



DISCOVER 4-H CLOVERBUD



PLANTS AND ANIMALS



DISCOVER

Elizabeth Davis | Madison McCann | Stacey MacArthur
Utah State University Extension

Description

The Discover 4-H Clubs series guides new 4-H volunteer leaders through the process of starting a 4-H club or provides a guideline for seasoned volunteer leaders to try a new project area. Each guide outlines everything needed to organize a club and hold the first six club meetings related to a specific project area.

Purpose

The purpose is to create an environment for families to come together and participate in learning activities while spending time together as a multi-family club. Members will experiment with new 4-H project areas.

What is 4-H?

4-H is one of the largest youth development organizations in the United States. 4-H is found in almost every county across the nation and enjoys a partnership between the U. S. Department of Agriculture (USDA), the state land-grant universities (e.g., Utah State University), and local county governments.

4-H is about youth and adults working together as partners in designing and implementing club and individual plans for activities and events. Positive youth development is the primary goal of 4-H. The project area serves as the vehicle for members to learn and master project-specific skills while developing basic life skills. All projects support the ultimate goal for the 4-H member to develop positive personal assets needed to live successfully in a diverse and changing world.

Participation in 4-H has shown many positive outcomes for youth. Specifically, 4-H participants have higher participation in civic contribution, higher grades, increased healthy habits, and higher participation in science than other youth (Lerner et al., 2005).

Utah State University is committed to providing an environment free from harassment and other forms of illegal discrimination based on race, color, religion, sex, national origin, age (40 and older), disability, and veteran's status. USU's policy also prohibits discrimination on the basis of sexual orientation in employment and academic related practices and decisions. Utah State University employees and students cannot, because of race, color, religion, sex, national origin, age, disability, or veteran's status, refuse to hire; discharge; promote; demote; terminate; discriminate in compensation; or discriminate regarding terms, privileges, or conditions of employment, against any person otherwise qualified. Employees and students also cannot discriminate in the classroom, residence halls, or in on/off campus, USU-sponsored events and activities. This publication is issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Kenneth L. White, Vice President for Extension and Agriculture, Utah State University.



Utah 4-H

4-H is the youth development program of Utah State University Extension and has more than 90,000 youth participants and 8,600 adult volunteers. Each county (Daggett is covered by Uintah County) has a Utah State University Extension office that administers the 4-H program.

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.

4-H Clubs

What is a 4-H Club? The club is the basic unit and foundation of 4-H. An organized club meets regularly (once a month, twice a month, weekly, etc.) under the guidance of one or more volunteer leaders, elects its own officers, plans its own program, and participates in a variety of activities. Clubs may choose to meet during the school year, only for the summer, or both.

Club Enrollment

Enroll your club with your local Extension office. Each member will need to complete a Club Member Enrollment form, Medical History form, and a Code of Conduct/Photo Release form (print these from [the www.utah4h.org](http://www.utah4h.org) website or get them from the county Extension office).

Elect Club Officers

Elect club officers during one of your first club meetings. Depending on how many youth are in your club, you can decide how many officers you would like. This will typically include a president, vice president, pledge leader, and secretary. Other possible officers or committees are: song leader, activity facilitator, clean-up supervisor, recreation chair, scrapbook coordinator, contact committee (email, phone, etc.), field trip committee, club photographer, etc. Pairing older members with younger members as Sr. and Jr. officers may be an effective strategy to involve a greater number of youth in leadership roles and reinforce the leadership experience for both ages. Your club may decide the duration of officers 6 months, 1 year, etc.



A Typical Club Meeting

Follow this outline for each club meeting:

- Call to order—president
- Pledge of Allegiance and 4-H Pledge—pledge leader (arranges for club members to give pledges)
- Song—song leader (leads or arranges for club member to lead)
- Roll call—secretary (may use an icebreaker or get acquainted type of roll call to get the meeting started)
- Minutes of the last meeting—secretary
- Business/Announcements—vice president
- Club Activity—arranged by activity facilitator and includes project, lesson, service, etc. These are outlined by project area in the following pages.
- Refreshments—arranged by refreshment coordinator
- Clean Up—led by clean-up supervisor



Essential Elements of 4-H Youth Development

The essential elements are about healthy environments. Regardless of the project area, youth need to be in environments where the following elements are present in order to foster youth development.

