

disappointed of his schemes; and if there is a traitor within who answers readily to the temptations without, he will not require great events or a prominent stand to carry on his work; things that we should call trifles may be made an occasion for sin.—*Truth without Prejudice.*

#### 4. READING.

"There are many," said Dr. Chalmers, addressing a meeting of his own parishioners "who have been two or three quarters at school, and have even got on as far as the Bible; but when I come to examine them, I am struck with their slovenly and imperfect mode of reading, obliged as they are to stop and to spell to blunder on their way through every verse in such a manner as to make it palpable to those who hear them that it had been very little worse for them though they had never been at school at all. Now, be assured that those who cannot read with fluency and readiness to the satisfaction of others, cannot read with satisfaction, or any real understanding of what they do read to themselves. They may go through the form of reading their Bibles, but I am sure that they do not understand them, and what is this to say but that the Bible is still a sealed book to them—that they want the key by which it is to be opened"—*Chalmers.*

#### 5. I HAVE NO TIME TO READ.

The idea about the want of time is a mere phantom. Franklin found time, in the midst of all his labour, to dive into the hidden recesses of philosophy, and to explore the untrodden paths of science. The great Frederick, with an empire at his direction, in the midst of war, on the eve of battles that were to decide the fate of his kingdom, had time to reveal the charms of philosophy and intellectual pleasures.

Bonaparte, with all Europe at his disposal, with kings in his antechamber, begging for vacant thrones, with thousands of men whose destinies were suspended on the brittle thread of his arbitrary pleasure, had time to converse with books. Cæsar, when he had curbed the spirits of the Roman people, and was thronged with visitors from the remotest kingdoms, found time for intellectual conversation and study.

Boys and girls can have time, if they are willing to improve it, to gain much valuable knowledge, while out of school, without depriving themselves of necessary play or enjoyments.

Suppose every scholar eight years of age should commence reading some interesting books, and read one hour each day, continuing to do so until he is twenty years old; he would have gained more than a year's time, or three hundred and sixty-five days of ten hours each.

Who will try this course? Young reader, will you do it? You can if you will only make the attempt, and thus lay up a vast amount of knowledge for yourself. Winter is coming on. Now is the time to read.—*The Student.*

#### 6. TWO WAYS OF TELLING A STORY,

##### A LESSON FOR UNCIVIL BOYS.

In one of the most populous cities of New England, a few years since, a party of lads, all members of the same school, got up a grand sleigh ride. The sleigh was a very large and splendid one, drawn by six gray horses.

On the day following the ride, as the teacher entered the school-room he found the pupils in high merriment, as they chatted about the fun and frolic of their excursion. In answer to some inquiries he made about the matter, one of the lads volunteered to give an account of their trip and its various incidents.

As he drew near the end of his story, he exclaimed: "O, sir, there was one little circumstance that I had almost forgotten. As we were coming home, we saw ahead of us a queer-looking affair in the road. It proved to be a rusty old sleigh, fastened behind a covered wagon, proceeding at very slow rate, and taking up the whole road."

"Finding that the owner was not disposed to turn out, we determined on a volley and a good hurrah. They produced the right effect, for the crazy machine turned out into the deep snow, and the skinny old pony started on a full trot."

"As we passed some one gave the old jilt of a horse a good crack which made him run faster than he ever did before, I'll warrant you. And, so with another volley of snowballs pitched into the front of the wagon, and three times three cheers, we rushed by."

"With that, an old fellow in the wagon, who was buried beneath an old hat, and who had dropped the reins, bawled out,—'Why do you frighten my horse?' 'Why don't you turn out then?' says the driver. So we gave him three rousing cheers more. His horse was frightened again, and ran up against a loaded team, and I believe almost capsized the old creature—and so we left him."

"Well, boys," replied the instructor, "take your seats and I will in my turn tell you a story, and all about a sleigh-ride, too. Yesterday afternoon, a very venerable old clergyman, was on his way from Boston to Salem, to pass the residue of the winter at the house of his son. That he might be prepared for journeying in the Spring, he

took with him his wagon, and for the winter his sleigh, which he fastened behind his wagon.

