



# PATHFINDER HONOURS

Flowers- Skill Level 2

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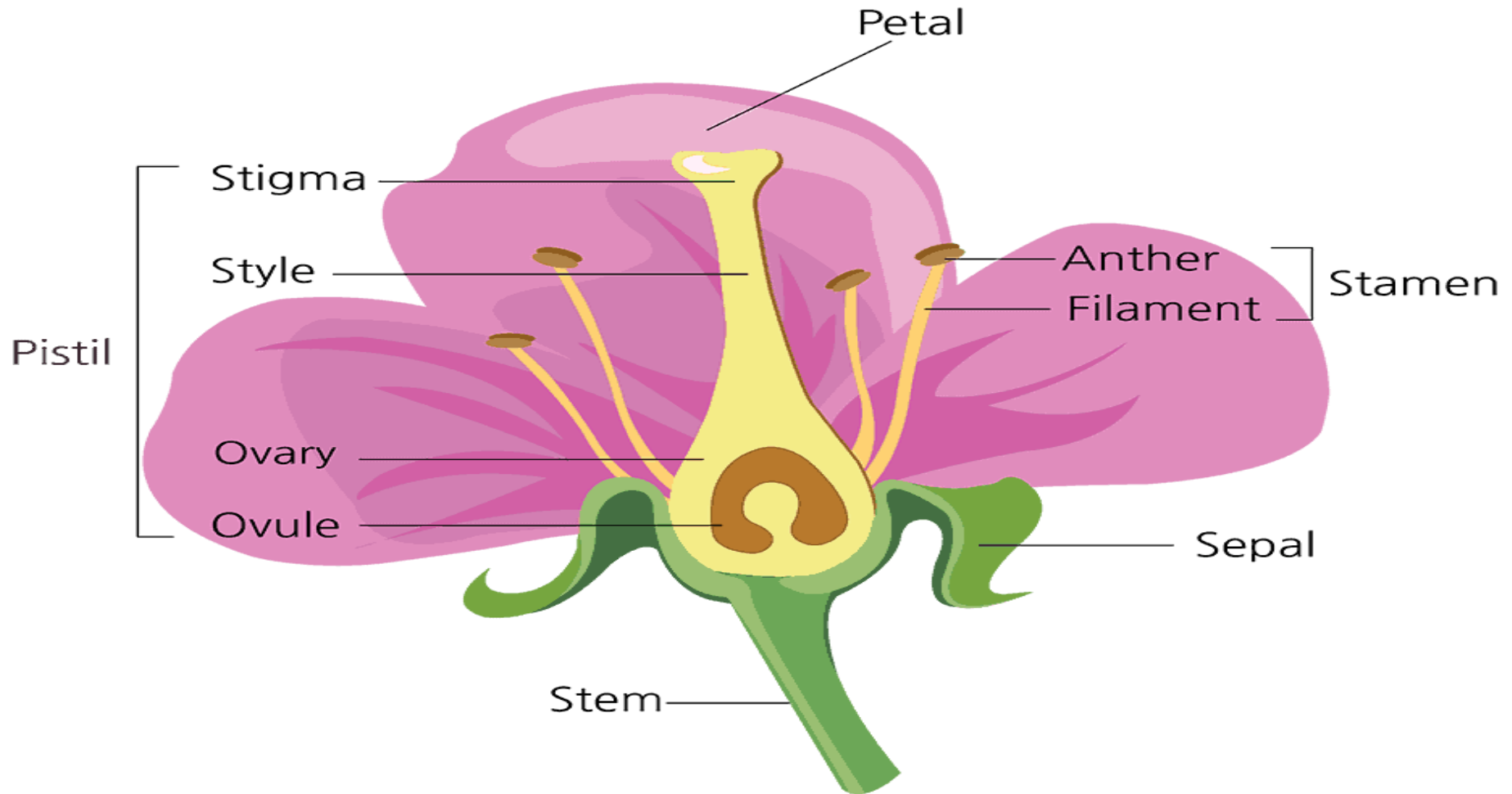
# REQUIREMENTS

1. Draw or photograph 35 kinds of wild flowers and identify them correctly.
2. Draw and properly label, or point out the actual parts of a flower: pistil, stamen, petal, sepal.
3. Name six flower families and their distinguishing characteristics. Name at least two flowers in each family.
4. Describe the life story of a particular flower, including the part played by insects or wind in pollination.
5. Name at least two plants that are poisonous to touch, and state which, if any, are found in your locality.

