



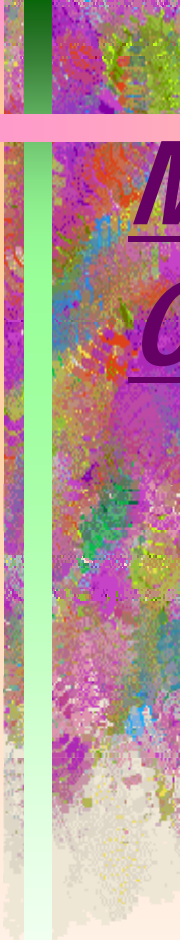
**4th Annual Northern Nevada
Higher Education
Assessment Conference
Feb 10, 2006**

***Truckee Meadows Community College
Reno, Nevada***

Mathematics Assessment

***By Gail Small Ferrell
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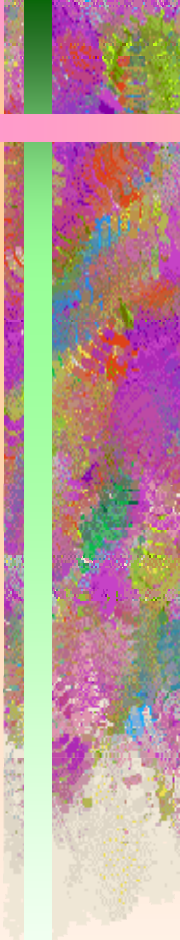
Mathematics Curriculum Before Calculus is in Transition.

- **Mathematics, possibly more than any other discipline, is under scrutiny by the public.**
- **"faculty must help their students think critically, learn how to learn, and find motivation for the study of mathematics in appreciation of its power and usefulness" (p. xii, AMATYC, 1995)**



Classroom Faculty are challenged to:

- **"help their students think critically,**
- **learn how to learn,**
- **find motivation for the study of mathematics**
- **have an appreciation of its power and usefulness" (p. xii, AMATYC, 1995)**



American Mathematical Association of Two-Year Colleges *Crossroads in Mathematics*

- *Standards for Introductory College Mathematics Before Calculus*
- "establish standards for
- and make recommendations about
- two-year college and lower-division mathematics programs below the level of calculus"



guidelines for mathematics education

- **The challenge now is to synthesize and incorporate these exciting Standards into our courses.**
- **We then must assess student outcomes based on those standards.**
- **How can we show student achievement of those standards?**



As we implement these Standards into the curriculum:

- *assess their effectiveness*
- *measure the success of those changes*



The Standards are in three categories:

- **Standards for Intellectual Development**
- **Standards for Content**
- **Standards for Pedagogy**



STANDARDS FOR INTELLECTUAL DEVELOPMENT

Standard 1-1: Problem Solving	Standard 1-2: Modeling
Standard 1-3: Reasoning	Standard 1-4: Connecting with Other Disciplines
Standard 1-5: Communicating	Standard 1-6: Using Technology
Standard 1-7: Developing Mathematical Power	


BLOOM'S TAXONOMY OF LEARNING

- **6. Evaluation**
- **5. Synthesis**
- **4. Analysis**
- **3. Application**
- **2. Comprehension**
- **1. Knowledge**




In each classroom, we have a mixture of learning styles

- *We also have our teaching style*
- *The assessments that are presented in this book are varied in style*
- *In this way, we can see the best performance by each of our students some of the time.*



True Colors™ classifies learners into four colors based on how they prefer to learn

- **Green learners prefer to work independently**
- **Gold Learners do best when content is structured**
- **Blue learners feel best in interactive atmospheres**
- **Orange learners perform well in competition**



**This workbook is intended to
address changes in learning
objectives**

and their related assessments.