

PRESERVICE/INSERVICE COLLABORATIVE MATH GRANT FOR MIDDLE  
SCHOOL TEACHERS

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This grant involved the placement of two middle school student teachers with one cooperating teacher. Four middle school student teachers were paired and placed with two middle school teachers during the Spring semester of 2005. The university supervisor for the student teachers was a member of the department of C&I at Texas State University and was also the one who taught the undergraduate mathematics methods course recently completed by the student teachers.

This project focused on specific teaching strategies to be used by the student teacher:

Strategy #1: "Thinking Skills and Understanding of Mathematics"

The university supervisor and cooperating teachers worked with the student teachers to help the student teachers develop math lessons that focused on getting middle students to understand math concepts and procedures by focusing on skills that enhanced the middle school students ability to "see" the patterns and relationships in math.

Strategy #2: "Effective Note Taking in Math Class"

To enable middle school students to take notes during math class, the student teachers developed handouts that the middle school students completed as notes during presentation and discussion of the math lessons. Constructing the handouts to be used by middle school students for note taking, enabled the student teacher to be more effective in deciding on the math content and understanding necessary for each lesson. The middle school students learned that their completed handouts could be studied and by studying their notes their understanding of math was enhanced.

The following two handouts used by the student teachers are included with this narrative:

Handout #1: "Understanding the Three Types of Least Common Denominators"

Handout #2: "Developing the Formulas for Circumference and Area of a Circle"

Strategy #3: "Analysis of TAKS Questions"

The student teachers examined the last three TAKS exams to understand

specific skills required on the exam. These specific skills were incorporated into the student teacher,s lessons. Additionally, the specific skills identified on the TAKS exam were used to assess practice and study materials that were to be used with the middle school students.

UNDERSTANDING PERIMETER AND AREA OF A CIRCLE

PERIMETER: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CIRCUMFERENCE: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

RADIUS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DIAMETER: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

THREE WAYS TO MEASURE THE CIRCUMFERENCE OF A CIRCLE:

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_
3. \_\_\_\_\_  
\_\_\_\_\_

MEASURING YOUR GROUP,S WOODEN WHEEL

GROUP #1	GROUP #2	GROUP #3	GROUP #4	GROUP #5
r=	r=	r=	r=	r=
d=	d=	d=	d=	d=
C=	C=	C=	C=	C=

UNDERSTANDING RELATIONSHIPS

RADIUS-----DIAMETER

DIAMETER-----RADIUS

DIAMETER-----CIRCUMFERENCE

CIRCUMFERENCE-----DIAMETER

APPROX. FORMULA FOR CIRCUMFERENCE OF A CIRCLE

$$C = \text{_____}d$$

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PI AND ITS VALUE

\_\_\_\_\_ IS A CONSTANT AND IS THE RELATIONSHIP  
BETWEEN A  
GIVEN CIRCLE'S \_\_\_\_\_ AND  
\_\_\_\_\_.

THE VALUE OF \_\_\_\_\_ IS 3.14

FORMULA FOR CIRCUMFERENCE OF A CIRCLE

$$C = \text{_____} \text{ OR } C = \text{_____}$$

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FORMULA FOR 1/2 CIRCUMFERENCE OF A CIRCLE

$$1/2 C = \text{_____}$$

FINDING THE AREA OF A CIRCLE