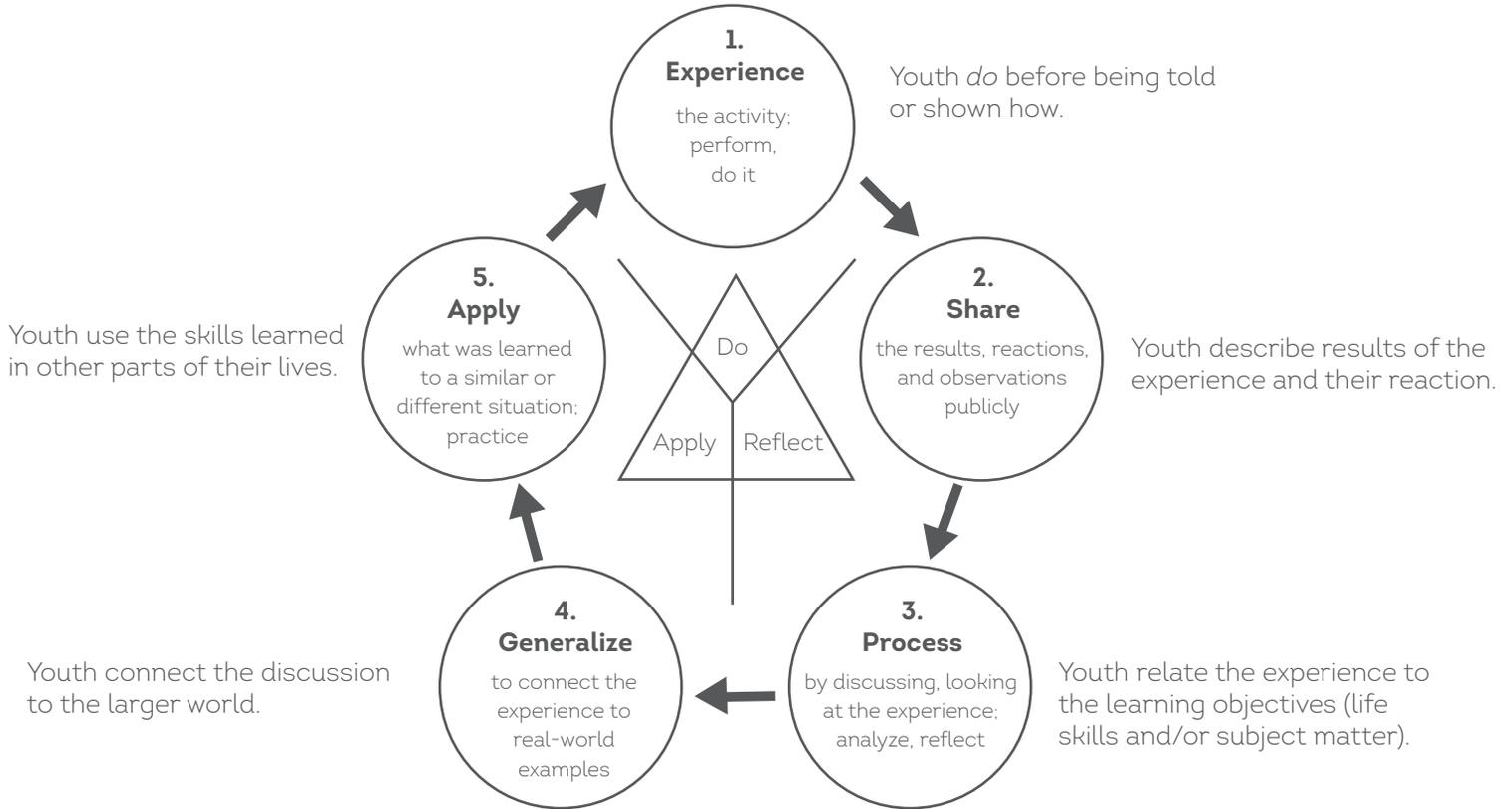
1. **Belonging:** a positive relationship with a caring adult; an inclusive and safe environment.
2. **Mastery:** engagement in learning, opportunity for mastery.
3. **Independence:** opportunity to see oneself as an active participant in the future, opportunity to make choices.
4. **Generosity:** opportunity to value and practice service to others.

(Information retrieved from: <http://www.4-h.org/resource-library/professional-development-learning/4-h-youth-development/youth-development/essential-elements/>)



4-H “Learning by Doing” Learning Approach

The Do, Reflect, Apply learning approach allows youth to experience the learning process with minimal guidance from adults. This allows for discovery by youth that may not take place with exact instructions.



4-H Mission Mandates

The mission of 4-H is to provide meaningful opportunities for youth and adults to work together to create sustainable community change. This is accomplished within three primary content areas, or mission mandates - citizenship, healthy living, and science. These mandates reiterate the founding purposes of Extension (e.g., community leadership, quality of life, and technology transfer) in the context of 21st century challenges and opportunities. (Information retrieved from: http://www.csrees.usda.gov/nea/family/res/pdfs/Mission_Mandates.pdf)

- 1. Citizenship:** connecting youth to their community, community leaders, and their role in civic affairs. This may include: civic engagement, service, civic education, and leadership.
- 2. Healthy Living:** promoting healthy living to youth and their families. This includes: nutrition, fitness, social-emotional health, injury prevention, and prevention of tobacco, alcohol, and other drug use.
- 3. Science:** preparing youth for science, engineering, and technology education. The core areas include: animal science and agriculture, applied mathematics, consumer science, engineering, environmental science and natural resources, life science, and technology.

Getting Started

1. Recruit one to three other families to form a club with you.
 - a. Send 4-H registration form and medical/photo release form to each family (available at utah4h.org).
 - b. Distribute the Discover 4-H Clubs curriculum to each family.
 - c. Decide on a club name.
 - d. Choose how often your club will meet (e.g., monthly, bi-monthly, etc.).
2. Enroll as a 4-H volunteer at the local county Extension office (invite other parents to do the same).
3. Enroll your club at the local county Extension office.
 - a. Sign up to receive the county 4-H newsletter from your county Extension office to stay informed about 4-H related opportunities.
4. Identify which family/adult leader will be in charge of the first club meeting.
 - a. Set a date for your first club meeting and invite the other participants.
5. Hold the first club meeting (if this is a newly formed club).
 - a. See *A Typical Club Meeting* section above for a general outline.
 - i. Your activity for this first club meeting will be to elect club officers and to schedule the six project area club meetings outlined in the remainder of this guide. You may also complete a-d under #1 above.
 - b. At the end of the first club meeting, make a calendar outlining the adult leader in charge (in partnership with the club president) of each club meeting along with the dates, locations, and times of the remaining club meetings.
6. Hold the six project-specific club meetings outlined in this guide.
7. Continue with the same project area with the 4-H curriculum of your choice (can be obtained from the county Extension office) OR try another Discover 4-H Club project area.



