How to Use Key-Word Feature of News-Letter

In order to aid in catching the items that concern you and to facili-tate clipping and filing, a key word in small capitals has been printed on the right of the line above each article. The key words used fit into any system of classification, whether it be a straight alphabetical file, a system of your own devising, the Library of Congress classification or the Dewey

Note that you can clip out any article without fear of damaging another article in which you might be interested, since editorial matter printed on the righthand pages is backed by advertising, standing matter or a continuation of the article on the other side.

Library of Congress Classification

The classification of the Library of Congress has come into common use in the libraries of the country owing to the publication of the Government of the card index of all new books. We print below a list of the subject titles which are most used in the SCIENCE NEWS-LETTER. The full scheme of classification is contained in "Outline Scheme of Classes," issued

by the	he Library of Congress.						
В	Philosophy.						
BF	Psychology.						
G	Geography, voyages, travel.						
GA	Mathematical and astronomical geog-						
	raphy.						
GB	Physical geography.						
GC	Oceanology and oceanography.						
GF	Anthropogeography.						
GN	Anthropology. Somatology. Ethnol-						
	ogy. Ethnography. Prehistoric ar-						
a-5	chæology.						
GR	Folklore.						
GT	Manners and customs.						
GV	Sports and amusements. Games.						
HC	Economic history and conditions. National production.						
1112	National production.						
HE	Transportation and communication.						
HF	Commerce.						
HM L	Sociology. General.						
M M	Education. Music.						
M N							
P	Fine Arts.						
ō	Philology and linguistics. Science. General.						
ŎΑ	Mathematics.						
~n	A - 1						
ăč	Physics.						
ÕD ÕB	Chemistry.						
UP.	Taeningy.						
ÕE ÕH	Natural history.						
ÕK	Botany.						
ÕL	Zoology.						
ÕМ	Human anatomy.						
ÕР	Physiology.						
ÕR	Bacteriology.						
Ŕ	Medicine. General.						
SB	Field crops. Horticulture. Land-						
	scape gardening. Pests and plant						
c D	diseases.						
SD	Forestry. Animal culture. Veterinary medicine.						
SF	Ammai culture. Vetermary medicine.						

SH Fish culture and fisheries.

5 K.	Hunting. Game protection.					
Г	Technology. General.					
ГΑ	Engineering—General.					
ГС	Hydraulic engineering.					
ΓD	Sanitary and municipal engineering.					
ΓE	Roads and pavements.					
ΓF	Railroads.					
ΓG	Bridges and roofs.					
Γ H	Building construction.					
ΓJ	Mechanical engineering.					
ΓK	Electrical engineering and industries.					
Γ L	Motor vehicles. Cycles. Aeronautics.					
ΓN	Mineral industries. Mining and Me-					
	tallurgy.					
ΓP	Chemical technology.					
ΓR	Photography.					
ΓS	Manufactures.					
ΓT	Trade.					
ГΧ	Domestic science.					
U	Military science. General.					
V	Naval science. General.					
	Dewey Classification					

The main divisions of the Dewey Decimal Classification, used in many libraries and by many individuals, is given below for the convenience of those who wish to use this system:
000 GENERAL WORKS—

```
Bibliography
010
         Library economy
General cyclopedias
General collected essays
General periodicals
030
040
050
          General societies
070
         Newspapers
         Special libraries. Polygraphy
080
      Book rarities
PHILOSOPHY—
090
100
         Metaphysics
         Special metaphysical topics
Mind and body
120
130
          Philosophical systems
140
         Mental faculties. Psychology
         Logic
Ethics
160
170
         Ancient philosophers
180
      Modern philosophers
RELIGION—
200
          Natural theology
210
220
          Doctrinal. Dogmatics. Theology
230
         Devotional. Practical Homiletic. Pastoral.
240
         Homiletic. Pastoral. Paroc
Church. Institutions. Work
250
         Religious history
Christian churches and sects
Ethnic. Non-Christian
270
280
290
       SOCIOLOGY-
300
          Statistics
Political science
310
320
          Political economy
330
340
          Law
          Administration
                              Institutions
360
          Associations.
          Education
370
       Commerce. Communication
Customs. Costumes. Folklore
PHILOLOGY—
 390
 400
           Comparative
          English
 430
          German
           French
 440
          Italian
 460
           Spanish
          Latin
 470
       Minor languages
NATURAL SCIENCE—
 490
```

