



Children & Flowers

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A Unit Study

A “Green Thumb Family” Guide

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**Part II: Favorite Flowers for Children
with Growing Tips and Fascinating Facts**

FLOWERS FOR BEGINNERS

A few introductory notes:

If you are a beginner, there are several points you will want to bear in mind. It is important to have plants that will thrive with the amount of sun that reaches the plot you are using. It is fun to have at least a few showy flowers such as hollyhocks or salvia as well as flowers good for cutting. Phlox, dianthus (pinks), zinnias, and asters are a few of the many that provide generous floral decoration for your home. Plants should be arranged so that those which grow tall will be at the back of the garden; the lowest ones should be in front, or else grown to form a border.

Plan Your Color Scheme: Your child can begin to enjoy his garden well ahead of the planting season if he works out a "theme" for his plot. It may be an all-yellow color scheme (marigolds, California poppies, nasturtiums, calliopsis); or purple and white (petunias, asters, baby's breath, hollyhocks); or red (salvia), white (petunia), and blue (ageratum). These flowers are a few of the many annuals from which a child should choose to obtain an abundance of blooms.

Protect the Seeds: If seeds are put in the earth too early they may freeze or rot. It is therefore advisable to start some annuals, for example pansies, indoors or in a protected seed bed, and then move the young plants to the garden when the weather is suitable. Many flower enthusiasts eliminate this step by purchasing plants from commercial growers. Pansy plants produced from seeds planted outdoors do not bloom until the end of summer.

Following is our rundown of 12 wonderful flowers that are a favorite with children. Any of these would make ideal growing projects for your garden this season.



Pansies



Tulips



Geraniums



Bachelor's Buttons



Nasturtiums



Petunias



Poppies



Iris



Roses



Chrysanthemums



Dahlias

PANSIES: PERFECT FOR CHILDREN

Youthful gardeners can ask for no more delightful flower than the pansy. Its coloring is beautiful and its markings often give it an appealing face. The dark spots at the bases of the side petals and the lines radiating from them suggest eyes and eyelashes, the opening of the nectar tube makes a nose, and the spot near the base of the lower petal will pass for a mouth.

Many varieties of pansies may be easily raised from seed sown in the spring or early summer, and seedlings may be set out in the garden in early spring. They do better in shady areas than in full sunshine.

Pansies Are Ideal for Picking: Children love to pick flowers. This makes the pansy an ideal plant for a child, as the flowers should be picked as soon as they open, or shortly afterward. If the pansy's seeds are allowed to ripen, the plant will bloom for only a short time, its life purpose having been accomplished. Persistent picking of the blooms, on the other hand, constantly produces new buds.

How Bees Help Fertilize the Pansy: The nectar sought by bees in the pansy is contained in the spur formed by the lower petal extending behind the flower. As the insect probes the nectar well with its tongue, pollen from a flower previously visited brushes off against the stigma. At the same time the bee receives a fresh coating of pollen dust. Shortly after a pansy has been fertilized, you can notice the ribbed seed pod becoming prominent. Finally this opens in three valves, and the seeds are scattered as the edges of each valve curl inward.

TULIPS: THE NATIONAL PASSION OF HOLLAND

This famous flower was introduced into Europe from the East in the sixteenth century, and about a hundred years later became the national passion of Holland. The Dutch growers speculated in outstandingly beautiful varieties of the tulip as some people speculate in stocks! Anyone who is familiar with these lovely flowers will understand the hold they took on Dutch tulip-fanciers.

Tulips Are Planted in the Fall: Tulips are excellent material for youngsters who enjoy gardening in every season of the year. They may be put in the earth during September or October. Each bulb is formed of several layers of leaves, all of which may open above ground if the planting is done properly with the tip of the bulb pointed upward. The leaf layers are fleshy, for they contain the food that was stored up during the previous season. This food nourishes the flower bud in the heart of each bulb and the other growing parts. The roots, forming a thick white tassel below the bud, bring minerals and water up from the soil.

The Tulip's Spring Buds: In the spring, the anxious gardener first sees his tulip buds appear, protected by three sepals. As the bud stretches upward and becomes larger, the green of the sepals changes to the color of the petals. When the flower finally opens there is no very noticeable difference between petal and sepal. The sepals are below the petals and stand out around them, giving the flower a triangular shape. When the sun is not bright, the sepals partially close about the flower.

BACHELOR'S-BUTTONS: COMPOSITE FLOWERS

Most children love this hardy and beautiful plant, often called the cornflower. It may have special interest for them, too, if they realize it is one of the "composite" plants a group in which different kinds of flowers are attached to one head. Those at the center of this compound flower head work for the production of seeds, while the flowers surrounding the center serve merely to attract insects.

The bachelor's-button usually has from seven to fourteen marginal flowers and they may be white, pink, blue, or purple. Each of the center flowers has a white corolla tube, enlarged toward the upper end to a purple bulb, and a purplish anther tube which is bent far over so that its tip opens toward the middle of the flower head.

GARDEN GERANIUMS: BUTTERFLIES' FAVORITE

On no other flower will you see a more obvious nectar well; that of the geranium extends almost the whole length of the flower stalk. The long narrow nectar tube explains why you often see butterflies on geraniums; this shape is especially suitable for the long-tongued insects.

Some of these plants are called "horseshoe" geraniums because of the horseshoe pattern on many of the leaves. Botanically they are not true geraniums, being the descendants of the pelargonium, a plant that was brought to England from South Africa more than two hundred years ago. These African plants were the ancestors of many of our popular garden geraniums. Other varieties have been bred; Luther Burbank, for example, created the now popular crinkled-leaf species from a single wild geranium plant that did not have the customary smooth-edged leaves.

Seeds Spread by Explosion: Some geraniums have depended for so long on man for planting that they have almost lost the power of producing seed. However, in the single blossoms you may sometimes discover the ovary changed into a long beaklike seed pod a feature that reveals its relationship to the wild geranium. The seeds are dispersed by an explosive action of the pod.

How Geraniums Open: It is interesting to watch geranium flowers opening. Several buds are grouped together in a nest of specialized leaves known as "bracts." Besides having this protection, each bud is individually guarded by its own sepals. As the flower stalk grows longer and droops from the weight of the buds, the bracts often fall off. In each mass of drooping buds, the ones in the center open first. It sometimes happens that by the time those on the outside are in bloom the center flowers have begun to wither.

NASTURTIUMS & THEIR REMARKABLE METHOD OF POLLINATION

The most remarkable aspect of the nasturtium is its special method of pollination. The five beautiful petals are set around the mouth of the long tube leading to the nectar well. The two upper petals are erect, suggesting colorful display signs. They are marked with lines that point toward the opening of the nectar tubes. The lower petals stand out to form a landing platform for visiting insects.

Despite this, the flower is not actually designed for hospitality; it can accommodate only big insects such as sizable bees or butterflies for its pollination work, and it is able to thwart smaller, useless

creatures that might creep into its treasure house of nectar.

Each of the lower "landing" petals narrows to a fine strip at its inner end, making it in effect a footbridge to the nectar tube. These bridges are covered with projecting fringes and numerous little spikes that prove an effective barrier to any small creeping visitors.

Mechanized Pollination: When a nasturtium first opens, its several stamens are all bent downward. But when the pollen-containing anthers located at the end of each slender stalk of a stamen are ready to function, the stalk lifts up so that it is directly in the path of the nectar store. When a bee or butterfly, or occasionally a hummingbird, touches the stamens, it is sometimes bombarded with pollen. Equally remarkable is the action of the anther: No sooner has it discharged its pollen than it shrivels, making way for a new anther.

While all this is going on, the flower's three-lobed stigma lies quietly below and behind the anthers. (The stigma is located on the prolongation of the ovary known as the style.) But, once all the pollen has been shed, the stigma rises up and opens. Now the stigma operates like a three-pronged fork, and as more insects come in quest of nectar, it rakes pollen from them. Thus the ovary is fertilized and the seeds are ready to develop.

PETUNIAS AND THEIR INTERNATIONAL BACKGROUND

Profusely blooming petunias are so much a part of our American garden scene that it comes as a surprise to us to learn that they have an international background. They are the result of a cross between two species of plants from different parts of South America. The first of these, with long-tubed white flowers, was brought to Europe a little more than a hundred years ago.

Shortly afterward seeds of the second species, having small, broad-tubed, red-purple flowers, were sent to the Glasgow Botanical Gardens where the two species were brought together. Today we find petunias of many colors, but red-purple and white still predominate.

Pollen for Petunias: The petunia's wonderful arrangement for pollination is one of the marvels of nature. Near the bottom of the long tube lies the stigma, with two well-developed anthers in front of it and two more not quite so advanced behind it. The stalks that support the front anthers are longer than those of the second pair. There is still another anther a fifth on a stalk shorter than all the others. This is apparently a little pollen supply held in reserve by the flower.

For about half its length, each stamen is attached to the base of the flower's tube. The rest of the stamen curves abruptly inward. This makes it snuggle up to the pistil, the base of which is set in the nectar well at the bottom of the flower. When an insect pays a visit, its tongue reaches along the flower tube toward the nectar and it presses against the stamens at the point where they curve. This causes the anthers to move about, and as they move their pollen is shaken off on the insect!

In an older petunia the stigma, standing above the empty anthers, opens into two lobes and is ready to receive pollen from other flowers.

The Petunia and the Hummingbird Moth: The most notable insect partners of petunias are the sphinx or hummingbird moths, which can often be seen hovering over these flowers in the early evening.

Petunias are members of the "nightshade" family, which also includes the tomato, the potato, and tobacco. Hummingbird moths are distinctly partial to all these plants.

POPIES FASCINATE BEES

The poppy is distinctly a bee's flower. The insects apparently delight in wallowing in the pollen that lies along the ridges of the flower's pistil.

This pistil resembles a tiny vase with a circular cover. After a poppy has been fertilized, the circular cover develops a scalloped edge. Sharp ridges run from the center of each scallop down the length of the vase-like pistil. These ridges are the outer edges of partitions. Countless seeds develop inside these partitions and, when ripe, they fall into the hollow capsule which forms the center of the pistil.

The Poppy's Seed-Shaker: An observant child is charmed to see how poppy seeds make their way in the world. As each segment of the capsule loosens at the top and curls back from the circular cover, openings are formed. The upshot is that the "Vase" has been made into a perfect seed-shaker. When the wind blows on it, or when it is brushed by any passing creature, the contents the seeds are sprinkled a little at a time in all directions.

There are a great many varieties of poppies, but only four species are commonly cultivated: the corn poppy and the opium (both of them annuals); the arctic and the oriental (both perennials) .

The California poppy in its native setting blooms abundantly from February to April in the desert and the foothills. In gardens in the East you can see the shining orange flowers from mid-summer until frost arrives.

IRISES: LARGE AND SHOWY

The large, showy iris, also called "blue flag," is another plant favored by bees. It has an interesting shape because of its unique style, which is divided into three branches so large and broad that they appear to be petals. These branches combined with the sepals form a tunnel through which bees pass. Between the sepals and the style are the true petals, marked with decorative purple lines.

How the Bee Maneuvers on the Iris: The bee uses the lip of a sepal for its landing platform, then pushes forward through the tunnel to the nectar well. As the insect moves, pollen that it has collected from another flower is rubbed off against the stigma, which hangs like a tent flap above the nectar well. The stigma is so fashioned that it gathers pollen from an incoming insect but turns a blank side to the departing visitor. The small solitary bees are persistent callers; so are bumblebees and honeybees, though they seem to prefer different varieties of the iris.

ROSES: THE WORLD'S MOST POPULAR FLOWERS

It has been said that children see so many roses that they take them for granted. I doubt that this is really their attitude, as so many of them choose roses when asked to write about their favorite nature

subject. Certainly the rose appears to be the world's most popular flower. It is grown wherever gardening is practiced, in all temperate climates and in some tropical regions as well. It is also believed to be the oldest of cultivated flowers.

Though no flower is more readily identified, many people are perplexed by the question, "What IS a rose?" Looking for an answer, we may be inclined to find more sense than nonsense in Gertrude Stein's famous statement, "A rose is a rose is a rose"; for the rose has endless varieties and it is neither an ordinary seed plant nor a tree. There are single blooms, having only one row of showy petals, and double blooms with their rows of petals arranged in regular sequence or in loose informal patterns.

Five Thousand Varieties of Roses: The roses' bright colors cover a wide range from white, through delicate pink, yellow to rich tones of red. As to size, they vary from dime-small miniatures to exhibition blooms seven inches and more across. Believe it or not, in the United States alone there are more than five thousand varieties, each differing in some detail. The plant is a woody shrub which may stand erect or climb on supports. It has an extensive root system that sometimes goes as deep as twenty feet into the ground.

Roses and Strawberries Are Relatives: Aside from the innumerable kinds of roses produced in gardens, there is the simple but very beautiful wild rose with its broad blossoms that display five pink petals. On a wild rose or a full-blown garden rose you can easily see the great number of stamens, about twenty, as a rule, a characteristic feature of the whole family. Usually there are a great many pistils also.

Many of our common fruits belong to the rose family; the plants include the creeping strawberry as well as the sturdy blackberry bush and apple tree. Though these plants differ considerably in size and general appearance, their blossoms have a great similarity to the rose.

CHRYSANTHEMUMS: JAPANESE FAVORITE

The chrysanthemum has a double flower head, numerous petals, and lovely coloring (generally red, yellow, and white). It gets wide publicity every fall as the star attraction of countless flower shows. But it is not only the spectacular prize-winning varieties that merit popularity. There are many kinds that will flourish without highly skilled care, bringing fresh beauty to our gardens in the fall when most flowers are dying.

Until fairly recently "mums" could be grown in northern climates only inside a greenhouse; but now we have hardy types that bloom out-of-doors through light frost. These perennials usually survive the winter, and each spring you can separate the new growths and replant them. Thus your chrysanthemum display can expand considerably from a very few plants.

Two Thousand Years of Chrysanthemums: Two thousand years ago, a chrysanthemum much like a colored daisy was a popular garden flower in Japan. (A figure of a sixteen-petaled chrysanthemum is used as the crest of the Japanese imperial family.) Early in the eighteenth century some of these flowers were brought to England, and China and India contributed other species. English gardeners and plant breeders went to work with them and in less than a hundred years produced new varieties bearing flowers three times as large as any of the originals.

DAHLIAS: THEY GROW EVEN ON ASH HEAPS

The dahlia, a reddish flower that originated in Mexico and Central America, is a popular show flower. Because of their size and beauty, you might suspect that dahlias are difficult to raise. The fact is, though, that dahlias are adaptable to almost any kind of soil, if it has been properly prepared. Clayey soil may be lightened with coal ashes or sand, plus vegetable matter and manure. A light sandy loam will produce healthy plants and exquisite blooms; gravelly fields have been known to support fine dahlia beds; and a plant may even be found growing in an ash heap where a tuber (the underground stem) has been discarded.

How to Protect Dahlia Seeds: You can raise dahlias from stem cuttings as well as from tubers. For a real gardening adventure, your youngster may enjoy trying to develop new dahlias from seeds. The project begins at the height of the blooming season, when he must be on the lookout for any particularly large, rich-colored flower. This should be tagged "For Seed," so that it will not be picked.

The chosen flower must now remain in the garden until insects have carried pollen to it and it "goes to seed." When the flower shrivels and turns brown, you tie a small paper bag over it so that you can save the seeds if the seed pod bursts.

How to Plant Dahlia Seeds: Late fall is the time for you to gather the seeds, drying them and storing them in an airtight bottle. Early in May you plant them in a box with one part soil to two parts sand mixture. When seedlings appear about two weeks later, transplant them to a sunny spot in the garden.

Until the buds finally open, the young gardener will go through the suspense of wondering whether they will be double or single flowers and what their color will be. It all depends on what pollen was carried to his flowers during the previous season.

Indoor Gardening

If you live in an apartment and cannot have a garden outdoors, you and your child can share the rich pleasures of starting a garden indoors. Bulbs are especially suitable. (Bulbs are buds made up of a stem surrounded by leaves.) You can buy them inexpensively at many department stores, hardware stores, or florist shops.

Narcissus Bulbs Are Easy to Grow: The narcissus, a popular favorite with yellow or white varieties, need only be supported in a shallow dish with pebbles or bits of broken shell, and given just enough water to show through the pebbles.

Unaided, a youngster can easily prepare a dish for a narcissus bulb, and will be thrilled at having something his very own. To enhance his enjoyment, a narcissus grows rapidly and thus rewards daily watching. Care should be taken when watering that water does not leak in where old leaves have broken off, as this causes a bulb to rot.

When it is first planted, the bulb should be kept in a dark cool place until its roots have formed. Outdoors this would take from eight to twelve weeks, but indoors only a few weeks are required. The plant should then be brought into sunlight gradually, being kept away from drafts. Two or three weeks will elapse before a flower appears.

Hyacinth, Tulip, and Crocus Bulbs: Such bulbs as hyacinths and tulips do better in soil. As bulbs have a built-in food supply, the soil need not be rich. Sandy garden soil well mixed with peat moss is excellent. A hyacinth bulb should be placed so that its top projects over the top of the pot; a tulip bulb should have its top level with the top of the soil. As for crocus and other small bulbs, they should be covered with an inch of soil.

If you keep the bulbs in a cool dark place for several weeks, the roots will be well developed before the leaf stalks begin to grow. When the roots press against the sides of the pot or show at the bottom opening, you know that the plants are ready for a sunny window.

OTHER EASY INDOOR GARDENING TECHNIQUES

You need not limit your indoor gardening to bulbs. You have the choice of plants growing directly from roots, such as the sweet potato; from stem cuttings begonia, geranium, or cactus, among others; and from certain fleshy leaves, such as those of the African violet. Also, many seeds thrive when they are planted indoors.

A wooden cigar box will do to give stem cuttings or leaves their start. Bore holes in the bottom and spread pebbles or chips from broken flowerpots. Then fill the box with clean sand to within half an inch of the top. Moisten the sand and press it down firmly. Make a hole in this soil for each stem cutting you wish to plant. (A pencil is a very good tool for this purpose.)

Now place a freshly cut stem in each hole, making sure that in every case you have buried at least two "nodes" juncture points for leaves that have been removed. Keep the little garden moist, in a cool place, and before long, roots should form at each node.

You will also find that marigolds, petunias, and other plants will flourish in your window boxes. Smaller seeds should be planted about a quarter of an inch deep, and larger ones slightly deeper; allow at least an inch between seeds. When your seedlings are large enough to handle, transplant them to window boxes or flowerpots. An excellent mixture in which to plant them at this time combines two parts garden soil, one part sand, and one part leaf mold.