



DISCOVER



4-H SEEDS CLUBS



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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).

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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 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, one 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.

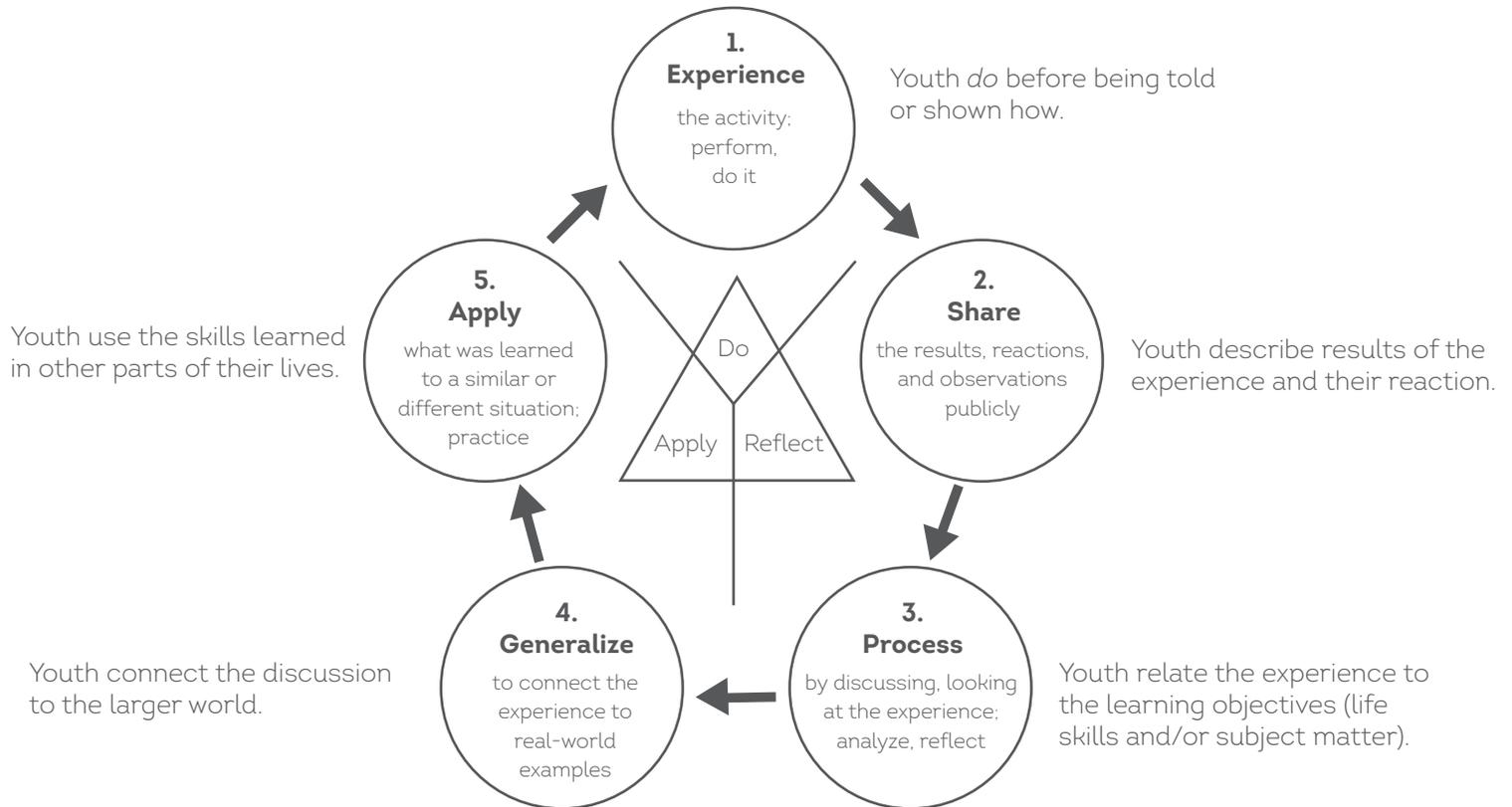
1. **Belonging:** a positive relationship with a caring adult; an inclusive and safe environment.
2. **Mastery:** engagement in learning, opportunity for mastery.
3. **Independence:** opportunity to see oneself as an active participant in the future, opportunity to make choices.
4. **Generosity:** opportunity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

