Priority Issues Identified

Texas AgriLife Extension is unique because it has faculty in every area of the state who are dedicated to educating Texans in many areas of need. This uniqueness provides an opportunity to bring together the people of Texas, other service agencies, and educational groups to help provide solutions to the problems and issues facing Texans.

The success of Texas AgriLife Extension Service’s educational outreach depends on knowing what local residents see as the issues impacting their lives and then developing a plan to meet those needs. The only way to know what local residents see as issues is to ask. The process of asking the questions took place as an online forum beginning back in January, 2011.

The Tarrant County Leadership Advisory Board provided the guidance for the issue identification process and over several months local citizens were encouraged to input the issues they find most important in their lives. The following issues were identified in Tarrant County.

The next step takes place this fall when County Extension Agents engage their Program Area Committees and other local groups in developing plans to address the issues identified. It is with this community input and the expertise of our local staff and Extension specialist that we will chart the course for Extension education in 2012 and beyond.
Take the 40 Gallon Challenge and pledge to save 40 gallons of water each day for your county, your state and your country. The 40 Gallon Challenge is a call for residents and businesses to reduce their region’s water use on average by 40 gallons per person, per day. There are lots of ways to conserve water, what can you do to help? Visit the 40 gallon challenge website and make your pledge towards water conservation today! www.40gallongchallenge.org. Follow the link for Texas.

Top 3 actions pledged saving the most water:
• Reduce irrigation station runtimes by 2 minutes (saved 37,040 gallons)
• Use a broom instead of a hose to clean driveways and sidewalks (saved 25,608 gallons)
• Add mulch (2”-3”) around trees and plants (saved 24,100 gallons)

Will you take the challenge?

Produced by the University of Georgia College of Agricultural and Environmental Sciences© 2011

If you are experienced in the art of home food preservation or a novice who would like to know more please visit the National Center for Home Food Preservation website at http://uga.edu/nchfp. This is an excellent source for tested recipes and up to date techniques.

Drought is a part of the normal production cycle. Dealing with dry periods and decreased feed supplies needs to be part of the overall management plan. When deciding on an alternative feeding program, there are several options to consider. The goal is to re-breed cows while maintaining calving intervals, maintain pounds of calf produced per cow, and minimize feed cost per pound of calf sold.

When considering feed options, think about the following:
• Design a feeding program to fully utilize local feeds,
• Supplement low-quality feeds correctly,
• Analyze forages and feed precisely,
• Substitute 1 pound of grain or other concentrate feed for 3 pounds of grass hay,
• Carefully balance every ration against the animal’s requirements,
• Make every effort to reduce feed losses,
• Feed the highest quality feed to animals that have higher feed requirements (i.e., growing replacement heifers or growing calves),
• Feed the lower quality roughages to cows in the middle-third stage of pregnancy,
• Save the better quality feeds for periods before and after calving, and
• Treat low-quality roughages with various feed additives. Additives can improve palatability and feeding quality.

