the earth's surface, and is thus easily obtained. The result of the discovery is that hills where formerly thorns, thistles, and mullens disputed the dominion, now support luxuriant corn.

The benefit of knowledge is seen in its moral influence on its possessor. And since the field seems to widen as we proceed with our subject, after saying a word on this point, the reader may go out "under the open sky" and make his own observations.

The affirmation of Dr. Young in regard to the "undevout astronomer," is applicable to all the votaries of learning. The undevout botanist, the undevout chemist, the undevout intellectual or moral philosopher—all are "mad." We do not understand how any one can study the works, the beauties, the laws of nature; the mechanism of the human mind or of the human system; the laws by which the moral world is governed—in short, science with all its theology, without more strongly admiring the character, and without reverencing and adoring the person of the glorious Author of both matter and mind.

Flowers are called by one writer the "poetry of the earth," and by another, with as much propriety, the "Scriptures of the earth." Their delicacy of structure, the transcendent beauty of their petals, their stamens, their pistils,; their fragrance and their profusion, all exhibit the divine attributes and the amazing goodness of their "Great Original." Thus it is with everything God has made to beautify the earth and gladden the heart. Seen through the microscope or telescope of science, as the case may require, His handiwork is opened to us each day as an epistle from heaven, fragrant with divine aroma and bearing the inscription of Emmanuel. The author of "Night Thoughts" has expressed the whole in one line;

"All nature is a glass, reflecting God."

The effect of science being like its object, we cannot better conclude, than in the language of Sir James McIntosh. "The object of all science," says he, "is to inspire the love of truth, of wisdom, of beauty—especialy of goodness, the highest beauty—and of that Supreme and eternal MIND which contains all truth and wisdom and beauty By the delightful contemplation and pursuit of these transcendent aims for their sake only, the mind of man is raised from low and perishable objects and prepared for those high destinies which are appointed for those who are capable of them."

Brighton, December, 1860.

☞ If we justly look upon a proneness to find faults as a very ill and mean thing, we are to remember that a proneness to believe them is next to it.

ATTENTION, steady and continuous, is the corner stone of the intellectual temple.

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JANUARY 16, 1861.

Written for the Educationalist.

AEROLITES.

Among all of nature's wonders what so calculated to arrest attention and yet so little understood, so apparently without law, reason or explanation, so much the wonder of the ignorant and the perplexity of the learned, as those celestial appearances called *shooting stars, falling stars, meteors, aerolites, fireballs;* for these we deem but variations or modifications of one peculiar class, all governed by the same laws, subject to like influences, having a similar origin, and, perhaps, equally explicable.

All are acquainted with the peculiar phenomena presented by falling stars: all have watched for them on a clear autumnal night, exclaimed with delight at their appearance, traced their shining path through the sky, and stood silent as they disappeared, wondering whence so suddenly started into view this strange mysterious form, whence its origin, what its laws, its course, its purpose. But not the night alone is startled by their sudden gleam; day, too, sometimes reveals their almost unheeded presence. Sometimes a very dark cloud seems to burst, and heated angular fragments fall, covered with a shining black crust containing iron, nickel and other substances in a union never found among tellurie minerals. That all or even a large proportion of these meteors *fall* is not to be supposed; though that they do sometimes fall is proved by the fragments found still heated; and it is even related that a sailor on board a Portugese ship and a monk at Milan were struck dead by falling aerolites.

They move, some of them in a direction nearly horizontal, others rise in their course, and others, again, appear to remain motionless for a time. There is an account in the 'Philosophical Transactions of the Royal Society of London' of a remarkable fiery meteor first observed over the Northern Ocean. It passed in a S. E. direction across England, crossed the straits of Dover, and was traced as far as Rome, a distance of one thousand miles. There is no account of this having fallen to the earth.

The common impression is that these fireballs are but a little distance from the earth, but it is found by calculation from the angle at which they are seen by observers at different places that their height must vary from 16 miles to 120, and their rate of motion, mostly in a S. E. or N. W. direction, from 18 to 90 miles per second—the earth's movement in its orbit being about nineteen miles per second. In size they vary from a mere point of light to a half mile in diameter. These larger are supposed to be composed of a solid nucleus, less dense, however, than the earth's mean density, surrounded by an inflamable vapor.

They are sometimes visible a minute, lighting up the sky, paling the stars and discoloring the moon, leaving behind a luminous trail which may be visible so long as seven minutes, but usually disappears in three or four. Of their color Humbolt says: 'From four thousand observations made it appears that two thirds are white, one seventh yellow, one seventeenth red, one thirty-seventh green." The combustion of these meteors, attended with the rapid or more slow disappearance of the tails, which are generally many miles in length, is the more remarkable as the burning tails sometimes bend or wave about. This motion so similar to that frequently noticed in the tails of comets may perhaps be referred to the same cause; vibrations or movements in the upper strata of the atmosphere.

The periodic occurrence of falling stars at six well defined intervals or periods in the year adds an additional interest to the whole subject. It is believed that an extraordinary shower may be expected once in thirty-three or four years. The next is predicted by Others to occur about the twelfth of November, 1867. These displays of divine power, contemplated by the philosophic observer, awaken solemn reverential thoughts, while the untutored mind sees only scintillations of light in the firmament and perceives in the blackened stone that falls from the exploded cloud no more than the rough product of a powerful natural force.

Plutarch in his life of Lysander, after giving "the opinion of physicists," says, "but there is another and more probable opinion which holds that falling stars are not emanations