# REQUIREMENTS

6. Do three of the following:
  - a. Arrange, draw, or photograph a series of at least six flowers showing in order of the colours of the rainbow: red, orange, yellow, green, blue and violet.
  - b. Submit fresh, pressed or dried flowers which have: five petals, four petals, three petals, no petals.
  - c. Distinguish and name two out of five wild or cultivated flowers by their odour, while blindfolded.
  - d. List flowers that you have observed being visited for food by the following:
    - i. Birds
    - ii. Honeybees
    - iii. Bumblebees
    - iv. Butterflies
    - v. Moths
  - e. Watch a flower for at least ten minutes in the sunshine, and at least ten minutes after dusk, and report on insect visitors. State the number and kind of visitors and name of flower.

# DRAW AND LABEL PARTS OF A FLOWER



## MONOCOTS



**one  
cotyledon**



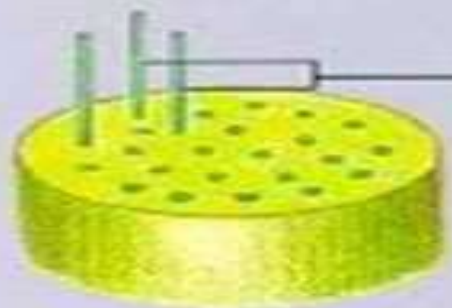
**floral parts  
in threes**



**parallel  
leaf veins**



**pollen grain has  
one pore or  
furrow**



**vascular  
bundles  
throughout  
stem's  
ground tissue**

## DICOTS



**two  
cotyledons**



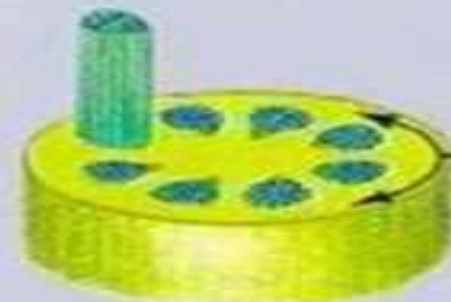
**floral parts  
in fours  
or fives**



**netlike  
leaf veins**



**pollen grain has  
three pores or  
furrows**



**stem's  
vascular  
bundles  
arranged  
in a ring**



# FLOWER FAMILIES

- Orchid
- Lily
- Cactus
- Rose
- Aster
- Buttercup

# ORCHID- ORCHIDACEAE

- The Orchid family is one of the largest family of flowering plants, containing over 25,000 species.
- They are monocotyledons. They have one cotyledon, or one embryonic leaf.
- Orchids have simple leaves with parallel veins.
- Their shape is highly variable between species.

# VANILLA





# LADIES SLIPPER ORCHID





# LILY- LILIACEAE

- Plants in this family have linear leaves, mostly with parallel veins, and flower parts in threes.
- They have 3 petals and 3 sepals which look identical to in size and colour.
- Most have an underground storage structure like a bulb.



# EXAMPLES:

- Tulip
- Wild Garlic

# TULIP AND WILD GARLIC



# CACTUS

- Cacti are distinctive, unusual plants, which are able to live in extremely arid and hot environments.
- Have a range of anatomical and physiological features which conserve water.
- Most Cacti are succulents. The Succulents structures containing the chlorophyll necessary for life and growth.
- Their leaves have become the spines for which cacti are so well known.