Do not exceed grain feeding by 0.4 percent of the live body weight when forage is the major component of the diet. Grain is not always practical to feed, but there are ways to feed it even in pasture or rangeland situations. Many producers use barrels, gated pipe split in half, bunks, or old hog feeders mounted on a trailer. Releasing the cowherd into drylot is a management alternative that may allow producers to take advantage of grains and byproduct feeds. Diets for drylot cows are formulated to meet the nutrient requirements of the cows while minimizing feed costs. As a result, intake is generally limited and more concentrate feeds are included to cheapen the diets. Since intake on concentrate diets is restricted, cattle may appear gaunt and behave as though hungry. After 14 to 21 days, they will adapt to the reduction in feed intake, but they may continue to appear gaunt. Cattle should adapt to high-grain diets in seven to 10 days and should be observed closely during that time. A minimal amount of roughage is required to maintain rumen function. As a rule of thumb, cows should receive at least 0.5 percent of their body weight as roughage (90 percent dry matter basis). Thus, a 1,200 pound cow should receive at least 6 pounds of roughage per day. In many cases, the best alternative for cow/calf producers is to utilize a limit-fed, high-grain diet fed in drylot or semi-confined. The most expensive nutrient for a cow is energy (TDN). The initial reaction of many people is that cows will not survive on that small amount of feed. But, it’s important to keep in mind that grain is a concentrated energy source with 10 pounds of grain supplying the energy equivalent of 15 to 20 pounds of hay. Cows should be slowly adapted to high-grain feeding, just like feedlot cattle. A suggested practice is to begin with 2 to 3 pounds of whole shelled corn per head, per day and free-choice roughage. Then, increase the grain by 1 pound per day, and reduce the hay by 2 pounds each day until the final ration is attained. Make sure plenty of bunk space is provided so all cows can eat at the same time. Feed two times per day if possible. Once the cows are switched over to the limit-fed, grain-based ration, observe their body condition (flesheness) over time and adjust the grain as needed to maintain adequate condition.
High school graduation is an exciting time for families. As parents you have helped with science fair projects, spelling bee, homework, worked concession stands and chaperoned at dances. You have worked hard, along with your graduate, to get them across the stage. Now on to the next frenzy, getting your young person off to college. This is an excellent opportunity to make a spending plan to assist your child in planning for the known and unknown costs of college. If you prepare your college bound child now, they will be able to better handle a financial crisis.

Before school starts:

$ Outline all expected costs of college-living, entertain, school, and the money extras.
$ Discuss and make sure each of you has an understanding of who is going to pay for what.
$ Set up a separate account to manage the college expenses. This account may need to be a joint checking account so that you both have full access.

Review your insurance

Anything can happen, I lived in the dorm and we had a measles outbreak one semester and wow, we had so many issues with quarantine. However, we had (have) an excellent student health center. Review this information with your young adult.

Effective September 2010, parents can keep their kids on their plan until age 26. If you are planning to do this, discuss with your child when you plan on removing them from your policy.

Renters’ insurance or using your homeowner's policy for your student is a good option if they are living away from home. If they will be living off campus in an apartment, house or duplex, renters’ insurance for their belongings protects from fire, flood and theft. Review with your insurance provider the best way to insure your student's belongings especially their high tech items – cell phones, computers, MP3 players or gaming equipment.

Will they be taking a car? Does the university or college allow incoming freshmen to have cars? Have an open conversation with your teen about the total cost of speeding tickets and accidents. Keep the grades up to receive “good student discounts.”

Beware of Credit Cards

In 2009 the laws changed for young people and credit cards.

1. Anyone younger than 21 years of age must have a co-signer for a credit card, unless they have a co-signer or make enough to cover the limit.
2. Credit card companies are no longer allowed to set up on campus and do giveaways if you sign up.
3. Credit card companies must also explain interest costs if you only pay minimum.

If you decide to co-sign for your child, you are on the financial hook if they fail to pay. This is an excellent opportunity to set limit expectations and review the cost of credit.

Living off campus - Re-evaluate expenses

As your child is not an incoming freshman, they might want to live off campus. Much of the college studying structure is removed, in addition to a change in finances. Things to consider and discuss:

1. Financial responsibility for both your child and their roommate(s). A parent may have to co-sign.
2. Costs of: gas (community to and from campus); groceries (what will each roommate be buying); internet access (free on most college campuses); utility bills.
3. Renters’ insurance and car insurance: what those amounts change?
4. More incidentals – may encourage more eating away from home.

Adapted from: Smart Money

Leaders are what have created history as we know it: the ones who inspired new legislation, the ones who built new organizations, the ones who inspired great change. They were able to inspire the masses through the effective communication of their ideas and strategic positioning of a common vision and mission...they inspired those who wanted to see change occur! They empowered others to act and excel in that action! However, these were also few and far between, if we define leadership in a traditional form: The one in charge; the one with power over others and authority to make decisions for the group.