- Citizenship:** connecting youth to their community, community leaders, and their role in civic affairs. This may include: civic engagement, service, civic education, and leadership.
- 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.
- 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/htm/volunteers/get-involved/new-volunteer-training>

To start modules: <http://4h.wsu.edu/volunteertraining/course.html>

(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:

<http://tinyurl.com/lb9tnad>

4-H SEEDS CLUB *Meetings*



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4-H Club Meeting 1

Seeds and Seed Parts



Supplies

- Beans
- Corn seed
- Peanuts
- Various fruits (apple, cherry, orange, cantaloupe, watermelon, avocado, strawberry, pumpkin, or squash, pomegranate)
- Knife
- Tweezers for each member
- Magnifying glasses (optional)
- Plates or bowls for each member to place seeds in
- Printed seed diagram for each member
- Large poster board or white board
- A fruit is a Suitcase for Seeds by Jean Richards

INTRODUCTION

In this club meeting youth will learn the basic seed parts and functions. Youth learn how to identify plant parts through hands-on experiences. Youth can start to build relationships with others in the club by working in groups.

PRIOR TO THE MEETING

Prepare the fruit by cutting it in half so all of the seeds are exposed. Set out the fruit so each table or group of youth have one half of each fruit with some seeds. Put some peanuts at each station.

Cut each corn seed in half. Try to cut the seed in many different cross sections. Do the same to the bean seed. Lay each different cross section together in its own area. Set up stations or an assembly line so that each member will be able to observe each seed cross section.

DESCRIPTION

Start by asking the youth what seeds are. (The starting of plants, how plants reproduce, immature plants).

Explain to youth that inside seeds are embryos, immature or baby plants.

WHAT TO DO

Have the club members stop at each station of the corn and bean cross sections. Instruct them to look at each seed.

Instruct the students to pull out the seed handout. Draw your own outline on the board or poster and label the parts of the seed. Have the members follow along as you label the parts of the seeds aloud on the poster board or white board. Explain the function of the seed parts as you fill them in.

Activity #1

LEARNING SEED PARTS



Activity #1

CONTINUED



Radicle: The root portion of embryo or seed. The radicle often emerges from the seed first and starts the plant's uptake of nutrients.

Cotyledon: The first leaves to emerge from seed. These leaves often look different than leaves that grow later on.

Endosperm: The stored nutrients inside the seed. The endosperm is used when the plant is still too small to uptake enough nutrients to grow out of the soil. The endosperm helps boost the seedling out of the soil.

Seed coat: Protective outside of the seed. The seed coat protects the embryo inside. Seed coats can be very thick to very thin.

Germination: The process of a plant emerging from the seed. Germination is a word that is used very often when discussing seeds and their habits.

Activity #2

SEEDS IN FRUITS



WHAT TO DO

Allow the youth to pick at fruit and place the many different seeds on their plates. Instruct the youth to examine each seed. They can break the seeds, scratch the surfaces, examine the textures, or anything to help them explore. Have the youth break apart the peanut and examine the parts of the seed. Have the members try to name some of the seed parts on the peanut. The peanut halves are the two cotyledons. The little piece that often falls out or sticks to one side at the base of the two halves is the radicle. After the youth have gotten a chance to examine each seed, ask them what they observed about each one. Tell some observations of your own. (e.g. It is surprising that the cherry pit takes up so much of the fruit vs. the cantaloupe where the seeds are very little, seeds on a strawberry are on the outside of the fruit, the avocado has a very round seed.)

Activity #3

READING TIME



WHAT TO DO

Cut up some of the fruit and allow the youth to eat it while listening to A Fruit Is a Suitcase for Seeds, by Jean Richards.



Reflect

- What purpose does the seed coat serve?
- How do humans use seeds?
- What was your favorite fruit to eat? Do the seeds bother you?

Apply

- How will you use the things learned in this lesson?
- Are there other seeds that you find interesting?
- Why should we know about seeds when trying to grow plants?

4-H MISSION MANDATES

Mastery

Youth can master the complex knowledge of seeds by hands-on experiences that enforce the material taught in the lesson.

