

# Mini 4-H

# Plants & Flowers

## All Divisions



**Draft developed by:**  
**Purdue University Cooperative Extension Service**  
**Area VII 4-H Youth Development Educators**

**(Blackford, Delaware, Fayette, Franklin, Henry, Jay, Madison, Randolph, Rush, Union, & Wayne Counties)**

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### **Resources and References**

Delaware County Mini Arts and Crafts Manual  
Franklin County Mini Crafts Manual  
Kids' Squish Book by Loris Theovin Bree and Marlin Bree

**February 1998**



# Mini 4-H Parent's Page



Welcome to the Mini 4-H Program! Mini 4-H is designed for youth to explore a variety of project areas.

Your child received this project manual when enrolling in Mini 4-H. This manual will provide fun, age-appropriate learning activities throughout their year(s) in Mini 4-H and their interest in this project.

As a Mini 4-H parent, your job will be to guide and encourage your child through the activity. It is highly suggested that you do not complete the activities for them. Instead, help them, guide them, work with them, and let them do all that they possibly can. The 4-H Program encourages "learn by doing" ...and is the best educational tool that we can provide for youth.

Additionally, the Mini 4-H program is set up to allow your child to exhibit a project at the 4-H Fair. This project is based upon information within this manual.

The 4-H Fair is an exciting time for 4-H members and families. It is a week that allows community youth to showcase their talents, interests and enthusiasm for learning.

Mini 4-H is fun! Your child will certainly enjoy it. You can have fun too, by guiding and helping as your child participates in the program. Encourage and praise your child as he/she has fun learning and sharing with you.

If you have any questions regarding Mini 4-H or other 4-H programs, please feel free to contact your local Extension Office.



# Mini 4-Her's Page



Welcome to Mini 4-H! You are now a member of the 4-H family. You are a special person.

Mini 4-Her's have lots of fun! There are lots of activities for you to explore. You can try new things. You can share it with your friends and family.

Mom, Dad or another adult can help you with your project. Bring your project to the 4-H Fair and lots of people will be able to see what you have done. You also get a ribbon made just for Mini 4-Her's.



Here are some things to know about 4-H

The 4-H Symbol: A four-leaf clover with an "H" in each leaf

4-H Colors: Green and White

The 4-H Motto: To make the best, better.

The 4-H Pledge: I pledge my *Head* to clearer thinking,  
my *Heart* to greater loyalty,  
my *Hands* to larger service, and  
my *Health* to better living,  
for my club, my community,  
my country, and my world.

# What are Plants?

Plants are living things that grow. We see plants all around us. Inside your house, you might have “house plants.” These plants grow in small pots inside a building. Most plants grow outside your house. Look out your window. What kind of plants do you see? Let’s make a list of them.

1. \_\_\_\_\_ 3. \_\_\_\_\_ 5. \_\_\_\_\_  
2. \_\_\_\_\_ 4. \_\_\_\_\_ 6. \_\_\_\_\_



Plants need special things to grow. They need sunlight, water, and food (found in soil). They also breathe a special kind of air called carbon dioxide. Carbon dioxide is a gas that people exhale or breathe out of their lungs. Without these things, a plant will not live very long...just like you need water, food, and oxygen to live.

## Activity 1 - Plants Have Special Needs

### You will need:

- Pencil
- Four small pots or jars
- Paper towels or napkins
- Plastic wrap
- Scraps of paper and tape
- Soil ... you can use potting soil or dig some soil up outside. You will not need very much.
- 20 bean seeds or dried beans. (You may have this at home. Ask your parent or an adult if they can get you some.)
- The “Water, Sun and Air” chart on page 7.

### Here is what you do:

1. Label each pot or jar. Use a scrap of paper and tape it to the jar. You will have a total of five labels. These labels will say:
  - **Jar #1** – no water
  - **Jar #2** – no sun
  - **Jar #3** – no air
  - **Jar #4** – has water, sun, air, and soil
  - **Paper towel #5** – no soil
2. Get your pot or jars ready
  - **Jar #1:** Fill the jar half full with soil. Plant 3-4 seeds about ½” to 1” below the surface. Cover the seeds. **DO NOT WATER THE SEEDS.**
  - **Jar #2:** Fill the jar half full with soil. Plant 3-4 seeds about ½” to 1” below the surface. Cover the seeds. Add water to make the soil moist (not a lot of water). Put the jar in a closet or another place where it will be in the dark.
  - **Jar #3:** Fill the jar half full with soil. Plant 3-4 seeds about ½” to 1” below the surface. Cover the seeds. Add water to make the soil moist (not a lot of water). Cover the pot or jar with plastic wrap so it cannot get any air.
  - **Jar #4:** Fill the jar half full with soil. Plant 3-4 seeds about ½” to 1” below the surface. Cover the seeds. Add water to make the soil moist (not a lot of water).
  - **Paper Towel:** Fold a paper towel or napkin in half, and then in half again. Place 3-4 seeds inside the folded paper towel. Wet the paper towel.
3. Put jar #1, jar #3, jar #4, and the paper towel on a window sill or in a sunny place. Remember, you put jar #2 in the closet.
4. Pick a good time of the day to check on your plants. Maybe it's when you get home from school or after dinner. You will be checking your plants for five days.

