

GROW YOUR PALS PROGRAM GUIDE



THE NATIONAL FFA MENTORING PROGRAM

Sponsored by



LESSON 1.6

The Amazing Flower

Unit:
PLANTS AND GARDENING

PRECEPTS

A. Action

- A1. Work independently and in groups to get things done.



Lesson Type:
Large Group

NATIONAL STANDARDS

- CS.01.01.01.a. Work productively with a group or independently.
- PS.01.02.05.a. Identify the components of a flower, the functions of a flower and the function of flower components.
- NL-ENG.K-12.12 – Applying Language Skills
- NS.K-4.3 Life Science

STUDENT LEARNING OBJECTIVES

As a result of this lesson, the student will ...

- Identify the basic parts of a flower.
- Explain the function of each part of the flower.
- Define the term pollinate.





TIME

Instruction time for this lesson: **50 minutes.**



RESOURCES

National FFA Organization. (2003). LifeKnowledge Precepts and Signs of Success.



TOOLS, EQUIPMENT AND SUPPLIES

- ✓ **Picture of lily, tulips or daffodils, or actual sample of one or more of these flowers**

Prepare the five steps of making a paper flower in advance of the lesson using:

- ✓ **PALS1.6.LG.AS.A-** for the instructor
- ✓ **One copy of PALS1.6.LG.AS.B** - one per student, plus extras if needed.
- ✓ **One pair of safety scissors for each student**
- ✓ **One glue stick for each student**
- ✓ **One piece of construction paper per student.**
Use colors other than green.
- ✓ **Markers for each student**
- ✓ **Three pipe cleaners for each student** – white or yellow
- ✓ **PALS1.6.LG.TM.1**
- ✓ **Flower garden or greenhouse where flowers are grown**

KEY TERMS



The following terms are presented in this lesson and appear in *bold italics*:

Nectar
Pollen
Petals
Stamen
Pistil
Sepals



CONTENT OUTLINE

- I. Create paper flower
 - A. Color each part of the flower
 1. **Stem** – Dark green
 2. **Pistil** – Light green
 3. **Sepals** – Dark green
 4. **Petals** – Student's choice
 - B. Cut out each part of the flower and glue onto the sheet of construction paper
 - C. Discuss the function of each part of the flower
 1. **Stem** – Supports the flower and brings it food and water
 2. **Petals** – To attract insects that pollinate the plant
 3. **Pistil** – Helps flower produce seeds for growing new flowers
 4. **Sepals** – Protects the flower before it blooms
 5. **Stamen** – Collects **pollen** to fertilize flowers

INTEREST APPROACH

Show students a picture of a flower or have a real flower, available. Lilies, tulips or daffodils are best for this lesson. Find out what students know about flowers by asking them questions about flowers.



What do I have in my hand?

Responses will be it's a flower or a picture of a flower, depending on what you have.



That's right! It's a flower. Why are flowers important to us?

Answers may range from make things look pretty, smell nice, attract bees, etc.



Great answers!

Flowers are important for many reasons. They make our yards pretty in summer. They also produce seeds so new flowers can grow. That way we have flowers every year.

How many of you like honey? Without flowers, we wouldn't have honey. Bees collect **nectar** from plants and make honey from the **nectar**. Let's find out more about how flowers accomplish this work.

SUMMARY OF CONTENT AND TEACHING STRATEGIES

OBJECTIVE 1. | Identify the basic parts of a flower.



- I. Create a paper flower
 - A. Color each part of the flower
 1. **Stem** – Dark green
 2. **Pistil** – Light green
 3. **Sepals** – Dark green
 4. **Petals** – Students choice

To help students learn the parts of the flower and their function, use PALS1.6.LG.AS.A and PALS1.6.LG.AS.B to construct a paper flower. Instructions and materials can be found on PALS1.6.LG.AS.A. Find a central location where you can lay out needed materials, such as a table in front of the room or the area where you have students gathered. Show students the paper flower you created before the lesson started so they can observe what they will be making.



To help us better understand how flowers are important to us, we must first learn about each part of the flower. Each of us will create a paper flower to take home. Your flower will look similar to this one.

Hold up example of paper flower for all to see.



So let's begin.

First, we each need a few materials... When I say FLOWERS slowly and quietly walk to the front of the room and select three items: a box of colors, a pair of scissors and one glue stick.

Hold each of these items up as you name them.



When you have found these, quietly return to your seat. Let's review.

When I say what word?

Students should say Flowers.

