Issues Students Face When Learning Geometry in the Classroom

[redacted]

ELED 514

North Carolina Agricultural and Technical State University

November 10, 2012

HHH Project Proposal

Introduction

In a word the most important concept that is pervasive throughout all aspects of the core Social Science classes is, scarcity. Scarcity is a key concept effecting Civics, World History, and U.S. History alike. This concept, which is so important to the Social Sciences, is also a primary motivating factor in our own personal lives. Scarcity determines the price of the food we eat, the price we pay for our lodgings, and the careers we choose.

Media regularly reports that people die from scarcity and the ramifications of scarcity every year. Whether discussing famines, to wars, or simple economics; scarcity is always an important part of the conversation when discussing the basic needs of people around the world. Students studying and understanding scarcity will be better prepared to understand that the choices they make have impact on their community. My head, hand, and heart community service project will seek to address a local manifestation of scarcity and provide the students an opportunity to engage with their local community in a meaningful manner.

Identify who will benefit

For the purpose of the project I will identify three separate groups that will directly benefit from this HHH project. The primary and most direct group that will benefit are the below poverty families of Siler City N.C.**.** All proceeds from the project will go directly to cover any expenses incurred by the participants in the project first and the remainder will be donated to Chatham County Together a local nonprofit that works with at risk youths (the majority of the SAGE student body is at risk). This donation will help Chatham County Together to continue their mission of providing services to teens in need. Another way that below poverty families of Siler City N.C. will benefit is by students providing quality produce directly to citizens at a local farmers market at the best possible price. One effect of scarcity (or more correctly its inverse, surplus) is the relative abundance of cheap unhealthy food when compared to fresh healthy food. This HHH project will seek to address that effect by providing the community with a sustainable source of inexpensive healthy foods.

The second group who will benefit from the project is the students themselves. The students will receive direct experience in running a business and experience, first hand, the positive impact that they can have on their community. The students will also receive direct experience growing and raising their own food. Being involved in producing goods for market will give the students a better understanding how to assess value in a market. The students will also benefit from the project in the most direct way possible. I work in a school that serves largely at risk children, many of whom are on free and reduced lunch. In many homes in America there is inadequate nutrition for children. The students themselves will have access to better nutrition through the program.

The last group I will mention benefiting from the project is the Chatham County Farmers Association The students will bring attention and positive press to the Chatham County Farmers Association**.** Hopefully this will bring increased sales at local farmers markets. Increased sales would benefit both the farmers themselves and the tax base they are attached to. It is worth noting that Chatham county has a large agricultural base and another way that local farmers will benefit from this program is an increase in a local legal skilled work force. This in turn may yet again increase both profit at the local level and the taxes paid into the local governments.

Population

This HHH project will be selling at one farmers market in Siler City. However, the students will be in charge of raising awareness of the Chatham County Farmers Association as part of the project. This will benefit the entire Chatham County Farmers Association not just the one farmers market where the students' goods will be sold. The particular farmers market was chosen because of its proximity to the school and at risk populations in Siler City. This market is within walking distance of various at risk populations in Siler City. This proximity helps meet the needs of many who cannot afford to travel to more affluent areas. 10 acres of available farmland has been donated

for the project. However, the land is 20 minutes from the school. If a closer source of land becomes available the project will use utilize it instead. The students will research and utilize the most efficient, safe, and economical methods of producing the goods for sale. If a smaller plot of land closer to the school became available the students may focus on maximizing yield with limited resources**.** With many mainstream and populist news outlets forecasting a future of limited resources this skill set may even provide for some of the students in the future.

GOALS (OBSERVABLE)

A primary goal of the project will be to provide fresh healthy produce to at risk populations in Siler City. One measurable aspect of this goal will be comparing the produce cultivated by the students to produce available prior to the project. The produce will be compared in price and quality. A goal of the project is to provide produce that is as high of a quality as available produce at a lower price. Another goal of the project is to increase the availability of fresh produce. By increasing the supply and selecting a farmers market close to at risk populations the student will be increasing that availability to those who have the most difficult time.

The students will determine the specific goals of production. After doing market research the students will decide what to grow, how to grow it, how much to grow, and what to charge for it. The amount of land available and the number of student groups will determine the amount of land provided to the students. If the 10-acre plot 20 min from the school is used then the students will be maxed out at 7 groups and 1.4 acres per group. If a smaller more convenient plot of land becomes available then land usage and group configuration will be determined at that point. The students will determine student materials as they plan their projects. I will have a three hundred dollar budget from my local LEA that can be used for the project. Students can also volunteer time at the local PTA Thrift store to earn money for their project. The local thrift store donated $10 per hour for students, schools, and teachers who volunteer their time.

Content Area Instructional Unit Work Sample

North Carolina A&T State University

Family & Consumer Sciences, MAT

Dr. Rosa Purcell

Spring 2014

Section 1:

STATEMENT OF PHILOSOPHY

Learning is, of course, the main purpose of education. It is the goal of every student and the task of every teacher to increase knowledge and understanding in the classroom. I feel that the concept of learning should be focused around four main areas. Independent thought is essential to the development of each student. Being able to form unique independent ideas to solve problems will serve them both in and outside of the classroom. Group interaction is also an important part of learning. Being able to share ideas, validate them with those of others, and teamwork are important processes in social and mental development. The teacher should also be prepared to lead students in the direction they should go to reach correct conclusions and answers, without always providing the answers themselves. Finally, stressing the use of learned ideas and processes in new situations is essential. By using information, students should be able to apply what they have learned to new life or learning situations. Transfer of this sort is what really determines what has been learned.

