



# Skilled and Technical Sciences (STS) 7

## Course Description

In this course students will explore fundamentals in Skilled and Technical Sciences.

### 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
<b>Standard 1. Students will understand and accurately apply measurement.</b>		LA.1.1.5.b(1)	N/A	
Benchmark 1.1 Demonstrate linear measurement  <u>Sample performance indicators:</u> <ul style="list-style-type: none"> <li>Read a standard ruler</li> <li>Read a metric ruler</li> </ul>	KS – ESS01.03.01-05 KS - MNC10.01.01 STL12.I STL13.F	N/A	MA.7.2.5.a  SC.8.1.1.j	
<b>Standard 2. Students will know and model safe lab procedures and techniques.</b>	KS – TRC06	LA.1.1.5.b	N/A	
Benchmark 2.1 The student will know safety requirements.  <u>Sample performance indicators:</u>	KS – TRC10.03 KS - MNC06.05.03 KS – ACC06.01.03	N/A	N/A	



<ul style="list-style-type: none"> <li>• Complete a safety test with 100% accuracy</li> <li>• Sign a safety contract</li> </ul>	KS – ESS06 KS – SCC06 KS – SCPA10.02.01,04-04 STL12.H-K			
Benchmark 2.2 The student will practice appropriate classroom safety.  <u>Sample performance indicators:</u> <ul style="list-style-type: none"> <li>• Demonstrate safe tool operation</li> <li>• Demonstrate proper use of safe personal protection equipment</li> <li>• Operate and maintain a safe working environment</li> <li>• Demonstrate proper storage and handling of materials</li> </ul>	KS – ESS06.01.05-07 KS – TRC09 STL12.H-K	ELA.RST.6-8.3	LA.8.3.2 LA.8.1.6.k	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><b>Standard 3. Students will be introduced to technical communication.</b></p>	KS-MNC10.01.01			
Benchmark 3.1 Understand and produce sketches and working drawings.  <u>Sample performance indicators:</u> <ul style="list-style-type: none"> <li>• Distinguish views</li> <li>• Interpret dimensions</li> <li>• Identify symbols and line types</li> <li>• Complete orthographic and isometric sketch(s)</li> </ul>	KS – ESS02.01.02,04-06 KS – ACC10.01.01 KS – ACC10.01.02 KS – ACC10.01.04	ELA.RST.7	LA.8.1.6.f	
Benchmark 3.2 Technical reading and writing  <u>Sample performance indicators:</u> <ul style="list-style-type: none"> <li>• Demonstrate proper use of terminology through journal entries</li> <li>• Follow a plan of procedure</li> <li>• Follow written and verbal instructions</li> <li>• Access information from a variety of sources</li> </ul>	KS – ESS02.01.02,04-05 STL11.K STL17.H-I,K	ELA.WHST.6-8.4 ELA.RST.6-8.10	LA.8.1.6.d-g LA.8.2.2	
Benchmark 3.3 Design/Problem Solving  <u>Sample performance indicators:</u> <ul style="list-style-type: none"> <li>• Proper use of terminology</li> <li>• Recognize design/problem solving steps</li> </ul>	KS – ESS03.01.01-11 KS – SCPA03.01.01 STL11.H-L STL17.K	MTH.7.G.1	SC.8.1.3.b	



<ul style="list-style-type: none"> <li>Teamwork</li> </ul>				
<p>Benchmark 3.4 Information and Communication Technology</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> <li>Audio/ Video Communication</li> <li>Digital Communication</li> <li>Graphic Communication</li> </ul>	<p>KS – ESS02.01.06                  KS – ESS02.06                  KS – SCPA03.01.02                  STL17.H-K</p>	N/A	SC.8.1.3.b	
<p><b>Standard 4. Students will experience skills needed to complete a project.</b></p>	<p>KS – NMC10.01</p>			
<p>Benchmark 4.1 The student will identify needed supplies.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> <li>Identify materials</li> <li>Identify material applications</li> </ul>	<p>KS – SCPA10.01.01-02                  STL9.G</p>	N/A	N/A	
<p>Benchmark 4.2 The student will process material.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> <li>Demonstrate cutting processes</li> <li>Demonstrate drilling/boring</li> <li>Demonstrate sanding/grinding</li> <li>Demonstrate forming processes</li> <li>Demonstrate finishing processes</li> </ul>	<p>KS - ACC10.02.01                  KS – ACC10.02.03                  KS – SCPA10.01.01-04                  KS – SCPA10.02.03-04                  STL9.F,H                  STL11.L</p>	N/A	N/A	
<p>Benchmark 4.3 The student will identify tools.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> <li>Identify the tools</li> <li>Inspect and report tool conditions</li> <li>Select and apply the appropriate tool</li> </ul>	<p>KS – ACC10.02.02                  KS – ACC10.02.03                  KS – SCPA10.01.01-02                  KS – SCPA10.02.03-04                  STL12.I,K</p>	ELA.RST.6-8.4	LA.8.1.5	
<p><b>Standard 5. Students will explore career opportunities.</b></p>	<p>KS – NMC01</p>			



<p>Benchmark 5.1 The students will examine and report on the Skilled and Technical Sciences (STS) Career Field.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> <li>• Architecture &amp; Construction</li> <li>• Manufacturing</li> <li>• Science, Technology, Engineering, &amp; Math(STEM)</li> <li>• Transportation, Distribution, &amp; Logistics (TDL)</li> </ul>	<p>KS - NMC04                  KS – NMC09                  KS – ACC05.02                  KS – ESS09.07.01                  KS – SCC09.01.01                  STL18.F-G                  STL19.H                  STL20.F-I</p>	<p>ELA.WHST.6-8.7-9.</p>	<p>LA.8.4.1.a-c                  LA.8.1.6.j</p>	<p>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)</p>
<p>Benchmark 5.2 The students will explore and report on emerging technologies.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> <li>• Robotics</li> <li>• Nanotechnology</li> <li>• Green Technologies</li> <li>• Space Exploration</li> <li>• Energy</li> </ul>	<p>STL14.G                  STL15.F,H-I                  STL16.E-H                  STL17.H-K                  STL18.F-G                  STL19.F-H</p>	<p>ELA.WHST.6-8.7-9.</p>	<p>LA.8.4.1.a-c                  LA.8.1.6.j                   SC.8.1.3.i</p>	<p>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)</p>

*Reference Standards Sources*

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

*Contributors*

**Secondary:** Jim Jelkin – Sunrise Middle School (Kearney, Nebraska), Jim Sapp – Southern (Wymore, Nebraska), Randy Stribley – Papillion-LaVista South (Papillion, Nebraska), David Shabram – Westside Middle School (Omaha, Nebraska). Dan Craney – Platteview High School (Springfield, Nebraska)

**Postsecondary:**

**NCE Staff:**

**Other:**

**Creation date:**  
**Approval date:**  
**Revision date** *(if changes made after final draft):*



## Other Information

Suggestions for innovative teaching and learning strategies:	<ul style="list-style-type: none"><li>•</li></ul>
Related assessments:	<ul style="list-style-type: none"><li>•</li></ul>
Extended learning opportunities:	<ul style="list-style-type: none"><li>•</li></ul>