How will you walk to the front of the room? *Elicit slowly and quietly.*

What three items do you need to get? *Box of markers, pair of scissors and one glue stick.*



Great!

FLOWERS!

As students return to their seats, give each one a copy of PALS1.6.LG.AS.B.



Does everyone have makers, scissors and glue stick? Raise your hand if you do not have these three. Good job everyone!

Does everyone have a sheet with the parts of the flower? Great! We will color the stem first. Everyone look at this sheet; the stem is here.

Hold paper up with flower parts and point to stem.



When you find the stem on your sheet, hold it up and point to it. Thank you!

We want the stem to be dark green, so look for a dark green color now. Raise your hand if you need help finding a dark green color.

Observe students to see that each finds a dark green color.



When you hear the word COLOR begin coloring the stem. When finished, lay your color down and wait for the next instruction.

COLOR!

As students finish coloring the stem, instruct them to color the pistil next.



The next part of the flower we will color is the **pistil**. When you find the pistil on your page, point at it and say, “bang.”

Watch to see that all students find the pistil.



Find a light green color and hold it in the air. Keep your hands up. When I say BANG, color the **pistil**.

BANG

After students finish coloring the pistil, instruct them to color the two sepals dark green, just like the stem.



Next we will color the **sepals**. There are two of them, they look like leaves. When you find the **sepals**, put one hand on top of your head. Find the same dark green color you used for the stem. As soon as you find it, color the two **sepals**.

The petals are the only parts left to color. Students can choose any color they want but it would be best to not use green so the other flower parts stand out.



So what part is left on the paper? The **petals**, that's right! You may choose to color the three **petals** any color you want. What are some colors that we may see on flower **petals**? When you find the color you like, color all three **petals**. What questions are there? Begin coloring.



As students are coloring the **petals**, place a piece of construction paper at each of their work stations.

OBJECTIVE 2: | Explain the function of each part of the flower.



B. Cut each part of the flower out and glue onto the sheet of construction paper

C. Discuss the function of each part of the flower

1. **Stem** – Supports the flower and bring it food and water
2. **Petals** – To attract insects that pollinate the plant
3. **Pistil** – Helps flower produce seeds for growing new flowers
4. **Sepals** – Protects the flower before it blooms
5. **Stamen** – Collects **pollen** to fertilize flowers



Now that our flower is colored, we need to cut each part out and correctly place it on the paper. We will start with the stem. Everyone find your scissors, but don't begin cutting until I say CUT.

Pause until everyone has found their scissors.



It looks like everyone has found their scissors. Cut only the stem out and then put the scissors down. Be very careful to cut neatly around the stem. If you need help, raise your hand.

CUT

After everyone has cut the stem out, instruct them to glue it to the bottom of the construction paper near the center. Once this is accomplished, discuss the function of the stem.



Now that we have the stem cut out, we will glue the stem to the construction paper. Find your construction paper. Lay it on your desk horizontally.

Show students what horizontally means by holding up the construction paper in the horizontal position.



We want the flower to be toward the center of the construction paper. The stem needs to be placed near the bottom edge and toward the middle of the construction paper. Look at where the stem is on my paper flower.

Show construction paper with Step 1 from PALS1.6.LG.AS.A.



Find that same spot on your construction paper. Did you find it? Excellent!

Next, find your glue stick and place a small amount of glue on the side of the stem that is not colored. Now, place the wide side of the stem pointing up and glue to the construction paper in the spot we just found.

After students glue the stem to the paper, discuss the function of the stem.



Can anyone tell me what the stem does for the flower? Stand up if you think you know.

Wait for student response, you may or may not get any.



Some of you guessed right, the stem holds up the flower. It also brings food and water from the soil to make the flower grow.

Next cut the petals out and glue on to the paper, making sure the base of the petal touches the stem.



Next carefully cut out all three **petals**. When you have them cut out, we will glue them near the stem. Each petal must touch the stem.

Show construction paper with Step 2 from PALS1.6.LG.AS.A.

After students have petals glued to the construction paper, discuss the function of the petals.



Who can tell me why the **petals** are important on a flower? Point to your nose if you have an answer?

Pause for a moment for student response.



You're right, the **petals** make the flower pretty, but they also attract insects to help **pollinate** them. Pollinating means the flower is fertilized and will produce seeds so we can have more flowers!

Next cut the pistil out, glue onto flower and explain the function.



The next part of the flower is the **pistil**. The **pistil** has a slim part, so we will have to cut very carefully. Find your scissors and cut around the pistil. Raise your hand if you need help.