500

Mathematics

Astronomy

```
Geology
        Paleontology
560
570
        Biology
        Botany
     Zoology
USEFUL ARTS--
        Medicine
610
        Engineering
        Agriculture
Domestic economy
Communication. Commerce
650
        Chemical technology
670
        Manufactures
        Mechanic trades
     Building
FINE ARTS-
       Landscape gardening
        Architecture
720
730
        Sculpture
        Drawing. Decoration. Design
        Painting
750
        Engraving
760
        Photography
770
        Music
     Amusements
LITERATURE—
American
800
810
        English
830
        German
840
        French
        Italian
860
        Spanish
870
        Latin
880
        Greek
        Minor
                languages
     HISTORY-
900
        Geography and travels
Biography
Ancient history
910
920
        Modern
940
          Europe
950
           Asia
           Africa
970
           North America
           South America
980
           Oceanica and polar regions
```

Physics Chemistry

ABOUT **BUYING**

We know how much trouble it sometimes is to get the book that

So if you want to add to your library any book reviewed or noted in the Science News-Letter, or any book in print-just remit to us the publisher's price and we shall rush the book to you postage prepaid.

Don't hesitate to consult with us on your book problems.

SCIENCE SERVICE 21st and B Sts. Washington, D. C.

A Science News-Letter

A Weekly Summary of Current Science published by Science Service, Inc., the Institution for the Popularization of Science, organized under the auspices of the National Academy of Sciences, the National Research Council and the American Association for the Advancement of Science.

Publication Office: 1918 Harford Ave., Baltimore, Md.

Editorial and Business Office: 21st and B Sts., Washington, D. C.

VOL. X OCTOBER 2, 1926 NO. 286

Entry as second-class matter at the postoffice, Baltimore, Md., applied for.

Edwin E. Slosson, Director. Watson Davis, Managing Editor.

\$5.00 a year, 10c. a copy.

Ten or more copies to same address: 6c. a copy. Special reduced subscription rates are available to members of American Association for Advancement of Science.

BOARD OF TRUSTEES SCIENCE SERVICE

REPRESENTING AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

J. MCKEEN CATTELL, Vice-President and Chairman of the Executive Committee; Editor, Science, Garrison, N. Y.

D. T. MACDOUGAL, Director, Desert Laboratory, Tucson, Ariz.

M. I. PUPIN, Professor of Electromechanics, Columbia Uni-

REPRESENTING NATIONAL ACADEMY OF SCIENCES

JOHN C. MERRIAM,
President, Carnegie Institution of Washington.

. A. MILLIKAN, Director, Norman Bridge Laboratory of Physics, Calif. Institute of Technology.

. A. NOYES, Director, Gates Chemical Laboratory, Calif. Inst. of Technology.

REPRESENTING NATIONAL RESEARCH COUNCIL

VERNON KELLOGG, Treasurer, Permanent Secretary, National Research Council.

C. G. ABBOT,
Director, Astro-Physical Observatory, Smithsonian Institution.

VICTOR C. VAUGHAN,
Professor Emeritus of Hygiene, University of
Michigan.

REPRESENTING JOURNALISTIC PROFESSION

JOHN H. FINLEY, Associate Editor, New York Times.

FRANK R. KENT, Baltimore Sun.

MARK SULLIVAN, Writer, Washington.

REPRESENTING E. W. SCRIPPS ESTATE

W. E. RITTER, President,
University of California.
ROBERT P. SCRIPPS,
Scripps-Howard Newspapers, West Chester,
Ohio.

THOMAS L. SIDLO, Cleveland, Ohio.

