

lessons assigned to this work. The course as thus outlined is an excellent one and if properly conducted by a devoted and enthusiastic teacher will render the work of the school-room easier and lighter, and relieve it of some of its present monotony. There is one danger, however, which will have to be guarded against, and that most carefully, namely, the danger of reducing this to mere machine work. Let the children, as far as is consistent with the plan of the lesson, follow their own inclinations and the danger will be greatly minimized.

II

CHEMISTRY.

The following are review questions in Chaps. ix-x, High School Chemistry.

1. State Avogadro's hypothesis and give the experimental evidence, upon which it is based.

2. A quantity of gas occupies 100 cubic feet when measured at 21°C , and 800 inches in pressure. What volume will it occupy when measured at 35°C , and 720 inches in pressure?

3. Explain each of the following statements:

(a) The specific gravity of air is 14 43.

(b) The atomic weight of nitrogen is 14.

(c) The molecular weight of oxygen is 32.

(d) The equivalent weight of zinc is 32.5.

4. Using the element carbon show how its atomic weight may be determined by a consideration of a number of its gaseous compounds. Explain the use that is made of equivalent weight in determining atomic weights.

5. What does the symbol of an element and the formula of a compound stand for with regard to the element or compound?

6. What additional data are necessary to obtain the correct formula in

problem seven, page 57? Show how to use this additional data in determining the formula.

7. Define valency and explain what is meant by saying that the element carbon is a tetrad and the element oxygen is a diad.

8. Write a note on nomenclature as applied to binary compounds and apply the principle to name the oxides of nitrogen.

9. Express in words the following equation: $\text{M} + \text{H}_2\text{SO}_4 = \text{MSO}_4 + \text{H}_2$.

10. The specific heat of phosphorous is .1740 and the equivalent weight of it is 10.34; find the atomic weight of phosphorous. Enunciate the law on which your solution is based.

QUESTIONS ON CÆSAR.

BOOK V. CHAPTERS 22-26.

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I. Translate into good idiomatic English chapter 22, *Cassivellannus hoc proelis—noceat*.

1. Parse *permotus*, *multum*, *vectialis*.

2. Classify the subjunctives in the passage.

3. Distinguish *pendēret* and *pendēret*.

4. Derive *detrimentis*, *legatos*, *vectigalis*, and show the bearing in each case on the meaning of the word.

5. Compare *maxime* and *facile*.

6. *Neu*. What other form of this word?

II. Translate idiomatically chapter 25, *Tertium—mittere*.

1. Parse *regnantem*, *quorum*, *opera*.

2. Construction of *annum*, *auctoribus*, *impulsu*.

3. Distinguish *hostes* and *inimici*.

4. What changes would require to be made in the last sentence if *imperat* were used instead of *jubet*?

5. *Hiemare*. How formed? What are such verbs called?