Other Resources

Utah 4-H website: www.Utah4-h.org

National 4-H website: www.4-h.org

4-H volunteer training:

To set up login:

<http://utah4h.org/volunteers/training/>

To start modules: (password = volunteer)

References

Information was taken from the Utah 4-H website (utah4h.org), the National 4-H website (4h.org), the Utah Volunteer Handbook, or as otherwise noted.

Lerner, R., M. et al. (2005). Positive youth development, participation in community youth development programs, and community contributions of fifth grade adolescents: Findings from the first wave of the 4-H Study of Positive Youth Development. *Journal of Early Adolescence*, 25(1), 17-71.

We would love feedback or suggestions on this guide; please go to the following link to take a short survey:

Go to <https://goo.gl/iTfiJV> or [Click here to give your feedback](#)

4-H CLOVERBUD PLANTS & ANIMALS CLUB *Meetings*



Club Meeting 1

Growing in the Garden 2



Club Meeting 2

Down on the Farm 5



Club Meeting 3

Birds 8



Club Meeting 4

Plants 11



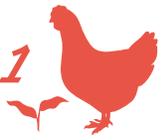
Club Meeting 5

We Love Pets 15



Club Meeting 6

Visit to the Zoo 18



Activity 1 Supplies

- Several different types of seeds
- Paper plates
- Trail mix
- Small paper cups
- The Tiny Seed by Eric Carle

Activity 2 Supplies

- Two 3-liter plastic bottles
- Several small baby food jars
- Small assorted silk flowers
- Green play dough
- Cardboard egg cartons
- Gold spray paint
- Dirt
- Seeds
- Water
- Ribbon
- Potting soil

INTRODUCTION

Seeds are important, because we wouldn't have all our delicious produce without them! When planted and nourished, seeds turn into the things we eat every day. It's important to know how to plant and take care of seeds so we can grow fruits and vegetables and someday teach our kids and grandkids to grow them too.

PRIOR TO MEETING

- Learn the song "Plant a Seed"

(To the tune: "London Bridges")

"Plant a seed and water it

Water it, water it

Plant a seed and water it

Then we'll watch it grow.

Make sure that it is in the sun

In the sun, in the sun

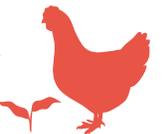
Make sure that it is in the sun

Then we'll watch it grow.

Adapted from: www.hummingbirded.com

Activity #1

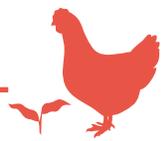
Which seed is it?



Which Seed is it?

TIME: 7-10 Minutes

1. Place several different kinds of seeds on a paper plate. Talk about the seeds and why they are different.
2. Ask the children what they think the seeds would become if you planted them. Make sure you remember what kind of seed each is.
3. Describe to the group some of the fruits or vegetables that the seeds will become and see if they can guess which seed you are talking about.

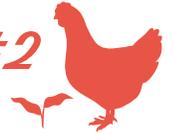


4. Try to find a trail mix that has lots of seeds, nuts, and raisins. Give each child a paper cup with a scoop of trail mix in it. Have them identify the seeds and nuts. Ask them to tell you which seeds they like and which ones they don't.
5. Read the book, *The Tiny Seed* by Eric Carle, to the group. Ask them if they think all plants came from a tiny seed.
6. Ask them how many seeds are in fruits and vegetables like peaches, apricots, apples, pears, oranges, peas, peppers, potatoes, etc.

Mini Greenhouse

TIME: 7-10 Minutes

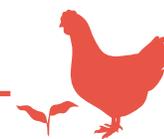
Activity #2 Mini Greenhouse



1. Cut all the way around the plastic bottle about 4 inches down from the top.
2. Fill the bottom 4-6 inches of the bottle with dirt. Plant the seeds and water them a little.
3. Place the top back on to cause dew to be collected for self watering.
4. Place in a sunny window. Wait until the plant is big enough to plant outside, then transplant.
5. Give each child a small amount of green play dough. Have them shape it like grass and put it in the lid of the jars (the lid will be the base of the jar).
6. Let the children choose several silk flowers and poke them in the dough. Screw the lid and the jar together. Tie a ribbon around the base of the jar.
7. Cut the lid off of the cardboard egg cartons. You could give each child their own carton and 12 seeds or cut the cartons in thirds so that each child only plants four seeds.
8. Fill egg sections with potting soil and plant the seeds in each section according to the directions on the package. Once the children have planted the seeds, sprinkle with water until the soil is moist, but not dripping wet.
9. Let the children take their cartons home and if they want, when the plants have reached 1-2 inches in height, they can transplant them into their own gardens. They can plant the egg sections right in the ground. Make sure to water them after planting.

REVIEW

A seed is a part of a flowering plant involved in reproduction. It consists of three major parts: embryo, endosperm, and testa. The embryo is produced when male and female elements are combined during reproduction. It will eventually grow into a new plant. The endosperm is a collection of stored food the young plant will use as it begins to germinate, or grow. The testa is a tough outer layer that protects the embryo and endosperm from damage by outside factors. Seeds are produced when pollen is released from the male (stamen) part of a plant. That pollen comes into contact with the ovules of the female (pistil) parts of a plant. Some kinds of plants contain both male and female organs on the same plant. In that case, self-fertilization can occur when pollen from one part of the plant fertilizes ovules on another part of the same plant.



