

sweet and mucilaginous, because the starch is changed into sugar and gum. At the same time, numerous vessels run through the lobes for the purpose, as is supposed, of conveying these principles, as generous nutriment to the newly-born plant, until it has acquired sufficient maturity to procure other support for its welfare from the air and the earth; and when this happens, the sugar and gum entirely disappear from the lobes; they decay, and the plant is entirely dependant on the leaves and the root for its future support.

The silent and almost miraculous process of germination will only take place under certain conditions. In the first place, darkness is essential, and plants will not sprout if exposed to constant light; and yet no sooner have the leaves appeared than light becomes absolutely essential to a healthy and vigorous growth. In the second place, a due temperature is essential, which must always exceed 32 degrees, and never exceed 100 degrees Fahrenheit. It also requires a liberal supply of moisture, and perfect access of air; and all these agents, light, heat, moisture, and air, must operate conjointly or at the same time. Bury the seed deep in the earth, and so situated it will not germinate nor decay, but remove it near the surface, so as to be subjected to the influence of air, moisture and heat, and it will quickly start into life, and its emerging plumula or leaf become verdant under the influence of the solar light. Seeds of the raspberry which have been buried 1600 years, thirty feet deep, have been known to germinate and grow.

How mysterious is the agency of light, at first serving to keep the vital principle dormant, but when it has once burst into activity, becoming so essential to the growth and beauty of the plant. The power and goodness of God are magnificently displayed in this element. As we look out on the landscape, lighted up by the glorious orb of day, and relieved by the various shades of verdure; as the eye wanders over hill and valley, mountain and plain, streamlet and lake, or as we gaze with admiration on the blue vault above—the summer clouds, or the stupendous arch of varied light which so frequently spans the heavens as the rainbow—how can we refrain from bowing down with grateful adoration before the Being, who has, by the creation of this one simple element, contributed so wonderfully to the happiness of his creatures, and saved them from the horror of groping in perpetual darkness. And how excellently does the divine goodness and wisdom shine out, in constituting this light, of seven different colours, as it is exhibited in the rainbow, or separated by a prism. Different objects absorbing different rays, and reflecting others, produce an endless diversity of shades, and we are charmed with the varied and gorgeous hues of creation.

“Look upon the rainbow and praise him that made it; very beautiful it is in the brightness thereof; it compasseth the heavens about with a glorious circle, and the hands of the Most High bended it.”—*Vermont Agriculturist*.

THE FLOWER GARDEN.—The first point to be remembered in making a garden is, that ugliness is unknown among plants. Every thing created is beautiful when in its most perfect state, but it may be rendered ugly by mismanagement or by unavoidable accidents. There is not a weed in our fields which is not at some time of its life beautiful in one way or other, if in the most perfect health. Those which have the gayest flowers may have the poorest foliage, while, on the other hand, the most exquisitely beautiful leaves may be, and generally are, associated with unattractive flowers. But a garden must be beautiful in every possible way, and the grand mistake which half the English commit consists in ransacking the world for mere gaudy flowers. How great an error is this the Pelargoniums

abundantly prove, for scarlets, with the worst of all foliage, are exclusively employed in flower gardens, while the charming foliage of *Radula*, *quercifolium*, *graveolens*, *balsameum*, and their allies, is entirely overlooked, except by those who stand above the crowd.

Beauty in plants is dependant upon skillful cultivation, and it is because good gardening is not thought of, that most of our old favourite and herbaceous plants have fallen into neglect. Because they would remain alive without care, therefore they received none, their owners forgetting that what a plant would live upon is not precisely what it would thrive upon. Bad gardeners drew a ring in the ground with their forefingers, poured into the ring the contents of a packet of brown paper marked *Dalphinium Ajacis*, scratched the earth into the ring by the aid of a second finger, and called it sowing seeds. The plants sprang up, crowded each other to death, and what remained, a circle of poor, famished, jaundiced wretches, represented the noble family of *Ajax*. Had the plants been permitted to breathe and feed, and spread their branches, and nourish their brilliant flowers, they would have proved themselves worthy of the mighty name they bore. This was the way with all annuals, and hence the cultivation of annuals has almost ceased in fashionable gardens. What should have been done was to treat each separate plant with the same care that would be bestowed upon a pet *Geranium*; not that it would have needed as much, but to have given it all the care it wanted; then, indeed, its beauties would have become manifest, and it would have maintained its rank securely in the history of horticulture. He who doubts this should take a plant of *Hemlock*, put it in a garden, in rich soil, shelter it from winds, and give it ample room to expand; and he will find, probably to his great surprise, that it can scarcely be matched for admirable beauty. Beauty, then, is an affair of cultivation; and depends less upon a plant than on its master.

The season is not yet advanced enough to form an old-fashioned flower-garden; which is best done in the summer, so as to be ready for filling in the autumn and succeeding spring; but this is the very time to set about determining what to put into it when ready. Instead, therefore, of crowding our columns with long and useless lists of plants to be commended—which, after all, may not suit our inquirers' pockets, means, taste, or climate—we recommend the following course to be pursued. Go to the seedsmen and buy as many of their cheap packets of annuals as you can afford; go to the nurserymen for as many of their commonest herbaceous plants as it may suit your convenience to grow. Cultivate these skillfully through the summer; note all that you want to know about them—size, colour, season, duration, &c.; and then when the season comes for stocking your garden, you will have ten times better information in your possession than all the advice in the world can supply you with. Above all things, you will have learned what best suits your means, wants, and taste.—*Gardeners' Chronicle*.

DOMESTIC EDUCATION.—The time is coming, when domestic duties are expected to be performed upon scientific principles; and we are bound to employ every means in our power to make ourselves acquainted with the sciences pertaining to our domestic affairs. A knowledge of chemistry and dietetics, in a cook, is invaluable to a family. Information regarding the laws of health, and life, and mental philosophy, is absolutely necessary to the proper rearing of children. The suffering I have seen and experienced for want of knowledge, and the almost incredible advantage gained by the application of a few practical ideas, makes me very desirous for others, as well as myself, that we should have “more light.”