

(Contents continued from back cover)

AN ADVANCED MATHEMATICS PROGRAM FOR MIDDLE SCHOOL TEACHERS D. Carothers	79
THE TEACHER SHORTAGE: NATIONAL TRENDS FOR SCIENCE AND MATHEMATICS TEACHERS D. R. Sterling	85
HELPING PROVISIONALLY LICENSED MIDDLE SCHOOL SCIENCE TEACHERS J. J. Matkins, D. R. Sterling, A. Kitsantas	97
ALIGNING MATHEMATICS CURRICULUM TO CREATE POTENTIAL FOR ACTIVE LEARNING IN PRE-K THROUGH EIGHTH GRADE TEACHER EDUCATION G. E. Parker	109
RAPPORTEUR'S REPORT W. E. Haver	123

PART II: Regular Journal Features

REACHING DEEP IN MATH (DEVELOPING EDUCATIONAL EXCELLENCE AND PROFICIENCY IN MATHEMATICS) R. D. Anderson	135
HIROSHI HARUKI'S LEMMA WITH <i>MATHEMATICA</i> J. Boyd	143
TRANSITION TO TEACHING: AN ALTERNATIVE CERTIFICATION PROGRAM THROUGH A PARTNERSHIP BETWEEN A PUBLIC SCHOOL DISTRICT AND A PUBLIC UNIVERSITY R. Q. Berry III	149
STUDENT WORK SECTION R. Howard, <i>Section Editor</i>	167
ANALYSIS OF SOCIO-ECONOMIC FACTORS IN CORRELATION TO STANDARDIZED EDUCATIONAL TEST SCORES M. F. Connolly	167

CONTENTS Volume 7

PART I: “Harrisonburg Conference”

Statewide Conference on the Preparation of Middle School Science and Mathematics Teachers

BRIDGE TO THE FUTURE – WHAT THE PAST CAN TELL US S. T. Thornton	1
CAN SCIENCE METHODS REALLY BE TAUGHT ON-LINE? W. M. Fraizer	5
INVESTIGATIONS IN GEOMETRY— A HANDS-ON COURSE FOR GRADES 6-8 PRE-SERVICE TEACHERS A. Ellington	17
HISTORY OF A PROBLEM SOLVING COURSE FOR PRE-SERVICE K-8 TEACHERS J. Fitzgerald	23
A CASE FOR PROOF MAKING FOR PROSPECTIVE MIDDLE SCHOOL TEACHERS J.W. Whitenack, L.A.Lovin, and L. Cavey	29
FIRST STEPS TOWARD CHANGE IN TEACHER PREPARATION FOR ELEMENTARY SCIENCE C. Klevickis, R. Kolvoord, M. Handley, K. Giovanetti, D.Peterson, T. Daughtrey, S. Fairchild	37
WHAT DOES AN EXEMPLARY MIDDLE SCHOOL MATHEMATICS TEACHER LOOK LIKE? THE USE OF A PROFESSIONAL DEVELOPMENT RUBRIC M. Mason, D. Johnson, J. Rozelle, A. Koziol, Y. Smith-Jones, R.Cofer, L. Quick, E. O'Brien, W. M. Geiger, K. Grass	49
VIRGINIA COMMONWEALTH UNIVERSITY B.S. IN SCIENCE DEGREE PROGRAM R. W. Farley	61
HANDS-ON PHYSICAL SCIENCE FOR IN-SERVICE TEACHERS J. McDonnough, S. McKelvey, A. Baski, D. Lewis	67

(Contents continued inside)