Generosity

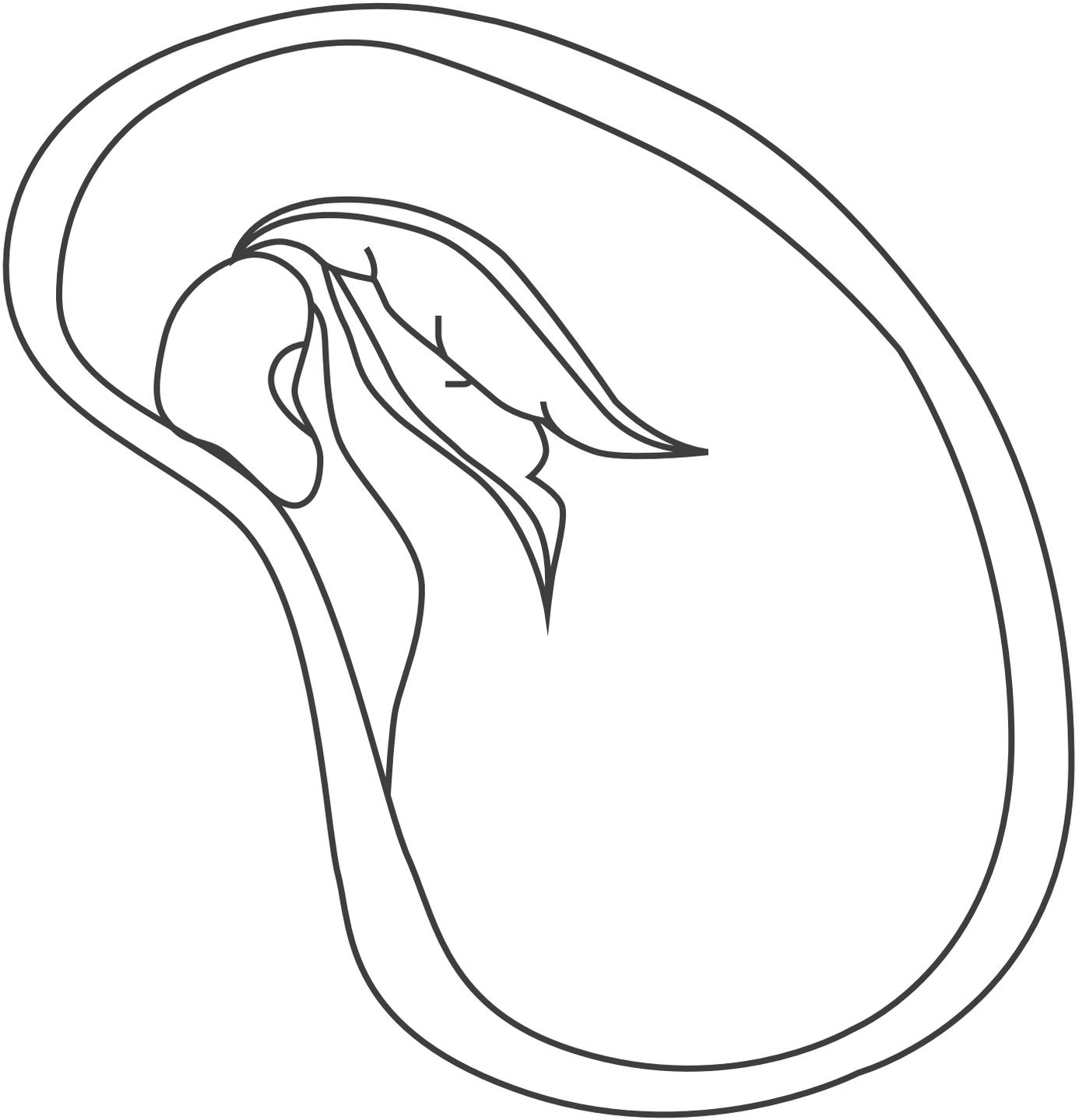
By working in groups, youth learn to work together, share ideas, and be compassionate toward one another.

Healthy Living

Enjoying the fruits that youth were able to experience through hands-on exploration allows youth to have a greater understanding of everyday foods.

Science

Seeds are very complex and by learning the basics of seed anatomy, youth obtain experiences that they can build upon in the future.





Supplies

- Blank paper
- Pens/pencils
- Various seeds with burs or hooks (cocklebur, burdock, hounds tongue)
- Various seeds with papus (dandelion, milk weed, cattail, anything with fluffy ends)
- Various seeds with wings (maple tree seeds, elm tree seeds, dyers woad seeds)
- Curly dock seeds (only enough for a demonstration)
- Wild oat seeds
- A bucket of water
- One coconut
- Plates to place seeds on
- A little water (a few drops per plate)
- Magnifying glasses for each member
- Flip, Float, Fly: Seeds on the Move, by JoAnn Early Macken

INTRODUCTION

In this club meeting members will learn the tricky ways that a stationary organism moves around to new areas. Seed movement and mechanisms for movement vary greatly, and youth will be able to experience a few of them in this club meeting.

