

make three or four of the simpler letters of the alphabet on the black-board and question thus :

“ What is the name of this letter (I) ? ” *I.*

“ Of how many lines is the *I* made ? ” *Of one line.*

“ In what position is this line ? ” *Perpendicular.*

“ What is the name of this letter (L) ? ” *L.*

“ Of what lines is it made ? ” *Of one perpendicular and one horizontal line.*

“ What angle do these two lines make ? ” *A right angle.*

“ What is the name of this letter (V) ? ” *V.*

“ Of what lines is it made ? ” *Of two oblique lines.*

“ What kind of angle do these lines make ? ” *An acute angle.*

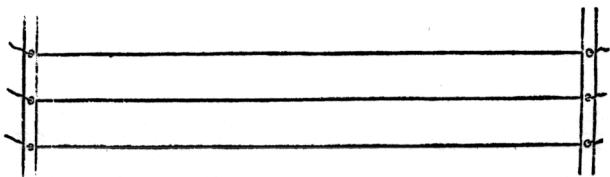
The letters **T**, **H**, **A**, **X** may be similarly dealt with.

LESSON III.

PARALLEL LINES.

ARTICLES for illustration :—pieces of wood, string.

Parallel lines may be introduced by drawings on the black-board ; but a more vivid illustration, and therefore more likely to be impressed on the minds of the children, may be obtained by tying two or three pieces of string (say twelve feet long and six inches apart) to two pieces of wood, as in the sketch.



Two children should be called to the front of the class to hold the strings tightly stretched between them in a hori-

zontal position, and another child should be directed to measure the distance between the strings in several places [See Lesson X. Stage I.]. The class may now be told that the strings, which lie side by side and everywhere at the same distance apart, are said to be *parallel*.

In a similar manner perpendicular and oblique parallel lines may be introduced to the children.

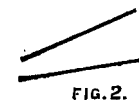
Turn now to the black-board for further illustration and exercise.

Draw lines as in Fig. 1. Pointing to these lines the teacher asks,



“ Do these lines lie side by side? Are they the same distance apart at each end? Are they parallel ? ”

“ Now look at these lines (Fig. 2). Are they parallel ? ”
No.



“ Why not ? ” *They do not lie side by side, and they are not the same distance apart at all points.*

“ Here are other lines.”



[Pointing to Fig. 3.] “ What can you tell me about these lines ? ” *They are parallel. They are straight. They are perpendicular.*

“Why are they said to be parallel?” *Because they lie side by side at the same distance apart.*

Similar questions should be asked of the *horizontal, oblique, and curved* parallel lines.

Objects in the room—the walls, windows, window-panes, door, pictures, table, black-board, &c.—will afford ample illustration of things having parallel sides.

LESSON IV.

LINES AND ANGLES (a Test Exercise).

For this lesson use such letters of the alphabet as are built up of straight lines, viz. **L, T, V, A, H, F, E, N, M, W, K, Y, X, Z.**

We take **V** and **W** as *examples.*

“What letter is this (**V**)?” *V.*

“How many lines are there in this **V**?” *Two.*

“Are they perpendicular?” *No.*

“Well, what are they?” *They are oblique.*

“What kind of angles do they make between them?”
An acute angle.

“Are the lines parallel?” *No.*

“Why not?” *Because they are not placed side by side, and they are not the same distance apart at all points.*

“What can you say of these lines **V**?” *They are parallel and oblique.*

“And of these **W**?” *They are parallel and oblique.*

“I will put them together thus—**W**. What letter do they make?” *W.*

“How many pairs of parallel lines form the **W**?” *Two.*

“How many angles do these lines make, and what kind of angles?” *Three acute angles.*

LESSON V.

MEASURES OF WEIGHT.—The lb., $\frac{1}{2}$ lb., $\frac{1}{4}$ lb., and oz.

It is of great importance that children should early acquire definite ideas of the more common measures of weight and capacity as well as of length, and every school should be provided with some apparatus for weighing. In this lesson we deal with the lb., $\frac{1}{2}$ lb., $\frac{1}{4}$ lb., and oz., leaving the cwt. and ton for a future stage.

The scales and weights being placed on the table the teacher may introduce the lesson with a little conversation. She may ask what children have been sent by their mother to the shop, and what for. How the shopman found out how much was a lb. or $\frac{1}{2}$ lb. of sugar, or butter, or cheese. Having got from the children the names lb., $\frac{1}{2}$ lb., $\frac{1}{4}$ lb., and oz., show them the weights, and let some of the scholars handle them to discover for themselves that the lb. is heavier than the $\frac{1}{2}$ lb., the $\frac{1}{2}$ lb. than the $\frac{1}{4}$ lb., and so on.

To show the children the real comparative value of each weight it will be convenient to use sand. Weigh 1 lb. of sand, then two $\frac{1}{2}$ lbs., and then show that two $\frac{1}{2}$ lbs. have the same weight as 1 lb. In a similar way show by experiment that two $\frac{1}{4}$ lbs. have the same weight as the $\frac{1}{2}$ lb., and that 4 ozs. have the same weight as the $\frac{1}{4}$ lb.

The children may now be directed and assisted to weigh for themselves, and the practice should be continued until the class, as a whole, can distinguish the different weights and appreciate their value.