

THE QUESTIONNAIRE

Members of N.A.B.T. who have not yet filled in and returned the *questionnaire* sent out early in December by the Committee on the Teaching of Biology are urged to do so soon and also to ask their colleagues to do likewise. If you did not receive this questionnaire notify Dr. D. F. Miller, Biology Building, Ohio State University, Columbus, Ohio.

FINANCIAL REPORT

THE NATIONAL ASSOCIATION OF
BIOLOGY TEACHERS

1938-1939

The following financial report was prepared and submitted for audit by Mr. P. K. Houdek, Secretary-Treasurer. The books of the secretary-treasurer of the national association for the year 1938-1939 have been examined by the auditing committee comprised of Grace L. Cook, chairman; Mr. Louis A. Astell; and Mr. W. V. Balduf. The books and financial report have been declared correct in every detail.

Receipts

Memberships	
1938-39	\$1,607.25
1939-40	342.00
1940-41	2.00
Advertising	728.68
Miscellaneous	195.15
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	\$2,875.08

Expenditures

Journal	\$2,246.89
Association	390.25
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	\$2,637.14
Returned Check	1.00
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Total	\$2,638.14
Balance in bank	236.94
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	\$2,875.08

Assets

Balance in bank	\$ 236.94
Accounts due (advertising)	313.71
Supplies and equipment	35.00
Address stencils	50.00
Back Copies	50.00
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Total	\$ 685.65

Liabilities

Advance payments of Member- ships	\$ 344.00
Accounts payable	
Journal	22.25
Association	12.03
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Total	\$ 378.28
Credit Balance	307.37
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	\$ 685.65

LIFE SCIENCE AIDS

Life science teaching must become more effective and meaningful. Probably if we strive toward the latter, we shall accomplish a greater effectiveness.

We must clarify our purposes and our programs in order that they will take place in terms of a conception of education that is consonant with the times—our outlook upon life is constantly being affected by advances in science; therefore, we are constantly having to work out different methods and techniques for the attack upon our problems.

Our high schools today have changed from institutions that just train the intellectuals for leadership, to those that seek to meet the needs of all the children of all the people. In view of the marked changes in the character of our school population, preparation for college is abandoned in favor of preparation for every day living. It is the business of the teacher to understand the nature and the needs of the student in his manifold relationships, and to help him to

meet his needs in such a way as to make life ever richer.

Each activity that is undertaken by the students in order to acquire information, skills, and habits, in order to solve problems, in order to take trips more intelligently, in order to enjoy books, stories, and poems, and in order to appreciate nature, should be evaluated on the basis of its contribution to improved living. Select those that best lend themselves to your type of student body, your equipment, and your community.

Develop your program in terms of the needs and the interests of individuals and of society at large. Methods that you might use to determine the interests include those of keeping notes of classroom happenings during a semester or two, keeping a record of questions asked by students in the class, making a survey of student interests and hobbies, making a list of materials brought to school, and keeping records of conferences held with individual students.

Our rooms should give the appearance of being general work rooms, having laboratory facilities, study facilities, visual education facilities, etc. Although they are cooperative workshops they should also be made as attractive as possible. Keep the bulletin board a place of changing vital interests. Why not include different types of attractive flower decoration? When the time comes that you feel you can offer the students greater freedom than you ordinarily do, and this will vary with your different classes, try having the student president conduct a short current event discussion at the beginning of each period. We have found that this method of scoring is very satisfactory:

The president has a list of all students in the class. He assigns certain ones of them the privilege of sharing new things in the field with the others. Each event

is followed by a discussion when it warrants it. The president gives a student one point if he gives his facts orally, one if he tells the source of his information, one if he selects a good life science topic, one if he tells it well and in an interesting understandable way, and one if he follows it with his reaction to his own event. This makes it possible for a student to get as many as five points for one event.

Following this plan will free you for doing first minute routine things and will get the students into the habit of expecting motors to begin turning on time.

Another aid is that of an orderly departmental or classroom file. Classify good student work so that it will be available when needed. Standardize the size of mounting board for your pictures. "Many hands make light work," they say. Why not call upon the students to bring material for the files? You might even use NYA workers to do the cutting, pasting, and filing. In building magazine files keep in mind that those like the National Geographic can be unstitched and divided into separate articles. Each can be placed within a manila cover or can be bound in your print shop. These when titled, classified and filed are most valuable.

Many of our students have a great deal of spare time, and little initiation or knowledge to plan the wise use of it. Why not interest and instruct them in taking trips, incidentally collecting life science credit? Have a suggestive list of trips posted in your room for reference purposes, giving the location, the costs involved, and the visiting hours. You might even include directions for getting these. Credit could well be granted for scientific lectures attended or listened to over the radio.

