THE IOWA SCIENCE TEACHERS JOURNAL

The Iowa Science Teachers Journal is co-sponsored by the Iowa Academy of Science and the University of Northern Iowa. The journal is dedicated to the improvement of science teaching and to the stimulation of interest in scientific studies. The journal is published tri-annually.

SUBSCRIPTION

For subscriptions, circulation data, additional copies and change of address, write the Managing Editor, ISTJ, Iowa Academy of Science, P.O. Box 868, Cedar Falls, Iowa 50613. Single copies may be obtained for $2.00.; a year’s subscription is $4.50. Any secondary science teacher in Iowa may obtain a subscription free of charge if a request is mailed to the Managing Editor. All such requests must be made on school stationery.

PUBLICATION POLICY

Publications will be received from all individuals interested in science education at any academic level. Preferential treatment will be given to Academy members and to papers with topics of special scientific and educational interest to science educators in Iowa.

All non-solicited manuscripts submitted to the editor will be reviewed by two authorities in the area concerned. All manuscripts must be typewritten, double-spaced on one side of a sheet and submitted in duplicate. Every attempt will be made to publish papers within a year after approval for publication. News items will be published promptly. Publication deadlines are April, September and December.

For information concerning news items, announcements or articles, contact Carl W. Bollwinkel, Ph.D., Editor, Iowa Science Teachers Journal, Dept. of Teaching, Price Laboratory School, University of Northern Iowa, Cedar Falls, Iowa 50613.

Responsibility

Experiments, laboratory exercises, lecture demonstrations and other descriptions of the use of chemicals, apparatus and instruments are presented in this journal as illustrative and directed at qualified teachers. Although every effort is made to ensure and encourage safe practices and safe use of chemicals, ISTJ cannot assume responsibility for uses made of its published materials. All those teachers planning to use materials from our pages should make choices and develop procedures for laboratory and classroom safety in accordance with local needs and situations.
2 THE CRISIS IN SCIENCE EDUCATION: PROBLEMS AND RECOMMENDATIONS
   Jack A. Gerlovich

10 A LOOK AT EARTH SCIENCE TEACHER NEEDS
   Peter A. Rubba

12 AVERAGE HEAT OF COMBUSTION AND AVAILABLE ENERGY OF CARBOHYDRATE,
   FAT AND PROTEIN
   H. I. Feinstein

13 STUDENTS' VIEWS OF SCIENCE TEACHERS, CLASSES, AND COURSE CONTENT
   Robert E. Yager and Ronald J. Bonnstetter

16 AN NSTA POSITION STATEMENT, SCIENCE-TECHNOLOGY-SOCIETY: SCIENCE
   EDUCATION FOR THE 1980s
   Glenn A. Berkheimer, Rodger W. Bybee, Kathleen M. Donnellan, Paul DeHart Hurd, Donald
   E. Maxwell, Rita Peterson, and Harold Pratt

21 A REFINED PLAN FOR ELIMINATION OF UNWANTED/DANGEROUS CHEMICALS
   Jack A. Gerlovich, Ron Kolpa, and Frank Kilpatrick

25 THE BASICS OF DIETING
   Erwin W. Richter

34 A HISTORY OF SCIENCE CROSSWORD PUZZLE
   Timothy Cooney

38 Thomas Edison/Max McGraw Scholarship Program

Departments
29 SCIENCE NOTES
36 SCIENCE CALENDAR
39 EDITOR'S CORNER

The Cover

The cover is stipple rendering using pen and ink based on a Bausch and Lomb photograph
of a sample of pond water. The art work was done by

Betsy Kelly

Kelly is an art major at the University of Northern Iowa and a graduate of Northern
University High School in Cedar Falls, Iowa.

A Contest

Can your students identify the organisms drawn on the cover? Students who can most
correctly and neatly label the largest number of organisms will receive an artist-
autographed print of the cover design suitable for framing. Xerox copies of the cover
design may be labeled and submitted. Entries will be judged by the Price Laboratory
School Science Faculty and their decisions are final. Six students and their teachers will
receive copies of the print as awards. All entries must be received by the ISTJ editor by
December 15, 1983.