5. Check your jars and paper towel. What do you see? Write your observations or what you see in the “Water, Sun, and Air” Chart.

<b>Day</b>	<b>Jar #1</b>	<b>Jar #2</b>	<b>Jar #3</b>	<b>Jar #4</b>	<b>Towel</b>
<b>Example</b>	<i>No plant</i>	<i>No plant</i>	<i>No plant</i>	<i>Not plant</i>	<i>Seeds are wet – nothing growing</i>
<b>Day 1</b>					
<b>Day 2</b>					
<b>Day 3</b>					
<b>Day 4</b>					
<b>Day 5</b>					

*Let's Grow!*

What did you see or observe?

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Which seeds grew the fastest?

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How did the seeds look in the paper towel?

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Why is it important that plants have sun, food, water and air?

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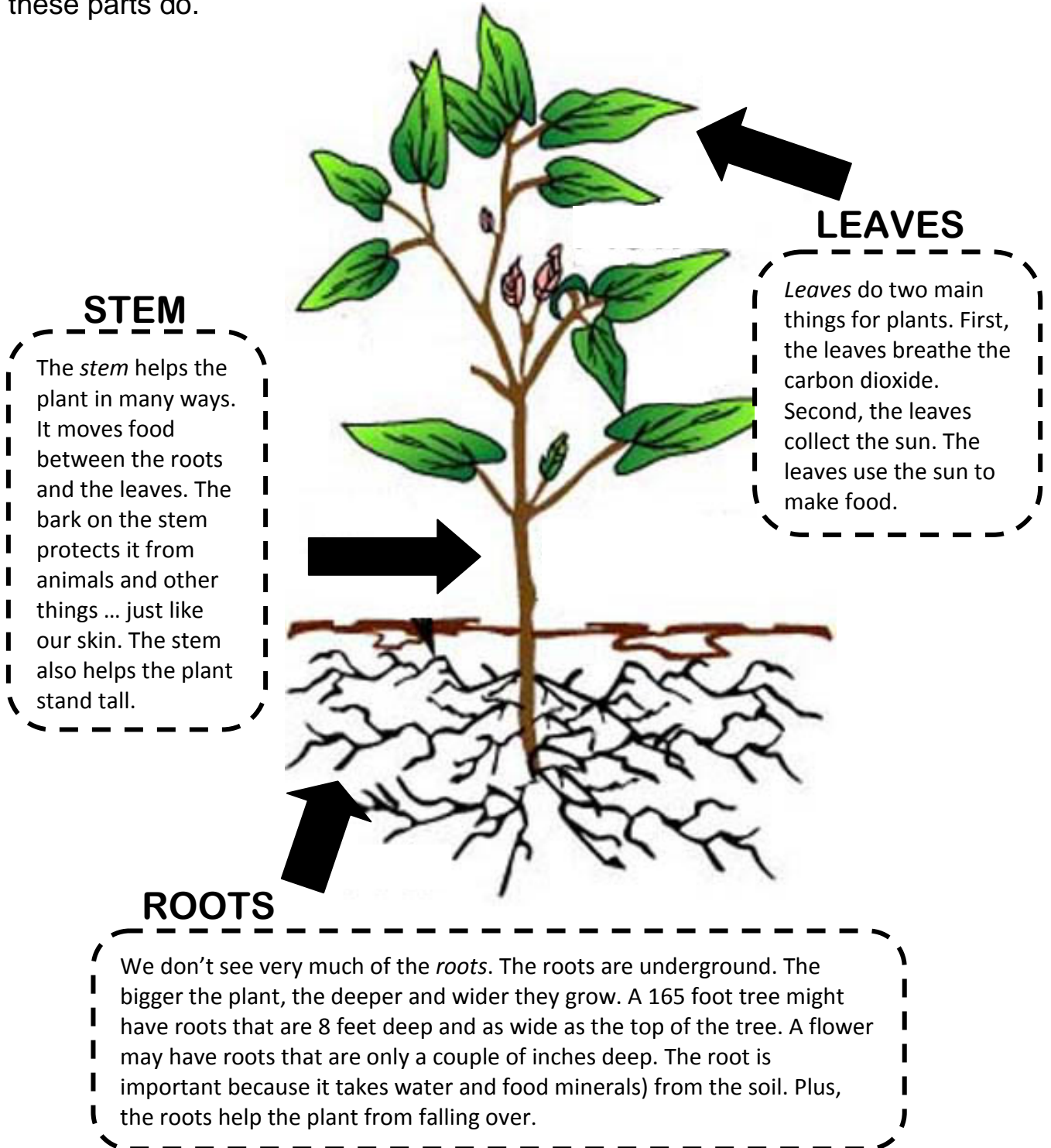
How are you like a plant?

