



# LifeKnowledge® At Work

To advance the integration of LifeKnowledge through local teachers.

## Our Founding Partners



JOHN DEERE



## Supporting Partner



This material is based upon work supported by the Cooperative State Research, Education and Extension Service, U.S. Department of Agriculture, under Agreement No. 2002.45201-05130 as a special project of the National FFA Foundation.

## LifeKnowledge® Featured Articles

### Empowering Others

Brad Dodson, associate professor at California State University, Chico, explains empowerment as he sees it. His experiences in agricultural education span 27 years, during which he has served in many different positions related to agricultural education. Read on to understand the essentials of empowerment and how LK can empower teachers and students. [Click here to learn more...](#)

### Wrapping Up the School Year With LK

The last few weeks of class are packed with activities. Here are some LK ideas on what do with the last remaining hours of class time. [Click here.](#)

### Featured Precept

#### Featured Precept: Spiritual Growth

Spiritual Growth is the reflective inner strength that allows us to define our own personal beliefs, values, principles and sense of balance. [Click here](#) to understand how to facilitate spiritual growth in your classroom.

### Featured Lesson Plan

#### Tech Lesson: Calculating Mulch

Matt Kreifels shares how he integrates LifeKnowledge into everyday lessons such as how to calculate the amount of mulch needed for a landscaping project. [Click here...](#)

### Comments & Success

[Contact us](#) with your comments, questions or LifeKnowledge success stories.

### Unforgettable e-Moments Hot Tips

#### Unforgettable e-Moment: Hole-in-One

Teaching about general greenhouse pests is a common lesson in many horticulture classes. Try this Hole-in-One e-Moment to allow students to engage their intrapersonal skills and practice safety in their mind.

[Click here to read article...](#)

#### Hot Tips

#### Diversity in the Classroom

The need for diversity in our classrooms continues to gain momentum as the world is ever changing. Check out this teaching tip on embracing diversity in your classroom and facilitating difficult discussions.

[Click here ...](#)

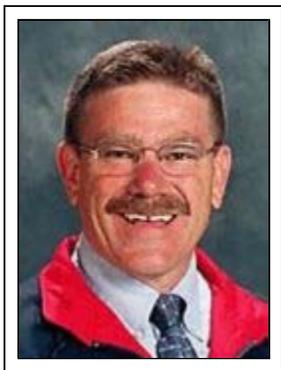
### LifeKnowledge News

#### LK Post-Secondary Survey Winners

Thanks to all those who participated in the Utilizing LifeKnowledge in Post-Secondary Education survey. [Click here](#) to find out who won the drawing

# Empowering Others

By Brad Dodson, Associate Professor, California State University, Chico



*Brad Dodson taught high school agriculture for six years and lectured at California Polytechnic State University while obtaining his master's degree. He then enrolled at Texas A&M University as a Ph.D. graduate student in agricultural education, teaching courses and advising students in their Collegiate FFA Chapter. After receiving his Ph.D., he was hired by the California Department of Education as a regional supervisor for the northern California area, advising the regional FFA program and providing technical assistance to high school agriculture teachers.*

*Currently Dodson coordinates the Agriculture Teacher Education program at Chico State. He teaches agricultural education courses and advises undergraduate and graduate students and the newly formed Alpha Tau Alpha Chapter.*

Empowering others means equipping them with the knowledge, skills and confidence to accomplish whatever they want to accomplish and live the life they want to live, both personally and professionally. As a teacher, you have ample opportunities to empower students. That essentially is your job! For example, when you teach students a skill such as interviewing skills, you empower them to be competitive in the job market. That is

empowering!

The LifeKnowledge turnkey lesson plans are tremendous resources for teachers to empower students. The lessons are ready to go, created by teachers for teachers. By integrating LifeKnowledge into the classroom and allowing the students to take charge and lead a lesson or activity, students will gain leadership experience that will boost their professional and social growth.

I use LifeKnowledge in three ways in my college classes:

1. As a system by which teachers can integrate leadership development into technical agriculture classes, embracing the original idea of LK. We need to face the realization that FFA does not work for all kids; not every student chooses to be involved. We have a responsibility, however, to empower all students with leadership knowledge and skills needed in the industry of agriculture. In my classes, we talk about the foundations of FFA and the integral nature of the three-circle model, but the classroom component of the model is the one and only way to bring leadership education to all students. The resource I advocate is LifeKnowledge.
2. The second way I use LK is through an assignment where students are required to build a leadership matrix. When I was teaching high school, my leadership development program was haphazard, hit-and-miss, and only those who happened to get involved when we did a leadership activity benefited. My program was not purposeful – leadership development was not intentional. I didn't sit down and identify the set of skills I wanted all of the students to develop before they left the program.

