

Hints and Helps.

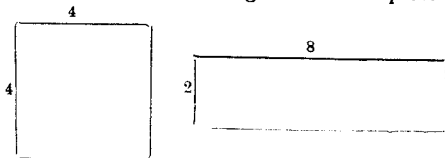
THE REASON WHY.

COMMON SENSE INVESTIGATIONS.

THOUGHT, inquiry, reasoning must be exercised in investigating a subject. By so doing you develop intellect and gain new truth. Those who are satisfied with mere mechanical replies, when they question, will never produce scholars, they do not educate, draw out, lead forth, but simply hear recitations. Let us illustrate. We have frequently, both in schools and at institutes, asked for explanations of "why is it colder in winter than in summer." The answer is given, "because the sun's rays fall less perpendicularly on the earth in winter." This is correct as far as it goes, but it goes only half way. It is simply stating a fact gathered from the books, it is an act of memory, requiring but little thought or reasoning. When the question is propounded, "why or how perpendicular rays furnish more heat than oblique ones,"—a question which requires thinking and reasoning, many otherwise good mechanical students have nothing further to say, and when an illustrative explanation is asked for, many teachers even fail.

This proves that too many are satisfied in their investigations with the statements of the book. To know that a thing is so, and to know why it is so, are two entirely different things. Drops of water are round, and so are tears, but why? We have two eyes, why do we not see double? A prism held in the sun's rays dissolves them into the seven colours. Why? Why must the prism be triangular?

A little common sense helps us amazingly in our investigations, and a simple little illustration oftentimes clears up a difficult subject. Why should a house or field be in the shape of a square rather than of a rectangle? Without resorting to the mathematical calculations, in another column, an illustration like the following settles the question:



The perimeter of the square, whose area is 16, is 16, while that of the rectangle is 20.

The reason that the circumference of a circle is 360, rather than 400 or 1,000, is simply because 360 is divisible by all the digits except one, thus:

$$\begin{array}{r} 2)360 \\ \underline{180} \\ 180 \end{array} \quad \begin{array}{r} 3)360 \\ \underline{120} \\ 120 \end{array} \quad \begin{array}{r} 4)360 \\ \underline{90} \\ 90 \end{array} \quad \&c.$$

The explanation of borrowing in subtraction can be given by means of toothpicks, the tens being tied in bundles of ten. As 2<sup>1</sup>/<sub>10</sub> or 21-9. Here we use two bundles of ten toothpicks, and one toothpick. To take nine away, one of the bundles must be opened, and nine being taken but one remains, which, with the other single toothpick, makes two single ones, and one bundle of ten, twelve in all left.

When the "reason why" is given by means of tangible illustrations, many difficult problems are simplified.—*National Educator*.

SUBJECTS FOR COMPOSITION.

1. WRITE a telegraphic dispatch, not exceeding ten words, and containing three distinct statements.
2. Write for your country paper a short description of a serious accident of which you were an eye-witness.
3. You are shortly to move into a new store some distance from your present stand. Prepare a circular to be sent to your customers apprising them of the change.
4. Write a telegraphic dispatch, not exceeding ten words, and containing four distinct statements.
5. You are in want of a situation as clerk in the grocery business. Prepare an advertisement for the papers setting forth your desires.
6. Write, in favor of your clerk, an order on a boot and shoe merchant of your town for goods to be charged to your account.
7. Your fall stock of dry goods has just arrived. Prepare a suitable advertisement announcing this fact.—*Popular Educator*.

ENGLISH AS SHE IS TAUGHT.

MARK TWAIN contributes to the April *Century* under the above title some examples of the curious answers made by pupils in our public schools. We quote a few as follows:—

- "Aborigines, a system of mountains.
- Alias*, a good man in the Bible.
- Amenable*, anything that is mean.
- Assiduity*, state of being an acid.
- Auriferous*, pertaining to an orifice.
- Ammonia*, the food of the gods.
- Capillary*, a little caterpillar.
- Corniferous*, rocks in which fossil corn is found.
- Emolument*, a headstone to a grave.
- Equestrian*, one who asks questions.
- Eucharist*, one who plays euchre.
- Franchise*, anything belonging to the French.
- Idolator*, a very idol person.
- Ipecac*, a man who likes a good dinner.
- Irrigate*, to make fun of.
- Mendacious*, what can be mended.
- Parasite*, the murder of an infant.
- Publican*, a man who does his prayers in public.
- Tenacious*, ten acres of land."

Here is one where the phrase "publicans and sinners" has got mixed up in the child's mind with politics, and the result is a definition which takes one in a sudden and unexpected way:

"*Republican*, a sinner mentioned in the Bible." Also in Democratic newspapers now and then.

Here are two where the mistake has resulted from sound assisted by remote fact:

"*Plagiarist*, a writer of plays."  
"*Demagogue*, a vessel containing beer and other liquors."

Here is one which—well, now, how often we do slam right into the truth without ever suspecting it:

"The men employed by the Gas Company go round and speculate the meter."