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# Parts of a Plant

There are three main parts to a plant. They are roots, stems, and leaves. Let's look at this plant and identify the parts. Plus we will talk about what these parts do.

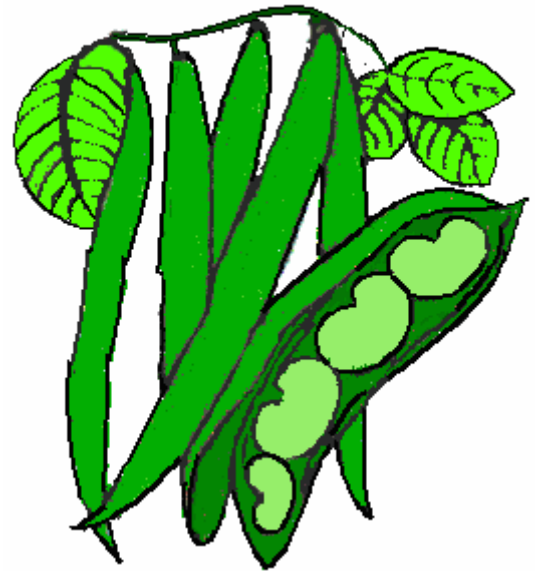




# Activity 2 - Beans in a Baggie

## ***You will need:***

- Pencil
- Two clear plastic bags ... you do not need one that zips shut
- 8 to 10 bean seeds or dried beans. (You may have this at home. Ask your parent or adult if they can get you some.)
- Two paper towels or napkins
- “A Bean Grows” chart on page 10.



## **Here is what to do:**

1. Fold the paper towel or napkin. It will need to fit inside the plastic bag. Wet the paper towel or napkin.
2. Place the seeds evenly inside the folded paper towel or napkin.
3. Carefully put the paper towel or napkin inside the plastic bag.
4. Repeat with remaining materials.
5. Put one plastic bag in a warm, sunny place. Put the second plastic bag inside a closet.
6. Check the seeds every 2 or 3 days. When you begin to see a small sprout, it is germinating or beginning to grow.
7. Predict or guess when you will begin to see a stem or roots. Write this in the “predict” area on the chart. Check the seeds to see how close you came.
8. Keep checking the seeds until you can answer all of the questions on the “A Bean Grows” chart.
9. If the paper towel or napkin begins to dry out, you will need to wet it again.

### A Bean Grows – Seeds in the Sun

	Predict	Observed	Date observed
Which grows first, the stem or the root?			
How many days will it take to sprout?			
How many days before the leaves come out?			
How long is the root the first day it shows?			
How long is the stem the day it shows?			
What color is the root the first day?			
What color is the stem the first day?			

### A Bean Grows – Seeds in the Closet

	Predict	Observed	Date observed
Which grows first, the stem or the root?			
How many days will it take to sprout?			
How many days before the leaves come out?			
How long is the root the first day it shows?			
How long is the stem the day it shows?			
What color is the root the first day?			
What color is the stem the first day?			

*Let's Grow*

Which seeds germinated the fastest? Why?

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How did you know if the stem or root grew first?

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What did the root look like when it started to grow? How was it different from the stem?

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What was the difference between the seeds in the sun and the seeds in the closet? Why were they different?

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What did you learn from this experiment that will help you start seeds in the future?

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# Activity 3 – Sun Power

## You will need:

- Shoebox with lid
- Paper cup
- Cardboard
- Scissors
- Tape
- Soil
- 3 pinto beans or another kind of bean



## Here is what to do:

1. Fill the cup with soil
2. Plant the beans in the soil, about a ½” or 1” from the top.
3. Add water to the soil. (Don’t add too much - just enough to make it moist.)
4. Allow the bean to sprout. It will take about 5 to 7 days. Don’t forget to keep the soil moist. You may need to water the soil.
5. Cut a hole in one end of the shoebox
6. Place the bean plant (remember, let it sprout with good leaves and a stem) on the end of the shoebox without the hole. Put the lid on the box.
7. Allow the plant to grow from one end of the box to the other.
8. Open the lid each day to check to see how much the plant has grown.
9. Water the soil as needed.

## Let’s Grow

How many days did it take for the plant to grow from one end of the box to the other?

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Why did the plant grow this way? What did it need?

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If you are growing plants inside, where is a good place to put them? Why?