Reflect

- What new skills did you learn today?
- What helps a seed grow?
- How do you care for a garden?

Apply

- Why are seeds important?
- How can you use what you learned at home?
- Where else can you find seeds besides in produce?

4-H MISSION MANDATES

Identify from citizenship, healthy living and/or science and explain why.

Science

The process in which plants grow is a long and slow one. Seeds require a certain amount of water, certain amount of sunlight, and the right soil. Careful attention and precision is needed to help the seeds become the plants they are supposed to be.

ESSENTIAL ELEMENTS

Identify tips to include during the lesson and how it applies.

Belonging

Club members work in teams to complete projects.

Independence

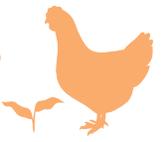
The discussions are based on club member's effort, and projects are largely self-led.

Resources:

The Tiny Seed by Eric Carle Publisher: Aladdin Library; ISBN: 0689842449
<http://www.encyclopedia.com/plants-and-animals/botany/botany-general/seed>

Play Dough

Mix 1 c. flour, 1 c. water, ½ c. salt, 1 tsp. cream of tartar, and 1 tbsp. oil together, and cook in a pan over medium heat until it forms a ball. Add green food coloring, and knead to incorporate color. Let the mixture cool before using.



Activity 1 Supplies

- Hay
- Pellets
- Leaves
- Fruit
- Mud
- Glue
- Scissors
- Bucket
- Paper plates
- Markers
- Crayons
- Cotton balls
- Small animal toys
- Construction paper
- Large popsicle sticks
- *The Little Red Hen* by Carol Ottolenghi and Regie Holladay
- Animal pictures or toy animals

Activity 2 Supplies

- Plastic cow, pig, and chicken
- Several latex gloves
- Water
- Bucket
- Push pin
- Various food containers/boxes that came from one of these animals (e.g. milk cartons, butter cartons, chicken nuggets, etc.)
- Transportation for the group

INTRODUCTION

The children will observe the work that goes on around a farm by “participating” in farm chores. They will become familiar with the livestock and crops that are raised on a farm by classifying which products come from animals or crops. Through this lesson the children will learn how crops go from the farm to our homes and the dinner table. They will experience some of the responsibilities of the farmer and his role on the farm.

PRIOR TO THE MEETING

Learn the songs “Old Macdonald Had a Farm” and “On the Farm” (to the tune of London Bridges Falling Down) in order to teach the group and sing them together. Find all the small animal toys beforehand as well as the food containers.

Activity #1

Who am I?



WHO AM I?

TIME: 7-10 Minutes

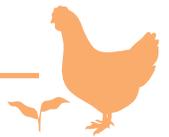
1. Place the toy animals in the bucket. Choose one child to be “it.” That child will choose an animal from the bucket and try to act it out without making any sounds.
2. If the group can’t guess what animal it is, then have the child make the animal sounds. Keep playing until each child has had a turn to be “it.”
3. Make a list of all the animals named in the book, *The Little Red Hen*, or come up with a few more of your own (red hen, pig, duck, horse, cow, sheep, goat, etc.).
4. Have the children choose one animal they would like to be. If there is a large group, there can be more than one of each animal.
5. Give each child a paper plate and have them use the crayons, markers, cotton balls, construction paper, etc., to decorate the plate to look like the animal that they have chosen.
6. When they have finished decorating the plate, help them glue the tongue depressor to the paper plate. As you read the book, *The Little Red Hen*, have the animal characters hold up their “faces” and act out the animal.

Adapted from: www.hummingbirded.com

FARM PRODUCTS

TIME: 7-10 Minutes

1. Sit in a circle and pass out the food boxes, containers, etc. Have each child talk about the container they have and place it next to the animal that produces it. Give hints if they look a bit confused or undecided, by making the appropriate animal sound.
2. Poke small holes in the fingertips of the gloves. Fill the gloves with water and tie off at the end. Have the children take turns "milking the cow" into the bucket.
3. (Optional) Take the whole group for a visit to a farm. Arrange for the farmer to be there to show the group around. Have him/her talk about the animals, how they eat, sleep, and the food that is produced on the farm.



Reflect

- What animals are raised on a farm?
- What products come from a farm?
- What is the farmer's job?

Apply

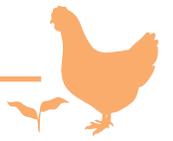
"Half a century ago, family farms were prevalent. Animals grazed on pasture, breathing fresh air, and feeling sunshine on their backs. During inclement weather, they were sheltered in straw-bedded barns.

In contrast, the rearing of farm animals today is dominated by industrialized facilities (commonly referred to as "factory farms") that maximize profits by treating animals not as sentient creatures, but as production units. Raised by the thousands at a single site, animals are confined in such tight quarters that they can scarcely move, let alone behave normally. Such production creates what appear to be "cheap" meat, eggs, and dairy products. But what at the cash register seems inexpensive in fact costs dearly to farm animals, the environment, rural and traditional farming, human health, and food quality and safety.

Over 9 billion chickens, pigs, cattle, turkeys, sheep, goats, ducks, and geese are bred, raised, and killed for food annually in America. Each is a social, feeling individual capable of experiencing pleasure. The vast majority, however, are only familiar with deprivation, fear, and pain." (<https://awionline.org/content/farm-animals>)

- What new skills did you learn from this club meeting?
- Why is it important to know about farm animals?
- How can we help farm animals thrive?





4-H MISSION MANDATES

Science

The kids in the group are learning how animals eat, sleep, and thrive in their own environments. It's important to know how animals benefit our environment as well as how we can benefit theirs.

