



## Science, Technology, Engineering, and Math (STEM) Skill Standards Checklist

Student Name.	School District
YA Coordinator	YA Consortium
High School Graduation Date	

### Certification Areas Completed:

#### Required Skills - For EACH Pathway

#### Check completed areas

- Core Skills
- Safety

#### Engineering & Technology Pathway

- Engineering Drafting Unit- REQUIRED FIRST
- Mechanical/Electrical Engineering Unit
- Civil Engineering Unit

#### Science & Math Pathway

- Bioscience Lab Foundations Unit- REQUIRED FIRST
- Bioscience Applications Unit

### Level One Requirements:

*Students must complete ALL listed below*

#### Check completed areas

- Required Skills
- Minimum of **ONE** Pathway Unit
- Minimum of 2 semesters related instruction
- Minimum of 450 work hours

### Level Two Requirements:

*Students must complete ALL listed below*

#### Check completed areas

- Required Skills for EACH pathway
- Minimum of **TWO** Pathway Units
- Minimum of 4 semesters related instruction
- Minimum of 900 work hours

Total Hours Employed	Company Name	Telephone Number
		(   )
		(   )

## Required Skills

Required of ALL Science, Technology, Engineering, and Math YA Students

Copy this page FOR EACH pathway to be completed

CORE SKILLS	Minimum rating of 2 for EACH Check Rating		
	1	2	3
1. Apply academic knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Apply career knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Communicate effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Act professionally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Demonstrate customer service skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Cooperate with others in a team setting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Think critically	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Exhibit regulatory and ethical responsibilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Use basic technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Use resources wisely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SAFETY	Minimum rating of 2 for EACH Check Rating		
	1	2	3
1. Follow personal safety requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Maintain a safe work environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Demonstrate professional role to be used in an emergency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Rating Scale:

**3** = Exceeds entry level criteria | Requires minimal supervision | Consistently displays this behavior

**2** = Meets entry level criteria | Requires some supervision | Often displays this behavior

**1** = Needs improvement | Requires much assistance & supervision | Rarely displays behavior

### Additional Comments –

## Engineering and Technology Pathway

Engineering Drafting Unit – REQUIRED FIRST	Minimum rating of 2 for EACH Check Rating		
	1	2	3
1. Apply engineering principles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Interpret technical drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Use measuring devices accurately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Organize databases, files, & drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Reproduce documents & plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Use engineering drafting software	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Develop one-view drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Develop 2D (orthographic) view drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Develop 3D view models	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Prepare auxiliary views	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Prepare section views	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Dimension drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Apply lettering & basic annotation to drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Check, revise, & record drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Participate on an engineering project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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