Therefore, I now ask my college students to create a leadership matrix that identifies at least 10 skills needed by all agriculture students, as well as the additional skills needed by chapter officers and committee chairs. The matrix is to include the LifeKnowledge lesson(s) that addresses those particular skills. The matrix then serves as the basis of their systematic leadership development program.

3. Lastly, I use LK to teach lesson planning. The LK lessons are examples of educationally sound lesson plans. I encourage the students to pay attention to the structure, flow and scripting of directions and contextual sets, teaching methodologies and languaging in the LK lessons and then to implement those components in their own lessons.

A strength of our program is the level of engagement of our pre-service students in agricultural education beyond the walls of the classroom. It is important for college students to experience firsthand the three-circle model – what is involved in teaching agriculture, including being an FFA advisor and SAE supervisor. These experiences are empowering. I require my students to participate in agricultural education beyond what they do in the classroom.

They must be active in service learning activities such as competitive events, business meetings, leadership training programs, SAE project visits and teacher association meetings. The students serve as judges, hosts, workshop presenters and trainers. We host a Field Day where we have more than 1,300 FFA members come to campus and participate in multiple CDE events, and our agricultural education students are an integral portion of the leadership behind this Field Day.

The students facilitate workshops at state convention and they host a regional officer candidate training as well as a two-day state officer candidate training. Our 40 to 60 students within the department have ample opportunities to stay involved.

As a mentor to future peers in the teaching profession as well as in other professional development settings, it is important to empower through communication. For example, when I observe a student teacher, prior to my classroom observation, I ask the student teacher to identify an aspect of their teaching on which they would like me to focus my observation. Then I collect data during the lesson. I might record how many times during the class they tried to get the students back on track, their clarity of directions, and/or the engagement levels of their students throughout their lessons. During the post-observation conference, we will review and analyze the data and identify areas of strength and needed improvement. Being objective is key, and the data serves as a reference point for discussion and evaluation. The discussion of how they performed and then having a conversation about how it propels or retracts from student learning creates open lines of communication between me and the student teachers.

*FFA was not meant to be a stand-alone club, but a teaching tool where youth can practice leadership in a "real" way.*

While visiting student teachers and in my classes, I try to balance commendations and recommendations. Generally, while coaching, I start with a compliment and end with a compliment. I try to use Mark Reardon's coaching model: introduce theory, model it, give opportunities for practice and then provide coaching. Being a good example of the teaching model during class is essential in setting up the future teachers for success.

A focus in the classroom is how to help students empower each other. For example, if you teach an LK lesson on cooperation followed by providing opportunities for students to work cooperatively with others, that can be empowering. This is the way FFA was intended to be set up – as a tool for greater student growth and learning. Teach agriculture students leadership and personal skills and then give them opportunities to practice and hone their skills. FFA was not meant to be a stand-alone club, but a teaching tool where youth can practice leadership in a "real" way.

Preparing students to be successful is what teaching is all about. Many agriculture teachers do a great job of modeling character and responsible work ethic through coaching, practicing and praising. One thing I did not do as a high school teacher is to stop and take the time to look back and reflect with the student on their performance – provide feedback to them so that they can improve for next time. Perfect practice makes perfect. An essential component in learning is reflection.

Empowerment is a great way to train officers, committee chairs, etc. I help my students realize that if they can't empower their officers, they will be burdened with micromanaging their chapter and doing much of the work themselves. It benefits both their young leaders and the advisor to empower their officers and chairpersons. As a result, advisors and officers do not get stuck doing all the work – the operation of the chapter is shared by others. Students can empower each other through peer teaching, goal setting and mentoring, and teachers can empower their students by utilizing LifeKnowledge lesson plans.

[BACK TO TOP](#)

---

## Wrapping Up the School Year With LK

**By Katy Wuthrick, Education Specialist, LifeKnowledge Center for Agricultural Education**

There are only seven days of school left, with two assemblies, NHS Induction Ceremony and the All-School Picnic. Classes will be hit-or-miss the next few days, but you want to make the hours spent in class meaningful. How can you incorporate a lesson that will be fun, memorable and useful to the students in the last few days of class?

