03-04 KS – TRC10.03 KS - MNC06.05.03	N/A	N/A	



<ul style="list-style-type: none"> • Complete a safety test with 100% accuracy • Sign a safety contract 	<p>KS – ACC06.01.03 KS – ACC06.01.02 KS – ESS06 KS – SCC06 KS – SCPA10.02.01 KS – SCPA10.02.03 KS – SCPA10.02.04 STL12.H-K</p>			
<p>Benchmark 2.2 The student will practice appropriate classroom safety.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> • Demonstrate safe tool operation • Demonstrate proper use of safe personal protection equipment • Operate and maintain a safe working environment • Demonstrate proper storage and handling of materials 	<p>KS - ESS06.01.05,07 KS – ACC06.01.03 KS – TRC09 STL12.H-K</p>	<p>ELA.RST.6-8.3</p>	<p>LA.8.3.2 LA.8.1.6.k</p>	<p>Alignment presumes that students must comprehend oral or written instructions to complete the task. (CC: ELA RST.6-8.3; NE: LA 8.3.2, 8.1.6.k).</p>
<p>Standard 3. Students will use technical communication.</p>				
<p>Benchmark 3.1 Read a working drawing</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> • Distinguish views • Identify line type • Interpret dimensions • Identify symbols 	<p>KS – ESS02.01.02,04 KS – ACC10.01.01 KS - NMC02 STL11.I-J STL12.I-K</p>	<p>ELA.RST.6-8.4 ELA.RST.6-8.7</p>	<p>LA.8.1.6.f</p>	
<p>Benchmark 3.2 Produce a working drawing</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> • Complete orthographic sketch(s) • Complete isometric sketch(s) • CAD software – 2D and/or 3D 	<p>KS – ESS02.01.05-06 KS – ESS04.02.01 KS – SCPA03.01.03 KS – ACC10.01.02 KS – ACC10.01.04 KS – NMC10.01.01 STL11.H-L STL12.I-K STL17.J-K</p>	<p>ELA.WHST.6-8.6 MTH.7.G.1</p>	<p>LA.8.2.1.f MA.8.2.4.a</p>	
	<p>KS – ESS03.01.01-11</p>	<p>N/A</p>	<p>N/A</p>	



<p>Benchmark 3.3 Technical reading and writing</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> • Demonstrate proper use of terminology through journal entries • Use and/or create a plan of procedure • Follow written and verbal instructions 	<p>KS – SCPA03.01.01 KS - NMC02 STL11.K STL17.H-I,K</p>			
<p>Benchmark 3.4 Design/Problem Solving</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> • Proper use of terminology • Recognize design/problem solving steps • Teamwork 	<p>KS – ACC03.01 KS – ACC07.01 KS – NMC03 STL11.H-L STL17.K</p>	<p>ELA.WHST.6-8.4 ELA.RST.6-8.10</p>	<p>LA.8.1.6.d-g LA.8.2.2</p>	
<p>Standard 4.Students will recognize material types and properties.</p>				
<p>Benchmark 4.1 The student will identify different types of materials.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> • Identify materials • Identify properties • Identify material applications 	<p>KS – SCPA10.01.01-02 KS - ACC10.02.02 STL1.F-H STL9.G</p>	<p>ELA.RST.6-8.4</p>	<p>LA.8.1.5</p>	
<p>Standard 5. Students will demonstrate material processing.</p>				
<p>Benchmark 5.1 The student will know material processes.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> • Know cutting processes • Know drilling/boring • Know sanding/grinding • Know forming processes • Knowfinishing processes 	<p>KS – SCPA10.01.01-02 KS - MNC10.01.02 KS – ACC10.02.01 STL9.F</p>	<p>N/A</p>	<p>N/A</p>	
<p>Benchmark 5.2 The student will demonstrate material processes.</p> <p><u>Sample performance indicators:</u></p>	<p>KS – ACC10.02.03 KS – SCPA10.01.01-04</p>	<p>ELA.RST.6-8.3</p>	<p>LA.8.3.2 LA.8.1.6.k</p>	<p>Alignment presumes that students must comprehend oral or written instructions to complete the task. (CC: ELA RST.6-8.3; NE: LA 8.3.2,</p>



<ul style="list-style-type: none"> • Demonstrate cutting processes • Demonstrate drilling/boring • Demonstrate sanding/grinding • Demonstrate forming processes • Demonstrate finishing processes 	KS – SCPA10.02.03-04 STL9.F,H STL11.L			8.1.6.k).
Standard 6. Students will select tools for the correct operation.				
Benchmark 6.1 The student will identify tools. <u>Sample performance indicators:</u> <ul style="list-style-type: none"> • Identify the tools • Inspect and report tool conditions • Select and apply the appropriate tool 	KS – SCPA10.01-02 KS – SCPA10.02.03-04 KS - ACC10.02.01 STL12.I,K	ELA.RST.6-8.4	LA.8.1.5	
Standard 7. Students will explore career opportunities.				
Benchmark 7.1 The students will examine and report on the Skilled and Technical Sciences (STS) Career Field. <u>Sample performance indicators:</u> <ul style="list-style-type: none"> • Architecture & Construction • Manufacturing • Science, Technology, Engineering, & Math (STEM) • Transportation, Distribution, & Logistics (TDL) 	KS – NMC01 KS – ESS09.07.01 KS – SCC09.01.01 KS – ACC05.02 KS – NMC04 KS – NMC09 KS – NMC10 STL18.F-G STL19.H STL20.F-I	ELA.WHST.6-8.7-9.	LA.8.4.1.a-c LA.8.1.6.j	The depth of students' investigations, and thus the research standards that apply, will be determined by the nature of the task. (CC: ELA.WHST.6-8.7-9; NE: LA.8.4.1.a-c, LA.8.1.6.j)
Benchmark 7.2 The students will explore and report on emerging technologies. <u>Sample performance indicators:</u> <ul style="list-style-type: none"> • Robotics • Nanotechnology • Green Technologies • Space Exploration • Energy 	STL14.G STL15.F, H-I STL16.E-I STL17.H-K STL18.F-I STL19.F-H,K	ELA.WHST.6-8.7-9.	LA.8.4.1.a-c LA.8.1.6.j SC.8.1.3.i	The depth of students' investigations, and thus the research standards that apply, will be determined by the nature of the task. (CC: ELA.WHST.6-8.7-9; NE: LA.8.4.1.a-c, LA.8.1.6.j)



Reference Standards Sources

- KS = Career Clusters Knowledge and Skills Statements. Revised 2008. National Career and Technical Education Foundation, Silver Spring, MD. www.careerclusters.org.
- (additional reference standards listed)

Contributors

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Postsecondary:

NCE Staff:

Other:

Other Information

Suggestions for innovative teaching and learning strategies:	•
Related assessments:	•
Extended learning opportunities:	•