And here—with "zoölogical" and "geological" in his mind, but not really to his tongue—the small scholar has innocently gone and let out a couple of secrets which ought never to have been divulged in any circumstances:

"There are a good many donkeys in the theological gardens."  
"Some of the best fossils are found in theological cabinets."

[The above is the extract to which we referred in an editorial note in last issue. The extract was crowded out.—ED.]

TRUE BEAUTY.

A WOMAN, famous as one of the most kindly and lovable among leaders of the best American society, once said: "If I have been able to accomplish anything in life, it is due to a word spoken to me in the right season when I was a child, by my old teacher. I was the only homely, awkward girl in a class of exceptionally pretty ones, and being also dull at my books, became the butt of the school. I fell into a morose, despairing state, gave up my study, withdrew into myself, and grew daily more bitter and vindictive."

"One day the French teacher, a grey-haired old woman with keen eyes and a kind smile, found me crying."

"'Qu' as-tu, ma fille?' she asked.  
"'O madame, I am so ugly!' I sobbed out. She soothed me, but did not contradict me."

"Presently she took me to her room, and after amusing me for some time said: 'I have a present for you, handing me a scaly, coarse lump covered with earth. 'It is round and brown as you. 'Ugly,' did you say? Very well. We will call it by your name, then. It is you! Now, you shall plant it and water it and give it sun for a week or two.'

"I planted it and watched it carefully; the green leaves came first, and at last the golden Japanese lily, the first I had ever seen. Madame came to share my delight."

"'Ah,' she said significantly, 'who would believe so much beauty and fragrance were shut up in that little, rough, ugly thing? But it took heart and came up into the sun.'

"It was the first time that it ever occurred to me that, in spite of my ugly face, I too might be able to win friends and to make myself beloved in the world."—*Youths' Companion*.

A LESSON WITHOUT A NAME.

BY SARAH L. ARNOLD.

THEY came at noon,—the noon of a gay day. The day was one of the last of February's twenty-eight, and the snow lay deep on the ground. When Miss Oddways walked home from school at noon she was tired, because the day was gray and the winter had been long. When she went back the sky was blue and the air was clear, while her face wore a glad smile. She thought the silver-gray pussy-willows she had found waiting for her at home made all the difference. A group of boys were playing marbles on the icy sidewalk. "They are right, the boys and the willows," thought Miss Oddways; "spring cannot be far away."

When she visited the C class, that afternoon, it was time for a Place Lesson, so the programme said. But after the children had greeted Miss Oddways, must they not also give greetings to the clear brown and gray pussy-willows that she wore?

"What are they?" she asked, enjoying their interest in the new-comers. All the children knew and wanted to tell. One little lad called them "brown kitties."

"Where do they grow?" "All along the lake road!" "And the road to the Geyser." "All wet, swampy places." "Down in the woods, back of my house." "And oh," cried Harry, "such big gray ones grow down by the brook, at my grandfather's. I'll bring you some!" "Thank you," said Miss Oddways, seeing the child so happy in the thought of his giving. "That will make us both glad."

"Who can guess why I wear those to-day?" "Because they're so pretty." "Because they feel so soft on your hand." "To make you remember the one that gave them to you." Because you like them." These were the answers that came.

"Still another reason," Miss Oddways said. "Do you know, little people, that I wear these little 'brown kitties,' as John calls them, because they have a message for me? What do you think they are saying?"

Then their eyes were earnest, and they wondered. But never a word came.

"Let me tell you a secret," said the teacher. "See these little brown jackets the pussies wear? Shall I tell you when they were made?"

"Oh, I know," cried Bennie; they've been on all winter, for last fall I found some and pulled them off, and there was the gray inside."

"Ah, yes; Bennie knows my secret. Now see how the grey has peeped out, underneath and all about the brown! Think how long it has waited under its brown coat; think why it comes out now; then tell me what it says."

They all knew,—glad knowing. "Spring's coming! spring's coming!" they chorused.

"What then?" "Oh, the Mayflowers in the Ten Spring Woods!" "And the birds!" "And the violets all over everywhere!"

They were friends of theirs,—all the spring blossom. They had not thought before, but they thought now, that the willows sent their silvery heralds to tell of the Mayflowers and violets and birds. And now they learned how the dear gray things had waited through all the long, cold winter months, till the time came for them to bear their message of hope and cheer.

Miss Oddways saw that they knew her meaning, but she did not say anything about patience nor faith. "You see, the willows were sure, all winter, that spring would come when it was time. So they waited. 'Twas a happy waiting, I think, don't you?"

There could be no Place Lesson. They had talked the time away.—*The American Teacher*.

RECITATION FOR A VERY LITTLE BOY.

It's very hard, kind friend, for me,  
To stand up here with trembling knee,  
And see so many people's eyes  
Cast on a boy of my small size;  
But, then, I thought I'd take my place,  
And, soldier-like the music face,  
I've tried my hardest to please you;  
You may believe me, this is true;  
Your kind attention (ere we part)  
I thank you for with all my heart.  
(Places hand on heart; bows to audience.)  
—*Morrison's Selections*.