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:

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

- Petal
- Stigma
- Style
- Anther
- Filament
- Stamen
- Ovary
- Sepal
- Ovule
- Stem
<table>
<thead>
<tr>
<th>MONOCOTS</th>
<th>DICOTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>one cotyledon</td>
<td>two cotyledons</td>
</tr>
<tr>
<td>floral parts in threes</td>
<td>floral parts in fours or fives</td>
</tr>
<tr>
<td>parallel leaf veins</td>
<td>netlike leaf veins</td>
</tr>
<tr>
<td>pollen grain has one pore or furrow</td>
<td>pollen grain has three pores or furrows</td>
</tr>
<tr>
<td>vascular bundles throughout stem’s ground tissue</td>
<td>stem’s vascular bundles arranged in a ring</td>
</tr>
</tbody>
</table>
FLOWER FAMILIES

• Orchid
• Lily
• Cactus
• Rose
• Aster
• Buttercup
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 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
• 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
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
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
Four Petals
Common Evening Primrose
Cranberry Flower
SUNDRPS!
Virginia Meadow Beauty Flower
Three Petals
Orchid
Trillium
Apetalous
(No Petals)
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:
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