Science News-Letter Is Already Indexed

GF

In order to aid in catching the items that concern you and to facilitate clipping and filing, a key word in small capitals has been printed on the right of the line above each ar-This follows the classification of the Library of Congress since this system has come into common use in the libraries of the country owing to the publication by the Government of the card index of all new books. We print below a list of the subject titles which will be most used in the "Outline Science News-Letter. Scheme of Classes," issued by the Library of Congress and purchasable from the Superintendent of Documents, Washington, for 10 cents, contains a more complete classification.

How To Clip and Classify

The Science News-Letter is a "cut-up" periodical. It aims to provide the information you want when and where you want it. It is a continuous loose-leaf supplement to any text-book or encyclopedia. But to make it most useful you must do your part. The best way to handle current news in science is to adopt the rule of the thrifty housewife in fruit season: "Eat what you can and what you can't eat you can."

Here is a good scheme if you haven't a better one. Get a dozen or twenty folders or envelopes which fit in a vertical filing case or drawer. Cut out the class titles of topics and paste on the upper edge of the envelopes. Or write on such titles as you prefer. If you use the Dewey Index or some other system put these numbers or letters in place of the Library of Congress marks.

As soon as you get a copy of Science News-Letter look it over, read through such articles as you have time to and cut out such as seem to you worth preserving for reference. Drop the clippings into their proper envelopes right away. Don't throw them into a desk drawer to accumulate until you have time to sort them over. You never will find time for that. At least we hope you will always have something more pleasant and profitable to do than filing a heap of old clippings. Science NEWS-LETTER is a new sort of magazine. Try a new way of using it.

Classification

 \mathbf{R} Philosophy.

BF Psychology.

Geography, voyages, travel. G

GA Mathematical and astronomical geography.

Physical geography.

GC Oceanology and oceanography.

Anthropogeography.

GN Anthropology. Somatology. Ethnology. Ethnography. Prehistoric archeology.

GR Folklore.

GT Manners and customs.

Sports and amusements. Games. GV HC Economic history and condi-

tions. National production.

Transportation and communication.

Commerce.

 $_{\rm HM}$ Sociology. General.

Education.

Music.

Ν Fine Arts.

Philology and linguistics.

Q QA QB Science. General.

Mathematics.

Astronomy. ÕС

Physics. ÕD Chemistry.

QΕ Geology.

QH Natural history.

QK Botany. QL Zoology.

QM Human anatomy.

ÕР Physiology.

OR

Bacteriology. Medicine. General.

Agriculture. General.

Field crops. Horticulture. Landscape gardening. Pests and plant diseases.

SD Forestry.

Animal culture. SF Veterinary medicine.

SH Fish culture and fisheries.

SK Hunting. Game protection.

Τ Technology. General.

TAEngineering — General.

TCHydraulic engineering.

TD Sanitary and municipal engineering.

TE Roads and pavements.

TF Railroads.

TG Bridges and roofs.

TH Building construction.

Mechanical engineering. TI

ΤK Electrical engineering and industries.

TL Motor vehicles. Cycles. Aeronautics.

TN Mineral industries. Mining and Metallurgy.

TP Chemical technology.

TR Photography.

TS Manufactures.

TT Trade.

TXDomestic science.

Military science. General. U

Naval science. General.

Science News-Letter, October 2, 1926

SCIENCE SERVICE

Science Service is a unique institution, established at Washington for the purpose of disseminating scientific information to the public. It aims to act as a sort of liaison agency between scientific circles and the world at large. It interprets original research and reports the meetings of learned societies in a way to enlighten the The specialist is likewise a layman. layman in every science except his own and he, too, needs to have new things explained to him in non-technical language. Scientific progress is so rapid and revolutionary nowadays that no one can keep up with it from what he learned at school. Science Service endeavors to provide life-continuation courses in all the sciences for newspaper readers anywhere in America without tuition fees or entrance examinations.

In a democracy like ours it is particularly important that the people as a whole should so far as possible understand the aims and achievements of modern science, not only because of the value of such knowledge to themselves but because research directly or indirectly depends upon popular appreciation of its methods. In fact the success of democratic institutions, as well as the prosperity of the individual, may be said to depend upon the ability of people to distinguish between science and fakes, between the genuine expert and the pretender.