PRIOR TO THE MEETING

Prior to club meeting, collect the various seeds. Depending on location and time of year, some seeds might be unavailable. Some of the best examples of seed dispersal are weed seeds and cannot be purchased. These seeds will need to be collected, carefully stored, and disposed of to ensure prevention of weed spread.

Note: If wild oat seeds cannot be obtained, a YouTube video can be played instead if the club location has the capabilities. You can find many videos about the wild oat seed moving, but here is a suggested video: <https://www.youtube.com/watch?v=BPpl73cbU8s>.

Set out enough plates for the club to be divided into groups of two to three youth. On each plate place all of the various seeds (at least one of the different kinds of seed on each plate). Label the seeds on the plate so the members know which is which. On each plate, or for each group, provide about 10 drops of water. It can be placed in a separate container or on the same plate, just ensure that it doesn't touch any of the seeds.



WHAT TO DO

Instruct the members to examine each seed with a magnifying glass. Have the members draw a picture of each seed on their piece of paper and label which one it is.

Instruct the members to place the oat seed in the drops of water and let them observe. Teach the students about how the oat seeds can wind and unwind when water is applied. The long part of the seed is called the awn. Wild oats will not germinate/grow when they are exposed to sunlight. Winding and unwinding the awn, based on different water conditions helps the seed bury itself. This is a very unique seed dispersal method.

Lead a discussion about each seed. Ask members what some of the differences were between seeds in the same categories (Differences between cocklebur vs. burdock, or dandelion vs. milk weed). Ask about how they think each seed travels.

Demonstrate in the bucket of water how curly dock seed can float on top of the water and be carried down a stream. Next, place the coconut in the bucket. This illustrates how coconuts can float to different places in tropical locations.

Discuss the following dispersal methods.

WIND DISPERSAL

Dandelion seeds- The papus (fluffy hairs) allows the seeds to be light and helps hold them up in the breeze.

Maple seeds- Wings on maple or elm seeds allow the seeds to spin and be carried in the wind. Fruits like these are called samaras.

WATER DISPERSAL

Curly dock seed- The wings on the sides of the seed act like floatation devices or lifejackets in the pool.

Coconut- The coconut floats on top of water and can be carried by currents.

GRAVITY DISPERSAL

Tree Fruits- Fruits that grow on trees often use gravity to disperse their seeds. When fruits fall off trees, many times they split open. Often the gravity that causes the fruit to fall also helps the fruit roll away from the tree, spreading the seeds further.

ANIMAL DISPERSAL

Burs- Many burs, as seen when the seeds were examined, are designed to stick to clothing and animal fur. This allows the seeds to be carried long distances.



WHAT TO DO

Read Flip, Float, Fly: Seeds on the Move, by JoAnn Early Macken to help conclude the club meeting while members clean up their stations.



Reflect

- What was one thing that surprised you when you examined the seeds through the magnifying glass?
- Can you think of any other ways seeds travel?

Apply

- Why is seed travel important to plants?
- How do humans help disperse seeds?

4-H MISSION MANDATES

Mastery

The youth gain a sense of mastery by seeing seeds up close, and learn the many ways that seeds travel.

Generosity

By working in small groups and in an inclusive environment, youth can enjoy a sense of belonging to the club.

Science

The youth obtain knowledge of seed dispersal by exploring the mechanisms and science behind the act.



Supplies

- Various seeds (anything – self-harvested, seed packets lying around, whatever is available)
- Paper towels
- Saran wrap
- Water
- Sand paper
- Any seeds from the any of the following (Choose 2):
Albizia julibrissin (Mimosa), Robinia pseudoacacia (Black locust), Gleditsia triacanthos (Honey locust), Sophora japonica (Japanese pagoda tree), Gymnicladus dioicus (Kentucky coffeetree)
- Pots to plant scarified seed in
- Soil medium
- Labels (tags, or masking tape)
- Permanent marker

INTRODUCTION

Seed testing is a valuable tool that is very important to many plant industries. In this club meeting youth learn how to test seed viability at home in a very effective manner.

