

Before Pictures of ground of KECE Garden!



15 foot by 45 foot plot of ground proposed by Kayenta ECE Feb. 20, 2015.



May 2015! Front rows have onion and potatoes.

You must first realize: You Can't Build an ECE Garden on your own!

- ▶ People involved with the KECE Garden:
- ▶ Admin: Mr. Harry Martin, Supt. Of Schools, Ret,; Dr. Paul Fulginiti, ESS/KECE Director; Mr. Mike Aylstock, Northern Arizona Univ. Internship Mentor.
- ▶ ECE Team 2014-2015: Ms. Cheryl McDaniel, Team Lead; Ms. Daisy Begay, Mrs. Virginia Arthur, Ms. Britt Tallis, Ms. Lorraine Chester, Ms. Jody Smith, Ms. Frances Adekai, Ms. Laura Delmar, Ms. Terri Gamble, Ms. Lucy Black, Ms. Shonna Grandson, Mr. Paul Bronston, Mr. Andrew Brown.
- ▶ Maintenance Team: Mr. Raymond Jensen, KUSD MO Director, Mr. Alvin John, Mr. Terrance Tenakhongva.
- ▶ Community Members: Scott and Christine Caton, Mr. Kelly Yazzie.
- ▶ Total: 22 People were involved in this project within some aspect (not including the 88 students KECE involved in planting; also not including the head start program of an additional 75 students who planted).
- ▶ Note: 100% of ECE staff returned for 2015-2016 school year; Team has worked together since February 2013.

Notes and Quotes #1: Mr. Harry Martin, Supt. Of Schools, Kayenta USD#27, Ret.

“Our gardening project was started to make students aware of how things grow. As a bonus it also helped them gain responsibility, provided an introduction to the life cycle, allowed them to match plants with pictures, introduced them to better foods, and helped them with colors and letters of the plants being grown. In addition they seemed to like the activity and it was a good way to involve parents with the program”.

Background: How did KECE/KUSD staff get the idea to have a garden?

- ▶ The Kayenta Early Childhood Education Program had students planting flowers for their mothers/grandmothers every spring.
- ▶ Planting is very traditional to the Navajo people and culture.
- ▶ Many staff members have childhood stories of learning to plant fruits and vegetables-some still plant every year themselves.
- ▶ My own parents have had a garden almost every year that I can remember.
- ▶ This laid the foundation for the project to get off the ground-YOU CANNOT DO THIS ON YOUR OWN!!!

How did KECE get a garden?

- ▶ It started with a dream of bringing in a greenhouse as an administrative internship project.
- ▶ Dr. Fulginiti suggested that this may be too big and to do some research on greenhouses and talk to Mr. Clyde McBride-KUSD CTE Team Lead , National CTE Teacher of the Year-2014-2015.
- ▶ Mr. McBride informed KECE that a decent greenhouse for year round use would be no less than \$60,000-\$70,000.
- ▶ Thus KECE started working with local community organizations and our own knowledge to put in a garden.

Objectives of this presentation!

- ▶ Review costs of growing own food versus buying it;
- ▶ How much food can be produced by small gardens;
- ▶ Why we should have a garden in Early Childhood Education Programs;
- ▶ How to obtain permission from administration to build a garden;
- ▶ Obtaining materials and putting them in (i.e. drip systems, beds, etc);
- ▶ What to grow, where and when;
- ▶ And finally how to tie gardening into ADE EC Standards.

Cost of food over past three years.

- ▶ According to the United States Department of Agriculture (April 2015) the price for fresh fruits and vegetables will either decline or stay the same at a rate of 2.0-3.0% on the Consumer Price Index (CPI). However when fruits and vegetables are separated fresh vegetables will increase 2.5-3.5%.
- ▶ United States Department of Agriculture Economic Research Service (ERS) states that “retail food price inflation rates approached the 20-year historical average of 2.6 percent per year”.
- ▶ Food prices for a family of four have risen nearly \$10.00 over the past three years.

Why does this matter to ECE programs?