Science Service spares no pains or expense in the endeavor (1) to get the best possible quality of popular science writing and (2) to get it to the largest possible number of readers. If in doing this it can make both ends meet, so much the better. If not, it will do it anyway.

Through the generosity of E. W. Scripps, Science Service has been assured of such financial support as to insure its independence and permanence. Mr. Scripps's long and wide experience as a newspaper editor and proprietor had convinced him of the importance of scientific research as the foundation of the prosperity of the nation and as a guide to sound thinking and living and he realized the need for an independent agency that would bring the results of research to the attention of the entire people so these could be applied to the solution of their personal, social or political problems.

Science Service is chartered as a non-profit-making institution and all receipts from articles, books, lectures and films are devoted to opening up new avenues for the diffusion of knowledge and developing promising methods of popular education. Although Science Service has a philanthropic purpose, it is conducted on business principles, with the aim of making each branch of its activities ultimately self-supporting so far as possible. All ac-

ceptable contributions are paid for and all published articles are charged for.

Science Service is under the control of a Board of Trustees composed of ten scientists and five journalists. The leading national organizations of all the sciences, the National Academy of Sciences, the National Research Council, and the American Association for the Advancement of Science, appoint three trustees each.

Science Service is not a governmental institution, but it is in close contact with the numerous governmental bureaus of research. It is not under the control of any clique, class or commercial interest. It has no connection with any particular publisher or syndicate. It will supply any news agency or newspaper on even terms. It is not the organ of any single scientific association. It serves all the sciences. It engages in no propaganda, unless it be called propaganda to urge the value of research and the usefulness of science.

Science News-Letter, October 2, 1926

PAST VOLUMES

Nine volumes of the Science News-Letter have been issued in mimeographed form. Volume I consisted of numbers 50 to 90, inclusive, including the period March 13 to December 30, 1922; thereafter volumes consisted of 26 numbers covering halfyear periods, with the exception of Volume IX which consisted of numbers 273 to 285, inclusive, and included the three-month period of July, August and September of this year. Volume X begins with this number, the first to be printed, and will cover only the three last months of this year. Thereafter volumes will cover half-year periods. The pages in each volume will be numbered consecutively.

Science News-Letter, October 2, 1926

Two new subway tunnels are being constructed under the Thames.

Kapok, a floss obtained from pods of a tree in Java, is used throughout the world as a material for lifebelts and buoys.

The government recently spent \$25,-000 in repairing a temporary office building, damaged by the white ants known as termites.

Natives of Tierra del Fuego are said to endure extreme cold with greater hardihood than even the Eskimos of the north.

Rubberized wall paper, which may be washed or disinfected without injury, is being used by hospitals and some other public buildings.

Science News-Letter, October 2, 1926

Have You A Few Friends

who do not know the SCIENCE NEWS-LETTER?

As a subscriber to the most unusual scientific magazine of the hour you are, we hope, enthusiastic. We know you appreciate obtaining scientific news months before it can possibly be printed in book form.

The tastes of your friends harmonize with your own—send us the names of several men and women who will be interested in obtaining scientific NEWS.

We shall be glad to send, free to your intimates, a copy of the weekly Science News-Letter.

(Kindly state whether you wish your name mentioned in the sending of sample copies.)
М
М

SCIENCE SERVICE 21st and B Sts. Washington, D. C.

Photographs of Leading Scientists

Ideal for Classroom, Home or Den

Science Service has a Splendid Collection of 1200 Photographs of Leading Scientists Throughout the World From Which to Select Those You Wish, at the Low Fee of

ANY 10 PICTURES FOR ONLY \$2.00

(Sent Postpaid—Each Picture Postcard Size, 3½ x 5½ inches)

Botanists Chemists **Psychologists** Geographers Geneticists **Pathologists Physicists** Metallurgists **Naturalists Anatomists Astronomers Bacteriologists** Etc., Etc. **Anthropologists Entomologists Biologists**

For Those Who Desire

LARGER PICTURES-7 x 11 INCHES-\$1.00 EACH

We Offer An Enlargement of Any Photograph, Size 7 x11 Inches, Unmounted, Finished in Black-and-White, Plain Bromide, or Bromide-Sepia, Postpaid, Each \$1.00.

