

3. Distinguish between *acids*, *alkalies* and *salts*. Show how *calcium chloride* is made and what takes place when a solution of it is mixed with *sodium carbonate*.

4. Name the chief tillage operations, and state how each contributes to the productiveness of the soil.

5. Write a note on "bones as a manure," with particular reference to Liebig's process of preparing superphosphate of lime.

6. State De Candolle's theory in regard to land becoming "sick" of a crop. Give also Liebig's views on the same subject.

PHYSICS.

1. Define Gravity, Cohesion and Chemical Attraction, and tell the use of these forces.

2. Describe fully the chief properties of gases, and explain the construction and use of the barometer.

3. What do you understand by the term *energy*, and by the statement that "a heated body is an energetic body"?

4. Explain and illustrate the *conduction* and *convection* of heat.

5. Show by a diagram that different kinds of light are differently bent by passing through a prism.

6. Describe the Leyden jar, and the mode of discharging it.

FRENCH.

Translate into English:

C'est une chose, moi, où je ne consentirai point. Les alliances avec plus grand qui soi sont sujettes toujours à de fâcheux inconvénients. Je ne veux point qu'un gendre puisse à ma fille reprocher ses parents, et qu'elle ait des enfants qui aient honte de m'appeller leur grand-maman.

S'il fallait qu'elle me vint visiter en équipage de grande dame, et qu'elle manquât par mégarde, à saluer quelqu'un du quartier, on ne manquerait pass aussitôt de dire cent sottises. Voyez-vous, dirait-on, cette dame la marquise qui fait tant la glorieuse. C'est la fille de Monsieur Jourdain, qui était trop heureuse, étant petite, de jouer à la madame avec nous. Elle n'a pas toujours été si relevée que le voilà; et ses deux grands-pères vendaient du drap auprès de la porte Saint-Innocent.

Ils ont amassé du bien à leurs enfants, qu'ils payent maintenant peut être bien cher en l'autre monde; et l'on ne devient guère si riche à être honnêtes ges.

Se ne veux point de tous ces caquets, et je veux un homme, en un mot, qui m'ait obligations de ma fille, et à qui je puisse dire: Mettez-vous là mon gendre, et dinez avec moi.

1. When do *vingt* and *cent* take *s*? Give examples.

2. Parse *puisse*, *aient*, *manquât*, *l'on ne devient*. *guère*.

3. Give in full the imperfect indicative of *appeler*, the future of *falloir*, and the present subjunctive of *vouloir*.

4. Divide the tense; of the French verb into *primitive* and *derivative*, and give the rules for the formation of the latter from the former.

Translate into French:

Are you ill? What o'clock is it? It is twelve o'clock I shall go to the country to-morrow. Gentlemen, I thank you for your kindness. Wait for me, if you please. Write a letter to your friend. A man walked twenty miles in a day. Do you understand the French language? What is the matter with you this morning? My head aches. What kind of weather is it to-day? It is snowing. My friend will be here in half an hour. Here he is now. It is very useful to understand music. Is your sister at home? Every one believes it. Come in, I wish to speak with you.

SCHOOL SYSTEM AND SCHOOL MANAGEMENT.

1. Under what conditions and limitations are trustees empowered by law to dismiss a teacher?

2. Discuss the propriety of the legal provision whereby all the property owned within the county by a resident of a given section can be assessed for the support of the schools of that section.

3. State the general regulations, looking to the maintenance of order, under which you would place your school.

4. The Act relating to public instruction assigns the power of expelling pupils to the trustees, while it makes the maintenance of order and discipline one of the teacher's chief duties. Are these provisions contradictory? If not, how do you explain them?

5. What studies would you make the general basis of classification? In classifying would you ever take into account any considerations besides attainments? State reasons for your opinion.

6. How would you endeavor to make the oral lessons of the Course of Study contributory to the general order and purposes of the school?

TEACHING.

1. "The conditions of knowledge should be so arranged that with reasonable effort the pupil can discover the desired truth." Point out two opposite modes in which this principle is often violated by teachers.

2. What do you understand by the *analytic* as distinguished from the *imitative* method of teaching writing; state your reasons for preferring a combination of the two.

3. Give as a lesson-scheme for class in history ten heads under which any given reign may be discussed.

4. Discuss the soundness of the opinion that "even when a subject is too difficult to be understood it is well to have its principles carefully committed to memory; ready for use when subsequent mental development may enable the mind to comprehend them."

5. Give, in accordance with annexed outline, notes of an oral lesson on *Climate*, adapted to pupils in the eighth grade of the common school course.

Introduction:—

HEADS.	MATTER.	METHOD.

COMPOSITION.

1. What do you mean by *conciseness*? How is it violated? Give examples.

2. Name and illustrate the principal figures of language

3. *The Argumentative Theme*: (a) its object, (b) its divisions, (c) popular classification of arguments, (d) give model of argumentative theme on *Compulsory Education*.

4. Explain the statement that composition bears the same relation to literature that mechanical drawing does to art.

5. "The advances which have been made in the mechanical and useful arts have already begun to influence our social condition, and must affect still more deeply our systems of education (1). The knowledge which used to constitute a scholar and fit him for social and intellectual intercourse, will not avail him under the present ascendancy of practical science (2). New and gigantic inventions mark almost every passing year: the colossal tubular bridge, conveying the monster train over an arm of the sea; the sub-marine cable, carrying the pulse of speech beneath 2,000 miles of ocean; the monster ship freighted with thousands of lives; and the huge rifle gun, throwing its fatal and unchristian charge across miles of earth or of ocean (3). New arts, too, useful and ornamental, have sprung up luxuriantly around (4).....Wherever we are, in short, art and science surround us. (5) They have given birth to new and lucrative professions (6). Whatever we purpose to do they help us (7).....To our thoughts they give the speed of lightning, and to our timepieces the punctuality of the sun (8)."

(1). What is the general subject of the foregoing paragraph, and what sentences contain its enunciation?

(2). In what relation do the other sentences stand to these?

(3). Point out and discuss a peculiar figure in third sentence.

(4). Do you regard the seventh sentence as correctly expressing the author's meaning? If not, what change would you suggest?

(5). Is the statement "to our thoughts they give the speed of lightning" free from ambiguity? Explain its meaning.

(6). Define *accent*, *interval*, *scansion*, *catalectic*, *hexameter*, *rhyme*, *triple*, *stanza*.

(7). Scan the following (using Latham's notation) and if possible, name the author:

(a) In the spring a fuller crimson comes upon the robin's breast.

(b) Come back! come back! he cried in grief.

(c) Ye shepherds so cheerful and gay  
Whose flocks never carelessly roam.

(d) Take her up tenderly,  
Lift her with care.

GRAMMAR.

1. "There are some nouns which cannot be classed under any general rules for the formation of the plural." State, with illustrations of each, at least six varieties of such nouns.

2. Distinguish, by definition and illustration, between, (a) *strong* and *weak* verbs, (b) *regular* and *irregular* verbs.