Modern times necessitate a new "look" for leadership and also compels the masses to be leaders at individual moments. It is no longer possible to have one mind think broadly enough to make decisions for the masses. Modern leadership requires collaboration, sharing of ideas and insights, and the willingness to relinquish control when another has a greater ability to be effective and successful. Traditional leaders take on the form of effective managers of human resources while front line workers become leaders at individual and defined moments, based on their expertise, their skills, and abilities; both in project management as well as relationship management.

So, what makes the 21st Century different? Dr. Mitch McCrimmon, a management assessment and coaching consultant, offers up the following 5 differences:

1. The 21st Century is a “knowledge-driven age”, whereas the past was based on power. No longer can you simply ‘put in your time’ to move into leadership positions; your knowledge has to earn your right to be and stay there! The effective leader can generate new ideas and develop creative solutions to problems to compete on the basis of innovation and remaining relevant! The more ideas exist, the better the opportunities!
2. Change is much more rapid today and decisions are much more complex. It is no longer possible for any one person to always know what to do. The effective leader can generate new ideas among their group so as to compete on the basis of innovation and remaining relevant! The more ideas exist, the better the opportunities!
3. The world is no longer comprised of small “discrete groups”. The group boundaries are much more loose and “informal networks” and “strategic partnerships” form for limited purposes, but are always dynamic and ever-changing based on the circumstances, project, etc.!
4. The dynamics between groups is also as important as those that exist within groups! These are only occasional and long-standing based on the times. One organization can be a leader in and set the standard for others to follow; both formally and informally.
5. In the 21st Century, “knowledge workers” are not “compliant drones”. They want their input considered when determining the direction of an organization. They may not ever have the goal of obtaining formal leadership positions in their agency. No one will want to work as a subordinate when they can go elsewhere and function as an equal.

To learn more about leadership in the 21st Century, join Texas AgriLife Extension Service as it hosts the second annual Community Leadership Empowerment Conference (2011 C-LEC) on September 16, 2011. Call 817-884-1946 for more information or register online at https://agrilife.extension.tamu.edu.
A serving size is a specific amount of food listed on the nutrition facts label. It is used as a reference to display the nutrient content for that food.

- Pay attention to the amounts of foods that eat
- If you eat more than the recommended amount (serving size), you may be getting more calories than you need.
- Over time, these extra calories can lead to weight gain

Below is a guide to help you use common household items to determine if you are having more than what’s recommended.

### Grains Food Group

<table>
<thead>
<tr>
<th>Serving size</th>
<th>Common item</th>
<th>Serving size</th>
<th>Common item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 cup of rice/pasta</td>
<td>tennis ball</td>
<td>1 cup of green salad</td>
<td>baseball</td>
</tr>
<tr>
<td>1 pancake</td>
<td>CD</td>
<td>1 baked potato</td>
<td>computer mouse</td>
</tr>
<tr>
<td>1 piece of cornbread</td>
<td>bar soap</td>
<td>¼ cup of tomato soup</td>
<td>small Styrofoam cup</td>
</tr>
<tr>
<td>1 cup of cereal</td>
<td>hand in a fist</td>
<td>½ cup cooked broccoli</td>
<td>light bulb</td>
</tr>
<tr>
<td>2 cups cooked pasta</td>
<td>wide open hand</td>
<td>½ cup of raw veggies</td>
<td>7 baby carrots/1 ear of corn</td>
</tr>
</tbody>
</table>

### Vegetable Group

<table>
<thead>
<tr>
<th>Serving size</th>
<th>Common item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 cup of orange juice</td>
<td>small Styrofoam cup</td>
</tr>
<tr>
<td>½ cup grapes</td>
<td>15 grapes</td>
</tr>
<tr>
<td>½ cup of fresh fruit</td>
<td>7 cotton balls</td>
</tr>
<tr>
<td>1 cup of fresh fruit</td>
<td>tennis ball</td>
</tr>
<tr>
<td>1 medium size fruit</td>
<td>tennis ball</td>
</tr>
<tr>
<td>¼ cup of raisins</td>
<td>large egg</td>
</tr>
</tbody>
</table>

