

TEACHER-SUBSCRIBER.—QUES.—How can it be shown that two gases are set free when sulphuric acid acts on oxalic acid.

ANS.—Fit the generating flask with tight cork and delivery tube drawn to a fine point. When the gas is coming off freely set fire to it as it issues. The flame shows there is a gas which burns. Now pass the gas into lime water. The latter turns milky. Collect a bottle of the gas. Shake well with caustic potash solution, then transfer the gas to a clean bottle and add lime-water again. This time there is no milkiness. From which it may be inferred that the original gas coming from the generating flask contains two gases, one which burns but does not turn lime water milky, and another gas which does turn lime water milky.

School-Room Methods.

READING.

No. 5.

BY LITERATUS.

THE letter *w* is both a consonant and a vowel; a consonant before a vowel in a syllable, and a vowel after a vowel. In English it is never used as a vowel by itself. It begins about two and a half per cent. of the words in English. As an initial, assisted with *h*, it requires exceptional treatment; associated with *r* it is silent. The name this letter generally receives is double *u*. This name was at one time descriptive of its shape, when *u* was formed as *v* now is. But neither double *u* nor double *v* gives any aid to a learner in pronouncing a word in which it is used as a consonant. The best possible name for it is *woo*; the first part representing its function as a consonant, and *oo* its function as a vowel.

Exercise on *w* (*woo*):—First Part:—way, wax, was, we, week, web, wet, well, went, were, wig, will, word, work. Second Part:—wade, wait, waited, waiting, wall, walls, Walter, warm, warmed, warble, walk, walked, walking, wasn't, water, watering, waft, wave, waves, wee, weep, wend, went, west, wide, wild, wind, wink, wise, wiser, woe, wore, wove, woven, wonder, world, worlds, woman.

Y like *w* is used both as a consonant and as a vowel. Unlike *w* it is often used as a vowel alone. It begins a greater per cent. of English words. The name commonly given to it is *wi*. This name is as misleading as it would be to call the letter *b* by the name *de*. The proper name for the letter is *yi*. *I* is associated with it in its name rather than *e* because it is used as a substitute for *i* in a large number of words.

Exercise on *y* (*yi*):—yak, yam, yap, yard, ye, yean, year, yearn, yeast, yell, yelk, yelp, yerk, yes, yet, yex, yield, yoke, yolk, yore, yule.

The last letter of our alphabet begins about one-fifth per cent. of our words. It is commonly called *zed*. It would be as philosophical to call *b* *bed*, *d* *ded*, *p* *ped* and *v* *ved*, as to call *z* *zed*. The name of a letter should contain no unnecessary effect. Drop *d* and call it *ze*.

Exercise on *z* (*ze*):—zax, zeal, zend, zest, zero, zimb, zinc, zone, zulu.

THE SOCRATIC METHOD.

THIS translation from one of Plato's dialogues illustrates Socrates' method of instruction. He had probed and questioned Meno until he made him uncomfortable in the conviction that he was not so wise as he thought himself.

"Why, Socrates," said Meno, "you remind me of that broad sea-fish called the torpedo, which produces a numbness in the person who approaches and touches it. For, in truth, I seem benumbed both in mind and mouth, and know not what to reply to you, and yet I have often spoken on this subject with great fluency and success."

In reply Socrates says little, but calls to him

Meno's attendant, a young slave boy, and begins to question him.

"My boy, do you know what figure this is?" (Drawing a square upon the ground with a stick.)

"O, yes. It is a square."

"What do you notice about these lines?" (tracing them.)

"That all four are equal."

"Could there be another space like this only larger or less?"

"Certainly."

"Suppose this line (pointing to one of the sides) is two feet long, how many feet will there be in the whole?"

"Twice two."

"How many is that?"

"Four."

"Will it be possible to have another space twice this size?"

"Yes."

"How many square feet will it contain?"

"Eight."

"Then how long will the sides of such a space be?"

"It is plain, Socrates, that it will be twice the length."

"You see Meno that I teach this boy nothing, I only question him. And he thinks he knows the right answer to my question; but does he know?"

"Certainly not," replied Meno.

"Let us return to him again."

"My boy, you say that from a line of four feet long there will be produced a space of eight square feet; is it so?"

"Yes, Socrates, I think so."

"Let us try, then." (He prolongs the line to double the length.)

"Is this the line you mean?"

"Certainly." (He completes the square.)

"How large is become the whole space?"

"Why, it is four times as large."

"How many feet does it contain?"

"Sixteen."

"How many ought double the square to contain?"

"Eight."

After a few questions the lad suggests that the line should be three feet long, since four feet are too much.

"If, then, it be three feet, we will add the half of the first line to it, shall we?"

"Yes." (He draws the whole square on a line of three feet.)

"Now, if the first square we draw contained twice two feet, and the second four times four feet, how many does the last contain?"

"Three times three, Socrates."

"And how many ought it to contain?"

"Only eight, or one less than nine."

"Well, now, since this is not the line on which to draw the square we wanted, tell me how long it should be?"

"Indeed sir, I don't know."

"Now observe, Meno, what has happened to this boy; you see he did not know at first, neither does he yet know. But he then answered boldly, because he fancied he knew; now he is quite at a loss, and though he is still as ignorant as before, he does not think he knows."

Meno replies, "What you say is quite true, Socrates."

"Is he not, then, in a better state now in respect to the matter of which he was ignorant?"

"Most assuredly he is."

"In causing him to be thus at a loss, and benumbing him like a torpedo, have we done him any harm?"

"None, certainly."

"We have at least made some progress toward finding out his true position. For now, knowing nothing, he is more likely to enquire and search for himself."

— Pennsylvania School Journal.

THE January *Review of Reviews*, in its "Progress of the World" (editorial) department, discusses present problems in public health administration, municipal reform in the United States, the movement for deep waterways from the great lakes to the Atlantic Ocean, the Nicaragua Canal question, the proposed arbitration of the boundary dispute between Venezuela and Great Britain, the payment of our government of damages to Canadian seal poachers, the prospect of civil service reform, the demand for a bank-note currency, the change in the Canadian Premiership, the disposition of English visitors to instruct Americans, and the recent action of the American Federation of Labor; among foreign topics receiving treatment in this department are the Armenian question, the war in China, the approaching Parliamentary contest in Great Britain, the London School Board election, South African affairs, the French in Madagascar, and the death of the Princess Bismarck.

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