## EXAMPLES ARE:

- Saguaro
- Barrel Cactus
- Prickly Pear
- Rabbit Ear

PRICKLY PEAR, SAGUARO, BARREL AND RABBIT EAR CACTI



# ROSE- ROSACEAE

- Members of the Rose family have 5 sepals and 5 petals, which are flat and wavy at the margins.
- Each flower has at least ten stamens.
- All members of the rose family have a *hypanthium*, which is a bowl-shaped part of a flower consisting of the bottoms of the sepals, petals, and stamens stuck together.





# EXAMPLES:

- Rose
- Blackberry
- Strawberry
- Raspberry
- Apple
- Plum
- Peach
- Cherry
- Pear

# ROSES, APPLE, PEAR, PEACH AND STRAWBERRY



# ASTER-ASTERACEAE

- Plants in the Aster family typically have one or both of two kinds of florets.
- The outer perimeter of a flower head like that of a sunflower is composed of florets possessing a long strap-like petal, termed a ligule; these are the ray florets.
- The inner portion of the flower head (or disc) is composed of small flowers with tubular corollas; these are the disc florets.



# EXAMPLES

- Aster
- Common Daisy
- Lettuce
- Sunflower
- Chrysanthemum
- Dandelion

# SUNFLOWER, CHRYSANTHEMUM AND DAISY



# NEW ENGLAND ASTER



# BUTTERCUP-RANUNCULACEAE

- Plants in the Buttercup family are mostly herbaceous plants, but with some woody climbers (such as Clematis) and shrubs (e.g. Xanthorhiza).
- Leaves are very often more or less palmately compound.
- The flowers have many free stamens arranged in a spiral and usually many free pistils. Flowers are most often grouped in terminal racemes, panicles or cymes.



# EXAMPLES:

- Buttercup
- Marsh Marigold
- Larkspur
- Thimbleweed
- Delphinium
- Columbine
- Clematis
- Hellebore



