

2. What are the leading educational principles developed by Rousseau? State the objectionable features of his 'Emile,' with the reasons of your objections.

3. Give some account of Jacotot and his system.

4. "It seems to be remarked that, in practice, the Pestalozzian system seems scarcely to have fulfilled the promise of its theory" (Herbert Spencer.) How does Mr. Spencer illustrate and account for this?

5. Tell what you know about the distinctive features of the teaching and school discipline of Dr. Thomas Arnold, or, of Bell and Lancaster.

6. Give a clear account of the origin and progress of national education in Ontario. What characteristics peculiar to itself does the Ontario system possess?

NOTE.—Five questions will be reckoned a full paper.

Practical Department.

MOTTOES FOR THE SCHOOL-ROOM WALLS.

No Bad Thoughts.
Be Self Reliant.
Kind Words Never Die.
Truth Wins When Deception Fails.
Our Life is what we Make it.
Let all your Actions be Upright.
Knowledge is Power.
Always be Frank and Truthful.
Indolence Never Climbs a Hill.
Never Give Up.
Always be on Time.
No Idlers Here.
Wisdom is Strength.
God Bless our School.
Always be Polite.
Strive to Please.
Be Kind to One Another.
"I'll try," must Succeed;
"I can't," must Fail.
Honest Youth makes a Happy Old Age.
Truth is Golden.
An Idle Word can never be Recalled.
Always do your Best.
Well Begun is Half Done.
Doing Right Pays.
Perseverance Wins.
Never Forget that God is Ruling.

THE TONIC SOL-FA METHOD OF SINGING.

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In the observance of *time* in singing, it may be asked, How am I to know whether the music is to be sung fast or slow? or, What is the duration of a pulse? Generally, two-pulse music is sung slowly, three-pulse faster, four-pulse slightly faster than that, and six-pulse the fastest, but both speed and expression are nearly always noted at the commencement of the piece, especially in those intended for instruction. For marking time an instrument is used, called a *Metronome*, in which a pendulum is moved by clock-work machinery, and by lengthening or shortening this pendulum the required speed is indicated. Thus, if we want to sing a piece marked M. 60 (Metronome 60), we adjust the pendulum to the length needed to produce sixty beats in a minute, and the time which elapses between

each successive beat is the length of the pulse. In fast music, such as six-pulse measure, the pendulum could not be adjusted to beat every pulse, in which case it is arranged to beat half measures, or as it is expressed in the Tonic Sol-fa notation, "beating twice in a measure." The clock-work metronome is rather expensive, and for learners a cheap substitute may be used which the teacher can easily make. Get a narrow white tape, to which attach a plummet of about two ounces in weight—a piece of lead flattened out to the size of a silver dollar, with a hole near the edge, will do—and measure off on the tape lengths corresponding to the scale of inches in the following table, marking on it the several metronome figures:

M 50.....	Tape 56 inches.
M 56.....	" 47 "
M 60.....	" 38 "
M 66.....	" 31 "
M 72.....	" 27 "
M 76.....	" 24 "
M 80.....	" 21 "
M 88.....	" 17 "
M 96.....	" 13½ "
M 120.....	" 8½ "

These metronome figures include nearly all the movements required, until by practice the speed can be regulated according to taste and experience. The plummet is made to swing like a pendulum, while the teacher grasps the tape at the figure which denotes the metronome rate of movement. This simple contrivance is so correct as the clock-work instrument, but is near enough for all practicable purposes.

Difference of Voices.—A boy's voice is like a woman's until a period in his life is reached—generally about fourteen or fifteen years of age—when it becomes hoarser and deeper, and the pitch becomes exactly an octave lower than it was, and continues so. Then when he sings in unison with women he may fancy he is still singing the same notes, but they are only *replicates* of these notes. Some men can sing higher than others, with a clear, ringing sound, but are unable to sink their voices so low; the higher tones form what is called *tenor*, and the lower *bass*. Again, some ladies and boys possess voices capable of high range and strong power, which are classed as *soprano*, while others, whose voices are perhaps equally powerful, have a lower range, which may be classed as *contralto*. The harmonious effect of these voices when singing a well-composed piece of music is, to the majority of the human race, extremely exquisite.

In the staff notation, when music is arranged for four voices, there are two staves used, the upper for soprano and contralto, and the lower for tenor and bass. Sometimes tenor is written in the upper staff, underneath the notes for female or treble voices. Also, the notes are not read in the same manner in each staff; for example, *F* in the treble staff is in the first space; in the bass staff it occupies the fourth line, and even then is an octave (eight notes) below the treble. This discrepancy causes much trouble to the learner. In the Tonic Sol-fa the same expression is used for all voices, but it is understood that both tenor and bass are sung an octave lower than written, because, in the first place, it obviates the necessity of increasing the number of octave marks in writing and printing the notation; and secondly, on account of the impression which exists that men sound the same note as women, when it is in reality only a lower replicate. If it were written as sounded, men would desire to pitch their voices an octave lower than needed, and therefore the plan adopted is convenient though not strictly correct.

The learner will now observe, and bear in mind, that when a letter is used without a figure it represents a note in the octave of the key-note; when the figure is attached to the upper part of the letter