### Fruit Group

<table>
<thead>
<tr>
<th>Serving size</th>
<th>Common item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 cup of orange juice</td>
<td>small Styrofoam cup</td>
</tr>
<tr>
<td>½ cup grapes</td>
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</tr>
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<td>tennis ball</td>
</tr>
<tr>
<td>1 medium size fruit</td>
<td>tennis ball</td>
</tr>
<tr>
<td>¼ cup of raisins</td>
<td>large egg</td>
</tr>
</tbody>
</table>

### Protein Group

<table>
<thead>
<tr>
<th>Serving size</th>
<th>Common item</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 tablespoons of peanut butter</td>
<td>ping pong ball</td>
</tr>
<tr>
<td>3 oz. of cooked meat</td>
<td>deck of cards</td>
</tr>
<tr>
<td>3 oz. of cooked chicken</td>
<td>1 chicken leg</td>
</tr>
<tr>
<td>1 oz. nuts</td>
<td>1 handful</td>
</tr>
</tbody>
</table>

### Common Snacks

<table>
<thead>
<tr>
<th>Serving size</th>
<th>Common Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 oz. chips/pretzels</td>
<td>2 handfuls</td>
</tr>
<tr>
<td>½ cup chips, crackers, popcorn</td>
<td>1 man’s handful</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Serving size</th>
<th>Common Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 oz. of cheese</td>
<td>9-volt battery or 4 dominoes</td>
</tr>
<tr>
<td>1 oz. of cheese</td>
<td>Thumb</td>
</tr>
<tr>
<td>1 cup of milk</td>
<td>1 school carton of milk</td>
</tr>
</tbody>
</table>

Reference: Texas Agrilife Extension Service “Getting the facts on serving sizes” lesson (Better Living for Texans curriculum)

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With the June 2nd debut of USDA’s Choose My Plate icon, making food choices for a healthy lifestyle can be a simple transition from My Pyramid by using the ideas in this list to balance your calories, to choose foods to eat more often and to cut back on foods to eat less often.

1) **Balance calories**
   - Find out how many calories YOU need for a day is a first step in managing your weight. Go to [www.ChooseMyPlate.gov](http://www.ChooseMyPlate.gov) to find your calorie level. Being physically active also helps you balance calories.

2) **Enjoy your food, but eat less**
   - Take the time to fully enjoy your food as you eat it. Eating too fast or when your attention is elsewhere may lead to eating too many calories. Pay attention to hunger and fullness cues before, during and after meals. Use them to recognize when to eat and when you’ve had enough.

3) **Avoid oversized portions**
   - Use a smaller plate, bowl and glass. Portion out foods before you eat. When eating out, choose a smaller size option, share a dish, or take home part of your meal.

4) **Foods to eat more often**
   - Eat more brightly-colored vegetables, fruits, whole grain products, and fat-free or 1% milk and dairy products. These foods have the vitamin D and fiber. Make them the basis for meals and snacks.

5) **Make half your plate fruits & veggies**
   - Choose red, orange, and dark green vegetables like tomatoes, sweet potato, and broccoli along with other vegetables for your meals. Add fruit to meals as part of main or side dishes or as dessert.

6) **Switch to fat-free or low-fat (1%) milk**
   - They have the same amount of calcium and other essential nutrients as whole milk, but fewer calories and less saturated fat.

7) **Make half your grains whole grains**
   - To eat more whole grains, substitute a whole-grain product for a refined product, such as eating whole wheat bread instead of white bread, or brown rice in place of white rice.