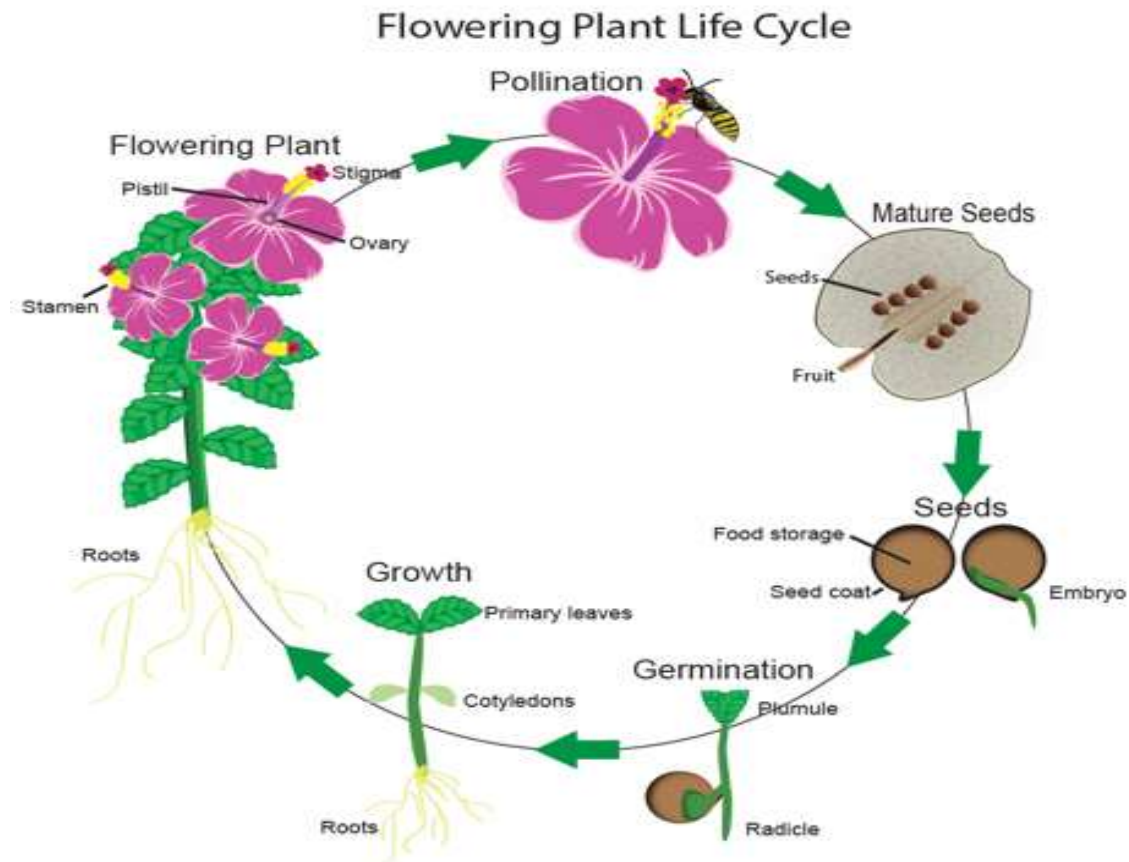
# BUTTERCUP, LARKSPUR AND CLEMATIS





# FLOWER – LIFE HISTORY

# LIFECYCLE OF A FLOWERING PLANT





**NAME TWO PLANTS THAT ARE  
POISONOUS TO TOUCH**



# GYMPIE GYMPIE (DENDROCNIDE MOROIDES)



# STINGING NETTLE AND POISON IVY



# GIANT HOGWEED



# ADAM AND EVE, HEMLOCK





ARRANGE FLOWERS ACCORDING TO  
THE COLOURS OF THE RAINBOW



# RED, ORANGE AND YELLOW



## Red

**Columbine**

**Rose**

**Tulip**

**Cardinal flower**

## Orange

**Daylily**

**Marigold**

**Spotted touch-me-not**

**Butterfly weed**

## Yellow

**Goldenrod**

**Daffodil**

**Dandelion**

**Evening Primrose**

# GREEN, BLUE AND VIOLET



## Green

Maple (tree)  
Solomon's seal  
Skunk Cabbage  
Jack-in-the-pulpit



## Blue

Bluebell  
Pansy  
Hyacinth  
Hydrangea



## Violet

Clematis  
Periwinkle  
Orchid  
Lady's slipper



**SUBMIT FRESH, PRESSED OR  
DRIED FLOWERS WHICH HAVE:  
FIVE PETALS, FOUR PETALS,  