**Jobs:** As those last days of school wind down, integrate career success lessons to help your students find and keep a summer job. Empower them to land the job of their choice by teaching a series of influential lessons: *HS. 36 – Conducting a Job Search*, *HS. 38 – Interviewing Techniques* and *HS. 39 – Keeping a Job*. Whatever stage of the job hunt the students are in, these lessons are sure to be helpful and correlate on a personal level.

Perhaps your students aren't looking to make money this summer; they just want to keep busy. Discuss job shadowing and what a great perspective in decision making and professional growth can come from such experiences. Teach *HS. 31 – Making Decisions About Career Paths* to help your students understand the importance of job shadowing.

**Service:** Aid your students in realizing the ample opportunities to be of service this summer. Encourage them to become a camp counselor, serve as a mentor, volunteer at a community center or serve on Junior Leaders. You could easily weave the LifeKnowledge Middle School Lesson Plans in Unit 5 into any service conversation. Lessons such as *MS. 59 – Finding Opportunities for Service in Your Family/School* or *MS. 61 – Everyday Acts of Service to Others* could resonate with students and empower them to become involved in service projects this summer.

As we all know, paid jobs and service activities are great resume builders, so remind your students about how to create a resume and encourage them to keep theirs up-to-date throughout the summer (*HS. 37 – Developing a Resume*).

**SAE:** Many SAEs begin or come to fruition during the summer months. Set your students up for success by giving them a few last-minute pointers before you set them free. Explore *AHS. 50 - Developing Innovative SAEs* and challenge your students to explore other SAE opportunities or to expand upon their current SAE program. Suggest an entrepreneur or placement SAE that would be different than what they currently do.

Lastly, as final project work sessions wrap up, students often have some extra time prior to class dismissal; this is an excellent time to ask some reflective questions that direct students' attention to the skills associated with developing relationships. Try facilitating a discussion about their interactions throughout the period. [Click here](#) to see how that conversation might sound through a Coaching Guide Activity.

Say good-bye for the summer while encouraging your students' continuous improvement in all aspects of leadership, personal growth and career success.

[BACK TO TOP](#)

---

## Featured Precept: Spiritual Growth

Spiritual Growth is the reflective inner strength that allows us to define our own personal beliefs, values, principles and sense of balance. What we become and how we behave or live our lives are a function of individual identity. The issue of how our individual identity evolves is spiritual growth.

Our personal beliefs, values, principles and sense of balance provide one's foundation for making ethical decisions and for coping with defining moments. Ethical decisions are those that we know to be right or wrong. Defining moments, however, are those times when either choice is correct, but still a decision must be made, sometimes with painful results. People with positive spiritual growth not only make decisions with a clear conscience, but they do so with core values and principles that are reinforced or modified over time by reflecting on the results of previous decisions, especially the toughest ones.

Understanding spiritual growth begins with self-inquiry. Answering the question of "Who am I?" is essential as one's individual identity evolves and interactions with other people become more important. As one progresses through school and into the world of work, effective interactions with others are essential for personal and career success. Deeply rooted values and principles establish a belief system, which becomes the basis for how we live our lives.

Check out *AHS. 3 – Role of Spiritual Belief System in Personal Mission* to help your students understand the following key components:

Key components to a spiritual belief system

1. Definition of **spiritual belief system**: the beliefs and standards that help guide every decision we make in our lives.
2. Definition of **values**: standards that influence our life and our decisions.
3. Definition of **morals**: knowing the difference between right and wrong and applying that knowledge in our daily lives.
4. Definition of **standards**: predetermined boundaries set internally that guide what one will or will not do.
5. Definition of **ethics**: the principles behind behavior or conduct that is morally correct.

Other lessons to help your students' spiritual growth include:

- To nurture a spiritual belief system, teach:
  - *HS. 11 - Understanding Beliefs and Belief Systems*
  - *HS. 9 - Understanding Values, Beliefs, Character and Integrity*
- To help students respect and be sensitive to others' beliefs, teach:
  - *AHS. 6 - Respecting Others' Belief Systems, Visions and Mission*

Lastly, help your students become masters of the precept Spiritual Growth by trying this [FFACoaching Guide Activity](#).

[BACK TO TOP](#)

---

## Tech Lesson: Calculating Mulch



Calculating mulch is a great end-of-the-year lesson when there are only a few days of school left and you want class time to be productive, but there is simply not enough time to start a new unit. This mulch lesson is an excellent way to get the students involved in a hands-on activity, learn a useful skill and focus on the precept of decision making.

