

2. In what way may an ordinary register of attendance be most conveniently made a record also of the late-coming and of the early-going of pupils? What further use ought to be made of the information thus furnished?
3. What information should be given in an admission register, so that the said register may contain an abstract of each pupil's school career?

#### SECTION IV.—PRINCIPLES OF TEACHING.

1. What subjects of the elementary school course afford the best opportunities for cultivating the imaginative faculties of the pupils? Give a general outline of the way in which you would make one of these subjects subserve this purpose.
2. What are the special advantages and disadvantages (*a*) of oral, (*b*) of written examinations, which render the employment of both advisable in teaching?
3. "Teaching is both an art and a science." Discuss this statement, and from it deduce the necessary qualifications of a good teacher.

#### SECTION V.—METHODS OF TEACHING.

1. Define clearly what is meant by a "method," and state the characteristics of a good method.
2. How would you provide for the effective correction of composition exercises in a country school where the teacher is unassisted?
3. Explain fully your method of giving an ordinary writing lesson, or of teaching geographical definitions.

#### SECTION VI.—DISCIPLINE.

1. Some educationists assert that school punishment should never be arbitrary, but should always be the natural logical consequence of the misdoing. To what extent is this principle applicable in school-work, and what are the hindrances to its general application?
2. What means would you employ to give your pupils a proper sense of their mutual responsibilities as members of a society? What is the importance of doing this?
3. "The perfection of government is to effect the maximum of result with the minimum of machinery." Illustrate the application of this doctrine in school discipline.

#### SECTION VII.—GENERAL.

1. What special benefits are to be derived from grammar as a subject of elementary school education? How must it be taught to secure these advantages?
2. A distinguished educationist says: "I know that nine-tenths of those whom the University sends out must be hewers of wood and drawers of water; but, if I train the ten-tenths to be so, depend upon it the wood will be badly cut and the water will be spilt." Discuss the application of this to elementary school-work.
3. Write an essay on "The Special Value of Inductive Teaching."

#### CLASSES D AND E.—ELEMENTARY SCIENCE.

*Time allowed: Three hours.*

[NOTE.—Candidates are not to attempt more than ten questions. Female candidates, if proficient in Needlework, may substitute for this paper the paper on Domestic Economy and the Laws of Health; but passing in Science will not exempt them from passing in Needlework also.]

1. State the laws of gravitation. If a planet had half the mass of the earth and twice the diameter, what would be the weight of a mass of one pound upon its surface?
2. Describe how you would make experiments to illustrate the laws of motion. Explain the kinetics of a conical pendulum.
3. Suppose a set of cord and pulleys to be without weight and friction: make a sketch to illustrate the arrangement so that one pound shall balance six.
4. A body weighs six pounds in air; it floats in water, and requires two pounds to make it sink: what is its specific gravity?
5. Give examples of chemical affinity, of attraction of cohesion, of molecular attraction, and of magnetic and electrical attraction.
6. How is the velocity of sound in water or in a solid body ascertained?
7. How are the notes of an organ and of a concertina produced? Describe simple experiments to show that a succession of taps will produce a musical note.
8. What phenomena of light depend upon the fact of its rectilinear propagation?
9. Describe the camera used in taking photographs, and draw a diagram illustrating the formation of the image on the ground-glass plate.
10. If two pounds of steam, three pounds of ice, and ten pounds of water at 20° C. were mixed, what would be the temperature of the resulting water?
11. Give an account of some form of hygrometer, and illustrate your answer by a sketch.
12. Describe the formation of dew. Under what circumstances is it most copiously deposited?
13. Give a general account of magnetic induction.
14. Describe how a magnetic needle may be made to vibrate at will, although it be a hundred miles away.
15. Describe exactly what occurs during the burning of a candle.
16. What are the properties of carbonic acid? Describe two methods of preparing it.
17. Describe the germination of a seed.
18. Give a clear description of the mechanism of respiration.