*After students have cut the **pistil** out, instruct them to place it on the top side of the stem.*



Please look at the example of the paper flower.

Show construction paper with Step 3 from PALS1.6.LG.AS.A.



Notice that the **pistil** sits on top of the stem. The wide part of the **pistil** is at the bottom and the slim, long part is pointing up. Place a small bit of glue on the side of the **pistil** that is not colored and glue to the top side of the stem.

*After students glue the **pistil** to the **stem**, discuss its main function.*



The **pistil** has a very special function. How many of you remember at the beginning of the class, I said that flowers make seeds? Good. Some of you were really listening. The **pistil** is where the seed is made in the plant. Without this, the plants would die and we would have no more flowers!

*Instruct students to cut out the two sepals. These will be glued where the **pistil** and stem meet.*



Our flower now needs the two **sepals**. Remember, they look like the leaves. Again be careful as you cut around them. Take a few moments and cut the two sepals out.

Now that you have cut out the two **sepals**, we will place them on each side of the stem next to where the bottom of the **pistil** is. Again, look at the example I am holding up.

Show construction paper with Step 4 from PALS1.6.LG.AS.A. Point to the area where the sepals are glued on.



Do you see where the sepals go? Look at me and nod your head if you see where to glue the **sepals**.

Good! Place glue on the side which is not colored and place the **sepals** in the correct spot.

*Once students have the **sepals** in place, discuss the function.*



The **sepals** look like leaves but they have a very important job. Before the flower blooms, it is a baby flower, called a bud. The **sepals** cover the bud up like a pair of hands to protect it.

Clasp your hands together to demonstrate this.



When the flower grows, the **sepals** open and the flower petals unfold. The **sepals** remain at each side of the flower.

*Slowly unclasp you hands while keeping the base of your wrists together and palms facing each other to simulate the **sepals** opening up for the flower.*

*The last part of the flower is the **stamen**. These are represented by the pipe cleaners. Pass out three pipe cleaners to each student. You will need to bend the top half inch of the pipe cleaners to form an L shape. Demonstrate this for students.*



We are now ready for the last part of the flower. It is called the **stamen**. Each of you has three pipe cleaners. Pick one up and place your thumb and index finger about one-half inch from the top.

You will need to show them what one-half inch looks like.



Now bend the top over to form an L. Do this with the other two pipe cleaners.

Now we are ready to glue the **stamen** on to the flower. Make sure the bent end is up and the straight end touches the bottom of the **stamen**. Notice where the **stamen** are on the example.



Show construction paper with Step 5 from PALS1.6.LG.AS.A.



Place glue on each end of the **stamen** and glue in place.

OBJECTIVE 3: | Define the term pollinate.



Discuss the function of the stamen. Show students the bee and flower on PALS1.6.LG.TM.1. to illustrate pollen and pollination.



The **stamen** is another very important part of the plant. It produces a yellow, powdery-looking material called **pollen**. **Pollen** is the fertilizer that helps the plants produce seeds. When the plant is fertilized, this is called **pollination**.



An insect, like a honey bee, comes to the flower for nectar. The **pollen** sticks to its legs. It then flies to the next flower and some of the pollen falls into the **pistil**. The flower is now **pollinated** and can produce seeds.



REVIEW / SUMMARY

Instruct students to cut out the labels that remain on PALS1.6.LG.AS.B. You may need to hand out some extra in case the labels were cut up accidentally. To review, use the following riddle. As the students solve the riddle, they will glue the labels onto the proper parts of the flower. You may need to assist some in finding the correct labels.



We have one last thing to do. Label the flowers. First, cut out all the names of the flower parts and place them on you desk where you can see them. Take a few moments and do this now.

Let's find out how much we remember. I will give you a riddle, and you will see if you can find the answer to the riddle among the plant names. Once we solve each riddle, we will then glue the names of the flower parts on to the flower. Place both your hands on your head if you have your labels and are ready to play. Excellent!

Riddle 1: My color and fragrance attract insects to the flower. I give the flower beauty. What is my name? (answer: **petal**). Great! Find the **petal** labels and glue them on the **petals** of the flower.

Riddle 2: My job is to produce seeds for the flower. I am usually found in the center of the flower. What's my name? (answer: **pistil**) That's right, **pistil**. Glue the name **pistil** on to the flower's **pistil**.

Riddle 3: I make the pollen that sticks to insect legs. I help fertilize the flowers. What's my name? (answer: **stamen**). Correct: Glue the name **stamen** onto the pipe cleaners.

