

Surface.—*Space enclosed by lines is called surface ; it has, therefore, length and breadth, but no thickness.*

Think of a line as moving sidewise, and its path will form a surface. Illustrate by using a piece of wire, straight or curved to represent a line ; moving it sidewise through the air. The surface may be a plane, to all parts of which a straight rule can be applied exactly ; or it may be concave, that is, hollow like the inside of a bowl ; or convex, that is, bulging like the outside of a bowl or ball.

With a rectangular piece of stiff paper, or cardboard, you can illustrate the three definitions which have been given. The angles, or corners, where the edges meet, will represent *points* ; the edges themselves will represent *lines* ; and the surface of the paper will show what is meant by a *plane*.

A Solid.—*Space enclosed by surfaces is called a solid : it has length, breadth, and thickness.*

Observe that the word "solid," as thus defined, has no reference whatever to hardness, as it has in popular usage, but only to magnitude, volume, capacity. Different varieties of the solid will be described towards the end of this Intermediate Course.

Thus there is (1) the *point*, which has no dimension ; (2) the *line*, which has one dimension, length ; (3) *surface*, which is bounded by lines, and has two dimensions, length and breadth ; (4) the *solid*, which is bounded by surfaces, and has three dimensions, length, breadth, height or depth. All these things can be illustrated with a cube.

(To be continued.)

SCHOOL GOVERNMENT.

FROM BALDWIN'S "ART OF SCHOOL MANAGEMENT,"

"Government is the power of control which produces and sustains order. Order is fitness of condition in things." The end of school government is to facilitate growth ; but growth results from voluntary and well-directed effort. The child is to be developed into the self-reliant and self-determining man. Vicious habits are to be broken up, and right habits formed. These results are not reached by force, nor by mere authority, nor by iron rules, nor by cruel punishments. The child must be led to love and choose the good, and to hate and reject the bad. By judicious training, principles, precepts, and examples must be converted into habits. As the best instructor is the one who renders his pupils independent of himself, so the best disciplinarian is the one who trains his pupils to govern themselves. Hence the definition : *School government is the power of control which trains pupils to the habit of self-government.* Order is the result of good government. But, says Mayo :

"There are two styles of order in the school-house—the military and the natural. It is possible to drill a class of children up to a more than clock-work precision of uniform behavior ; but, valuable as some of these lessons of military obedience, promptness, and precision are, I am confident we should aim at a style of discipline deeper and more vital. Your school will not be well or beautifully governed till the majority of your scholars are so enthusiastically engaged in the work in hand that they form a public opinion which compels respectful and orderly behavior as the law of the little community. Your high vocation is to teach these children how to live with each other in American society, each attending faithfully to his own business, and all working together to build up the world's republic—the model country of mankind."

School government is here considered from the standpoint of the child. The teacher does not ask, "How may I keep order?" but rather, "How may I so manage as to develop my pupils into noble, self-governing youth?"

ELEMENTS OF GOVERNING POWER.

Governing power, in its educational sense, is ability to train to the habit of self-control. It is the capacity to marshal and render effective all educational resources. By careful analysis we discover the elements of governing power. The teacher spares no effort to

master and embody these. Thus armed, he assumes the fearful responsibility of child-culture.

I. SYSTEM IS THE FIRST ELEMENT OF GOVERNING POWER.—System characterizes all good government, human and divine. System is a condition of success in all fields of human achievement. The three factors are *Time, Place, and Method*.

1. *System means a Time for Everything.* Order, regularity and promptitude are the pillars of government. How admirably ordered is the well regulated household ! The rising, the retiring, and the meals, occurring each at its appointed time, prevent confusion and produce comfort. A network of railroads is a grand exhibition of the power of system. The time-table has revolutionized society, and the nations have learned to move to the rhythm of the rail. Napoleon once said to his officers, "Give your men plenty to eat and plenty to do, and you will find little difficulty in governing them." "Steady and congenial employment for the people," "Keep the pupils interested and busy" is the best rule ever given for the management of schools. The school programme, by providing congenial employment for each pupil during each portion of the school day, lays the foundation for good government.

2. *System means a Place for Everything.* "A place for everything, and everything in its place," is as important to the teacher as to the housekeeper or the mechanic. Having places for play, for wrappings, for books, for study and for recitation, enables the teacher to secure good order with much greater readiness.

ORDERLY HABITS.—Training pupils to orderly habits in the school-room prepares them for orderly habits through life. The teacher's desk, the pupil's desk, the school-room, and the school-grounds should be models of order and neatness.

3. *System means Method in doing Everything.* Military precision should characterize all school movement. In calling and dismissing school, in class tactics, and in all school exercises, exactness is desirable. Children thus acquire the habit of prompt obedience, and learn to move to the rhythm of society.

RESULTS OF SYSTEM.—System is the key to success. Each one's experience will verify this statement. John and James started with equal chances. John worked according to a plan, and made systematic efforts to become a scholar and a man. James drifted, and was content to while away the precious years. When forty, John was a distinguished member of Congress, but James was merely a nice little man without money, without influence, without brains. Systematic effort made the one a man among men, and drifting made the other a nunny. System builds railroads, carries on the world's commerce, and enables rulers to manage empires. Education is in the highest sense the world's work, and in all its processes the perfection of system is demanded. The school should prepare the pupil for life. The habit of systematic work is worth vastly more than all the knowledge derived from books. In school government, thorough system, vigorously enforced, is simply invincible.

(To be Continued.)

ENTRANCE LITERATURE.

[Edited for the CANADA SCHOOL JOURNAL by Messrs. H. Ray Coleman, Principal Peterboro' Public Schools, and J. A. McIlmoyle, Principal Peterboro' Separate Schools.]

AN INCIDENT AT RATISBON, PAGE 211.

Ratisbon is a strong city of Bavaria, where the diets of the Empire used at one time to meet. It has a great trade in salt, for which it is a depot, and sends large quantities of corn and wood to Vienna. In 1809, a battle was fought in the vicinity between the Austrians and the French, in which the latter were victorious. It has an ancient bridge of fifteen arches, over the Danube, and stands on the south side of the river, at the influx of the Rigeu. It is sixty-two miles from Munich, and 195 from Vienna, and has a population of 22,000.