



MASONRY/CONCRETE FUNDAMENTALS

Masonry/Concrete Fundamentals youth apprentices gain skills related to the use of construction safety, drawings and blueprints, materials, tools, materials, and general worksite procedures related to the masonry and concrete fields. Apprentices must adhere to industry safety and security standards.

Length of Apprenticeship: One or two Years

COMPETENCIES

Year 1: Masonry/Concrete Fundamentals youth apprentices must complete a **total of 15** Masonry/Concrete Fundamentals Competencies and a **minimum of 1** Masonry/Concrete Specialty Competency. Employers can substitute **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment. Year 1 competencies are completed with employer guidance. Youth apprentices must also complete the following during the first year:

Youth Apprentices must also complete the following during Year 1:

- First Aid Certification
- OSHA 10 or 30

Year 2: Masonry/Concrete Fundamentals youth apprentices must complete the **fifteen** Masonry/Concrete Fundamentals Competencies with minimal supervision and a minimum of **2** different Masonry/Concrete Specialty Competencies than the first year. A specialty competency may be repeated only if the type of construction (residential or commercial) differs from the first year. Employers can substitute **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment. Year 2 competencies are completed with minimal employer guidance.

Select construction type and circle the applicable year:

- Residential completed during Year: One and/or Two
- Commercial completed during Year: One and/or Two

Note that where necessary, skills can be simulated.

Masonry/Concrete Fundamentals Competencies	Masonry/Concrete Specialty Competencies
<ol style="list-style-type: none"> 1. Follow safety procedures 2. Read construction drawings and plans 3. Interpret symbols and procedures 4. Contribute to a job task plan 5. Work as a member of a construction team 6. Prepare work area for construction 7. Select construction materials 	<ol style="list-style-type: none"> 16. Assist with cutting brick and block 17. Assist with masonry and installation techniques 18. Lay masonry units to job specification 19. Assist with selecting the correct types of materials for the job 20. Perform volume estimates for material quantity requirements

<ol style="list-style-type: none">8. Use hand and light duty tools9. Use power tools and equipment10. Perform materials handling11. Install materials per job specifications12. Perform construction measurements13. Maintain a clean and safe work area14. Clean up job site15. Practice quality craftsmanship	
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REGISTERED APPRENTICESHIP BRIDGING OPPORTUNITIES

Some of the related instruction courses can bridge into the following registered apprenticeship:

- Cement Mason/Concrete Finisher

POST-SECONDARY PATHWAY OPPORTUNITIES

There are several post-secondary pathway opportunities in this area. Following is partial list.

- Carpentry



MASONRY/CONCRETE FUNDAMENTALS

Youth Apprenticeship

ON-THE-JOB LEARNING PERFORMANCE STANDARDS GUIDE

YOUTH APPRENTICE INFORMATION

Youth Apprentice Name	
YA Coordinator	YA Consortium
School District	High School Graduation Date

REQUIREMENTS

One Year

Youth Apprentices completing a one-year apprenticeship must complete ALL the items listed below.

Check completed areas.

- Competency checklist
- Employability Skills checklist (in this job book) or the DPI Employability Skills Certificate
- Related instruction equal to 1 high school credit or at least 3 college credits
- Minimum of 450 work hours

Two Year

Youth Apprentices completing a two-year apprenticeship must complete ALL the items listed below.

Check completed areas.

- Competency checklist
- Employability Skills checklist (in this job book) or the DPI Employability Skills Certificate each year
- Related instruction equal to 2 high school credit or at least 6 college credits
- Minimum of 900 work hours

HOURS

Record the hours the youth apprentice worked.

Total Hours Employed	Company Name	Telephone Number

COMPETENCIES

Year 1: Masonry/Concrete Fundamentals youth apprentices must complete a **total of 15** Masonry/Concrete Fundamentals Competencies and a **minimum of 1** Masonry/Concrete Specialty Competency. Employers can substitute **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment. Year 1 competencies are completed with employer guidance. Youth apprentices must also complete the following during the first year:

Youth Apprentices must also complete the following during Year 1:

- First Aid Certification
- OSHA 10 or 30

Year 2: Masonry/Concrete Fundamentals youth apprentices must complete the **fifteen** Masonry/Concrete Fundamentals Competencies with minimal supervision and a minimum of **2** different Masonry/Concrete Specialty Competencies than the first year. A specialty competency may be repeated only if the type of construction (residential or commercial) differs from the first year. Employers can substitute **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment. Year 2 competencies are completed with minimal employer guidance.

Select construction type and circle the applicable year:

- Residential completed during Year: One and/or Two
- Commercial completed during Year: One and/or Two

Note that where necessary, skills can be simulated.