8) **Foods to eat less often**
   - Cut back on foods high in solid fats, added sugars, and salt. They include cakes, cookies, ice cream, candy, sweetened drinks, pizza and fatty meats like ribs, sausage, bacon and hot dogs. Use these foods as “sometimes” treats not everyday foods.

9) **Compare sodium in foods**
   - Use the Nutrition Facts label to choose lower sodium versions of foods like soup, bread and frozen meals. Selected canned foods labeled “low sodium,” “reduced sodium” or “no salt added.”

10) **Drink water instead of sugary drinks**
    - Cut calories by drinking water or unsweetened beverages. Soda, energy drinks and sports drinks are a major source of added sugar and calories in American diets.

*Go to [www.ChooseMyPlate.gov](http://www.ChooseMyPlate.gov) for more information*
Every five years, the U.S. Department of Agriculture (USDA) and the U.S. Department of Health and Human Services (HHS) update and release the Dietary Guidelines for Americans (DGA) to provide Americans with the most up-to-date information regarding nutrition. This year’s release of the 2010 DGAs not only included updated key nutritional messages but a new food icon, My-Plate.

The purpose of the DGA is to “prevent and reduce diet-related chronic disease, while promoting good health and healthy weight among Americans ages two or older” (Executive summary of formative research, 2011). The information is intended to be used by policymakers, health/nutrition professionals, and the general public. To specifically help everyday Americans make better nutrition choices, consumer messages and tools have been developed and are currently available online at www.chooseMyPlate.gov.

Key Messages

The 2010 Dietary Guidelines for Americans focuses on seven key messages that fall under three main themes. You can find these key messages and themes in this edition of Extension in the City in the article titled “Ten Tips to a Great Plate”. These messages were developed based on information collected through several methods including interviews and focus groups. Consumers voiced that they wanted messages that were realistic, easy, and could work with their busy schedules. Furthermore, the DGA wanted the guidelines to “encapsulate two overarching concepts: 1) maintain calorie balance over time to achieve and sustain a healthy weight and 2) focus on consuming nutrient-dense foods and beverages” (Executive summary of formative research, 2011).

Food Icon

Along with updated Key Messages, the new food icon, My-Plate, was released to take the place of MyPyramid. Based on consumer interviews, many Americans were confusing the older version of the pyramid with the new version while others thought that the icon itself was too complicated and simple. In the end, the plate icon was chosen due to the message it conveys about family mealtime and how it serves as an easy reminder to make healthy choices at mealtime.

Let’s Eat for the Health of It

Regardless of whether you are supportive of the new icon and messages or not, the overall idea that we need to start making healthier food options is one we can all agree on. With anything else, there is not one message, icon, or tip that will appeal to everyone. However, with the guidance of the 2010 Dietary Guidelines for Americans and the MyPlate icon, you can begin to make healthy changes that work for your priorities, lifestyle, and perspectives. The best place is to start small and choose one key message to focus on. Starting this September, the USDA will release one key message consumers can try to focus on at a time through December 2013. There is no better time to get started!


Properly watering plants during the summer tends to be one of the most confusing and misunderstood of all the gardening chores. Quite often, even ardent gardeners fail to recognize adequate watering until it is too late and their plants are badly damaged or dead.

“How often should I water?” And “How much water should I apply?” are two of the most-often asked questions from gardeners and non gardeners that we receive during this time of the year. Since water is both essential for healthy plant growth and often costly to apply in quantity during the summer, it is important to get it to the plant’s roots efficiently and keep it there.

The following tips are suggestions for easier and more effective watering for your properties. These techniques should apply to all gardening, from shade and fruit trees and vegetable gardens to lawns and house plants.

Never water strictly by the calendar. We don’t drink water ‘every ten minutes’ or ‘every hour’, so why shouldn’t plants be watered ‘every two days’ or ‘once a week’? Instead, learn how to recognize dry plants and soil and use these as your tip-off for watering. Too many factors determine how fast a soil dries for us to put watering on a regular basis.