PREPARATION

Prior to club meeting, collect necessary seeds. Prepare for the activity by laying out a square foot of Saran wrap for each member. Next give each member three paper towels.

Activity #1

PAPER TOWEL TEST



WHAT TO DO

Teach the members that there are many different ways to test seeds. Seed testing is very important because farmers and growers don't want to spend money on seeds that won't grow. Experts devote a lot of time to seed testing, and there are entire companies that do only that. The testers take a small sample of the many different seed lots to test how well they will grow. They test for many things like germination, diseases, hard seeds, dead seeds, vigor, and seed weights. The paper towel test is used regularly in some of these facilities. The tests allow experts to see how many seeds will germinate out of each seed lot. After they reopen the paper towels, they give each germinated seed a rating on how vigorous it is, based on quality of size, leaves, and roots.

If there are enough supplies and time, members can do more than one paper towel test on different seeds.

Activity #1

CONTINUED



Step 1: Instruct the members to fold the paper towels so it looks like there is only one. Place the towels on top of the Saran wrap.

Step 2: Wet the paper towels so that they are full of water, but not so much that they are dripping everywhere. They should be fully moist.

Step 3: Give each member 10 seeds. Instruct the youth to lay them in a straight line at the bottom of the paper towel.

Step 4: Have the youth roll up the paper towel and Saran wrap, starting with the edge with seeds on it. Roll it loosely and seal the ends by folding over the edge of Saran wrap.

Step 5: Have members write their names in permanent marker on the outside of their paper towel test. Gather all rolls and store them in a warm place until the next club meeting.

Activity #2

SEED SCARIFICATION



WHAT TO DO

Some seeds have hard seed coats. This means that they do not let any water absorb into the seed and often prevent seeds from germinating. One way to help water uptake by the seed is to scarify. This means we will break or “scar” the seed so that water can be absorbed. One way to do this is by scratching the seed with sandpaper. The sand paper creates little cuts or holes in some of the seed coat so that water can be absorbed.

Step 1: Each member should be given five seeds of each seed type, a piece of sandpaper (they can share within each group), a pot or something to plant seeds in, and soil medium, and a way to wet the soil.

Step 2: Have each of the youth use the sand paper to scarify the seeds. Instruct the students to rub the seed on the sand paper until they see a change in color on the seed coat.

Step 3: Each member should fill their pot to the top with soil, and thoroughly wet the soil. Often soil media can get too dry and the water will not absorb. If this is the case it is often helpful to mix the soil in a bucket with water prior to filling pots.

Step 4: Club members should label their pots.

Step 5: Youth can plant their scarified seeds. Each seed should be planted at the right depth. A general rule of thumb is to plant seeds at depths 2X their diameter.

Youth can take their pots home to watch the seeds grow. Ask them to carefully record results of what germinates and to be prepared to report it at the next club meeting.



Reflect

- Is there another way you can think of to scarify seeds?
- How do plants benefit from having a hard seed, or needing to be scarified?

Apply

- When will you use the paper towel test again?
- Why do you think different seed tests are important?

4-H MISSION MANDATES

Independence

Youth learn how to work on their own with careful guidance and develop skills of independence.

Mastery

Youth gain a sense of mastery when they are able to watch the outcomes of efforts they make. Youth master the skill it takes to handle seeds and do the same work that professionals do every day.

Science

This club meeting prepares youth by helping them set up and follow through on their own science experiments and research.



4-H Club Meeting 4

Seed Collecting



Supplies

- Transparent containers or vials (can be found at: <https://www.sks-bottle.com/GardeningSeed-Containers2.html>)
- Permanent markers
- Grocery bags
- Masking tape
- Pens/pencils
- Basic plant ID book for your area (this can be self-created, or purchased)

INTRODUCTION

Seed collection is a fun way to get up close and personal with plants. Plant collections are often helpful when learning to ID plants and seeds. In this lesson youth can experience plants and seeds outdoors through hands-on experience.

PREPARATION

Prior to club meeting, find a suitable place to collect seeds. Depending on the season, ideal locations can vary. Fall is the best time to collect seeds, and many different locations are useful. In summer, many early-blooming flowers will set seed and a good garden bed can be a good location. Early spring and winter make seed collection hard, so it is not recommended to do this activity at that time. One solution, however, would be to grow some plants in pots and collect the seeds from them and incorporate another activity.

Prepare seed containers/vials by placing a strip of masking tape around each one.

Prepare plant ID booklets.