ESSENTIAL ELEMENTS

Mastery

The group is given the opportunity to master animals' environments, sounds, and lifestyles.

References:

The Little Red Hen by Carol Ottolenghi and Regie Holladay

www.hummingbirded.com

<https://awionline.org/content/farm-animals>





Activity 1 Supplies

- Birdseed
- Sponges
- Plastic plates
- Large mixing bowl
- Spoon
- 1 c. chocolate chips and/or peanut butter chips
- Muffin pan or baking sheet
- Aluminum foil or wax paper
- Candy that looks like bird eggs (peanut M&M's, jelly beans, etc.)
- Bird pictures
- 1 1/2 c. chow mein noodles and/or cereal (crispy rice, cornflakes, etc.)

Activity 2 Supplies

- Heavy cardboard
- String
- Birdseed
- Scissors
- Peanut butter
- Pencils
- Hole punch
- Yarn
- Pine cones
- Birdseed

PRIOR TO THE MEETING

- Learn the songs "Bird Wings" and "Five Little Ducks" to sing with your group.

INTRODUCTION

The children will observe birds and their homes. This lesson will allow the children to explore where birds live and observe them as they eat from bird feeders.

Activity #1 Making Nests



MAKING NESTS

Time: 7-10 Minutes

1. Place a sponge soaked with water in a plastic plate or bowl and let the children sprinkle it with birdseeds. Place the plate in a sunny place and watch for the seeds to sprout. The seeds will continue to sprout as long as the participants keep water in the plate.
2. Put a piece of aluminum foil or waxed paper on top of a muffin pan or flat baking sheet. If using a muffin pan, make indentations in the paper or foil in each of the depressions. Melt the chocolate chips in the microwave or in a double boiler (do not overheat!). When the chips are melted, mix the chocolate with the chow mein noodles or cereal in a large bowl. Working quickly before the chocolate solidifies, put a few spoonfuls of the chocolate mixture in each cup of the muffin pan, forming little nests. Have the children put a few egg-shaped candies in each of the little nests. Let the nests cool as you talk about how a bird makes its nest. Ask the children about the other types of bird homes they know of.





3. Have participants look at the various pictures of birds. Using the pictures, ask them with picture if that bird can fly. Explain that some birds can't fly. Discuss the reasons why some birds can't fly.

Activity #2

Bird Feeders



BIRD FEEDERS

Time: 10 Minutes

1. Make templates out of paper of a variety of birds. Have the children choose one template to trace around onto cardboard. Cut out the shape and punch a single hole at the top, then spread peanut butter all over the shape. Sprinkle birdseed over the bird shape, attach string and hang outside on a tree branch for birds to visit.
2. Cut a long piece of yarn or ribbon to hang the bird feeder. Tie the ribbon in a knot around the pine cone near the top. Spread peanut butter on the pine cone, then sprinkle birdseed over the pine cone. Hang the bird feeder on the tree.
3. Does it fly? Talk about different kinds of birds and whether or not they can fly.





Reflect

- Name three birds that can fly and three that can't.
- What is something that makes birds that fly different from birds that do not fly?

Apply

"Unlike man, who has always dreamt of flying, some birds will eagerly shed this evolutionary advantage if it no longer suits them. To remain airborne it helps if you have hollow bones to keep the baggage limit down."

- How do we use knowledge about flight in everyday life?
- How has the use of flight helped mankind?

4-H MISSION MANDATES

Science

The group will explore why some birds fly and some birds can't. This in turn will help them understand why humans have never been able to fly and the biological differences between our two species.

ESSENTIAL ELEMENTS

Belonging

Club members work in teams to complete projects.

Independence

The discussions are based on club member's effort, and projects are largely self led.

Resources:

www.enchantedlearning.com

<https://www.howitworksdaily.com/question-of-the-day-can-you-tell-if-a-coconut-is-mouldy/>



Activity 1 Supplies

- Oranges
- Tomatoes
- Peaches
- Plums
- Pears
- Apples
- A variety of fruits and vegetables
- Paper plates
- Fruit and vegetable pictures

Activity 2 Supplies

- Wax paper
- Water
- Two bowls
- Sponge

Activity 3 Supplies

- A white carnation for each child (or celery stalk)
- Baby food jar for each child
- Food coloring
- Small fish bowl or a large jar for each bowl
- Soil
- Small rocks
- Carrot seeds (root)
- Bean seeds (seeds)
- Lettuce seeds (leaves)
- Broccoli seeds (stalk)

PRIOR TO THE MEETING

Learn: Roots, Stems, and Leaves

CHORUS

Roots, stems, leaves, flowers, fruits and seeds. That's six parts, six parts, six plant parts that people need. The roots hold the plant in the ground, They gather up the water that falls around. And there's a root inside of me Because a carrot is a root that I like to eat. That's six parts, six parts, six plant parts that people need

CHORUS

A stem is an elevator growing up from the ground, The water goes up and the sugar back down. And there's a stem inside of me Because celery is a stem that I like to eat.

The leaves are the kitchens where the food is done They breathe the air and catch rays from the sun. And there's a leaf inside of me. Because lettuce is a leaf that I like to eat.

CHORUS

The flowers are dressed so colorfully, They hold the pollen and attract the bees. And there's a flower inside of me. Because cauliflower is a flower I like to eat.

The fruit gets ripe, then falls on down. It holds the seeds and feeds the ground. And there's a fruit inside of me. Because an apple is a fruit that I like to eat.

