Needs Driving NOCTI CSTN 100 Assessment

- College readiness
  - Technical skills vs Academic Skills
  - Technical skill assessment more difficult
- Dual Enrollment
  - College for High School Credit
- Technical Skill Assessment in General
  - Requirement of RPOS and Perkins

NOCTI® Assessment Development

Develop Standards and Competencies — 1	**Develop Assessment Blueprint** — 2
Develop Items and/or Performance Jobs — 3	**Pilot Assessment** — 4
Analyze Pilot Test Results — 5	**Establish Cut Score (Benchmark)** — 6
Review and Incorporate Edits — 7	**Finalize Assessment** — 8

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Keys to Assessment Development

- 1. Subject Matter Experts
  - Whose teaching the class
    - Secondary
    - Postsecondary
    - Industry
- 2. Experts in assessment
  - Validity and Reliability
  - NOCTI

Subject Matter Experts

- Secondary Construction Teachers

- Postsecondary Construction Teachers

- Industry

  - Home Builders Association

  - Montana Contractors Association

  - Individual organizations

Develop Standards and Competencies	**1**
Develop Assessment Blueprint	**2**
Develop Items and/or Performance Jobs	**3**
Pilot Assessment	**4**

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MONTANA QUESTION WRITING ASSIGNMENTS

		NEED	HAVE	WRITE
D	**Hazard Analysis**			
D-13	Identify causes of accidents and the impact of accident costs.	3	2	1
D-14	Define hazard recognition and risk assessment techniques.	3	2	1
D-16	Identify caught-in-between hazards and demonstrate safe working procedures and requirements.	5	2	3
E	**Hand Tools**			
E-21	Exhibit understanding of the basic procedures for taking care of hand tools.	5	1	4
E-31	Demonstrate understanding of the use of rules and measuring tools (e.g., tape, laser)	3	2	1
E-32	Demonstrate understanding of the use of plumb bob and chalk lines.	3	0	3

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The Ingredients of a Multiple-Choice Item

What ingredient is needed in order to produce self-rising flour? **Stem**

Answer — *A. baking powder

Distractors —
B. baking soda
C. corn starch
D. cream of tartar

Alternatives

The Recipe to Creating a Good Item
(General Guidelines)

1. Simply and briefly state the problem; don't use long, complex sentences or include extra or unnecessary information.
2. Ensure that items are independent of each other. An answer or clue in one item should not provide the answer to another item.
3. Create alternatives that are equal in length.
4. Construct alternatives that are reasonable; avoid silly or obviously incorrect responses.
5. Ask the problem in the stem and make responses short; avoid creating

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Analyze Pilot Test Results	5
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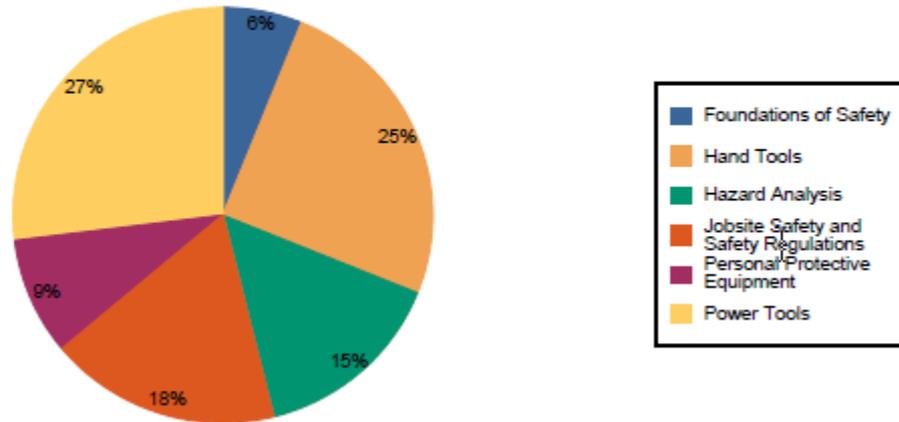CTE

Group Score Report

Site: City College Montana State University Billings - 5142
Test Date: 04/24/2013

Fundamenta

Duty #	Written - Cognitive Duty Description	Participant
1	Foundations of Safety	
2	Jobsite Safety and Safety Regulations	
3	Personal Protective Equipment	
4	Hazard Analysis	
5	Hand Tools	
6	Power Tools	
	Total	

Job #	Performance - Psychomotor Job Title	Participant
1	Circular Saw	
2	Drill Holes	
3	Pneumatic Fasteners	
4	Job Site Hazards	
	Total	

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Written - Cognitive

- Foundations of Safety — 6%
- Hand Tools — 25%
- Hazard Analysis — 15%
- Jobsite Safety and Safety Regulations — 18%
- Personal Protective Equipment — 9%
- Power Tools — 27%

Performance - Psychomotor

- Circular Saw — 18%
- Drill Holes — 36%
- Job Site Hazards — 24%
- Pneumatic Fasteners — 23%

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