This is a copy of the blank we use,

one being filed by each student for each trip taken or lecture attended.

Student's name Grade.....
Subject and period

Record of Scientific Visits and Lectures Attended

Place visited or lecture attended
Date of visit or lecture
Time spent there
Interesting discoveries:

We are anxious to have our students become more interested in reading and this is brought about by getting them to read more in books having a scientific vocabulary that they can handle, and giving them science credit for it. Aid in knowing the reading grade placement of each can be obtained from your counselor's office. Posted in the life science room is a list of books in our field that are available in the school library, in the nearest public branch library and in the main library. These are listed according to vocabulary difficulty. We also post a list of the bulletins that are available in our own library.

Below is a copy of the form made in our print shop, and used for keeping a record of each piece of reading done by each student.

Student's name Grade.....
Subject and period

Record of Scientific Reading

Author
Title
Date of publication
No. of pages read
What you think of the book, article, or pamphlet and why:

These may be kept in an envelope pasted in the note book until called for; or filed in a drawer or box as the teacher desires.

In order to acquaint the students with

our science requirements we give each one a copy of the following "special requirements for life science" to place in his notebook for reference. One is also posted in the room.

SPECIAL REQUIREMENTS FOR LIFE SCIENCE

I. Become familiar with the library and its offerings in the field of life science.

1. Consult the mimeographed sheet entitled, "Classification of Life Science Books in the Library."
2. Consult the posted list of books in the room entitled, "Books for Life Science."
3. Consult the posted list entitled, "Life Science Pamphlets."

II. Read books, magazines, and pamphlets pertaining to the subject being discussed. Keep a record of each on the blank entitled, "Record of Scientific Reading," that you will get from your science teacher.

III. Keep a vocabulary page in your note book upon which you will record the words that are new to you. Select the words from those that arise during discussion periods, and from any reading that you may do for science. Use each word correctly in a sentence.

IV. Take trips during the semester to any of the places listed on the mimeographed sheet entitled, "Places to Visit for Life Science," or to any additional place that may be so signified by your teacher. Keep a record of each on the blank entitled, "Record of Scientific Visits and Lectures Attended."

V. Attend Life Science lectures or listen to scientific radio lectures. Keep a record of each on the blank entitled, "Record of Scientific Visits and Lectures Attended."

VI. Make a special study of a vital life science topic, and develop a practical project that is correlated with it.

Many of our students come from a semi-industrial district where homes have little available yard space or none at all. In order that they may get some practical agricultural experiences each life science class works for a given amount of time in the field under the direction of the agriculture instructor

and the supervision of the class instructor. Here they get instruction and practice where possible in home beautification, in soil preparation, and care in planting seed, in transplanting, in cutting and arranging flowers for bouquets, in making cuttings, in doing budding, and in doing many other things too numerous to list here. Since home beautification is an aim throughout our entire district, we encourage students to take plants home with them from our agriculture supply.

The aids described above are offered because we find that they do work. We hope that they assist in helping the teaching of life science to become more meaningful to your students.

VIVIAN RAYBOLD PORTER
Jefferson High School
Los Angeles

KEYS FOR MODELS

I should like to pass on the following technique which has been gradually developed by the combined efforts of biology teachers, librarians, and pupils here at Sunset High School.

We type the name of each model and the legend from the manufacturer's key on an unruled 3 × 5-inch index card and slip it in a library card holder which has been attached with household cement to the under surface of the model. We have found the diagonal card holder preferable to the pocket holder.

We find the keys so placed under the models serve several useful purposes: first, they are convenient and quickly available for pupil use; second, they are out of the pupil's sight when the teacher desires to use the model for a test on mastery of structures; third, they stay with the model; fourth, they are inexpensive and easily replaced when worn;

fifth, in case the manufacturer's key is written in a foreign language, one translation by the teacher is sufficient thus avoiding any further discussion over the foreign words.

In order that unnecessary friction on the attached card may be avoided, it is a good practice to elevate the base slightly above the level of the table by inserting four rubber-headed tacks (obtainable at ten cent stores) into the bases of all models which rest flat on the table. The holes for the tacks may be made in plaster of Paris by a rotary motion of any sharp pointed instrument, such as a nail or tack. After the hole has been bored to the proper depth and diameter, place a drop of household cement on the tack and set it in the hole. Although this cement is not absolutely necessary, we use it as an extra precaution. These rubber-headed tacks are a very desirable addition to models having plaster of Paris bases because they aid in absorbing some of the shock incidental to handling.

The manufacturer's key is then filed away with the other laboratory records for reference should the card be lost. However, such a case has never arisen in our laboratory. Each year at inventory time, we make a check on the condition of the cards and replace those which appear too worn or soiled to serve another year.

RUTH MORRIS
Sunset High School,
Dallas, Texas

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