CHORUS

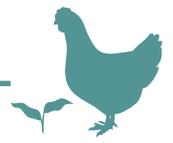
The seeds get buried in the earth, And the cycle starts again with a new plant's birth. And there are seeds inside of me. Because sunflower is a seed that I like to eat.

CHORUS

Now you know what this whole world needs, It's roots, stems, leaves, flowers, fruits and seeds. There's six plant parts inside of me. Because a garden salad is what I like to eat.

Adapted from: www.hummingbirded.com



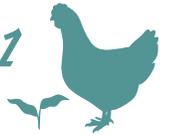


INTRODUCTION

The children will be able to identify and name the parts of a plant. They will recognize the ways in which plants help us by naming things we use that come from plants. We can see vegetation and plants all around us. This activity helps children become familiar with the parts of plants and the ways in which we use them. They will be able to see how many of the foods we eat come from plants.

Activity #1

Fruits and Vegetables



FRUITS AND VEGETABLES

Time: 5-7 minutes

1. Show the group one-half of each of the fruits. Help them observe and identify the placement of the seeds in each piece of fruit. Have the children group the fruits by how many seeds each one has. Ask the children if they think each of those fruits came from a tiny seed like the one they found inside the fruit.
2. Set up a tray with the different fruits and vegetables (apples, cucumbers, oranges, pears, green peppers, plums, etc.). Encourage the children to touch the items on the tray. Cut open one fruit and one vegetable. Ask them what is on the inside of both the fruit and the vegetable that is the same? (seeds) Explain that a new plant will grow from the seed. Seeds are found in the fruit of the plant. Cut open the rest of the fruits and vegetables.
3. Place each different fruit and vegetable seed on a paper plate labeled with a picture of that fruit or vegetable. Ask the children to tell you about each seed's color (white or brown). Keep asking questions about size (big or small), shape (flat or round), and the feel of the covering (smooth or rough). Have the children sort and classify the seeds by answering the previous questions.

Activity #2

Roots



ROOTS

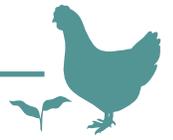
Time: 7-9 minutes

1. Put a few drops of water onto the wax paper. Help the children observe how the water droplets roll around the wax paper (notice how the wax does not allow the water to soak through the paper). Tell the children that plants have a waxy skin too. Explain that this shows how the wax coating of the plant keeps water from escaping from the inside of the plant.
2. Fill one of the bowls with water. Dip the sponge into the water. Make sure all the children see the sponge soak up the water. Squeeze the water out of the sponge into the other bowl. Have the children look at how much water came out of the sponge to see how much the sponge can hold. Teach the children that this is similar to the way roots soak up water when you water the plants.

EDIBLE ROOTS

Time: 7-9 minutes

1. Fill each jar with clean water. Put five drops of food coloring in the jars of water and stir. Place a carnation in each jar. Let the children take them home and watch as the petals of the flower begin to turn the same color as the food coloring they put in their jar. Explain that this shows how the plant “drinks” up the water.
2. Line the bottom of the fish bowl or jar with rocks about 1-2 inches in depth. Fill the rest of the bowl with soil. Plant the seeds very close to the edge of the bowl so they are visible from the outside. Put the jar in a sunlit area and make sure the children water it regularly without over watering. Watch as the plant parts grow. Growing side by side, the children will easily see that the roots of one (the carrot) are edible but the roots of the others are not.



Reflect

- What types of fruit come from a pit seed?
- How do plants get their water?
- What are the four parts of a plant?

Apply

- What were some differences you found when comparing the seeds of different fruits? Each seed is unique because what it becomes is unique. An apple isn't the same thing as a pear, and their seeds are different too.

4-H MISSION MANDATES

Healthy Living

Club members learn about fruits and vegetables, encourage them to include them in their diet.

ESSENTIAL ELEMENTS

Belonging

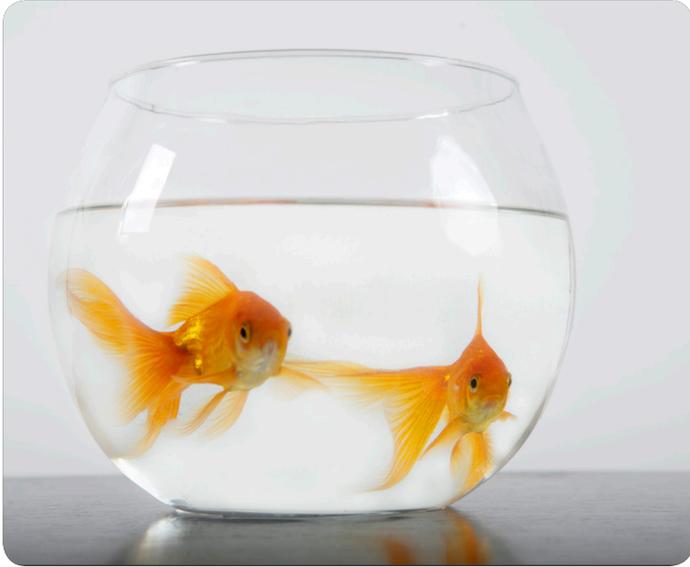
Club members work in teams to complete projects.

Independence

The discussions are based on club member's effort, and projects are largely self-led.

Resources:

www.hummingbirded.com



Activity 1 Supplies

- Goldfish
- Bowl
- Water
- Several pictures of various pets
- Tape

Activity 2 Supplies

- Pictures of items used by pets—dog food, dog house, bird cage, fish bowl, etc.
- Pictures of pets to match the supplies listed above
- Butcher paper
- Crayons

PRIOR TO THE MEETING

Learn the “Pet Care Song” to sing with your group.