"Even though this nontraditional format (LifeKnowledge) can face students with understandable challenges, it can also yield spectacular personal and professional learning experiences of both content and leadership," said Matt Kreifels, agriculture educator and author of this month's featured lesson.

Kreifels is the agricultural education teacher at Blair High School in Blair, Neb., where he challenges his students and himself to strive for professional development.

"Commitment to one's profession requires time and dedication. Matt has shown he is willing to make this commitment. Mr. Kreifels has worked with the National FFA LifeKnowledge curriculum," said Principal Thomas Anderson, Blair High School. "The best part about all of this training is that Matt brings it back to his classroom."

Throughout this lesson, Kreifels emphasizes the importance of making good decisions. He engages the students with a Choral Response e-Moment to keep their attention. At the end of the lesson, Kreifels suggests reviewing the day's lesson with a Graphic Artist e-Moment to help the students visually remember key concepts.

"Creating leaders within our classrooms may be the single most effective teaching and learning strategy that we can develop," Kreifels said. "Students deserve to experience leadership in all classes. As teaching evolves over the next 20 years, I believe that teachers of all subjects and grade levels will integrate leadership experience in their classrooms."

Calculating Mulch lesson [click here](#) - Lesson Evaluation Worksheet [click here](#)

[BACK TO TOP](#)

---

## Hole-in-One e-Moment

**Objective:** Students identify and perform the correct measure for the most common greenhouse pests, diseases and disorders.

**Problem area:** Students have an understanding of what the most common greenhouse pests are, but they do not apply the appropriate control measures.

Identify the most common diseases, pests and disorders that you want the students to know. This can be based upon what you find in your greenhouse or what is most common in your area.

The solution sounds like...

1. **Teach the skill.** We have identified those pesky pests, diseases and disorders that are common in our greenhouse. Think about the control measure. For each pest, we know there are certain steps to controlling an outbreak. Ask the students to identify one pest, disease or disorder. Pair up with a partner to discuss the control measure.
2. **Imagine it.** Let's take a common greenhouse pest – the whitefly. How do we check for whiteflies, and what is the control measure? Allow students to discuss. Close your eyes! Imagine walking out into the greenhouse and walking up to a table of poinsettias. Reach out and check the underside of the leaves for insects. You see a

cluster of those nasty pests! You look for the chemical control measure. You grab the container, read the label and apply the correct amount.

3. **Practice it.** Stand up! Let's walk through our whitefly example again. This time, each of you will perform the actions as if you were actually in the greenhouse. Guide the students through this practice. Have them rehearse for other common greenhouse pests.

#### **Why this solution works**

- Learners have the opportunity to practice in the safety of their mind before the heightened challenge of public performance.
- Enhances learners' visual-spatial, bodily-kinesthetic and intrapersonal intelligences.

[BACK TO TOP](#)

---

## **Diversity in the Classroom**

This tip has been taken from the University of Michigan Center for Research and Teaching:  
<http://www.crlt.umich.edu/tstrategies/tsmdt.html>

*Teaching Strategies: Multiculturalism/Diversity in Teaching*

American society is becoming increasingly diverse. As colleges and universities begin to reflect this diversity, teachers across academic disciplines try to understand students' varied backgrounds and experiences. Instructors also try to find new ways to foster a safe and open learning environment for all students. The articles and links in this section describe student differences and their implications for teaching and learning. There is also a list of additional resources on a variety of topics related to multiculturalism and diversity.

[Click here](#) to find multiple links related to how to facilitate diversity in the classroom.

[BACK TO TOP](#)

---

## **What's New With LK**

### **LK Post-Secondary Survey Winners**

Thank you to all of those who participated in the Utilizing LifeKnowledge in Post-Secondary Education survey. The LifeKnowledge Center for Agricultural Education appreciates your continued support.

The Prize Pack winners from the LK Post-Secondary survey drawing are:

Daniel Foster, The Ohio State University  
Marvin Kleene, Washington State University  
Thomas R. Dobbins, Clemson University  
Jon Ramsey, Oklahoma State University  
Kara Schut, Michigan State University

**Congratulations!**

[BACK TO TOP](#)

---

© 2008, National FFA Organization

Join the [LifeKnowledge mailing list](#) and get the LifeKnowledge At Work newsletter delivered straight to your email inbox.

You can also sign up for other great FFA e-Publications.