THREE PETALS, NO PETALS.**



# Five Petals



**Strawberry Flower**



**Blackberry Flower**



**Wrinkled Rose Flower**





**Nightshade Flower**





# Four Petals



**Common Evening Primrose**



**Cranberry Flower**



**SUNDROPS!**

# Virginia Meadow Beauty Flower



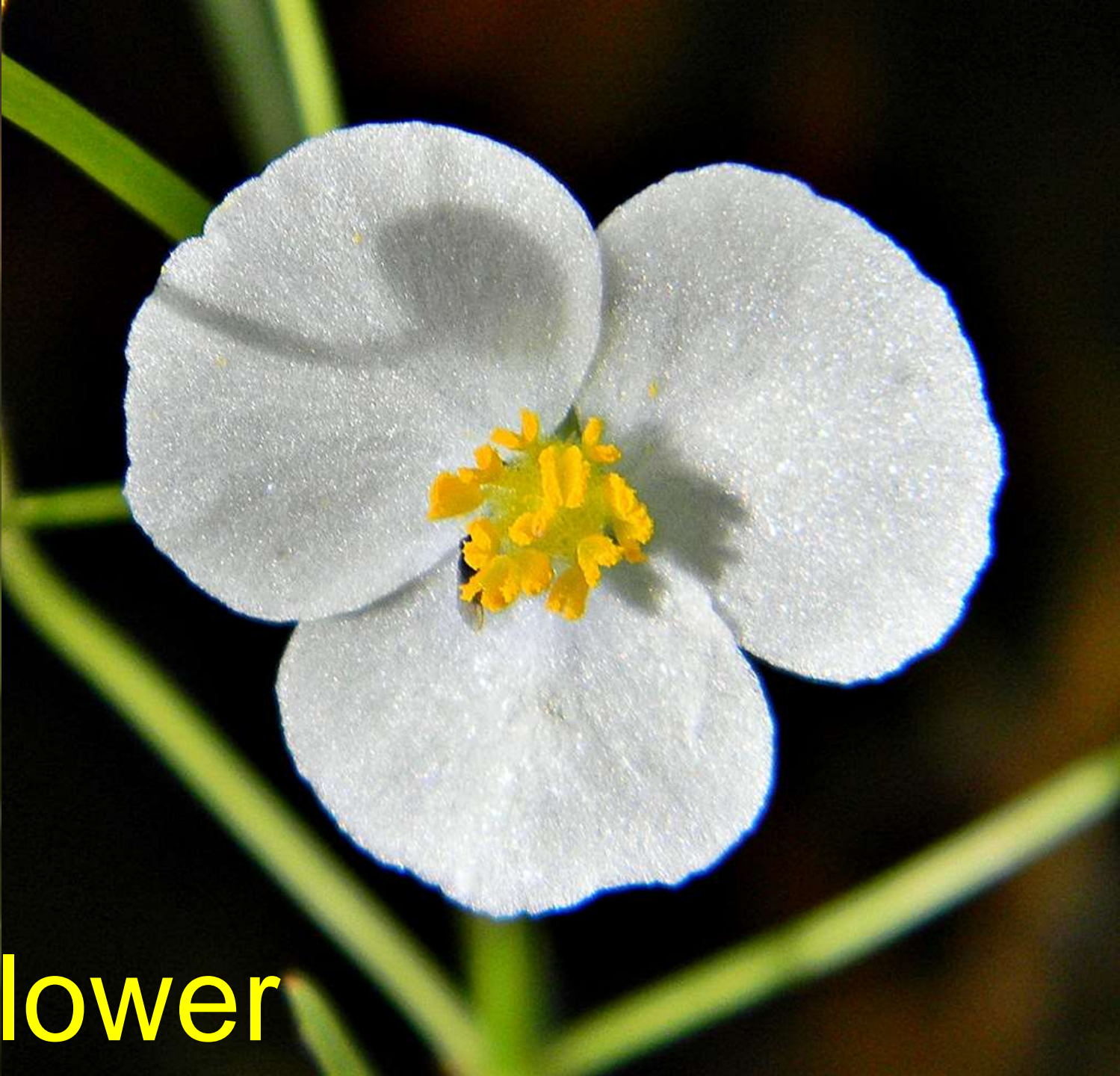


# Three Petals



**Orchid**





Arrowhead Flower



**Trillium**



**Apetalous  
(No Petals)**




**White Calla Lily**



**Hog-peanut**



# Lamb's Quarter Flower



**C. DISTINGUISH AND NAME TWO  
OUT OF FIVE WILD OR CULTIVATED  
FLOWERS BY THEIR ODOR, WHILE  
BLINDFOLDED.**



**D. List flowers that you have observed being visited for food by the following:**





# Birds





# Bumblebees







# Honeybees



**Butterflies:**







# Moths

**E. WATCH A FLOWER FOR AT LEAST TEN MINUTES IN THE SUNSHINE, AND AT LEAST TEN MINUTES AFTER DUSK, AND REPORT ON INSECT VISITORS.**

**STATE THE NUMBER AND KIND OF VISITORS AND NAME OF FLOWER**

