

A Free Biology Manual for High School Teachers

Our new catalog, which is now ready for mailing, is a combined teachers' manual and catalog of biological supplies for high school use. We have made every effort to make this 192-page book of real value to the high school teacher. It contains a Botany and Zoology Manual, a detailed article on the school aquarium, a large number of original illustrations and many short biological notes. The illustrations include over fifty original drawings, a large number of which are carefully labeled, diagrams of dissections and identification plates of laboratory plants and animals.

The Botany and Zoology Manuals, which occupy about sixty pages, are written especially for the high school teacher. In these manuals, we have made no attempt to present detailed courses of study, as such material is readily available in the many students' laboratory manuals now on the market. Instead, we have tried to include information which will be of value to the teachers in planning and carrying through a worth-while course in beginning biology. The desirability of studying living material is emphasized and we have made many suggestions as to ways in which teachers can collect and prepare much of their own laboratory material.

In the Zoology Section of the manual, the following type forms are discussed in detail, under such headings as collection, care of specimens in the laboratory, study of living specimens, etc.: Protozoa, Grantia, Hydra, Earthworm, Crayfish, Grasshopper, Honey-bee and Frog. The Botany Section of the teachers' manual considers in a similar way, Gleocapsa, Nostoc, Vaucheria, Spirogyra, Rhizopus (Mucor), Lichens, Mosses, Marchantia, Fern and Pine, as well as general discussions of the main groups—Algae, Fungi, Gymnosperms, Angiosperms, etc. An abundance of carefully labeled illustrative matter supplements the text.

Some of the practical suggestions will, we believe, be of value and interest to even the more experienced teachers. The following subjects are just a few of those which are discussed and explained in the manual:

- Demonstrating how Hydra feed.
- Finding living Vaucheria during the winter months.
- Collecting mosses at the proper seasons.
- Growing protozoan cultures.
- Suitable material for a study of the angiosperms.
- Studying living frog eggs.
- Collecting insects.
- Aquarium methods.
- Living earthworms in the laboratory.
- Regeneration experiments with Planaria.

The catalog section lists a very complete line of material for high school biology work. The items which have been included are those which are particularly useful in beginning biology courses. Many of the preparations have been specially developed to meet the need and requirements of high school teachers. In this section of the catalog are described—preserved and living specimens, microscope and lantern slides, demonstration preparations, life histories, models, charts, apparatus and instruments—everything, in fact, that is needed in the high school course.

This combined High School Biology Catalog and Teachers' Manual will prove of interest to every science teacher. We have already mailed copies to all teachers whose names are upon our mailing list. Addresses change, however, and if you have failed to receive your copy, please ask for it. One of these books will be sent to you at once and, we believe, that you will find it helpful and interesting.



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MARGARET EMERSON BAILEY, in
Harper's Magazine

Not in slight nor in derision,
But with pencil-point precision,
He who made Pythagoras
Made the snake that parts the grass;
Made the texture of its skin
Parchment to work problems in.
He who drew an adder's spread
To a rhomboid at its head,
Let no ferrule falter loose
On the straight hypotenuse
Obliquely slanting the dull eye
Of the snake that rustles by.
Not the rod of Roman lictor
Could lay lashes any stricter
Than the stripes, exact and neat,
Parallels that will not meet,
Running straight from tip to tail
On a buckling coat of mail
Fashioned out of lozenges.
And as intricate as these—
Pointed triangle and square,
All the rigid shapes that are,
Octagon and pentagon,
He has deftly patterned on
Some unscrolled and rippling back
As a method of attack
Till every scale and single joint
Proves some problematic point,
Working out with subtlety
A divine Geometry.

Science News-Letter, September 7, 1929

Fear of Unknown Analyzed

Psychology

Fear of the unknown plays a major role in the drama of every human life, a German psychologist, Dr. L. Seif of Munich, told the International Congress of Psychology at New Haven, last Thursday.

When a child begins to ask "why" at four years of age he is already trying to overcome the feeling of uncertainty and anxiety that human beings naturally hold toward what is strange, Dr. Seif showed. Strange experiences and objects are new, uncertain, dangerous, and such things are faced throughout life with anxiety. What is known, on the other hand, is safe and inspires confidence.

"If a child receives from his educators the right preparation—love, confidence, encouragement, and suitable training for overcoming the difficulties of the strange—he then learns always better to transform the strange into the known," the speaker explained.

If a child is spoiled, he does not learn to deal courageously with the strange. His experiences are characterized by disappointment, anxiety, and withdrawal.

Science News-Letter, September 7, 1929