---

**CONTEXT**

Group Work and Team Projects Lesson1

---

**PRECEPT**

B. Relationships

---

**SIGN OF SUCCESS**

- B1. Practice human relations skills including compassion, empathy, unselfishness, trustworthiness, reliability and listening
- B2. Interact and work with others
- B5. Participate effectively as a team member

---

**LEVEL OF APPLICATION**

Awareness

---

**PROGRAM COMPONENT**

Classroom

---

**ACTIVITY**

Relationship review after group project work sessions

---

**RESOURCES AND MATERIALS**

None required

---

**DESCRIPTION**

Often during group project work sessions, students will have some extra time prior to class dismissal. This is an excellent time to ask some reflective questions that direct students' attention to the skills associated with developing relationships. Here's how that conversation might sound with the class:

*Great work today! Let's do a quick check-in on some important skills related to developing relationships in our groups. I'm going to ask a few questions. Write down the questions and your response by yourself. In a moment we will bring this back to a classroom level discussion.*

- *How did you practice empathy today? (Empathy is putting yourself in someone else's shoes and considering how they feel.)*
- *How did you see others being unselfish today?*
- *What did you see someone else do today that told you they were really listening?*
- *How have you shown your team that you are reliable today?*
- *What have you done to participate effectively as a team member today?*

- *What have others done to participate effectively as a team member today?*

Allow time for students to complete the questions alone. Then assemble into project teams to discuss the answers. After some discussion time, elicit responses from each team and discuss the questions at the classroom level.



---

**CONTEXT**

FFA Week Lesson1

---

**PRECEPT**

L. Spiritual Growth

---

**SIGN OF SUCCESS**

L2. Respect and be sensitive to others' beliefs

---

**LEVEL OF APPLICATION**

Interaction

---

**PROGRAM COMPONENT**

FFA, Classroom

---

**ACTIVITY**

Students will attend a spiritual/church service as a chapter during National FFA Week

---

**RESOURCES AND MATERIALS**

List of churches/spiritual life centers in the community (yellow pages, telephone book, and local newspaper)

---

**DESCRIPTION**

Have students collectively decide what church/religious service they will attend during National FFA Week. This could possibly be done through voting.

After selecting the church, ask a representative to speak to the classes/students to explain their religion (this could be another student or leader from the church). This will provide an awareness/understanding of the religion. This would be a good time for students to ask questions about the religion.

Have students create a one-page insert/handout that can be given to all church attendees when they attend the church. The handout would profile FFA and National FFA Week. Also make sure students are aware of key FFA messages they might be able to provide during their attendance.

Pre-Activity Questions:

- What do you know about different spiritual belief systems?
- Why do you think it's important to be aware of different spiritual belief systems?

**WRAP-UP QUESTIONS**

---

- What similarities/differences did you see that were the same/different than your spiritual belief system (ceremonial, message delivered, clothing/attire, music, gender roles)?
  - How can learning about someone else's belief system benefit your development as a leader?
  - What activities are currently taking place in the world that stem from a group's specific belief in a spiritual system?
  - How might differences in a spiritual belief system impact a company whose employees come from varied spiritual backgrounds?
  - What are some examples where agribusinesses are influenced by customers' with different spiritual belief systems?
-

**Calculating Mulch**  
**Matt Kreifels, Agriculture Teacher**  
**Blair, Nebraska**  
**2006**

**Objectives: By the end of the lesson, the student learner will be able to...**

- calculate areas of various shapes
- calculate mulch volume
- determine cost of the required mulch

**Background**

Unit: Beginning Landscaping

LK Precepts:

- Technical and Function Skills in Agriculture
- Decision Making

Key Terms:

**Logistical Information**

Time: 1 Block (84 Minutes)

Tools, Equipment, Supplies: 100-foot tape measures, a marked outdoor area with curves and angles to measure (use a garden hose or rope if necessary), graph paper, cost of mulch at local business

**Interest Approach**

The principal just called and they have decided the carpet/tile in this room has to be replaced tonight, but the carpet/tile company misplaced their notebook with the area of this room. The principal wanted to know if we could calculate that and get back to him.

We know the formula to calculate area is what?

*Students answer "length x width."*

Right! If we were going to figure the area of this room, it would be pretty easy to do, right? To be sure we're exact, I think we'd better measure more than once so we know we've got it right. When I say "measure," we're going to find the most exact area of this room. We'll be divided into pairs. I'll give each pair a tape measure. It's important that we measure accurately, so work carefully!