Riddle 4: I support the flower and bring it food and water. What's my name?
(answer: **stem**) Outstanding! Glue the name **stem** onto the proper part of the flower.

Riddle 5: I protect the flower when it is just a bud. I look like small leaves.
What's my name? (answer: **sepal**) Super! Place the **sepal** name on the flower.



You all did an awesome job today creating your flowers and learning about each part. Take your flowers home and share what you learned today. When we next meet, I will ask you to name the parts and functions of the flower. Have fun sharing!



APPLICATION

One-on-One Idea

Gather different flowers from a garden and identify the parts.

Continued Discussion

Take small group of students outside and look for insects collecting pollen.



PALS1.6.LG.ASSESS.A | EVALUATION ANSWER KEY

1. B
2. D
3. E
4. A
5. C

PALS1.6.LG.ASSESS.A

Match the pictures on the right with the name and functions on the left:

1. _____



A. Pistil – Produces seeds

B. Petals – Attract insects

2. _____



C. Sepals – protect flower bud

D. Stem – Supports flower

3. _____



E. Stamen – Produces pollen

4. _____



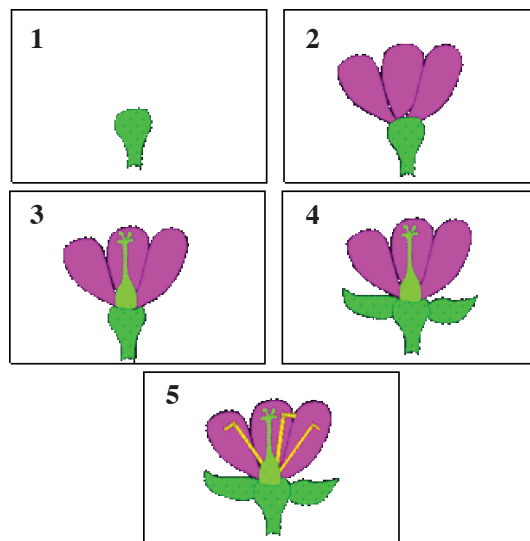
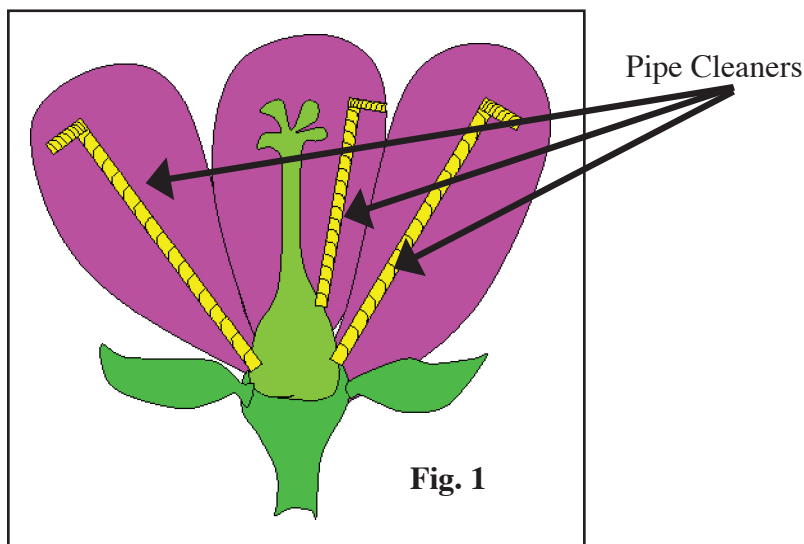
5. _____



PALS1.6.LG.AS.A

Create a Paper Flower

Create a paper flower using flower parts from PALS1.6.AS.B and white or yellow pipe cleaners as the stamen.



Note: Create each of the steps on 5 pieces of construction paper. Step 5 represents the completed paper flower. Use each piece for visual reference during instruction.

Each student needs the following materials:

- 1) PALS1.6.LG.AS.B – Parts of the flower handout
- 2) Colors or markers
- 3) 1 piece of construction paper – any color but green
- 4) Scissors
- 5) 3 pipe cleaners
- 6) Glue stick

Step 1: Color each part of the flower according the following chart:

- a. Stem – Dark Green
- b. Pistil – Light Green
- c. Sepals – Dark
- d. Petals – Student Choice – (Suggestions pink, blue, red, lavender, orange)

Step 3: Carefully cut each part of the flower out and each label.

