

SCIENCE AND THE SCHOOLS.*

BY THE HON. A. S. DRAPER.

WHAT is science? Some of the old writers called it "God's sight," and the characterization was not at all inappropriate. Science is the truth of the Almighty overcoming obstacles, working its way out through difficulties and marching on to its final triumph. Science and nature and Deity are very nearly the same. They are in full and harmonious accord. They constitute a power which is everywhere present and always active. No matter about any peculiarities of our personal beliefs, no matter in what kind of a church we worship, or, indeed, whether we worship at all, there is not one of us that does not realize the existence of such a Power in the world and does not know that it is everywhere present in the universe and that it is always active. We know that it controls both mind and matter; that flowers bloom and the electric current flows, and minds unfold and planets revolve and keep to their courses under its laws.

As one difficulty after another is removed and one achievement after another is accomplished, how mysteries are explained, how remote facts come into relationship, how the harmonies of the universe are established, and how we stand in the presence of the mighty Power that is behind it all!

We have lived long enough to know how vital it is to our happiness and our usefulness that we keep in accord with the Power that rules the universe, and that we act in harmony with scientific knowledge. We have, all of us, experimented enough to see how dangerous it is to attempt to cross the

boundaries which nature sets against human action. The human life which measurably expands to its possibilities must read the book of nature and act upon its precepts. The life which does this is enriched, gains capacity for enjoyment here, and will find itself in harmonious relations with whatever there may be in the hereafter.

Science is imperious. By consequences and results it has shown that no school authority dare disregard its injunctions, for its mission is to conserve the health of the pupils, and promote the effectiveness of the school.

It concerns itself with the character of the ground upon which the building is to stand and the conditions with which it is to be surrounded. It locates the building with reference to the points of the compass and the advantages of sunlight. It discriminates in material; it puts the basement floor above the water line; it regulates the height of stairs; it asks for sheltering porches and demands that outer doors shall swing outward. Above all, it looks to the size and shape, and temperature, and ventilation, and lighting of rooms. It says that the good health of each child requires at least twenty feet of floor space and 240 cubic feet of air space; that fresh air right from the outside is even more important than warm air, and that every child must have at least 2,000 cubic feet of it per hour, if the necessity of rebreathing the same air and the consequent likelihood of disease is to be avoided.

The last fifty years constitute a period which will be memorable, for that period has witnessed the rapid and mature development of the science of teaching, and that development has worked a complete revolution in

*(From an admirable address to the Cleveland teachers, December 16, '93; it is full of noble thoughts.)