- ▶ First it can save costs on food for your students meals (MUST FOLLOW ADE GUIDELINES);
- ▶ Secondly it teaches our students healthy eating habits;
- ▶ Third it helps you control what your students eat;
- ▶ Finally it can mean the difference between getting diabetes and not having diabetes.
- ▶ Special note: Nearly half of all Navajo children are at risk of being or are obese and/or have or are at risk of diabetes which was a major factor in leading to the KUSD ECE Garden Program.

How much food can gardens produce?

- ▶ How much food can this one bag of seeds produce per year in one 30 foot by 30 foot garden (900 square feet)?
- ▶ This one bag of seeds **produces apx. 2,800 lbs.** of food per year in a 30 foot by 30 foot garden (and you can save the seeds for next year-you can't replant GMOS.).
- ▶ Why does this matter?
- ▶ Simple financial sense: The average garden from what Mr. Brown could find saves approximately 50% or more on your grocery bill depending on what you grow and eat per season. You can also can or freeze the fruits and vegetables for winter usage-thus bringing significant costs down-translating that to ECE programs could save significantly on snacks and meals*.
- ▶ *Special note-you need to follow state laws on this-will cover this later.

Notes and Quotes #2: Dr. Paul Fulginiti, KECE/ESS Director, Kayenta USD #27

“First laughs. First steps. First Grade. We generate Healthy Transitions for our children and grandchildren. Our thinking, planning, and doing in the KECE program provides the place and time for our children to grow and learn. All our staff contribute, sensing responsibility to our children’s community garden. We are happy with our results, and a garden means sharing, planting, harvesting, and eating the rewards!”

Why do we want a garden in ECE programs?

- ▶ Take one minute and talk to your partner and discuss this.
- ▶ Healthy lifestyles; healthy life styles; healthy life styles;
- ▶ You control your food: Avoid genetically modified organisms and other chemicals in your students food;
- ▶ Teaches students to take pride in their work;
- ▶ Teaches students to respect and take care of mother nature;
- ▶ Allows incorporation of the Early Learning Standards (we will cover this later in the presentation).

How to obtain Permission to build a garden!

- ▶ First do your homework.
 1. Is there land available for even a small garden near a water source? If so, you are already half way there.
 2. Are you friends with your maintenance director/administrator?
 3. Do you have a general idea of what you want to plant?
 4. Are you able to show that the garden will help offset food costs, teach students about nature and taking responsibility, and most important tie them into state standards?
 5. Finally are YOU willing to put in the work involved to make this happen?

Is there land available for a garden?

- ▶ What is your campus area like? Flat? Rocky? Sandy?
- ▶ Consider that 900 feet square (30 feet by 30) is very small.
- ▶ Consider raised beds.
- ▶ Consider both raised beds and a plot of land.
- ▶ 4 foot by 4 foot gardens have become very popular.
- ▶ Consider your students needs? Are there students in wheelchairs? Are there cultural issues/traditions of planting?
- ▶ Will you possibly have a rodent/rabbit/snake problem? How will these issues be addressed?

What is your water source?

- ▶ Discuss with your neighbor why water is so important to a garden? (1 minutes)
- ▶ Water is the source of life for all living things.
- ▶ Who is going to pay for the water once it is set up (whose budget will it come out of)?
- ▶ How are you going to water your garden once it is set up? Drip system or hose?
- ▶ Water is also going to be your biggest challenge and cost year over year.
- ▶ A large consideration is going to be planting items that require little water.
- ▶ You will need to decide if the cost of water outweighs the healthy benefits of a garden.

Working with your administrative team.

- ▶ Working with your administrative team/leader will be the best way to get a garden going.
- ▶ KECE had not only the ECE/ESS director involved, but also Mr. Raymond Jensen, the Ground and Maintenance Director involved.
- ▶ Mr. Jensen has had grandkids in our KECE program and was very willing to help get the garden up and running.
- ▶ Mr. Jensen really helped in getting the courtyard cleared quickly for the garden to be prepped and tilled.
- ▶ Remember that if you have done your homework administrators will be more likely to help and be more involved.

