

Date March 15, 1969

EXCELLENCE IN TEACHING AWARD
Science and Mathematics

State Director:

Dr. Paul W. Tweeten
Consultant, Science Education
Department of Public
Instruction
Grimes State Office Building
Des Moines, Iowa 50319

Candidate in the Area of:
(Check Only One)

Biology _____
Chemistry _____
Physics _____
Earth Science _____
Mathematics X

Candidate's Record Form

The candidate should complete this form with complete information for the items requested. Use additional sheets if necessary.

Name Thomas A. Brown Date of birth 12-12-38School in which you teach Merrill Junior High SchoolAddress of school 5301 Grand AvenueSchool telephone number 274-3441 Home telephone number 277-8515Residential address 3517--38th StreetCity Des Moines Zip code 50310

1 Publications in professional or scientific journals.

"An Introduction to Ratio and Proportion"
February, 1969 Arithmetic Teacher

2 What professional journals and scientific journals do you read regularly?

Arithmetic Teacher Scientific American
Mathematics Teacher
Phi Delta Kappan
Education Today (NEA Journal)
Midland Schools

3 List the professional, scientific, or educational organizations (local, state, and national) in which you are a member.

National Education Association
Iowa State Education Association
Des Moines Education Association
National Council of Teachers of Mathematics
Phi Delta Kappa

4 What offices, committee assignments, or program duties have you held in the aforementioned organizations?

Faculty representative for the Des Moines Education Association

5 In what other pertinent school or community activities have you been engaged?

Book selection committee---first year algebra, Chairman

Sunday School teacher---Westminster United Presbyterian Church---9th grade team teaching group

Curriculum and Instruction Advisory Committee (See last page)

6 What Science Fair, Science Talent Search, Science Achievement Award, Student Institute, etc., winners have you sponsored?

none

7 List activities or accomplishments of former students in science/mathematics.

none---to my knowledge

8 What scholarships, awards, honors have you received?

none

9 Education record (Include Institute, special program, etc., attendance)

<u>College or University</u>	<u>Attendance dates</u>	<u>Years</u>	<u>Degree</u>	<u>Field</u>
Iowa State University	Sept. '56--June '58		none	
University of Northern Iowa	Sept. '58--June '61		B.A.	math
University of Northern Iowa	summers '62--'66		M.A.	math
The College of Idaho	summer '67(4 weeks)		none	math
The College of Idaho	summer '68(3 weeks)		none	math

10 Positions held (professional, teaching, administrative) in chronological order.

Name of organization or school	Position	Years	Number of classes per day
Merrill Junior High School	teacher	Sept. '61--present	5
Grandview College	teacher	spring '67	2 per week
D.M. Adult Education	teacher	'67--'69	1 per week for 6 weeks

11 What types of teacher certification do you have?

permanent professional certificate (teaching math, secondary)

I am presently working on course work at Drake University to obtain administrative certification...to be completed summer 1969.

12 What other pertinent information (programs, courses initiated, unusual teaching procedures, etc.) can you list to assist the selection committee?

I have been involved in a program to coordinate the teaching of science and mathematics at the junior high level. This has been aimed primarily at the 8th grade where a laboratory approach is used almost exclusively. The program has shown itself to be of some value after one year and will be continued and revised for the upcoming year.

Following the summer program at The College of Idaho, in 1967, I had the responsibility of presenting a program of innovative ideas in mathematics to the elementary teachers of the Des Moines Public Schools.

Academic preparation (Show courses studied in college in the fields below, including Institutes, course number, title of course, year taken, number of semester hours earned, and grades received.)

Biology

Chemistry

86:44 Gen.Chem. '56-'57 4
86:46 Qual.Anal. '57-'58 4

Physics

Earth Science

88:54 Mechanics '57-'58 4 C
88:56 Gen.Phy.II '60 4 C
88:58 Int.Phy. '60 5 C
88:152 Meas.in Elec.'60 3 C

Mathematics

Education

'56 80:45 Col. Alg. 4
'57 80:46 Trig.,Anal.Geo. 4
'58 80:145 Calculus I 5 C
'59 80:146 Calculus II 5 C
'60 80:149 Diff. Equations 3 C
'60 80:55 Col. Geo. 3 C
'60 80:153 Probability Theory 3C
'60 80:190 Teach. Sec. Math 3 C
'62 80:290 Prob.Teach. Math 2 B
'62 80:174 Math. Stat. I 3 B
'62 80:240 Math. Anal. I 3 B
'63 80:160 Intro. to Mod.Alg. 4B
'63 80:241 Math. Anal. II 3 C
'64 80:161 Intro.LinearAlg. 3 A
'64 80:167 Concepts of Topology 4 B
'65 80:210 Theory of Numbers 3 B
'65 80:265 Concepts of Geo. 3 B
'66 80:165 Intro.to Mod.Geo. 4 A

21:14 Teacher & the Child '58 5 C
20:16 Psych. of Learning '59 5 C
21:118 Soc. Found. of Ed. '61 4 C
28:138 H.S. Teaching '61 8 B
21:234 Phil. of Ed. '65 2 C
22:14 Adv. Ed. Psy. '66 2 A
250 Adm.Suprv.in Sec.Sch.68 3 A
253 Princ. & Tech. Guid.'68 3 B

Write a brief essay about your teaching. This should include a short discussion of your teaching philosophy and the role of science/mathematics in general education. You might describe any of your activities not covered in the above items.

I teach with enthusiasm! Mathematics is an interesting subject and lends itself to teaching by the discovery method. I encourage the student to use his intuition to direct his thinking in a new situation. Suggestions by students are always considered and often lead to new and interesting discoveries. At the junior high level there is more opportunity to explore the many areas of mathematics and to do it by appealing to the student's natural curiosity.

Mathematics has a beautiful and interesting structure, and I find this most exciting. Students, however, do not always appreciate this structure nor necessarily find mathematics, for mathematics sake, interesting. Many times this mistake was made, particularly after the recent revolution in mathematics, leaning heavily on the structure and becoming very rigid. The revolution was necessary and welcome but has now mellowed. The subject must be interesting and attempts must be made to appeal to the student by making it relevant.

I have found teaching to be a great challenge. It is necessary to work hard to keep up with various aspects of math; new materials, new curricula, and new approaches. This work is absolutely necessary if a fresh and meaningful approach is to be had from year to year. I look forward to trying team teaching, large-group presentations, and programs designed to promote individual development. There seems to be no end in sight to the developments in teaching, and I look forward to each coming year.

I am presently serving on the Curriculum and Instruction Advisory Committee. This group is made up of teachers and administrators with the purpose of reviewing programs in all subject matter areas. Textbook selections, pilot projects, curriculum committees, and other areas are all of concern to this committee. Of all groups that I have been involved with, this committee has provided me with a better view of the diverse and complex nature of curriculum in a system as large as Des Moines.