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# The Pretty Flower

If you look at a flower, on it you will see that here is another part of a plant. A plant has leaves and a stem. If you took the plant out of the soil, you would see roots. Why is a flower important?



A flower is very special because it makes seeds. These seeds fall to the ground and will grow into flowering plants.

People like flowers because they have a bright color. Some have a very pretty smell to them. A popular flower is a rose. It comes in a lot of colors (red, pink, white and many more). Perfumes are made from roses because people like to wear the special smell. What is your favorite perfume?

## Activity 4 – Flower Power

### You will need:

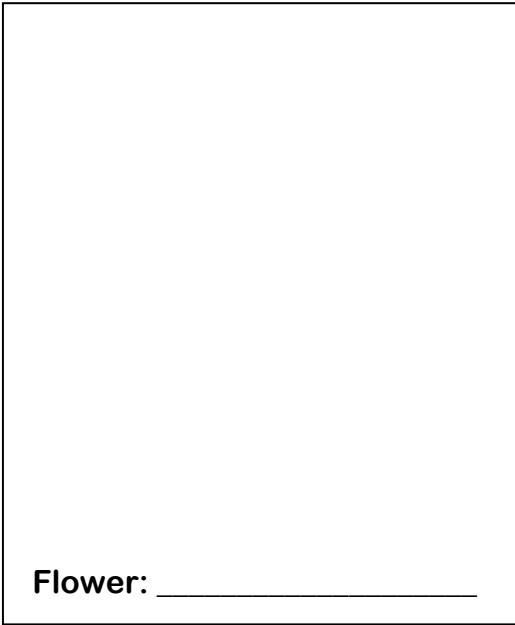
- Pencil
- Four different types of flowers or flowering cards
- “Petal” Chart

### Here is what to do do:

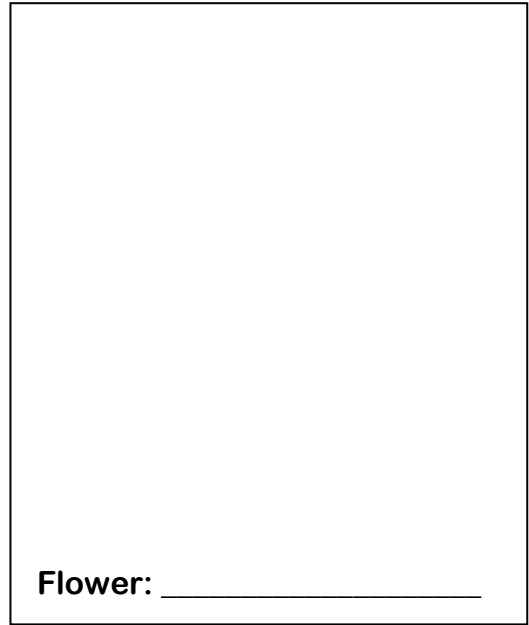
1. This is an activity that is easier to do in the spring and summer when there are a lot of flowers around.
2. Find four different flowers or flowering plants
3. Look at each of the flowers. Count the number of petals. What do the petals look like?
4. Complete the Petal Chart.

Flower	Number of Petals	What do the petals look like?

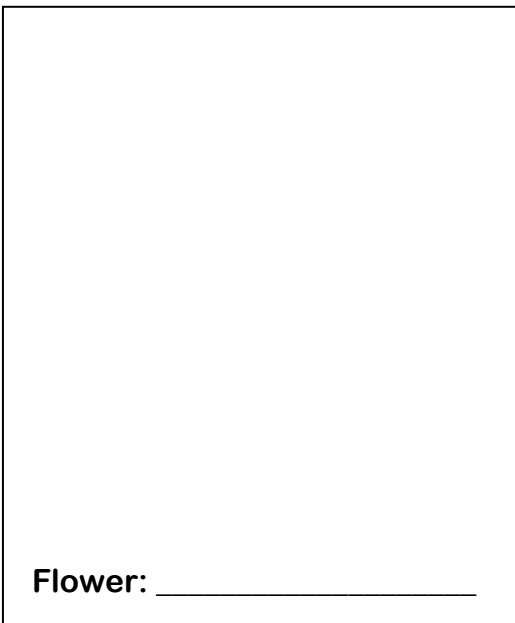
5. Draw a picture of the different shapes of petals