Activity #1

MEETING 3 REPORTING



WHAT TO DO

Have the youth pick up their paper towel tests from club meeting 3. Instruct them to open the rolls and to count how many of the 10 seeds germinated and grew. Ask each member to share their results. Lead a discussion on the importance of seed testing.

- Why do you think some seeds did not germinate?
- What surprised you about your results?
- Did some kinds of seeds germinate better than a different kind?

Ask the members the results of their scarified seeds at home. Ask which seeds germinated better. Explain to the members how seed tests are used by farmers and growers. When farmers buy seeds with a 90% germination rate, they plant 10% more seeds to ensure they have the right amount of plants growing in their field.



WHAT TO DO

Explain the collection procedures. This includes: how to use the vials, what things to be cautious about, staying together, and location safety.

Have the youth write their names or initials in permanent marker on each of their vial lids. After a seed has been collected have the members write the name of the plant and location of collection on the masking tape.

Walk around as a group collecting seeds and filling everyone's vials. As members explore, have them use their plant ID booklets to help identify the seeds they are collecting. As they collect, have them correctly identify the seeds, and label them on the masking tape.

The members can take vials home when finished.



Reflect

- What was your favorite part of collecting seeds?
- How do you plan to use your seed collection to help you in the future?
- How helpful do you think germination tests are?

Apply

- How can seed collections help professionals?
- What other collections can you make?
- What other seeds would you like to collect?



4-H MISSION MANDATES

Belonging

By going out together to collect seeds, members are given a sense of belonging by getting the opportunity to experience each other outside of the normal setting.

Mastery

Seed collecting gives the members a sense of mastery by allowing them to apply classroom knowledge to real life.

Independence

Youth can gain a sense of independence by identifying and labeling their own seed collections.

Citizenship

Youth learn citizenship skills by actively respecting the locations they travel to to collect seeds.

Healthy Living

This club meeting promotes healthy living among the youth by allowing them to experience physical activity in a thought-provoking manner.

Science

Youth can apply the knowledge and science they learn in the other lessons to the outdoor experience they obtain in this club meeting.



Supplies

- Cardboard toilet paper rolls (one for each member)
- Toilet paper
- Scissors for each member
- Elmer's glue
- Markers
- Flower seeds (any that would look good in a flower bed)
- Water
- Soil mix
- Rulers
- Six different garden vegetable seed packets (Multiple packets of each one so youth can read the labels)
- Six-pack planting containers
- Tags/labels or masking tape
- A growing area for the potted seeds until the next club meeting

INTRODUCTION

In this club meeting, youth will learn how to properly plant seeds and gain an opportunity to practice. Youth will also obtain knowledge on how to read packet labels and decipher the information that.

PREPARATION

Set out bottles of glue on each table for every two or three members. Lay out flower seed packets.

Activity #1

SEED PAPER



WHAT TO DO

Step 1: Pick up a 3-foot section of toilet paper and a cardboard toilet paper roll.

Step 2: Have the youth cut the toilet paper in half so they have two separate 3 foot strips.

Step 3: Teach the youth how to read the back of the seed packet. Explain what each of the symbols and numbers mean. Look for row/plant spacing. Explain how each packet will have correct planting conditions on the back of it.

Step 4: Have each of the members use a ruler and mark a dot on the toilet paper where a seed should be placed according to the back of the seed packet. Have the members mark the strip starting at one end and working to the other.

Activity #1

CONTINUED



WHAT TO DO CONTINUED

Step 5: Instruct the youth to place a dot of glue on each mark.

Step 6: Next have the youth place one seed on each dot of glue.

Step 7: Lay the second piece of toilet paper on top of the seeds.

Step 8: Roll the toilet paper back onto the roll.

Instruct the youth to unroll the seed paper at home in a garden bed and cover it with a bit of soil. Instruct them to put enough soil on top of the roll to allow the seed to be at the right planting depth, according to the seed packet.

Activity #2

STARTING SEEDS



WHAT TO DO

Lay out the seed packets of the different vegetables. Have members gather their own supplies. Instruct each of the youth to fill a six pack potting container with soil. Tell them to fill it all the way to the top.

Step 1: Together as a club, go through each seed packet and read the back of the packets together. Decipher what each seeds needs are.

Step 2: Have the club members plant three seeds in each cell of the pot according to the seed packet directions. Plant a different kind of plant in each of the cells.

Step 3: Instruct the members to water in their seeds.