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 and supervision | Rarely displays this behavior

MASONRY/CONCRETE FUNDAMENTALS

Masonry/Concrete Fundamental Skills	Rating		
Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
1. Follow safety procedures <ul style="list-style-type: none"> • select and use appropriate clothing and Personal Protective Equipment (PPE) • comply with job site safety and security rules and regulations • maintain a clean and organized work environment • identify and report unsafe job conditions • report injuries and damage to property 	Year 1 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Read construction drawings and plans	Year 1 Rating		

<ul style="list-style-type: none"> relate drawing to job task interpret elements and symbols locate worksite features on a construction plan convert scales measurements to full measurements translate specifications to work requirements 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Interpret symbols and procedures <ul style="list-style-type: none"> explain the role of drawings and specifications identify drawings and symbols used on a construction drawing apply information from drawings in construction activities interpret specifications appearing on construction drawings interpret and convert measurements in terms of actual dimensions explain specifications in terms of work requirements 	Year 1 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
4. Contribute to a job task plan <ul style="list-style-type: none"> setup and prepare tools and equipment for safe operation determine the scope of work respect contractual relationships apply scheduling practices 	Year 1 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
5. Work as a member of a construction team <ul style="list-style-type: none"> offer and request assistance follow company policies and procedures learn from other team members 	Year 1 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
6. Prepare work area for construction <ul style="list-style-type: none"> remove debris clean up sites dispose of waste and hazardous materials 	Year 1 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
7. Select construction materials <ul style="list-style-type: none"> consider usefulness and portability consider minimizing cost consider performance goals 	Year 1 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
8. Use hand and light duty tools <ul style="list-style-type: none"> wear appropriate PPE select the correct tool for the job inspect tool operate the tool safely perform routine maintenance on hand tools store tool 	Year 1 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
9. Use power tools and equipment <ul style="list-style-type: none"> wear appropriate PPE select the correct tool for the job inspect tool operate the tool safely perform routine maintenance on power tools store tool 	Year 1 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
10. Perform materials handling	Year 1 Rating		

<ul style="list-style-type: none"> • identify materials necessary to complete the task • conserve resources and materials • retrieve equipment and materials needed • load and unload materials, tools, equipment, and supplies • lift, position, and secure materials during installation 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
11. Install materials per job specifications <ul style="list-style-type: none"> • retrieve equipment and materials needed • unload materials, tools, equipment, and supplies • lift, position, and secure materials during installation 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
12. Perform construction measurements <ul style="list-style-type: none"> • select measuring tool • read measurement accurately • scale proportions • convert units of measurement • estimate resources, materials, and supplies needed for a project • record measurements 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
13. Maintain a clean and safe work area <ul style="list-style-type: none"> • clean and maintain materials and tools • clean, organize, and put away items in the work area • store materials and tools <i>after use</i> • follow facility procedures for clean-up and shut down 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
14. Clean up job site <ul style="list-style-type: none"> • clean and maintain materials and tools • store materials and tools <i>after use</i> • follow facility procedures for clean-up and shut down 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
15. Practice quality craftsmanship <ul style="list-style-type: none"> • inspect and test work to determine quality • monitor throughout for safety and quality • identify impact of building codes on quality of work • verify work meets job expectation 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
Competency Substitute (if you replaced a competency above, note the competency and rating)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
Comments:			

MASONRY/CONCRETE SPECIALTY SKILLS

- Year 1: Select 1
- Year 2: Select 1 different specialty skills or type of construction (residential vs. commercial) identified by employer

Masonry/Concrete Specialty Skills	Rating
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Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
16. Assist with cutting brick and block <ul style="list-style-type: none"> work with brick and block for application use tools in cutting brick and block cut brick and block prepare joints assure proper techniques for bonding 	Year 1 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Assist with masonry and installation techniques <ul style="list-style-type: none"> assist with depositing masonry material assist with spreading masonry material assist with consolidating concrete assist with striking concrete in a form 	Year 1 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Lay masonry units to job specification <ul style="list-style-type: none"> assist with building a concrete footer assist with setting and aligning forms that hold concrete to the desired pitch and depth assist with preparing units for placement verify the proper construction of forms ensure proper placement onto spacers assist with placing concrete 	Year 1 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Assist with selecting the correct types of materials for the job <ul style="list-style-type: none"> assist with the use of mortar applications in a project assist with mixing mortar to the proper consistency for the application assist with selecting the various types of mortar for the specific jobs 	Year 1 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Perform volume estimates for material quantity requirements <ul style="list-style-type: none"> assist with applying measurements, drawings, and specifications to a project perform a slum test successfully mix a batch of concrete 	Year 1 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competency Substitute (if you replaced a competency above, note the competency and rating)	Year 1 Rating		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Year 2 Rating		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Comments:			

RELATED INSTRUCTION

Indicate which related instruction courses the youth apprentice completed: