Flowers and Foliage

Training for 4-H Horticulture ID and Judging Contest
African Violet (*Saintpaulia ionantha*)

- African violet is a small plant with a rosette form.
- Leaves are densely pubescent. Leaf shape is oval to heart-shaped with smooth, scalloped, or ruffled margins.
- Flowers are borne in single or double clusters, can have five or more petals, may be ruffled around the edges of the petals, and come in different shades and color combinations.
Aloe Vera (Aloe vera)

• Well-known for the reputed medicinal value of the gel inside its leaves, aloe vera is a clump-forming, *succulent perennial* reaching a height of two feet.

• Its thick, *lanceolate, evergreen*, fleshy, gray-green leaves have white-ish teeth on the margins and are arranged in a rosette on a very short stem. New leaves often have white spots.

• A showy *inflorescence* emerges from the center of the plant. The tubular flowers may be yellow, orange, or red.
Amaryllis (Hippeastrum spp.)

• Amaryllis is a *herbaceous perennial* with a *tunicate* bulb.

• *Simple* leaves are *entire*, *linear* to strap-shaped, and up to two feet long.

• Leaves are somewhat leathery, *glabrous*, and arise with or after the flower stalk emerges.

• One to ten flowers may be produced on a hollow, leafless stalk to two feet tall. Flowers are large and funnel-shaped to ten inches across.

• Flowers are typically red, orange, pink, or white, and they are often lined or striped.
Beach Sunflower, Dune Sunflower  
(*Helianthus debilis*)

- Beach sunflower is a native ground cover that varies in height from 6 inches to 2 feet.
- It grows as a **perennial** or self-seeding **annual**.
- The **simple** 2-4 inch long leaves are **alternately arranged**, **lanceolate** to **ovate**, and rough textured. Leaf **margins** are **undulate** and often toothed.
- The 2" daisy-like inflorescence consists of darker disk flowers in the center, surrounded by the yellow ray flowers which resemble petals.
Begonia (**Begonia** spp.)

- Begonias are erect, trailing, or sometimes climbing *herbaceous, monoecious annuals* or *perennials*.
- Leaves are *simple, alternate*, and highly variable in size, shape, and color. They may be hairy or smooth. Leaves and petioles may be somewhat *succulent*.
- Flowers are usually borne in *cymes*, some quite showy. They come in a variety of sizes, shapes and colors.
Bird of Paradise (*Strelitzia reginae*)

- This tropical *herbaceous perennial* is forms clumps 3-4 feet tall and tall.
- The upright, waxy, blue-green leaves emerge from the soil on long, channeled *petioles*. The petiole bases are overlapping and 2-ranked, giving the base of the plant a fan-like appearance. Leaf blades are *simple, oblong* to *lanceolate* in shape, with *undulate margins*.
- The common name is derived from the large blue and orange *inflorescence* that resembles the beak and plumage of a brightly colored bird.
Bird's Nest Fern (*Asplenium nidus*)

- This plant forms a large **rosette**—approximately 2-4 feet tall and wide.
- **Simple**, linear, glossy, apple-green leaves unfurl from the center, giving the effect of baby birds in a nest. The leaf margins may be entire, undulate, or irregularly lobed. The prominent **midrib** is often black in color.
- Like all true ferns, bird's nest does not produce flowers or fruit, but instead reproduces from **spores** which are arranged in parallel lines on the leaf undersides.
Blanket Flower (*Gaillardia* spp.)

- Blanket flower forms attractive, one to two foot rounded clumps. These plants have wiry, branched stems with *lanceolate* to *linear* leaves.
- Two to three inch wide daisy-like, single, semi-double, or double inflorescences (consisting or disc flowers in the center and petal like ray flowers on the outside) are held on long stems above the foliage.
- Appearing throughout the summer, the ray flowers may be yellow, orange, red, or bicolor.
Caladium (Caladium bicolor)

- Caladium is a stemless, *herbaceous perennial* that grows from a *tuber*.
- The brightly colored leaves, are *simple*, arrowhead to heart shaped, and up to 14 inches long. The leaf margins may be entire or undulate. Leaves may be solidly colored or variegated in shades of red, rose, pink, green, and white.
- *Petioles* are longer than the leaf blades.
- The inflorescence is an inconspicuous, white *spathe* and *spadix*. 
Calathea, Prayer Plant
*(Calathea spp.)*

- Calathea is an tropical *herbaceous perennial* one to four feet tall.
- The *simple, ovate* to *lanceolate* leaves are often patterned in shades of green, silver, pink, maroon, and white. The undersides of the leaves may be dark purple, making a striking contrast to the lighter colored tops of the leaves.
- There is a swelling of the *petiole*, known as a *pulvinus*, just below where it attaches to the leaf blade.
- White, yellow, or orange, or purple flowers are born on an inflorescence with spirally arranged or 2-ranked bracts, which are sometimes waxy and brightly colored.
Canna (Canna x generalis)

- Cannas are erect, *herbaceous perennial* with thick branching *rhizomes*, growing three to five feet in height or more.
- The base of the *petiole* becomes a sheath that wraps around the thick, succulent stem.
- The *simple* leaves are *alternate* and two-ranked, measure one to three feet long, and are *ovate* to *lanceolate* in shape. They may be solid green or colorfully striped, and often have prominent veins.
- Irregularly shaped yellow, orange, red, or pink flowers are borne in terminal *racemes* or *panicles*.
- The fruit is a warty, 3-lobed capsule with the persistent *sepals* at the top.
Celosia, Cockscomb (*Celosia* spp.)

- Celosia is a showy garden plant grown as an **annual**.
- It has an upright growth habit, from one-half to five feet in height.
- Leaves are **alternate, simple, oblong**, and two to four inches long.
- There are two main types of Celosia, based on inflorescence shape: the plume type with a fluffy, light, airy texture that blows freely in a breeze, and the cockscomb type with a wavy texture that look like brain tissue to some people.
- Inflorescence color may be red, orange, yellow, pink, or purple.
Chinese Evergreen, Aglaonema  
(*Aglaonema* spp.)

- Chinese evergreen is a tropical *herbaceous perennial*. Commonly grown as a houseplant, it reaches a height of two to three feet.
- The glossy leaves are *ovate* to *lanceolate*, *evergreen*, and six to twelve inches long.
- Leaves may be solid green, spotted, or have attractive silver, white, pink, or red markings along the primary veins.
- The inflorescence is a white *spadix* and a white or green *spathe*.
Chrysanthemum
*(Chrysanthemum x morifolium)*

- Chrysanthemum is a much-branched, erect, *herbaceous perennial*.
- The *alternately* arranged, *simple* leaves are *lobed, lanceolate* to *ovate*, often hairy, and have a strong fragrance.
- The daisy-type inflorescence may be single or full double, and comes in a wide range of colors including yellow, orange, red, bronze, white, pink, and bicolors.
Coleus

(*Plectranthus scutellarioides*)

- Coleus is a free branching, erect or trailing, *annual* plant grown for its colorful foliage. It grows one to three feet in height.
- *Simple* leaves are *opposite*, generally *ovate*, with *margins* that may be *entire, crenate, serrate, undulate*, or *lobed*.
- Coleus foliage exhibits many colors and color combinations; patterns of pink, white, yellow, red, green, and maroon are common.
- The stems are square and the base of the stem may become woody with age.
- The inflorescence is a *raceme* or *panicle* of small blue flowers, which is of little ornamental value.
Coreopsis, Tickseed (*Coreopsis* spp.)

- The genus *Coreopsis* is Florida's state wildflower. It is an upright *herbaceous annual* or *perennial* from one to three feet in height.
- Most of the leaves are concentrated at the base of the plant, giving it a clumping appearance.
- The *simple* to *pinnately compound* leaves may be *alternate* or *opposite*, *elliptic* to *oblong*, two to four inches long, and sometimes have *lobed* margins.
- The daisy-like inflorescence may be single or double and is generally born of a slender, leafless stalk; ray flowers may be yellow, orange, pink, red, or bicolored.
Daylily (*Hemerocallis* spp.)

- Daylily is a one to three feet high, clumping, *herbaceous perennial* which may be *evergreen* or *deciduous*.
- Most of the *simple, linear* leaves emerge from the soil, usually without a stem.
- The flowers have three *petals* and three *sepals*. They are funnel-shaped to bell-shaped, and are born in clusters on long stems.
- They come in shades of yellow, orange, pink, red and purple, and bloom in the spring and/or summer.
Dendrobium Orchid
(*Dendrobium* spp.)

- Dendrobiums are one of the most popular types of orchids because of their ease of culture and prolific flowering habits.
- Plants often develop a swollen, reed-like stem measuring a foot or more in height.
- The base of the alternate leaves forms a sheath that wraps around the stem. Leaf shape may be ovate, elliptic, or lanceolate. Leaf texture is often thick and leathery.
- The white, pink, purple, yellow or multi-colored flowers are produced on long arching *racemes*. The lowermost petal or lip is often differently shaped or colored. Flowers open gradually and may remain open for three to four weeks.
Dianthus, China Pinks

(*Dianthus chinensis*)

- This low growing *herbaceous annual* grows six to twelve inches in height. The *opposite* leaves, are *linear* to *lanceolate*, with *entire* margins.

- Dianthus produces many one to two inch wide, single or double flowers in shades of white, pink, purple and red. Each petal has a toothed apex, giving the flower a fringed appearance. Flowers are mildly fragrant.
Dieffenbachia, Dumb Cane
(Dieffenbachia spp.)

• Dieffenbachia is a tropical, evergreen, *herbaceous perennial* with thick stems that reach one to four feet in height.

• The leaves are alternate, *simple*, *ovate to lanceolate*, and measure six to twelve inches long. Leaf color varies from solid green to patterned with white, yellow, or silver.

• The *petioles* are long and the petiole base forms a sheath around the stem.

• The inflorescence is a green or greenish-white *spathe* and a white *spadix*. 
English Ivy (*Hedera helix*)

- This aggressively growing, woody vine may be grown as a groundcover or it can be allowed to climb with its aerial roots firmly attaching to any rough-textured surface.
- The dark green or variegated, slightly leathery leaves are produced in abundance along the rapidly growing but rarely branching stems.
- The juvenile leaves are *simple, alternate*, 3-5 *lobed* and two to four inches in length. Adult leaves do not have *lobes*.
- Adult stage stems produce umbels or greenish-white flowers followed by small, round, blue-black berries.
False Heather, Mexican Heather (*Cuphea hyssopifolia*)

- This compact, one to two foot, low branching, frost-tender, *perennial* shrub is ideal for ground cover use or as an edging.
- The arching stems are covered by small, stalkless leaves which are *opposite, simple*, and *linear to lanceolate*, with *entire* margins.
- Small pink, white, or pale purple flowers with 5 or 6 petals are produced almost year-round.
Garden Verbena, Hybrid Verbena
(Verbena x hybrida)

• Garden verbena is a **herbaceous annual** or **perennial** with a low, trailing or mounding growth habit and square, hairy stems.

• Leaves are **simple**, **opposite**, **ovate** to **ovate-oblong**, with toothed or deeply lobed **margins**.

• Its mildly fragrant, five-petaled flowers are borne in flattened **umbels**.

• Flower color may be varying shades of white, yellow, orange, red, pink, purple, or blue, sometimes with a white eye.
Geranium (Pelargonium x hortorum)

- Geraniums are popular annual garden plants which are upright and rounded in shape, and grow one to two feet in height.
- The two to four inch long leaves are alternate, simple, round in outline, often lobed, and may have scalloped or toothed margins. The petiole is usually longer than the leaf blade. Some cultivars have a reddish or purplish band just in from the margin. Others may be variegated. Geranium leaves have a spicy scent when crushed.
- Flowers are in rounded umbels four to six inches across. The individual flowers have five petals or may be double. They can be red, pink, salmon, or white.
Gerbera Daisy (Gerbera jamesonii)

- Gerbera daisy is a rosette-forming perennial.
- Leaves are oblong to ovate or obovate with lobed margins, pubescent on the lower surface, five to ten inches long, and borne on petioles that are almost as long as the leaf blade.
- Gerbera inflorescences are daisy-like, produced on long leafless stems, and vary greatly in size and shape, but are usually 2-3 inches across.
- The ray flowers can be various shades of white, yellow, orange, pink, red, or bicolored. The disc flowers at the center of the inflorescence may be green, yellow, black, or brown.
Globe Amaranth  
(*Gomphrena globosa*)

- Globe amaranth is an *annual* which grows up to two feet in height. The plant is round and dense.
- The leaves are *opposite*, *simple*, and one to two inches in length. Leaf shape may be *elliptic*, *oblong*, or *ovate*.
- The *inflorescence* is a one inch, globe-shaped head consisting of many tiny, inconspicuous flowers surrounded by stiff papery *bracts*.
- The *bracts* are in shades of purple, pink, red, yellow or white.
Heartleaf Philodendron
(*Philodendron hederaceum*)

- Heartleaf philodendron is an *evergreen*, tropical *herbaceous* vine.
- The leaves are *alternately* arranged, *simple*, and *cordate*. Juvenile leaves are usually around 4 inches long, while adult leaves may be 12 inches or more long.
- The leaf surface may be glossy or have a velvety sheen. There are also cultivars with yellow leaves or variegated leaves. The leaf undersides are sometimes reddish.
- The inflorescence is a green *spathe* and white *spadix* that is rarely seen outside of the rainforest.
Holly Fern
(Cyrtomium falcatum)

• Holly fern has a dense crown with a mounding growth habit. The arching fronds are compound, spirally arranged, and are usually one to two feet long.

• *Leaflets* are ovate to elliptic, asymmetrical, to five inches long, with a long tapered tip and coarsely toothed margins. The leaflets are glossy dark green above, paler below, with a leathery texture.

• The reproductive *spores*, which occur on the leaf undersides, are light green when young and dark brown at maturity.
Impatiens (Impatiens spp.)

- Impatiens is an erect or mounding *annual* with *succulent* stems, which grows to a height of six inches to two feet.
- *Simple*, smooth leaves are *alternate*, with *crenate* to *serrate margins*. They are green or reddish-green, *ovate* to *elliptic* in shape.
- Flowers are solitary or borne in *racemes* of 2-5 flowers. Flowers may be single, double, semi-double, or fully double and come in many colors: white, pink, purple, red, orange, yellow, and bicolored. The lowermost *sepal* is modified into a spur on the back of the flower.
Jade Plant (**Crassula ovata**) 

- Jade plant is an erect to mounded *succulent* plant that looks like a miniature tree, usually one to three feet tall, but capable of growing much larger.

- **Opposite** leaves are succulent, glossy green, **elliptic** to **obovate** in shape, with an **entire** margin that is often red in color.

- Terminal **panicles** of small, star-like, five-petalled, pale pink to white flowers are produced in winter.
Lily of the Nile
(Agapanthus spp.)

• Lily of the Nile is an upright herbaceous, rhizomatous, perennial with a height of two to four feet when in bloom.

• It has up to 20 evergreen, simple, strap-like leaves per plant which are arching and are eight to twelve inches in length.

• *Umbels* of large, funnel-shaped flowers appear atop long stalks in summer. Flower color may be blue, lavender, purple or white.
Madagascar periwinkle, vinca *(Catharanthus roseus)*

- Madagascar periwinkle is a warm season *annual* or *perennial* that grows from six to twenty-four inches high and wide. It may have a carpet-like or an upright growth habit.
- Stems exude a watery milky sap when broken and may become woody at the base on older plants.
- The leaves are glossy green, *opposite*, *simple*, *elliptic* to *obovate*, and range from two to four inches long.
- The pin-wheel like flowers have five *petals* fused at the base, may be white, lavender, or pink, sometimes with a contrasting “eye” in the center.
Marigold (*Tagetes* spp.)

- Marigolds are erect, *herbaceous annuals* that range from six to thirty-six inches tall.
- The strongly aromatic, fern-like *pinnately compound* leaves have coarsely toothed *margins*.
- Leaf arrangement may be *alternate* or *opposite*.
- Inflorescences are dense heads to five inches across. They may be single, semi-double, or fully double in yellows, oranges, reddish-browns or bicolored. The ray and disc flowers may be the same color or contrasting colors.
Moth Orchid (*Phalaenopsis* spp.)

- *Phalaenopsis* produce long arching sprays of white, yellow, pink, purple, or bicolored flowers resembling moths in flight, which explains the common name "Moth orchid."
- *Phalaenopsis* produce one or two new thick, leathery leaves a year. The older leaves drop off at around the same rate. The leaves are alternately arranged and two-ranked and measure from 8 to 20 inches long. Leaf shape may be *ovate* or *obovate*.
- The thick, fleshy roots are often visible at the base of the plant.
- *Inflorescences* are *panicles* with 8 to 20 flowers, each measuring from two to four inches in diameter. Each flower has three petal-like sepals and three petals, with the lowermost petal modified into a lip.
Neanthe Bella Palm, Parlor Palm (Chamaedorea elegans)

• This is a **dioecious**, solitary-trunked, tropical palm that usually grows from four to six feet high.