Step 4: Label the pots with a tag or masking tape so that each member knows which one is theirs.

Leave the pots in a safe growing area until the next meeting. Water and care for the pots until the next club meeting.



Reflect

- Do you have a planned area where you want to put your seed paper in your yard?
- Why did we plant three seeds in a pot instead of one?
- Why put information on seed packets?

Apply

- Why should we space plants away from each other?
- When would you read the back of seed packets?

4-H MISSION MANDATES

Belonging

The youth foster closer relationships with each other by working together on projects, learning from each other's actions, and having a continued exposure with one another. Close relationships among the youth feed a sense of belonging to a group and build friendships.

Mastery

By building on each club meeting, the youth can gain a sense of mastery. The steps leading up to planting the seeds allows the group to understand the entire process.

Healthy Living

Planting vegetable crops exposes youth to where and how their food grows. This deeper understanding can help promote healthy foods and expose them to new choices.

Science

Planting the seeds they have explored before allows the youth to understand the science behind plant growth and germination.



4-H Club Meeting 6

Transplanting and Thinning



Supplies

- 4-inch square plastic pots (At least six for each member)
- Plastic plant growing trays
- Soil medium
- Tags/labels or masking tape
- Water

INTRODUCTION

In this club meeting youth learn how to properly transplant their seedlings and will get to experience proper after care.

PREPARATION

Care for seeds started in Club Meeting 5. Youth should bring them to work with in this club meeting.

Activity #1

TRANSPLANTING



WHAT TO DO

Begin the meeting by having the members collect last meeting's pots. Demonstrate how to transplant the seedlings into smaller pots before the youth start on their own.

Step 1: Fill the 4-inch pots and wet the soil thoroughly.

Step 2: Take out one of the cells with three seedlings inside. Try your hardest not to damage roots, but separate the three seedlings from each other.

Step 3: Make a reasonably sized hole in the new pot to place the seedling into. Place the seedling's roots into the pot, making sure not to bend the roots in a U-shape. Try to keep the tips of the roots pointing downward to ensure proper function.

Step 4: Slowly fill in soil on top of the seedling's roots, still being careful not to damage them. Keep the soil fairly loose and not too compacted.

Step 5: Repeat for each of the seedlings. Youth can choose to do one of each of the vegetables, or can opt to transplant all three.

Instruct the members that when the plant gets bigger, they will need to be transplanted once more into a garden bed. At that time the whole plant can be lifted out of the pot and placed in the ground without separating from the soil.



Reflect

- Why do you think we should separate the three seedlings?
- Why should we transplant plants from smaller pots to bigger pots?
- Why do you think the roots shouldn't be pointed upward when we transplant?

Apply

- Do you have any plants at home that you think need a bigger pot?
- Do you think professionals who work in greenhouses transplant their seedlings? Why?

4-H MISSION MANDATES

Mastery

Youth learn the process of seed growth from start to finish and master the techniques.

Independence

Youth should be able to understand the process of seed growth enough to be able to do it on their own in many different situations.

Generosity

By working with members of a group repeatedly, youth learn how to value each other's ideas and work.

Citizenship

Youth are able to apply their knowledge to help the community when needed.

Healthy Living

By teaching the youth how to start their own vegetables, they can use the knowledge to help them grow their own at home, thus promoting a healthier lifestyle.

Science

Exposure to the process of seed development allows the youth to more deeply understand the science behind the act.



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. <http://utah4h.org/htm/discover4hclubs>
2. <http://www.4-h.org/resource-library/curriculum/>
3. <http://utah4h.org/htm/resource-library/view-all-curriculum>

Become a 4-H Member or Volunteer

To **register** your Utah club or individuals in your club visit:

<http://www.utah-4.org/htm/staff-resources/4-h-online-support>

<http://utah4h.org/htm/about-4-h/newto4h/>

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:

<http://extension.usu.edu/htm/counties>

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/htm/events-registration/county-fairs>



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

For Utah state events and programs visit:

<http://utah4h.org/htm/events-registration>

<http://www.utah4h.org/htm/featured-programs>

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

<http://extension.usu.edu/htm/counties>

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/htm/about-4-h/newto4h/>

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/pu7lxyw>

Donate Money

Clubs or individuals can donate money gained from a 4-H project to a worthy cause. A 9-year-old 4-H member from Davis County donated her project money to help a 3-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:

<http://tinyurl.com/lb9tnad>