When your plants are dry, water them thoroughly. Water lawns so that the soil will be wet several inches down, to encourage deep rooting and drought tolerance (The one worst mistakes people make in their gardens is trying to ‘sprinkle’ them each day by using their thumb and the end of a running hose. Most gardeners just don’t seem to have the patience to stand in one spot long enough for deep water penetration. Water trees by taking the spray at an end off the end of the hose and letting water barely trickle out and run slowly for several hours out under the drip line (not up near the trunk). Be sure and keep and eye on this so that runoff does not occur.

Most of your plants should be watered in the early morning when there is no wind and no evaporation. Evening watering increases the likelihood of disease invasion, as the majority of diseases develop most rapidly in cool, moist conditions. Early morning watering is also the most efficient time to water, as your water pressure should be the highest since most people are asleep.

When watering your lawn, try to keep water off the leaves of trees and shrubs as much as possible. This is especially important for such plants as crape myrtles and roses, which are troubled by leaf diseases which spread rapidly on wet surfaces.

Symptoms for plants that have been kept too wet are about the same as for those kept too dry. Roots in waterlogged soils die and do not take up water, so plants wilt and turn yellow. Try not to water a drowning plant.

Organic matter, such as shredded pine bark and composted manure can increase water absorption when they are worked into soil to provide moisture. Mulches also keep the soil cooler and make weed pulling much easier.

Always soak chemical fertilizers into the soil immediately after application. These materials are excellent sources of nutrients, but they also salts, and can pull water out of plant tissues, resulting in burn, unless they are watered into the soil.

For the remainder of the upcoming summer months, they will need plenty of water, but equally important is properly applying the much needed water. Please make yourself aware of the watering restrictions in your town, as they are already being implemented. Please give us a call at (817) 884-1945 or e-mail me at chaney@tamu.edu if you have any questions.

Information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Texas A&M Life Extension is implied.
Fort Worth is often referred to as Cowtown, but Flowertown might be a more accurate nickname. Ornamental plant sales income for Tarrant County in 2009 as reported by Dr. Marco Palma, Texas AgriLife Extension Agricultural Economist, was $211,737,642. In the 2010 Texas AgriLife Extension Agricultural Income Report estimated income from Beef Cattle sales was $5,700,000. That’s about $37 dollars in plant sales for every dollar of cattle sales. Maybe it’s time to change that longhorn logo!

Our plant production industry has fared especially well through the recent economic downturn because the majority of ornamental plant producers in north central Texas specialize in growing “color” or bedding plants. Sales of these annuals and perennials are not as dependent upon new construction as sales of trees and shrubs.

In addition to the fact that these types of plants need to be replaced regularly, bedding plant sales have also benefitted from an increased interest in vegetable gardening and edible landscaping. Many people have probably purchased their very first vegetable and herb transplants in the past few years. According to a nationwide Harris Interactive survey conducted in January 2009 on behalf of the National Gardening Association, 43 million U.S. households planned to grow their own fruits, vegetables, berries, and herbs in 2009, a 19 percent gain from 36 million in 2008.

As they say in every infomercial, “but wait, that’s not all!” The green industry’s total contribution to Tarrant County’s economy in 2009 included sales of over $965 million, with the previously mentioned $211 million from the ornamental plant production industry, $220 million in landscape services and $533 million in retail nursery sales. In addition, a growing local food segment produces horticultural crops on small acreage growing small fruits and vegetables, tree fruit and nut crops, grapes, and herbs.

Landscaping services have an especially large impact on our economy because that segment accounts for almost half of green industry jobs. In their report, Economic Impact in Texas (January 2011), Dr. Palma and Dr. Charlie Hall calculated the number of full-time equivalent jobs required to produce the volume of green industry sales in the Fort Worth metropolitan statistical area at 12,855. That’s a lot of people who are earning a paycheck.