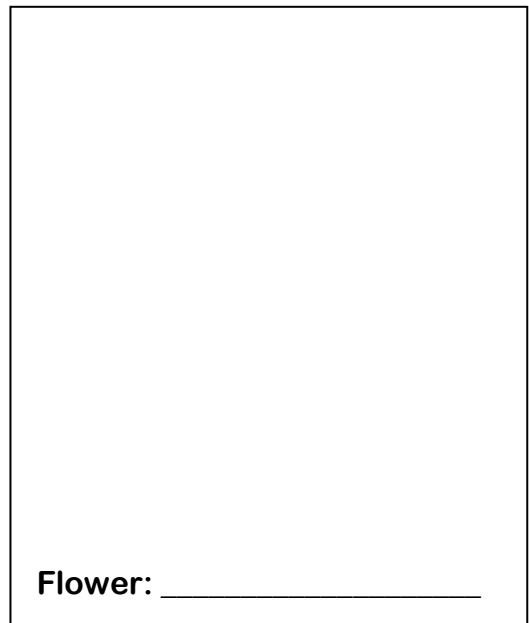
Flower: \_\_\_\_\_



Flower: \_\_\_\_\_



Flower: \_\_\_\_\_



Flower: \_\_\_\_\_

*Let's Grow!*

Which flower had the most petals? \_\_\_\_\_

Which flower had the least amount of petals? \_\_\_\_\_

Which petals were the largest ...the ones from the flower with the most petals or the one with the least? \_\_\_\_\_

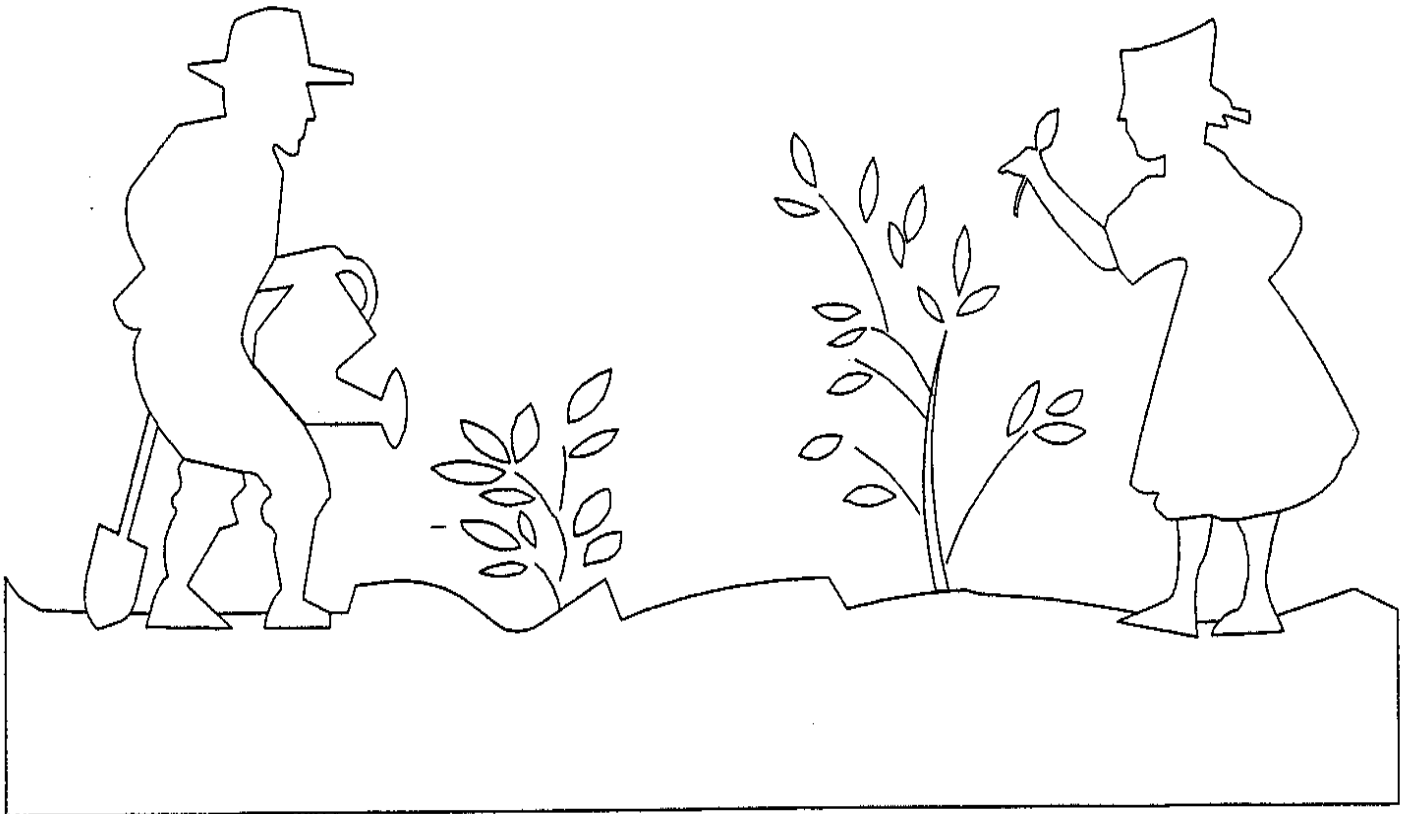
Which flower is your favorite? \_\_\_\_\_

If you were putting flowers in a vase, what flowers would you use and why?

