

# TEACHER PROFESSIONAL DEVELOPMENT

## USING ALGEBRA TILES AND OTHER MANIPULATIVES TO TEACH ALGEBRAIC CONCEPTS

### Professional Development Workshop for Math Educators Middle School and High School

Workshop Leader: Dr. Cathy S. Liebars, Associate Chair of the Mathematics and Statistics Department and the Mathematics Education Coordinator at The College of New Jersey

Participants will learn how to use algebra tiles to model concepts such as integer operations, arithmetic on polynomials, factoring of polynomials, completing the square, and solving equations, with connections to other topics. We will discuss reasons for using manipulatives or other concrete materials to teach fundamental algebraic concepts. There will be discussion and hands-on participation throughout the workshop.

#### The Learning Outcomes for participants:

- Participants will learn how to use algebra tiles and other manipulatives to help students understand fundamental algebraic concepts such as factoring.
- Participants will be aware of technological resources and various manipulatives that are available to teach algebra.

Dr. Cathy S. Liebars



#### Workshop Information

Thursday May 28 10:00am - 3:00pm

Location: The College of New Jersey Ewing, NJ

Certificate of Completion Provided

Fee: \$200.00

Materials: Bring your own tiles or order with TCNJ for \$100.00. Tiles not required for workshop.

Online Registration at: <http://bit.ly/SCmathtcnj>

Dr. Liebars teaches courses for pre-service teachers at all levels in the content area of mathematics. Dr. Liebars has presented workshops in several school districts in New Jersey on a variety of topics. She has worked with middle grades and elementary teachers, assisting in their implementation of reform-based mathematics programs like the Connected Math Program (CMP) and TERC Investigations in Number, Data, and Space. She is currently co-director of the Woodrow Wilson Teaching Fellowship induction grant at TCNJ. Dr. Liebars is a Past-President of the New Jersey Association of Mathematics Teacher Educators (NJAMTE), currently serves on their Executive Board, and is former chair of the New Jersey section of the Mathematical Association of America.



#### QUESTIONS?

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