*Divide the class into pairs and pass out tape measures.*

Matt Kreifels

Page 1 of 5



*Give the students five minutes to make their calculations and then compare answers as a class.*

## **Summary of Content, Instructional Sequence, Activities and Strategies**

### **Objective 1: Calculate areas of various shapes**

*Students will measure an area that you set up outside or somewhere in the school. Use a garden hose or rope to outline an area that has curves or angles, preferably beside a wall.*

Great—thanks for the help. I'm sure the principal and carpet/tile company will appreciate these numbers!

If you think of it, we're lucky that this room is so square. You know, when we carpet the ground in a landscape, it's not always so easy. As we've learned, most landscapes use curves and angles to soften the hard edges of buildings to create a more comfortable environment. As we dive into that question, remain focused as we solve a problem most homeowners don't know how to do!

First of all, these calculations are an estimate. It is possible to calculate precise areas, but from a business perspective, it is not worth our time. To calculate an area of a landscape, we need three things:

- tape measure
- graph paper
- pencil

*Use a Choral Response e-Moment.*

When we measure a landscape, it is best to draw the area on paper. From there, we can use the paper to estimate the needed mulch. As we've discussed previously, it is standard to use 1/8-inch scale when working with landscapes. When I say "measure," we will measure an area. Using the same partner and tape measure that you used in this room, we will proceed to measure an area outside that I've set up. Remember that we must first draft a copy, measure, then transfer it to our graph paper.

What questions do you have? Be sure to pick up a piece of graph paper as we leave the room. Ready? Measure!

*Facilitate the students measuring and transferring it to their graph paper. Have them count squares on their graph paper to determine the odd areas to calculate square footage. Return to the classroom.*



## Objective 2: Calculate mulch volume

Great measuring! Now that we know the square feet of that area, we know how much mulch we need, right?! Oh, what else do we need to know? (Students may say how much mulch can cover, depth of the mulch, etc.) Well, here are a few things that we'll need to know to calculate mulch.

As landscapers, what things do we need to know in order to calculate how much mulch we'll need for our space? [Elicit responses and list while checking off things we know already. Depth should be the answer.]

Depth is one important factor. Let's take a look to see what we need to know about that.

Let's record them in our learning journals:

- Mulch should be three inches deep to
  - Prevent weeds
  - Eventually decompose
  - Retain water
- Mulch is purchased by the cubic yard
  - Most people say “yards of mulch,” forgetting to say “cubic,” much like when speaking about concrete

Let's quietly ponder this question: how many square feet can a yard of mulch cover? Take 71 seconds to silently calculate this problem. Be ready to share your result or frustration with your neighbor. Go!

*Let students calculate, taking note of frustrations, etc.*

Great—turn to your neighbor and come to a consensus on how many square feet a yard of mulch can cover.

*Let them share. After a couple minutes, facilitate sharing between the entire class.*

---

You know, I have a difficult time sometimes trying to solve a problem like this. Raise your hand if you were frustrated or confused as we worked with our partners. What caused that frustration? *[elicit]*

Hmmm. What ways do we or others use to solve problems? *[elicit]*



*Draw some conclusions about problem solving while honoring student answers. Make these points as they come up: identify goal, obstacles, resources, etc. Also, let students know that it is okay to ask for help from others.*

---

Please know that I and the other teachers in this building are resources for solving problems. Let's take a moment to be sure that we have the right answer. Travel with me as mathematicians so we understand how this number is calculated.

*Come to a consensus and explain how those numbers are calculated (1 yard = 3 feet = 36 inches, so  $36'' \times 36'' \times 36'' = 46,656$  cubic inches; 1 square foot =  $12'' \times 12'' = 144$  square inches, so  $144$  square inches  $\times 3''$  deep =  $432$  cubic inches; therefore  $46,656$  cubic inches in a cubic yard divided by  $432$  cubic inches in a square foot of mulch =  $108$  square feet of mulch).*

As we've discussed before, mulch calculation is estimation. Therefore, from now on, let's use this to calculate our mulch:

- 1 yard of mulch will cover 100 square feet at 3 inches deep

So let's calculate how much mulch the area we measured outside will need.

*Facilitate the division of the square feet they calculated by 100 square feet to agree on a total number of cubic yards.*

### **Objective 3: Determine cost of required mulch**

Now we understand how much mulch we need, but where do we get it?

*Expect various answers: city, garden center, local tree removal business, etc.*

Right—there is usually a cost for that mulch. What may determine that cost?