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**COLOR ME**



# Activity 5 – Name that Flower!

## You will need:

- Crayons, colored pencils, or markers

## Here is what to do:

Match the flower with the name and color them.

Pick from the list below:

Bluebell

Lily

Bachelor Button

Daffodil

Rose

Crocus

Iris

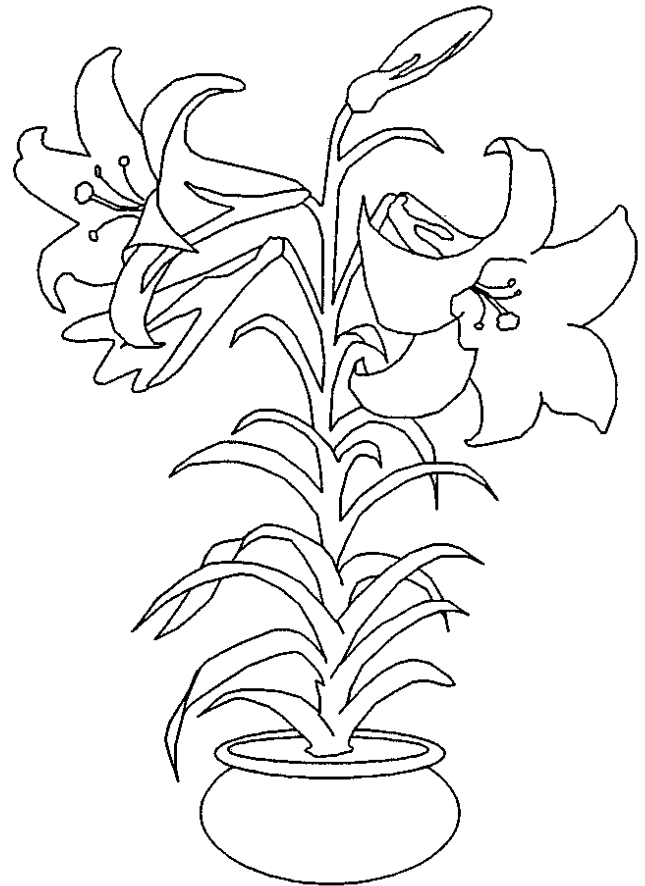
Geranium

Poinsettia

Sunflower

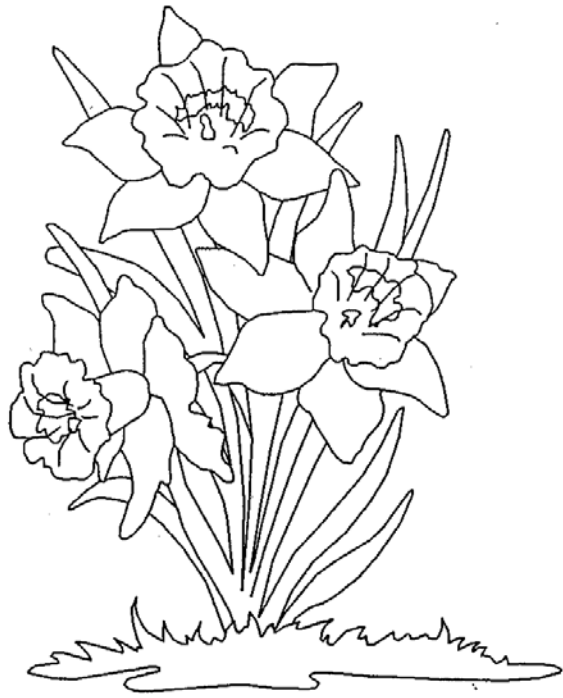


1. \_\_\_\_\_

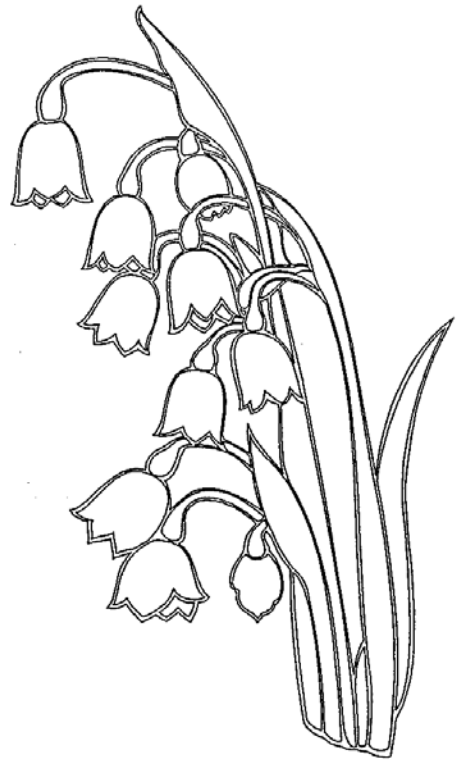


2. \_\_\_\_\_

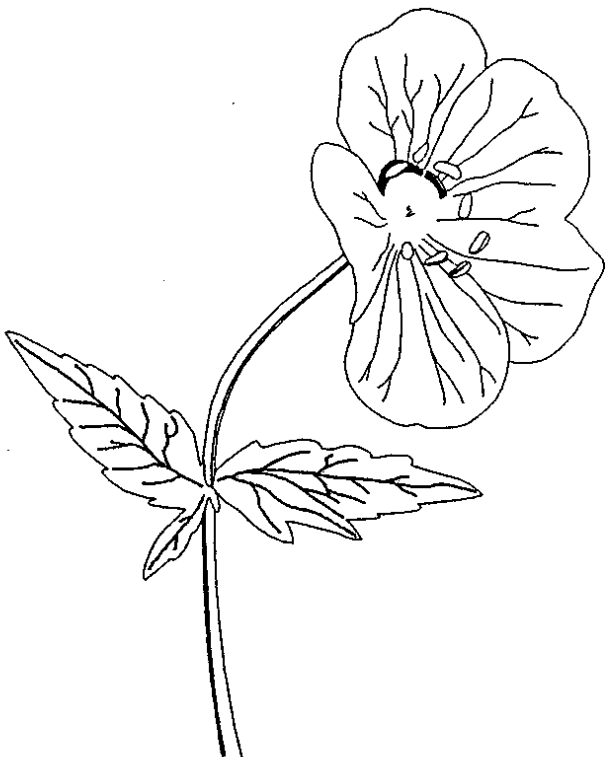




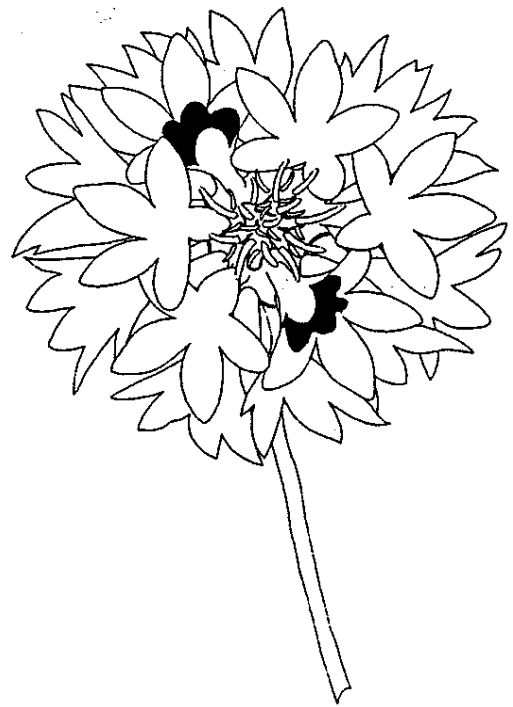
3. \_\_\_\_\_



4. \_\_\_\_\_

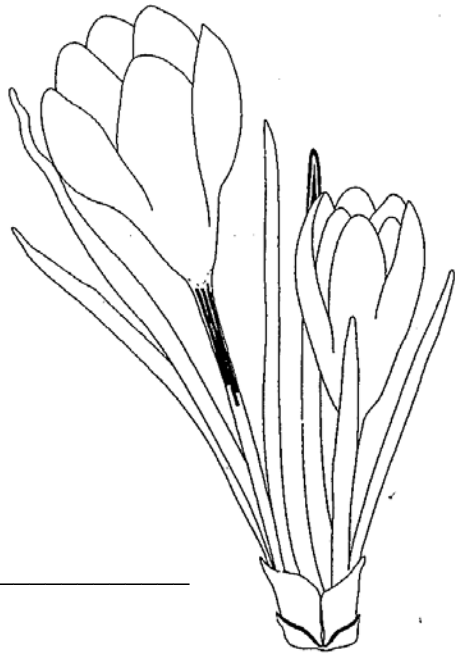


5. \_\_\_\_\_

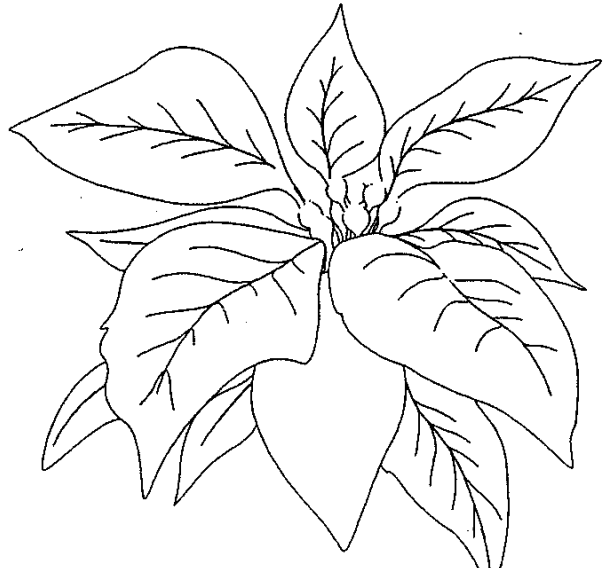


6. \_\_\_\_\_

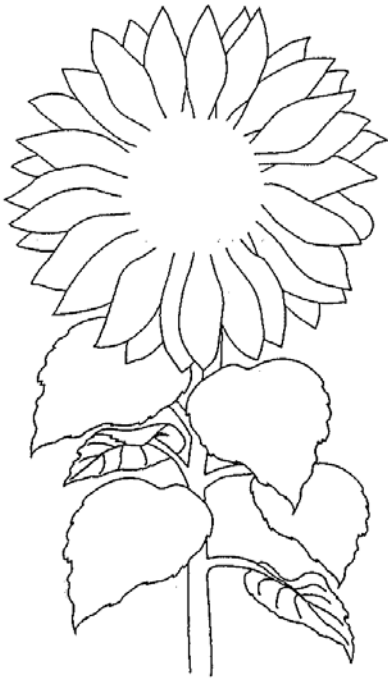
7. \_\_\_\_\_



8. \_\_\_\_\_



9. \_\_\_\_\_



10. \_\_\_\_\_



Answers: (1) Iris, (2) Lily, (3) Daffodil, (4) Bluebell,  
(5) geranium, (6) Bachelor Button, (7) Crocus,  
(8) Poinsettia, (9) Sunflower, (10) Rose

# Activity 6 – Where Did All the Water Go?

## You will need:

- One jar filled with water
- A white flower ... a carnation works the best
- Food Coloring (ask an adult for help with this. It can make a stain.)