In addition to the economic impact of commercial horticulture in Tarrant County, the industry has a positive impact on our urban environment. Managed landscapes decrease air pollution, help manage storm water runoff, reduce noise pollution and the urban heat island effect, provide habitat for wildlife and encourage physical fitness and outdoor community activities. Commercial horticulture isn’t only big; it’s truly green.

In teaching youth about responsibility, explain that “responsible people do what they are supposed to do. They think about what effects their actions have on others, and they accept the consequences of their choices. They work hard and do their best. They exercise self-control.” (Barbara Allman, Developing Character When It Counts: A Program for Teaching Character in the Classroom) Additionally, they honor and fulfill their commitments. In Developing Character When It Counts, Allman suggests that children should be given chores to teach them about responsibility. She cautions that these chores should not be simply assigned but agreed upon by both parent and child.

Allman encourages parents and children to sit down together and choose three daily tasks to be performed at home and offers the idea of a chore chart to assist with keeping track of each task completion. The chart Allman speaks about in her book is similar to charts we see in classrooms throughout our state, where little stars line up beside student’s names for completion of homework, good behavior or attendance. Allman believes that “the star helps your child feel a sense of accomplishment and also lets her or him know that the task has been done”.

The idea of the chore chart is a good one because it is something that most kids are familiar with since educators utilize charts within their classrooms. An additional activity that will aid in the discussion about responsibility is “Who is Responsible”.

**Who Is Responsible?**

<table>
<thead>
<tr>
<th>Phrase Bank</th>
<th>Others are responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am responsible</td>
<td>Paying the household bills</td>
</tr>
<tr>
<td>Waking you up in the morning for school</td>
<td>Brushing your teeth</td>
</tr>
<tr>
<td>Washing the dishes after a meal</td>
<td>Making your bed</td>
</tr>
<tr>
<td>Studying or doing homework</td>
<td>Picking out an outfit for school</td>
</tr>
</tbody>
</table>
Do you know the difference in a watershed, an aquifer and a river? Better yet, do you know why that is important? Over the next few articles I want to explore each in more detail to help you have a better understanding of water in your world.

An aquifer is an underground lake, more commonly known as ground water. When studying the water cycle, we learn that precipitation falls from the sky and lands on the earth’s surface. Some of the water runs off into surface sources, but some of the precipitation infiltrates the soil and percolates down through the soil, pulled by gravity.

Formation

This water moves through the pore spaces surrounding soil particles until it reaches an impermeable layer such as rock or a layer of clay. Water begins to collect above this layer, filling the pore spaces and saturating the area. This saturated, water holding area is called an aquifer. Do you know which aquifer Tarrant County falls into? In Tarrant County we fall into the Edwards Aquifer, Edwards-Trinity Aquifer and Trinity Aquifer. 97% of the world’s fresh water comes from aquifers.

Water Table

The upper level of an aquifer is the water table. The level of the water table can fluctuate depending upon seasonal changes, precipitation amounts, and the amount of water extracted both above ground and below ground. Excessive pumping can reduce the level significantly. It is often difficult to identify the boundaries and volume of an aquifer. In fact, most aquifers are actually series of interconnected aquifers rather than one large aquifer. There are two types of aquifers confined (under pressure) and unconfined which would be an example and unconfined.

Why should you care?

Water is one of the most essential components to life on earth but because precipitation does not fall in equal amounts everywhere, surface water alone is not enough to sustain many areas. In places where there is not enough water above ground, farmers and local water agencies turn to the groundwater found in aquifers to meet their growing demands. Because of this, aquifers have become one of the most important natural resources found in the world today.

