

N. B. Normal School Closing.

Gr. Sch. and Class I.

Time: 1 hr., 15 min.

BOTANY.

NOTE: Six questions, including the last three, make a full paper.

PART I. 1 hr., without text.

1. Define or explain Bract, Compound Leaf, Carpel, Fruit, Raceme, Monoecious, and name a different plant to illustrate each.
2. What becomes of the sugar present in the spring in the sap of trees? Give proofs of your answer and show the nature of the change.
3. Show how the absence of light affects the growth of a plant. Give proofs.
4. Compare the Buttercup, Cress, Aster and Buckwheat families, as to the insertion (adhesion) of their petals and stamens.
5. (a) Give the principal family characteristics and one of the generic characteristics of the plant on your desk; and (b) make a drawing showing the structure of its flower.
6. Make a tabular analysis of the above mentioned plant.

PART II. 15 min., with text.

7. Determine the series, class, sub-class, order, genus, and species of the plant you have analysed; writing out, as found in the text, every line leading to its complete determination.

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DOMESTIC ECONOMY.

Theory.

1. Why are women beginning to abandon domestic and private life for public life?
2. A great deal of house work requires time and hard labor. What definite plan can you arrange to economize force in (a) spring house cleaning; (b) family washing and ironing.
3. What is (a) Fever? (b) Inflammation? (c) Congestion? How should wounds be treated in an emergency?
4. Ophthalmia in schools. What series of causes are preventable and demand more attention than they have received?

Practice.

1. Give an example of your stitching.
2. Distinguish between the English and German methods of knitting.
3. What is Grafting? "Twill" darning? Wave darning? Give examples.
4. Work one button hole.

Class I.

PHYSICS.

Time: 1 hour.

NOTE.—Five questions make a full paper. Candidates for Superior License and Grammar School License must take the first two questions.

1. In a lever of the second class, a force of 10 pounds, acting at a distance of 12 feet from the fulcrum, balances a weight of 60 lbs. How far is the weight from the fulcrum?

2. If the base of an inclined plane be 15 feet and its height 20 feet, what force, acting in the direction of the plane, will be required to balance upon it a weight of 100 lbs.?

3. Mention a body which can be readily electrified by induction, and describe and explain the process by which you would electrify it (by induction.)
4. In which way are liquids in general more readily heated—by conduction or by convection? Why? Explain the latter process.
5. Account for the fact that a mixture of snow and liquid water, sitting in a warm room, remains at a constant temperature much below that of the surrounding air? What is the temperature of the water?
6. Under what conditions does light suffer refraction? Upon what does the amount of refraction depend? Mention some phenomena due to refraction of light.

BOOK REVIEWS.

THE FACTS OF LIFE, by Victor Betis and Howard Swan; George Philip & Son, London, publishers; price 3s. A systematically arranged dictionary of facts relating to home life, the school, travelling and plants. The book furnishes another valuable aid to instructors in the natural method. No English is used. The meaning of the expressions is brought out in carefully chosen and yet ordinary sentences which the skilful teacher can readily make clear to the pupil.

A FRENCH GRAMMAR for schools, by G. Eugene Fasnacht, editor of Macmillan's series of foreign classics; Macmillan & Co., publishers; price 2s. 6d. In this grammar the author presents a very carefully prepared treatise on the formation and syntax of the French language. It is not a book for beginners but one in which students of French would greatly delight. The accents, genders of nouns, etc., are all carefully explained.

SELECTIONS OF FRENCH IDIOMS, Plan and Roget, Macmillan & Co., publishers; price 3s. 6d. This is a very fine collection of French idioms which are explained by simpler, synonymous French phrases and not by corresponding English idioms. Thus the true spirit of the expression is not interfered with and the student is obliged always to think in French. Another commendable feature of the book is the fact that quotations are given from the best writers to exemplify the use of the idioms.

AUS HERZ UND WELT, edited by Dr. Wilhelm Bernhardt; D. C. Heath & Co., publishers; price 15 cts. This little book contains two short stories by two of the most popular literary women of Germany, Natty von Eschstruth of Berlin and Helene Stokl of Vienna. The stories are accompanied by very full notes and are valuable as examples of the colloquial language of the day, and have been presented to the public at the request of the publishers to meet the demand for everyday German.

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