## Here is what to do:

1. Fill your jar with water.
2. Carefully, add 4 to 5 drops of food coloring. Mix the food coloring with a metal spoon (it will not stain the spoon).
3. Cut the stem of the flower at an angle. This will help the flower absorb the colored water into its stem.
4. Let the flower stand in the jar until the petals of the flower turns color. Try something fun...want a flower with two colors? Split the flower stem about halfway up and place two pieces of the stem in two glasses next to each other.



*Let's Grow!*

Why did the petals turn color?

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What color did it turn? Did it match your food coloring?

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How could you use this activity in the future?

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# What to Exhibit



Here is a list of projects that can be shown at the 4-H Fair. Pick *one* of the projects you would like to exhibit at the fair this year. You do not need to make the projects in any special order. If you have any questions about your projects, please call your leader or the County Extension Office.

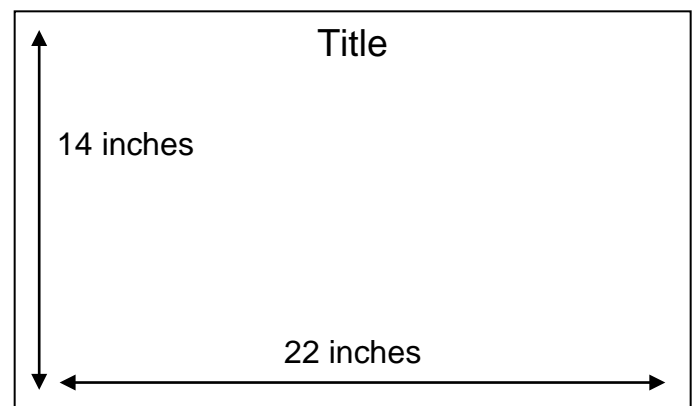
- Three cut flowers in a vase. The flowers can be the same kind or different kinds. Attach a small label that tells the kind of flower.
- A flowering plant in a pot. Attach a small label that tells the kind of plant.
- A house plant. Attach a small label that tells the kind of plant.
- A cacti. Attach a small label that tells the kind of cacti.
- Exhibit a colored flower (see activity 6 for details).
- Make a poster that shows the different parts of a plant.
- Find at least three pictures of flowers. Write the name of the flower next to it. You can use the flowers in this book. Put the pictures in a notebook.
- Make a plant maze. Bring the shoebox maze with the plant inside (see activity 3 for details).
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## Good Luck and Have Fun!

### Mini 4-H Poster Requirements

Poster requirements for ALL Mini 4-H projects that require posters:

1. Poster board (14"x22") should be displayed horizontally
2. Poster should have stiff backing and covered with clear plastic
3. A title should be at the top of the poster
4. Include your name, grade and club on a card in the lower right hand corner.



*Sample poster*