Resources

Investigating Water: A Water Education Program (http://texas4-h.tamu.edu/library/files/publications_enrichment_investigating_water.pdf)
United States Geological Service (http://ga.water.usgs.gov/edu/earthwaqaufer.html)

Activity: Edible Aquifer

Materials:
- 12-16 ounce clear plastic cup
- ¼ cup Rocks: chocolate chips, hard chocolate candy pieces in different sizes
- Pollution: 2-3 drops of food coloring (any color you have handy will do) or 1T of powdered fruit drink
- Water: clear soda
- Sand: cake sprinkles or chocolate granules
- Confining Layer: Ice Cream or frozen yogurt

Procedure:
1. Cut the bottom of cup place your rocks.
2. Add soda to cover rocks. This represents the water table.
3. Add the ice cream or yogurt to represent the confining layer of an aquifer.
4. Top with sprinkles to represent sand and grass. You may want to add another smaller layer of rock prior to adding this.
5. Push a straw through each layer until you reach the water table.
6. Add food coloring or powered fruit drink to the top to represent pollution.
7. Pour soda over the top and watch the pollution leach into the water table.

Discuss why and how water gets contaminated.
- What are ways that pollution can be pre
- vented?
- What can you do to keep pollutants out of the groundwater?

Extension in the City

City Page 14

Cindy Brunot County Extension Agent 4-H

Service-learning offers a unique opportunity for America’s young people -- from kindergarten to college students -- to get involved with their communities in a tangible way by integrating service projects with classroom learning. Service-learning encourages students in educational process, using what they learn in the classroom to solve real-life problems. Youth not only learn about democracy and citizenship, they become actively contributing citizens and community members through the service they perform.

Why is Service-Learning Important?

A national study of Learn and Serve America programs suggests that effective service-learning programs improve grades, increase attendance in school, and develop students’ personal and social responsibility.

Examples of Service-Learning in Tarrant County

• East Fort Worth 4-H Club members studied about pollution and sustainability. They participated in a riverbed cleanup where they removed a significant amount of varied trash. Upon completion, they categorized the types of trash collected and learned about its impact on the environment.
• Texas Wranglers 4-H Club members, as well as other members throughout the county, learned about the challenges facing families with children of Down’s Syndrome and Autism. With a child facing a special event called “Down on the Farm”, they provided a day of fun and service for the children, their, siblings, and parents. 4-H youth utilized information and skills learned in their 4-H projects to show the guests how to care for rabbits, chickens, horses, goats, and a cow. Carriage rides around the farm were one of the favorite activities. Guest parents expressed their appreciation for the special day and 4-H youth were grateful for the opportunity.

• As 4-H club members reflected on the sacrifices that our military service personnel make on a daily basis, they were moved to take action to show their appreciation.
• Countryside 4-H invited families throughout the county to join them as they conducted “Operation Appreciation”. The 4-H youth used the sewing skills that they learned in their Clothing projects to make wall hangings to be distributed as they deployed. Meeting at the airport, members from Countryside and Eagle Mountain 4-H thanked the soldiers for their sacrifices and dedication as they distributed the neck warmers and other USO-approved personal items. Following the event, the youth and adults participated in discussion and reflection.

In a similar fashion, Keiller 4-H members researched the conditions in Afghanistan and spoke with military personnel to determine ways to provide assistance. A group of soldiers mentioned that they have begun western roping as a recreational activity when they are off duty. The youth who learned about this in their 4-H club decided to help. The youth collected money which furnished personal items and recreational supplies for military personnel. Reflection and discussion led the youth to consider future opportunities to meet the needs of our military personnel.

Each of the above examples show how service-learning is integrating meaningful community service with instruction and reflection in order to enrich the learning experience, to develop responsible and strengthen our communities. For additional information on how you can become involved, contact the Tarrant County 4-H office.

Source: Learn and Serve America
Top 5 Water Saving Tips

1. Fix Leaks
   - Stop leaks in faucets, toilets, and irrigation systems

2. Replace Old Showerheads and Toilets
   - Replace your old toilet and showerheads with water-saver models

3. Purchase Water Saving Washer
   - Replace your clothes washer with an Energy Star washer

4. Change Behaviors
   - Use less water, reuse water, use waterless ways to complete the task

5. Reduce Water Use in Landscape
   - Plant native and low water-use plants

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