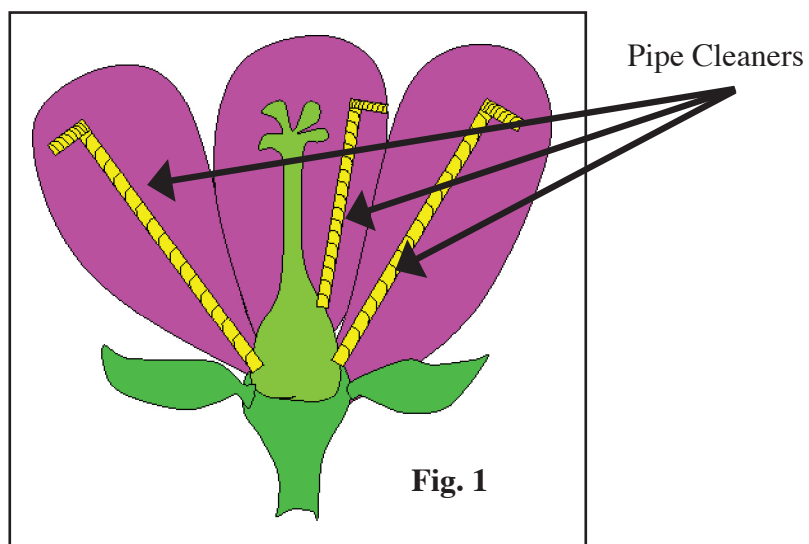
Step 4: Place the parts of the flower on the sheet of construction paper to form the flower shown in Fig.1 above.

PALS1.6.LG.AS.A *(continued)*

Step 5: After correctly arranging the flower parts, glue each part to the construction paper beginning with the stem, then sepals, pistil and finally the petals.

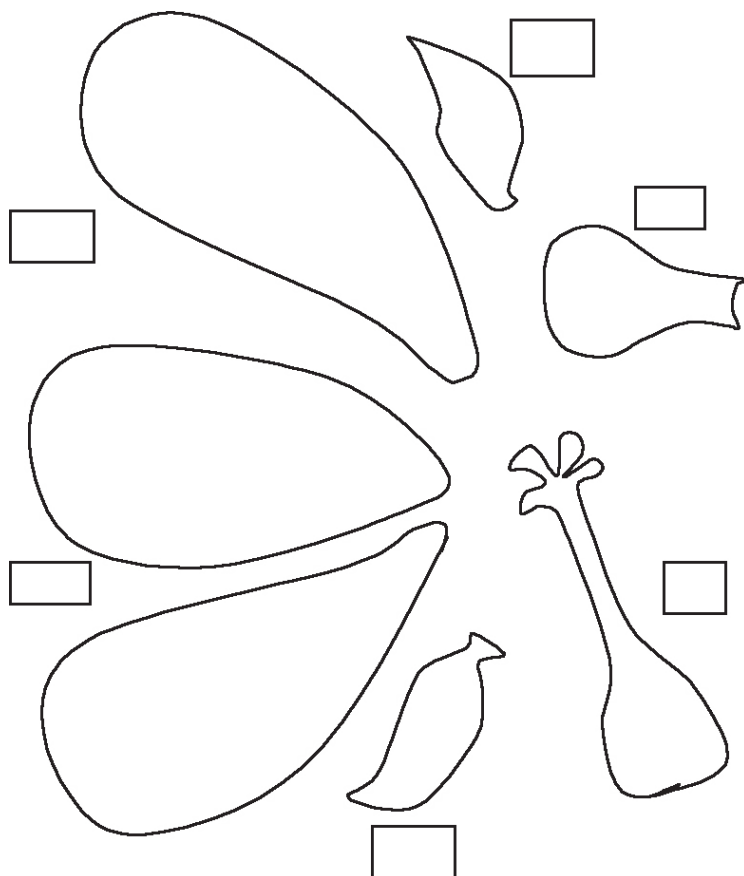
Step 6: After gluing the parts of the flower to the construction paper, select three pipe cleaners. Bend the top of each pipe cleaner over, about half to form an upside down L. Glue the pipe cleaners on as shown in Fig.1 (below). These represent the flower's stamen.

Step 7: Now glue each label on to the correct part of the flower.



PALS1.6.LG.AS.B

Color the Parts of the Flower



Stamen

Stamen

Stamen

(Used with pipe cleaners)

PALS1.6.LG.TM.1

Bee Pollinating Flower