Here is a list of common factors that affect mulch cost:

- Availability of wood to be chipped
- Kind of mulch
- Time of year
- Quality

I just called the garden center and they charge \$30 per yard for their most commonly sold mulch. Based on that figure, how much mulch do we need for our landscape?

*Facilitate their calculations. (Multiply yards of mulch by \$30 per yard.)*

Matt Kreifels

Page 4 of 5



Besides calculating mulch, we can also use this for other ground cover. Another common ground cover is river rock. What if we priced that at \$60 per ton, which also covers 100 square feet? How does that affect our total ground cover cost?

### **Review**

Use a Graphic Artist e-Moment so students can visualize the process of mulch and ground cover calculation.

### **Evaluation**

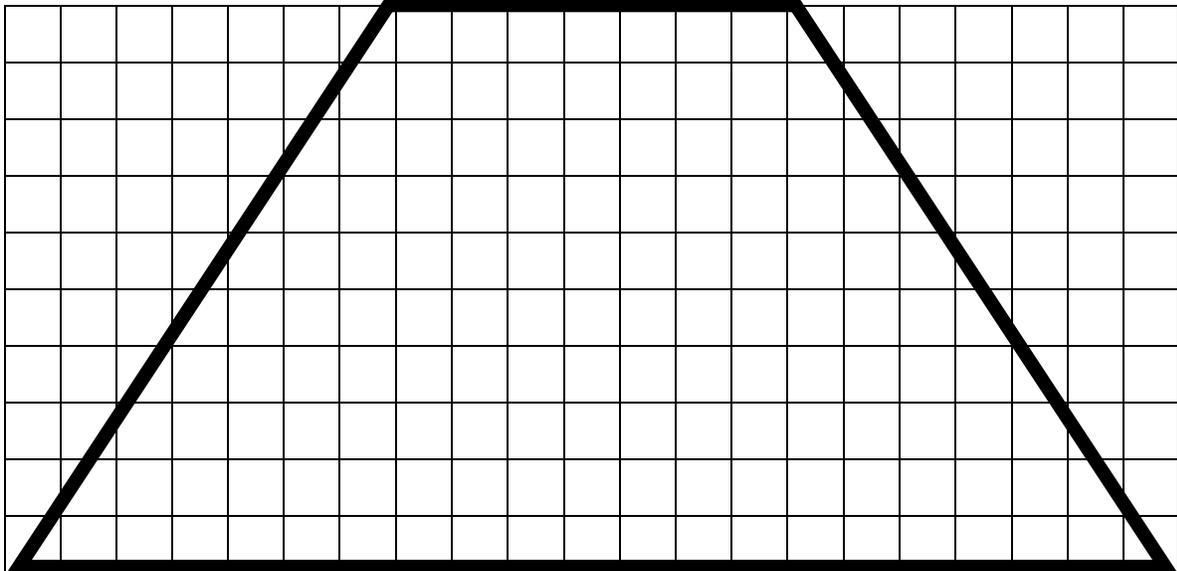
Use the attached worksheet.



# Horticulture Ground Cover Scenario

Name: \_\_\_\_\_

Date: \_\_\_\_\_



*1 length of a square = 2 feet*

*Total Plot = \_\_\_\_\_ square feet?*

Mulch costs \$30 per yard. River Rock costs \$60 per ton.	One yard of mulch covers 100 square feet. One ton of rock covers 100 square feet.
--	--

***Plot your plans above. Calculate how much of each item above you would need to fill the area.***

***Place all prices on the table below:***

Item	Cost per unit	# of Units	Total
Mulch			
River Rock			
Grand Total:			



Grants  
Teaching Strategies

- Academic Integrity
- Evaluation of Teaching
- Learning Styles/Theories
- Multiculturalism/Diversity
- Scholarship of Teaching
- Syllabus/Course Design
- Teaching Methods
- Testing/Grading
- Technology in Teaching
- Disciplinary Resources

CRLT Theatre Program  
Multicultural Teaching  
Instructional Technology  
Evaluation & Research  
Publications & Links

SEARCH



Search UM
  Search CRLT

Services and Links for: [FACULTY](#) | [GSIs & POSTDOCS](#) | [DEANS, CHAIRS, & DEPARTMENTS](#)

[Home](#) > [Teaching Strategies](#) > [Multiculturalism / Diversity in Teaching](#)

## Teaching Strategies: Multiculturalism / Diversity in Teaching

American society is becoming increasingly diverse. As colleges and universities begin to reflect this diversity, teachers across academic disciplines try to understand students' varied backgrounds and experiences. Instructors also try to find new ways to foster a safe and open learning environment for all students. The articles and links in this section describe student differences and their implications for teaching and learning. There is also a list of additional resources on a variety of topics related to multiculturalism and diversity.