• The arching leaves are **pinnately compound**, 18 inches to three feet long, with a six to 12 inch **petiole**.

• The leaflets are **linear-lanceolate**, with long tapering tips, about eight inches long, and are held in a flat plane.

• The tiny, bright yellow flowers are borne in a branched panicle. The **inflorescence** stalk turns from green to orange as the small black fruits mature.
Peace Lily, *Spathiphyllum* (*Spathiphyllum* spp.)

- Peace Lily is a clumping tropical, *herbaceous perennial* with large dark green, *lanceolate* to *ovate* leaves.
- Leaf *petioles* are as long as or longer than the blade.
- The inflorescence is an attractive white or greenish-white *spathe* and *spadix*.
Pentas (Pentas lanceolata)

- Pentas is an upright *herbaceous perennial* three to four feet in height.
- Leaves and stems are covered with fine hairs.
- Leaves are *simple, opposite, ovate*, have prominent veins on the undersides, and may be variegated.
- Inflorescences are three inch wide, dense clusters of long-tubed, star-shaped flowers.
- Available in white, pink, red, and lavender, these blossoms are extremely popular with butterflies and hummingbirds.
Peperomia (*Peperomia* spp.)

- Peperomias are herbaceous, tropical *annuals* or *perennials* which may have an erect stem or a rosette form. They are popular as houseplants, and may also be used as groundcover in South Florida.
- The *succulent* leaves are quite variable in size, shape and color. Leaves are frequently shiny and *ovate*.
- Leaf arrangement may be *alternate*, *opposite*, or *whorled*.
- The inflorescence is a light green or white *spike* that resembles a mouse’s tail, which consists of many tiny, petal-less flowers..
Pothos

*(Epipremnum aureum)*

- Pothos is a vigorous, *evergreen, herbaceous* vine or groundcover with *simple, alternate* leaves which are *ovate* to *cordate*.

- Juvenile leaves are *entire*, but mature leaves are perforated and can reach a length of 30 inches.

- Leaves are glossy, bright green, and irregularly variegated with lighter green, yellow or white. The base of the petiole forms a sheath around the stem.

- The juvenile form is the most commonly seen. It is a common houseplant; in warmer locations it is used as a landscape plant.

- The inflorescence is a greenish-white *spathe* and a white *spadix*, which is only observed on adult plants.
Red-edged Dracaena, Madagascar Dragon Tree (*Dracaena marginata*)

- This tropical, *evergreen* plant is distinguished by its relatively thin unbranched or few-branched stems that are topped by a *rosette* of ribbon-like leaves.

- The woody, straight or curved stems are typically two to five feet high but can grow much taller.

- The leathery leaves may be solid green, variegated or have a red stripe along their *margins*, and the leaf base clasps the stem.

- Mature plants produce panicles of fragrant, greenish-white flowers, which may be followed by orange to red berries.
Salvia (Salvia spp.)

- Salvia is an *herbaceous annual* or *perennial*, ranging from six inches in six feet in height, depending on the species or cultivar.
- Stems are usually square in cross-section.
- The leaves are *simple*, *opposite*, and *oval* or *lanceolate* in shape. *Margins* may be *entire*, *crenate*, or *serrate*. Some species have leaves with a pungent aroma.
- The inflorescence may be a *spike*, *raceme*, or *panicle*. The two-lipped, often tubular flowers come in a great variety of colors.
Sansevieria, Snake Plant
(Sansevieria spp.)

• Sansevieria is a semi-succulent herbaceous perennial. Leaves are typically long *linear*, with pointed tips, erect, stiff, and leathery, sometimes forming a *rosette*.

• Leaves are usually green with contrasting mottled, darker green stripes but may have yellow and/or white stripes along the edges or cross bands.