Time and money will be your biggest enemy!

- ▶ Questions to consider in dealing with gardens your administrators will ask?
 1. Who will weed it/water it in the summer time if no summer school?
 2. Who will provide materials to set your garden up (they can be cheap to very pricey)?
 3. How will the land be prepped for a garden and who will do it?
(You may not want your students to use the tiller)
 4. Who will install the materials (drip system, raised beds, etc.)?

Obtaining Materials for your garden!

- ▶ Businesses are often hit up for donations by districts, schools, and even teachers. Knowing this how can we obtain materials to build a garden?
- ▶ Are there businesses you know of that may help?
- Do you have friends in the business community? Family? Students Parents?
- ▶ KECE was very fortunate in that we had an outside community group that was willing to donate the drip system (apx. \$1,000 system) We were also fortunate to have seeds of many varieties donated by this group as well as the Navajo Agriculture Products Industry.
- ▶ SPECIAL NOTE: MANY BUSINESSES LOVE TO DONATE TO SPECIAL NEEDS PROGRAMS-I USE THIS AS A MAJOR SELLING POINT!

You have the materials: now what?

- ▶ You need to have a layout of your garden-what goes where, when, etc.
- ▶ Just like plans-if you fail to plan you plan to fail.
- ▶ You need to do your homework and plant what is best for your area.
- ▶ Are you planting fall, spring, and summer seasons?
- ▶ This may mean relearning how to plant yourself.
- ▶ You must be aware of heat, frosts, weather patterns, wind, animals, rodents, etc. All of these issues will come into play with what, and how, to plant.
- ▶ Make sure you coordinate with MO.....let them know who, what, and when you will be planting-include them in your plans from the beginning.

Tilling and setting up the garden!

- ▶ Like most places in Arizona it will be hot most likely.....so you will want to till and put in water systems, boxes, etc. early in the morning.
- ▶ Before tilling make sure you have measured out the rows, area, by feet-again you need a plan.
- ▶ It is recommended you do NOT let the ECE students use the tiller-for obvious reasons-although my students did enjoy watching the Catons till.
- ▶ Once the land has been measured, tilled, and water systems installed, you can then start planting.

Assign Rows-include students.

- ▶ Make sure each teacher or class knows which rows are theirs-this will allow for less confusion.
- ▶ Ask the students what they want to plant-include them in this decision.
- ▶ Make sure students each get seeds to plant.
- ▶ Depending on age, ability, you may want to only have two or three plant at a time with staff assistance.
- ▶ You will need to adjust based on your needs of your students.
- ▶ Students will most likely not really understand at first what they are doing.....must wait/delay gratification to see fruits/vegetables.



Tying gardening into ECE Standards!

- ▶ How many standards will your garden help you meet?
- ▶ You will meet every standard without trying. Examples:
- ▶ Social-Emotional-respecting other people's property;
- ▶ Approaches to Learning: Curiosity.
- ▶ Language and Literacy: New words, vocabulary.
- ▶ Math: Measurement, date, sorting and classifying.
- ▶ Science: Exploration, new words, investigation.
- ▶ Social Studies: Past, present, future.
- ▶ Physical Development/Health: Healthy lifestyles, eating healthy.
- ▶ Fine Arts: Music, painting what the grow, dramatic play.

Drawbacks of a garden!

- ▶ Your first year will most likely be a reverse curriculum garden:
- ▶ This means your students will plant in the spring (right before summer break) and harvest in the fall.
- ▶ High maintenance-this is not a hobby.
- ▶ If you plan on using the food for serving in your cafeteria, you will need to follow the ADE rules and procedures-this can be found in the resources section of this PowerPoint.
- ▶ Students can take food and vegetables home.
- ▶ Remember teaching healthy eating now will help students make healthy choices in later life.
- ▶ You will need to consider putting garden to bed after harvesting.
- ▶ Will you compost?



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