(To tune of “Take Me Out to the Ballgame”)

I take good care of my pet

Give him food every day

Make sure he has nice clean water

And that he exercises and plays

Oh, I make sure that he is healthy

Has a nice warm place to sleep

Because I love to take care of my pet

He’s my own special friend to keep!

Adapted from: www.hummingbired.com

INTRODUCTION

The children will name three things they must do in order to properly care for their pets. They will match different care items with the pet that would use them. They will become familiar with different types of pets.

These activities will remind those children who have pets that they must properly care for them. It will give children without pets at home the opportunity to see what it would be like to have a pet. This lesson gives children an idea of the responsibility that is involved in having a pet.

PETS

Time: 20 Minutes

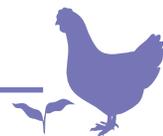
1. Put the goldfish in a large, clean bowl with cold, clean water. Let the children watch the fish swim round and round. Encourage discussion and exploration.
2. Explain to the children that many dogs and some other pets must go to obedience school where they learn many commands and tricks. Based on "Simon Says," give commands for the children to do dog tricks. Say, "The trainer says," and then give appropriate commands such as: lie down, beg for a treat, roll over, speak (woof), scratch your ear, wag your tail, show your tongue and pant.
3. Tape a picture of a pet on each child's back. Have the children walk around the room so they can see the other's pictures. Have the children take turns asking questions such as: "Where does my pet live?" "What does the pet look like?" "How does the pet move around?" etc. The children try to guess the identity of the pet. If the child has difficulty guessing, the other children may give extra clues.

PET SUPPLIES

Time: 20 Minutes

1. Have children match the pets to the supplies they would use. You could make it into a memory game. You could also hand out a picture to each child, making sure they don't show it to anyone else. Have them go around the room asking questions about the other children's pictures to find the match to their pet or supply.
2. Discuss with the children that there is a lot of responsibility when you have a pet. There is a lot of care and work that must go into taking care of pets in order to keep them happy. Some pets require more care than others. Think of different animals and the needs they might have. For example: Dog—food, clean bath, dog bone toy, dog house, love and affection, exercise, etc. Fish—food, clean water, rocks or plants, etc.
3. Lay the paper out on the floor and have the children draw a picture of their favorite pet. The favorite pet may be their own pet or a fictional character (Clifford, Curious George, etc.).





Reflect

- In what ways can you make your pet happy?
- Name two pets and how you would care for them.
- What is your favorite pet?
- How would you take care of that pet and make it happy?

Apply

A pet could be anything from a puppy to a snake! It's important to know the proper care for whatever pet you own and know that it varies with each type of animal. Pets teach responsibility and ownership and can be fun for everyone.

- What can you learn from taking care of a pet?
- What things do both pets and people need?

4-H MISSION MANDATES

Healthy Living

Club members learn about needs and how to be active with their pets.

ESSENTIAL ELEMENTS

Opportunity

Children in the group are getting the opportunity to be responsible for something. For those in the group who actually have pets, it strengthens the importance of being there for the pet and understanding its needs.

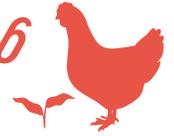
References:

www.hummingbirded.com



4-H Club Meeting 6

Visit to the Zoo



Activity 1 Supplies

- Animal crackers
- Bucket
- Zoo Animals by Annie Ingle
- National Geographic magazines or other animal magazine
- Scissors
- Glue
- Large index cards
- Markers
- Crayons
- Yarn
- Hole punch
- Zoo stickers
- Index cards

Activity 2 Supplies

- Leaves
- Fruit
- Nuts
- Beef jerky
- Plastic zoo animals
- 2 ¼ c. flour
- 2 tsp. baking powder
- ¼ tsp. salt
- 1 c. sugar
- 2/3 c. butter/margarine, softened
- 2 eggs
- 2 bananas, mashed
- 1 tsp. vanilla

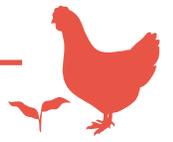
PRIOR TO THE MEETING

Learn the "The Zookeeper Song" to sing with your group.

To the Tune: Down By The Station

Down at the zoo
 Early in the morning,
 You can see the animals
 Standing in a row.
 You can see us feeding
 One and then another.
 We are the zoo keepers,
 Watch us go!
 Down at the zoo
 Early in the morning,
 You can see the animals
 Standing in a row.
 You can see us cleaning
 One and then another.
 We are the zoo keepers,
 Watch us go!

Adapted from: www.hummingbirded.com

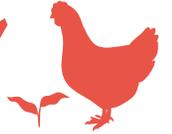


INTRODUCTION

The children will demonstrate that they know the difference between zoo animals and farm animals. They will be able to name several zoo animals. They will become familiar with the habitat of zoo animals by hands-on activities and books. This lesson will acquaint children with how zoo animals live and how they are different from farm animals.