• Small, greenish-whitish, tubular fragrant flowers are arranged in *spikes, racemes*, or *panicles*.
Spider Plant
*(Chlorophytum comosum)*

- Spider plant is a *rosette*-forming *herbaceous perennial* commonly used as a groundcover or in containers, which eventually forms clumps up to one foot in height and four feet across.

- Its *simple*, long *linear* leaves are smooth, with *entire* margins, and pointed tips, and may be solid green or lined with white or yellow bands.

- The flowers are small, white, to three-fourths inches across, and borne in long stalked, arching *racemes*.

- Small plantlets are produced at the end of the inflorescence after it has flowered.
Ti Plant, Cordyline (Cordyline fruiticosa)

• The colorful leaves of the ti plant, are clustered on the upper portions of erect, slender, cane-like stems up to 10 feet tall, but more commonly 2-4 feet tall.

• The leaves are simple, alternate, spirally arranged or two-ranked, and lanceolate, elliptic, or oblong in shape. Leaf color ranges from solid to variegated in shade of green, yellow, pink, red or nearly black.

• The petioles are channeled and clasp the stems.

• Small pinkish-white flowers are produced in panicles. The red berry fruits are seldom seen.
Torenia, Wishbone Flower  
(*Torenia fournieri*)

- Wishbone flower is grown as a warm season *annual* in Florida. It forms mounds up to 18 inches high and wide.
- The *simple* leaves are *opposite*, *ovate*, have a coarsely toothed *margins*, and are less than one inch long.
- The stems are square in cross-section or 4-angled.
- The five flower *petals* form a tube with the arching stamens (male reproductive parts) forming white “wishbones” inside the upper two petals.
- Flower color may be blue, purple, pink, yellow, or white, often with a differently colored throat or a yellow marking on the lower petal.
Wax Plant, Wax Flower
(*Hoya carnosa*)

- Wax plant is a tropical, *evergreen* vine.
- The *simple, opposite, ovate* to *elliptic* leaves, are semi-succulent with *entire* margins and a waxy texture, and measure two to four inches long.
- In the spring and summer, it produces pendant, dome-shaped *umbels* of light pink, waxy flowers, which are fragrant at night.
- Each flower is up to 1/2 inch in diameter, and the male and female reproductive parts form a five-pointed, dark pink star in the center.
Weeping Fig, Benjamin Fig
(Ficus benjamina)

• Weeping fig is a houseplant or (in South Florida) an evergreen tree with drooping, spreading branches that can grow to 60 feet tall and wide.

• The leaves and stems exude a milky sap when broken.

• The leaves are alternate, simple, ovate-elliptic in shape, glossy green, leathery-textured, two to four inches long, with an elongated tip and many closely spaced lateral veins.

• Inconspicuous flowers develop into round, orange to red fruit less than 1/2 inch long. Flowers and fruit are rarely seen on potted plants.
Zebra Plant \textit{(Aphelandra squarrosa)}

- Zebra plant is a one to two foot tall tropical \textit{herbaceous} houseplant, sometimes grown in the landscape in South Florida.
- The leaves are \textit{simple, opposite, ovate} to \textit{elliptic} with pointed tips and a waxy texture. They are glossy dark green with conspicuous white striping along the veins.
- The inflorescence in a terminal \textit{spike} of overlapping yellow \textit{bracts}, which form a cone-line structure, from which yellow, two-lipped flowers emerge.
Zinnia (Zinnia elegans)

- Zinnias are an erect, **herbaceous annuals**.
- The simple leaves are **oppositely** arranged, **lanceolate, ovate, or oblong** in shape, dark green, and finely hairy, with **entire margins**.
- The daisy-like inflorescences are single or double heads that may be single or double.
- The petal-like ray flowers are bold shades of pink, purple, red, orange, yellow, green, and white, and may be solid or bicolor.
- The disc flowers are usually the same color as the ray flowers when they are in bud, but are yellow when they are open.
ZZ Plant (*Zamioculcas zamiifolia*)

- ZZ plant is a tropical *herbaceous* plant that grows from potato-like *rhizomes*.
- ZZ plant is typically used as a houseplant or groundcover in tropical climates and will grow to about 3 feet tall.
- It has *pinnately compound* leaves made up of 6-8 pairs of glossy, leathery *leaflets* held on upright succulent stems.
- The insignificant inflorescence is a greenish-white *spathe* and yellowish-white *spadix* produced at the base of the plant.