

the most careful cultivation of mind—a sound mind in a sound body being the true standard of a complete education.

PHYSICAL EXERCISES.

The following simple physical exercises suitable for the school room have been carefully selected, and are highly recommended not only as a means of physical culture, but also as a pleasant variety in the ordinary school exercises.

It is of the utmost importance that the windows be opened to admit fresh air before commencing work, and that before each exercise the proper "position" be insisted on. In graded schools, where the pupils remain seated during the greater part of the day, it is recommended to take one or two of the given exercises after each lesson; and in rural schools the whole set twice a day—in the middle of the morning session, and again in the afternoon.

The exercises are calculated to develop the chief muscles of the body, and they are so arranged that too continuous a strain on any part is avoided. They may be gone through with simultaneously by the class and teacher counting in concert to each stroke, or the teacher counting alone. Easy exercises, accompanied by singing, for little ones, can be found in Hughes' "Drill and Calisthenics"; and "How to get strong," by Blaikie, contains a great variety of exercises suitable for school purposes, besides much other valuable information.

Position.—Pupils standing in the aisles single file, three feet apart, heads and necks erect, heels together, toes out at an angle of 45°, hands down at sides, with palms to the front.

1. Raise the hands directly over the head, and as high as possible, until the thumbs touch, the palms of the hands facing to the front, and the elbows being kept straight. Now, without bending the elbows, bring the hands downward in front towards the feet as far as can comfortably be done, generally at first about as low as the knees, taking care to keep the knees themselves absolutely straight—indeed, if possible, bowed ever back. Now return the hands high over the head, and then repeat, say six times. This number twice a day for the first week will prove enough; and it may be increased to twelve the second, and maintained at that thereafter, care being taken to assure two things: one, that the knees are never bent; the other, that after the first week the hands are gradually brought lower down, until they touch the toes. The end sought in this exercise is to make the pupil stand straight on his feet, and to remove all tendency towards holding the knees slightly bent, and causing that weak, shaky, and "sprung" look about the knees, so very common, to give way to a proper position.

2. **Position.**—Arms akimbo, heels four inches apart, toes pointing outward, body erect. **One.**—Raise the heels off the floor, till the whole weight of the body rests on the soles and toes of the feet; pause a second. **Two.**—Lower the heels slowly till they rest on the floor. Repeat six times twice a day for the first week, double that number the second week, and maintain at that. This exercise strengthens the muscles of the legs from the knees down, giving firmness and elasticity to the step in walking.

3. **Position** as in No. 1. Raise the hands above the head, elbows straight, till the thumbs touch. Now never bending the body or knees a hair's breadth, and keeping the elbows unbent, bring the hands slowly down, not in front this time, but at the sides just above the knees, the little finger and inner edge of the hand alone touching the legs, and the palms facing straight in front. Now notice how difficult it is to warp the shoulders forward even an inch. The chest is out, the head and neck are erect, the shoulders are held low, and the knees straight. The whole frame is so held, that every vital organ has free scope, and their healthier and more vigorous action encouraged. If steadily practised, it is one of the very best known exercises, and not only gives strength, but a fine erect carriage. Carry the hands slowly back through

the same line till again over the head. Then bring them down to the sides again, and do six of these movements twice each day the first week, and twelve afterward.

4. **Position** as in No. 2. **One.**—Bend the knees gradually, bringing the body down in a stooping posture, as low as possible, taking care to keep the back straight; all the while. **Two.**—Now rise till the knees are straight. Repeat six times twice a day for the first week; for the second week and thereafter, double that number. This exercise strengthens the thighs, and permits continuous walking and standing without fatigue.

5. **One.**—Hands clenched and thrown forcibly back as high as the shoulders, elbows near the sides, nails to the front. **Two.**—Throw them as high as possible. **Three.**—Bring them back to the shoulders as in **One.** **Four.**—Bring them to the sides. Continue 1, 2, 3, 4, at least five times. The whole exercise should be performed with considerable energy. This movement develops the chest and arms, and is one of the most important. If the hands are tightly clenched in **One** and thrown open in **Two**, shut again in **Three** and opened in **Four**, this additional work will be found to tell directly on the shapeliness, and strength of the hands.

This set of exercises will take only five minutes if gone through with properly.

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THIRD CLASS TEACHERS' PROFESSIONAL EXAMINATION HELD AT LINDSAY.

DECEMBER 17TH AND 18TH, 1880.

MENTAL ARITHMETIC.

EXAMINER—H. REAZIN.

Time—One minute for each question.

1. Find the least number whose factors are 4, 3, 12 and 15.
2. One half of a number plus 24 is 4544. Find the number.
3. The quotient is 1360, divisor 12, remainder 8. Find the dividend.
4. MDL+XL+XIX+255.
5. How many minutes from 9.45 a.m. to 5.15 p.m.?
6. Find the sum of all the even numbers between 111 and 121.
7. How many pence in 5,214 shillings?
8. To the L.C.M. of 21 and 48 add the G.C.M. of 143 and 187.
9. $\frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{5} + \frac{1}{6}$.
10. How many more five cent. pieces than 25 cent pieces in \$28.
11. Simplify $3\frac{1}{2} + \frac{\frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{5}}{\frac{1}{12}} - 1\frac{1}{2}$.
12. How many men can do a work in 2 days which 3 men can do in 18 days?
13. At \$1.96 per gallon, what will be the cost of 2 quarts, 1 pint, and 1 gill?
14. Find the interest on \$360 at 10 per cent. per annum for 13 months.
15. Simplify $\{1/\sqrt{(14+15+16)^2-2300} + \frac{1}{3}\} \times 5\frac{1}{2}$.

EDUCATION.

EXAMINER—J. H. KNIGHT.

1. In what classes should the following subjects be taught, viz.: Geography, Drawing, Object Lessons, Grammar, and Canadian History?
2. What Arithmetic should be taught in the Third Class?
3. How should you conduct a class in Dictation?
4. In some schools pupils frequently lie, steal, swear, backbite, copy and injure property. In other schools these offences are rare. How do you account for the difference?
5. Discuss "good and bad definitions."