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Teachable

EVERYDAY PHYSICS

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Physics Learned Through Everyday Life Applications

It is Related to the Daily Life of the Student

—the illustrative examples and applications are taken from the home or the agencies that serve the home. Familiar machines are used: the fire extinguisher, the automobile, generators, vacuum cleaners, radio hook-ups, household sewage and water supply, etc.

It is Organized for Effective Teaching

—the arrangement is psychologically sound, proceeding from the known to the unknown.
—both the metric and common systems of weights and measures are used.
—difficult parts of Mechanics are postponed to the end of the study, when the student has become familiar with facts that will lead to an easy understanding of Mechanics.

It Makes the Work Clear and Exact Through the Use of "Solved Problems"

It Furnishes an Adequate Amount of Drill

—exercises repeat the application of the principles taught in each chapter.

It is in Complete Agreement with the Physics Syllabi of the College Entrance Examination Board

—equally for those not intending to go to college or for the prospective college student.

(although this book is a revision of the popular PHYSICS OF THE HOUSEHOLD, it is practically a new book. The material has been almost completely rewritten, the contents have been brought up to date, and the illustrations are new.)

\$1.80

THE MACMILLAN COMPANY

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IMMUNOLOGY

Step Toward Typhus Fever Vaccine Taken

IMMUNIZATION against typhus fever, a filth disease that raised its head threateningly during the World War, is made a possibility of the future through the researches of Drs. Hans Zinsser and M. Ruiz Castaneda of the Harvard University Medical School, Boston, reported to the Society of American Bacteriologists in Cambridge.

Four important steps are made by the Harvard researches:

1. The Rickettsia bodies are shown to be the cause of typhus fever. These peculiar masses of irregular granules were found in cases of typhus fever by Dr. Howard T. Ricketts, who died a martyr to his research in 1910. For some time they were not even classed as true microorganisms. Now Dr. Zinsser has carefully washed the Rickettsia and by injecting these washed germs into guinea pigs has produced the disease.

2. Taking a hint from the tremendous mortality from typhus in times of

famine, Dr. Zinsser found that poorly nourished animals infected with the disease gave many of the Rickettsia bodies, although the organisms are rare in ordinary cases of the disease. This gave him a way of producing enough Rickettsia to attempt immunization experiments.

3. Using a vaccine made by killing Rickettsia with formalin, Dr. Zinsser immunized animals effectively. Sometimes the disease was prevented entirely and when this was not the case the disease was made much milder.

4. The experimenters succeeded in culturing the Rickettsia bodies, whereas this has been considered extremely difficult heretofore.

The Harvard researches have not yet approached application to humans.

Typhus fever is a disease of the unclean and if its carriers, such as lice, ticks and bedbugs, are prevented the disease does not appear in epidemics.

Science News Letter, January 3, 1931

ANIMAL PSYCHOLOGY

Rats See When Visual Center In Brain Is Destroyed

NEW light was thrown on the problem of what part of the brain controls vision when Dr. K. S. Lashley, of the University of Chicago, reported the results of his experiments with rats to the meeting of the American Psychological Association in Iowa City.

Dr. Lashley found that rats can still see when the entire part of the brain known as the visual cortex is destroyed. They cannot distinguish differences in visual pattern, but can detect differences in brightness, and have some discrimination of distance.

He believes that his experiments indicate that the discrimination of intensities of light is a function of parts of the brain other than the cortex; the identification of the position of large objects is made possible by nerve fibers scattered to all parts of the cortex, and that vision for patterns or figures de-

pends upon a small cortical area which probably represents the projection in the brain of the retinal fixation point.

Good Boys in School

The old charge that teachers' marks reflect personal reactions of liking and disliking toward the pupils as well as the pupils' achievement, has been tested by Prof. P. M. Symonds, of Columbia University, who reported to the Psychological Association.

There is a slight tendency, he found, for teachers to assign lower marks to pupils showing undesirable conduct than their achievement on objective tests indicates that they deserve, but there is also a definite relationship between achievement and conduct. The children with undesirable traits did the poorest work, while their better behaved classmates were more scholarly.

Science News Letter, January 3, 1931