Activity #1

Zoo Animals



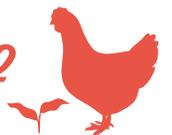
ZOO ANIMALS

Time: 20 Minutes

1. Place the animal crackers in the bucket. Choose one child to be "it." That child will choose an animal from the bucket and try to act like it without making any sounds. If the group can't guess what animal it is, then have the child make the animal sounds. Keep playing until each child has had a turn to be "it." When they have guessed the animal, they can eat their cracker.
2. Read Zoo Animals and then have the children talk about the animals they want to see at the zoo. Give each child an old magazine (National Geographic) to cut out pictures of wild animals. They should find about six to eight pictures and then glue them to large index cards. Have them label the card by putting the animal's name on it. Once they have glued on all their animals, give them a blank card and have them write, "At the zoo, I can see..." Have each child put that card on top of the stack of picture cards. Using the hole punch, put a hole in the top corner of each card and then put them all together and string the yarn through to complete the zoo book.
3. Find as many different zoo stickers as possible. Place the stickers on index cards and have them match them by animal or color. You could also play a memory game using two of each animal card.

Activity #2

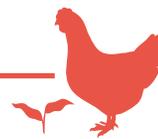
What do Zoo Animals Eat?



WHAT DO ZOO ANIMALS EAT?

Time: 20 Minutes

1. Find several types of food that zoo animals might eat—leaves, fruit, nuts, beef jerky, etc. Next, gather several different plastic zoo animals. Have the children match the zoo animals with the food they might eat. Discuss why each specific animal eats the type food they do.
2. Combine flour, baking powder, salt, and sugar in a large bowl. Mix well. Add butter or margarine. Mix well. Add remaining ingredients. Mix well. Drop by teaspoonfuls on cookie sheet. Bake in a preheated, 400 oven for 12 minutes. Have the children help measuring, mixing, and dropping the cookies on the cookie sheet.
3. If you have a local zoo near you, plan a trip to visit it. Before going to the zoo, discuss with the group that they must not touch the animals or throw things at them. The animals are wild and could be dangerous. Encourage safety and fun!



Reflect

- Name three of your favorite zoo animals.
- Where do zoo animals usually come from?
- How are zoo animals different from farm animals?

Apply

- What can you learn from going to the zoo?
- Why is it important to learn about animals?

4-H MISSION MANDATES

Identify from citizenship, healthy living and/or science and explain why.

Healthy Living

Club members are active, and make healthy food choices in activities.

ESSENTIAL ELEMENTS

Identify tips to include during the lesson and how it applies.

Belonging

Singing with other students develops unison and a team bond.

Independence

Discussions are based on club member input, and club members are responsible for their own learning.

References:

www.hummingbirded.com

Continue Discovering



More to *Discover*

Congratulations on completing your Discover 4-H club meetings! Continue with additional curriculum in your current project area, or discover other 4-H project areas. Check out the following links for additional 4-H curriculum.

1. www.discover4h.org
2. <http://www.4-h.org/resource-library/curriculum/>
3. <http://utah4h.org/curriculum/>

Become a 4-H Member or Volunteer

To **register** your Utah club or individuals in your club visit and contact your County Extension Office

<http://utah4h.org/about/>

<http://utah4h.org/join/index>

For help registering in 4-H online visit:

<http://utah4h.org/staffresources/4honlinehelp>

Non-Utah residents, please contact your local 4-H office:

<http://www.4-h.org/get-involved/find-4-h-clubs-camps-programs/>



Stay *Connected*

Visit Your County Extension Office

Stay connected with 4-H activities and news through your county Extension office. Ask about volunteer opportunities, and don't forget to register for your county newsletter. Find contact information for counties in Utah here:

<https://extension.usu.edu/locations>

Enjoy the Fair!

Enter your project or create a new project for the county fair. Learn about your county fair and fair judging here:

<http://utah4h.org/events/index>



Participate in Local or State 4-H Activities, Programs, Contests, or Camps

For Utah state events and programs visit:

<http://utah4h.org/events/index>

<http://utah4h.org/projects/>

For local Utah 4-H events and programs, visit your county Extension office.

<https://extension.usu.edu/locations>

Non-Utah residents, please contact your local 4-H office.

<http://www.4-h.org/get-involved/find-4-h-clubs-camps-programs/>



Discover *Service*

Become a 4-H Volunteer!

 <http://www.youtube.com/watch?v=UBemO5VSyK0>

 <http://www.youtube.com/watch?v=U8n4o9gHvAA>

To become a 4-H volunteer in Utah, visit us at:

<http://utah4h.org/join/becomevolunteer>

Serve Together as a 4-H Club or as an Individual 4-H Member

Use your skills, passions, and 4-H to better your community and world. You are needed! Look for opportunities to help in your area or participate in service programs that reach places throughout the world (religious groups, Red Cross, etc.).

Hold a Club Service Project

USU Collegiate 4-H Club hosted "The Gift of Giving" as a club activity. Club members assembled Christmas stockings filled with needed items for CAPSA (Community Abuse Prevention Services Agency).

<http://tinyurl.com/lu5n2nc>



Donate 4-H Projects

Look for hospitals, nursing homes, or other nonprofit organizations that will benefit from 4-H projects. Such projects include making quilts for CAPSA or Primary Children's Hospital, or making beanies for newborns. During Utah 4-H State Contests, 40 "smile bags" were sewn and donated to Operation Smile.

Partner with Local Businesses

92,000 pounds of processed lamb, beef, and pork were donated to the Utah Food Bank in 2013 by multiple companies.

<http://tinyurl.com/pu7lxw>

Donate Money

Clubs or individuals can donate money gained from a 4-H project to a worthy cause. A nine-year-old 4-H member from Davis County donated her project money to help a three-year-old battle cancer.

<http://tinyurl.com/mqtfwxo>



Give Us Your *Feedback*

Help us improve Discover 4-H curriculum. We would love feedback or suggestions on this guide.

Please go to the following link to take a short survey: [Click here to give your feedback](#)

Or go to: <https://goo.gl/iTfiJV>