"His sight and hearing were somewhat blunted by age, and he was proceeding very slowly and quietly, for his horse was old and feeble, like its owner. His thoughts reverted to the scenes of his youth—of his manhood, of his riper years. Almost forgetting himself in the multitude of his thoughts, he was suddenly disturbed, and even terrified, by loud hurrahs from behind, and by furious pelting and clattering of balls of snow and ice upon the top of his wagon."

"In his trepidation he dropped the reins, and as his aged and feeble hands were quite benumbed with cold, he could not gather them up, and his horse began to run away. In the midst of the old man's trouble, there rushed by him, with loud shouts, a large party of boys, in a sleigh drawn by six horses." "Turn out! turn out, old fellow! Give us the road, old boy! What will you take for your pony, old daddy? Go it, frozen nose? What's the price of oats?"—were the various cries that met his ears.

"'Pray do not frighten my horse?' exclaimed the infirm old driver. Turn out then! turn out! was the answer, which was followed by repeated blows and cracks from the long whip of the 'grand sleigh,' with showers of snow-balls, and three tremendous cheers from the boys who were in it. The terror of the old man and his horse was increased, and the latter ran away with him, to the imminent danger of his life. He contrived, however, to secure his reins, and to stop his horse just in season to prevent his being dashed against a loaded team."

"A short distance brought him to his journey's end, the house of his son. His old horse was comfortably housed and fed, and he himself abundantly cared for. That son, boy, is your instructor, and that old fellow and old boy (who did not turn out for you, but would gladly have given you the whole road had he heard you approach) that old daddy and old frozen nose, was your master's father."

Some of the boys buried their heads beneath their desks; some cried; and many hastened to their teacher with apologies, and regrets without end. All were freely pardoned, but they were cautioned that they should be more civil for the future, to inoffensive travellers, and more respectful to the aged and infirm.—*New Hampshire J. of E.*

#### 7. LESSON ON THE THERMOMETER.

*Derivation and definition.* The term thermometer is derived from two Greek words—*thermos*, heat, *metron*, a measure; the literal meaning is therefore a measure of heat.

*Description.*—The thermometer consists of a little hollow globe of glass, with a tubular stem of the same size from the top to the bottom: this is made of glass, because it must be transparent, in order that we may notice the action of the liquid which it contains. The liquid which fills the ball and part of the stem is generally mercury or quicksilver. Spirits of wine are sometimes used, but the former is found to be the best, as it does not pass into vapour in low temperatures as spirits of wine. After the mercury is put into the ball and part of the tube, the whole is made intensely hot; as near the evaporating point as possible, because then it has the greatest bulk which it can have as a liquid. The end of the tube opposite the ball is then closed by melting the glass to a solid by heat, which is called sealing it hermetically, i.e., perfectly close. Afterwards it is allowed to cool gradually and as it cools the liquid cools down to its proper position.

The ball must not be too large or the liquid sinks down into it altogether, and the thermometer becomes useless in low temperatures; it must not be too small or the liquid would not sink low enough into it, and it would then be useless at high temperatures. To ascertain which is the freezing point, the thermometer is plunged into cold water which is just freezing, when a mark is made on the tube just opposite the surface of the liquid which is in it. In order to ascertain the boiling point, the thermometer is plunged into boiling water and a scratch made as before. The distance between these two points is divided into a certain number of degrees. This is called scaling it.

The thermometer which is commonly used in England is Fahrenheit's, in which the interval between the boiling and freezing points is divided into 180°; the freezing point is marked 32°, and the boiling 212°.

Thermometers were in use in the seventeenth century, but it is not known by whom they were invented. Fahrenheit's was invented A. D. 1724.

*Use.*—The thermometer is used to measure heat, and by its aid we can ascertain whether there is a sufficient amount of heat in a room or whether too much. If the thermometer rises between 56° and 60° above zero when placed in a room, the room is sufficiently warm.

#### 8. PRINCIPLES OF BAROMETRIC INDICATIONS.

1. Changes of weather are indicated by changes in the height of the column, and not by its absolute height. When the mercury is low, wind and perhaps storms may be anticipated.