Ask for Complete Catalog, Sent Free

Address:

SCIENCE SERVICE

Photographic Department

21st and B Streets

Washington, D. C.

We Want Scientific Photographs

To supplement our science news service for newspapers, Science Service produces a scientific photographic service.

Has a chemist in a nearby laboratory discovered a new element? Get his picture with the apparatus and send it to us.

Has a scientific expedition returned? Send us pictures of the specimens that were secured and the men who collected them.

Has some unusual and novel piece of machinery been installed in some plant in your neighborhood? Let us have its picture, with the men who put it in.

In other words, we want interesting pictures of creditable scientific achievements, and we shall pay to get them.

Such pictures must not be offered for publication elsewhere until we have used them, and prints submitted should be on glossy paper and very clear.

Write us for further information

SCIENCE SERVICE 21st and B Sts. Washington, D. C. Deliberate killing of wild animals is proceeding at such a swift pace that one scientist fears that man will eventually be the only mammal left on earth.

Julius Caesar is said to have made secret memoranda by moving each letter of the alphabet forward four places, using d for a, e for b, etc.

Government tests of 10 brands of hotel chinaware showed that the most durable china was 50 per cent harder than the softest ware.

It is probable that plants bend toward the sun because the tension of their protoplasm is greatest on the side exposed to light.

Young chickens, as well as old, may be infected with tuberculosis and spread it to hogs, according to recent tests.

Better not to know so much than to know so much that is not true.—

Josh Billings.

The color of apples depends upon their nitrogen content, the highest colored fruit having the least.

Fats have more than twice the fuel value of sugar, starch, or protein when digested in the body.

It would take an express train 200 years at full speed without stopping to travel from the earth to the sun.

More than 2,000 years ago, historical records in China were written on bamboo tablets, strung together like a fan.

There is a large bed of pure Epsom salts near Death Valley, California.

Ordinary soft coal after drying consists of about three-fourths carbon.

The jaguar, which has the usual fondness of cats for fish, is an expert fisherman.

Salt mines in the Carpathian Mountains have been worked since the eleventh century.

Opium is gathered from the seed pod of the opium poppy when the petals first unfold.

The faintest stars that can be seen by the naked eye are classed in the sixth magnitude.

The female of one species of spider carries her young about on her back, like Indian papooses.

(By Science Service)

rate, yet interesting, scientific news and features. Whenever you see the name of our organization, or the credit line, or the SCIENCE SERVICE insignia in newspaper or magaine, you know that authentic scientific information is being presented.

Science Service presents to the public definite scientific facts, in a popularized style, that appeal not only to men and women of science—but to the laymen interested in the scientific wonders of the day.

SCIENCE SERVICE 21st and B Sts. Washington, D. C. Teachers, Professors, Librarians, Club Leaders:

6c. a Week

(\$2.25 for school year, October through June; \$3.00 for calendar year)

is the special price of quantity subscriptions to THE SCIENCE NEWS-LETTER

when ordered by colleges, schools, libraries and clubs.

The Science News-Letter is a living text-book that will vitalize science study. Each week it will bring to your classes a summary of the organized science knowledge of the world. Every field of science is covered. No book can do it. For the price of ONE text-book you can obtain in the News-Letter matter that would fill FIVE large books..

During the past four years hundreds of copies have been used in science classes throughout the country. (Note the study helps for each science on page 7.)

Orders must be for ten copies or more to go to one address.



SCIENCE SERVICE
21st and B Sts.,
Washington, D. C.

For t	he enclosed \$		in n	ny name subscriptions
	for	 school year year weeks		beginning with issue of
Name		 		_Street
City		 		State