AACU/University of Maryland Diversity Web  
<http://www.diversityweb.org>

DiversityWeb is an interactive resource hub designed to support colleges and universities in their efforts to create settings that foster students' understanding of the intersection between domestic and global issues and their sense of responsibility as local and global citizens. The site contains information about diversity innovations relative to institutional leadership, faculty and student development, and curriculum change. It also provides information about research trends and evaluation.

Understanding Prejudice: Teacher's Corner  
<http://www.understandingprejudice.org/teach/>

This page contains links to teaching ideas, materials, and resources (including more than 35 college-level classroom activities and student assignments) about prejudice, discrimination, multiculturalism, and diversity.

CRLT Multicultural Teaching Resources  
<http://www.crlt.umich.edu/multiteaching/multiteaching.php>

Multicultural teaching encompasses a broad range of topics from student and faculty diversity and retention, to teaching about social justice and creating inclusive classrooms in which all students can succeed. This gateway webpage offers information about the services that CRLT provides to U-M faculty and GSIs, a link to the CRLT Theatre Program, and a list of multicultural resources and bibliographies.

CRLT Multicultural Teaching: Annotated Bibliographies  
<http://www.crlt.umich.edu/multiteaching/multibiblio.php>

This link provides a number of annotated bibliographies for educators.

CRLT Teaching Strategies & Disciplinary Resources:

[Creating an Effective Learning Climate](#)  
<http://www.crlt.umich.edu/tstrategies/tscelc.php>

[Group Work and Cooperative Learning](#)  
<http://www.crlt.umich.edu/tsgwcl.php>

[Incivility in the College Classroom](#)  
<http://www.crlt.umich.edu/tstrategies/Incivility.php>

[Afroamerican and African Studies](#)  
<http://www.crlt.umich.edu/tstrategies/afroamericanstudies.php>

[Asian American and Asian Pacific American Studies](#)  
[http://www.crlt.umich.edu/tstrategies/asian\\_asianpacific\\_american.php](http://www.crlt.umich.edu/tstrategies/asian_asianpacific_american.php)

[European Studies](#)  
<http://www.crlt.umich.edu/tstrategies/eurostudie.php>

[Latin American Studies](#)  
<http://www.crlt.umich.edu/tstrategies/latinamerstudies.php>

[Middle Eastern Studies](#)  
<http://www.crlt.umich.edu/tstrategies/middleeaststudies.php>

[Native American Studies](#)  
<http://www.crlt.umich.edu/tstrategies/nativeamerstudies.php>

Women's Studies  
<http://www.crlt.umich.edu/tstrategies/womensstudies.php>

Diversity Among Our Students  
<http://fluid.stanford.edu/class/cee200/diversity.htm>

American society is more diverse now than at any time in the last fifty years. In order to teach effectively in such an environment, instructors need to understand students' varied backgrounds and experiences and explore ways to foster an open, safe environment for all students. This essay describes some common challenges for students of color and offers suggestions for how faculty can provide encouragement and support.

Diversity in Teaching and Learning: Links to Web Articles  
<http://www.colorado.edu/journals/standards/V6N1/EDUCATION/SYLLABI/bibsyll.html>

For faculty who would like to incorporate a multicultural perspective into their courses, this link provides sample syllabi with course overviews, bibliographies, grading rubrics, and model lesson plans. Disciplinary perspectives that are represented include: civics, geography, geometry, cultural studies, history, film, and literature.

Understanding Prejudice and Discrimination  
<http://www.understandingprejudice.org/>

This website provides more than 2,000 links to prejudice-related resources, searchable databases, and a variety of interactive exercises that explore the causes and consequences of prejudice, stereotyping, and discrimination.

Also see the following journals:  
Black Issues in Higher Education  
Women in Higher Education  
Journal of Diversity in Higher Education

[back to top](#)

CRLT • University of Michigan • 1071 Palmer Commons • 100 Washtenaw Ave. • Ann Arbor, MI 48109-2218  
Phone: (734) 764-0505 • Fax: (734) 647-3600 • Email: [crlt@umich.edu](mailto:crlt@umich.edu)

Copyright © 2009 The Regents of the University of Michigan UM Gateway | Non-Discrimination Policy  
Best viewed @ 1024 X 768