In order to aid students in reaching their desired learning goals, the teacher must have a clear set of objectives. I feel that teachers should serve a number of purposes. First and foremost, they should act as guides, pointing students in the direction they should go to find answers and solve problems by providing them with the essential information they need to do so. Students also need to feel comfortable approaching their teacher for discussion outside of class. Teachers need to make education as enjoyable and beneficial as possible to and for students. By teachers acting in all of these manners, a student's education will be more complete and enjoyable than one in which a student only sees the teacher in the classroom.

Teachers should also set specific goals for students. Mastery of information has always been the goal for teachers, and should continue to be one of the essentials. In

addition, long term goals for students should be set, allowing students to work towards goals over time. As a part of this, intellectual development of each student should continue over time, allowing students to use what they are learning later in life. It is also the hope of all teachers that students will develop an interest in the subject area being taught. Although this does not occur in all cases, students should at the very least develop an appreciation for the subject and the material being taught in the classroom.

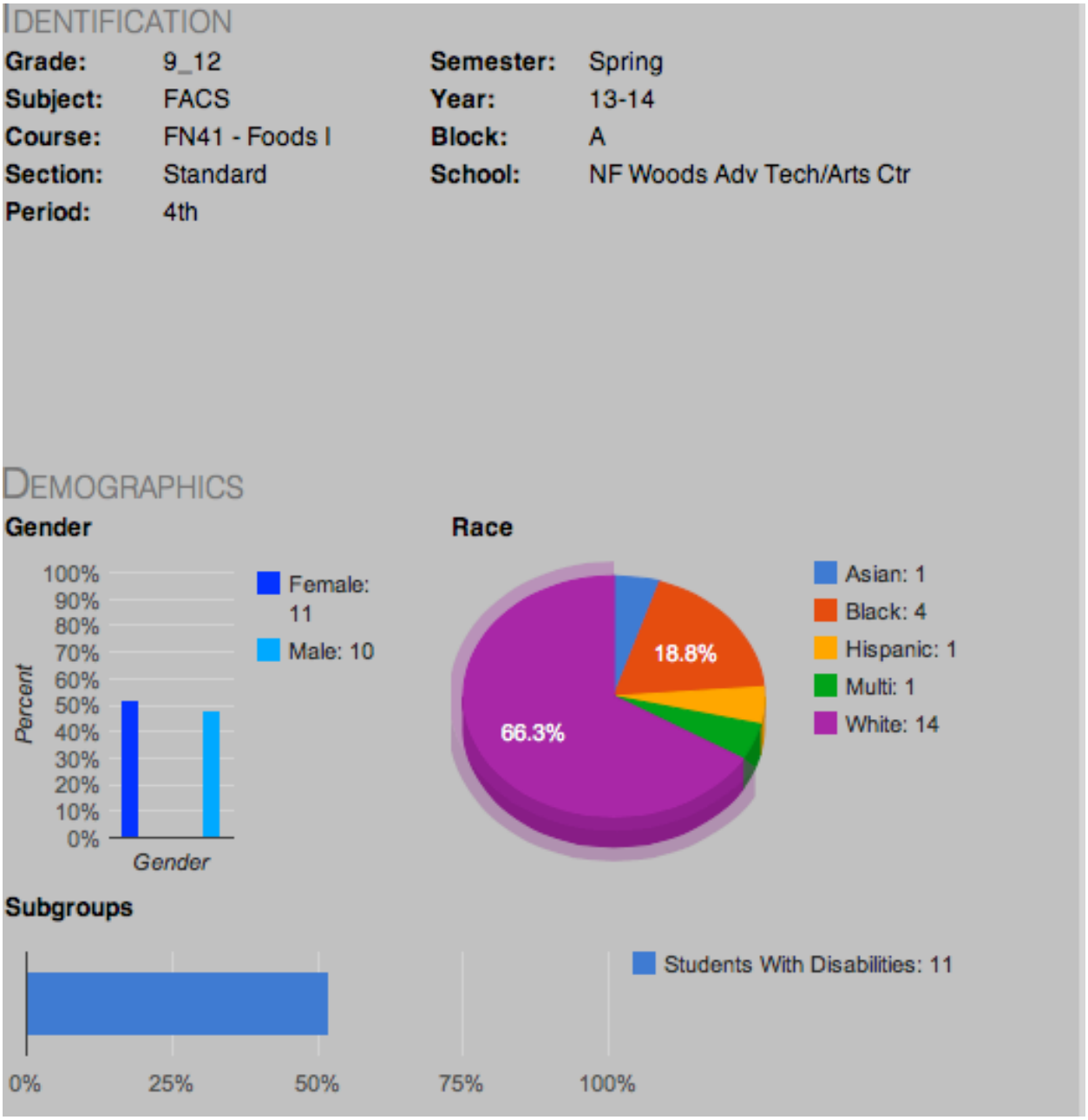
This leads to an expected question: how does one implement this philosophy? No single teacher will be able to implement all of their personal educational philosophies at one time. By constantly creating ideas for day-to-day use, the teacher can begin to work towards their philosophical goals. Over time, these can become long-term goals, allowing the teacher to develop the teaching styles and methods that work best for them. Finally, by continually asking, "How do I conduct my classes?" the teacher can examine how close or far they are from sticking to their educational goals.

As with anyone involved in education, student or teacher, a personal growth plan should always be included. One never develops socially, intellectually, or academically, without consistently learning new things and striving to further oneself. This can include classes as a part of a continuing education program, receiving regular input from students and consistently attempting to improve their teaching style, or trying new ideas or strategies on a regular basis.

Each teacher needs to have a personal philosophy of teaching to guide their actions and ideas. This list is one I have made to guide myself. It is by no means all-encompassing, but it provides a basis for what I feel about education, and what I want my students to feel when they leave my classroom.

Section 2: Contextual Analysis

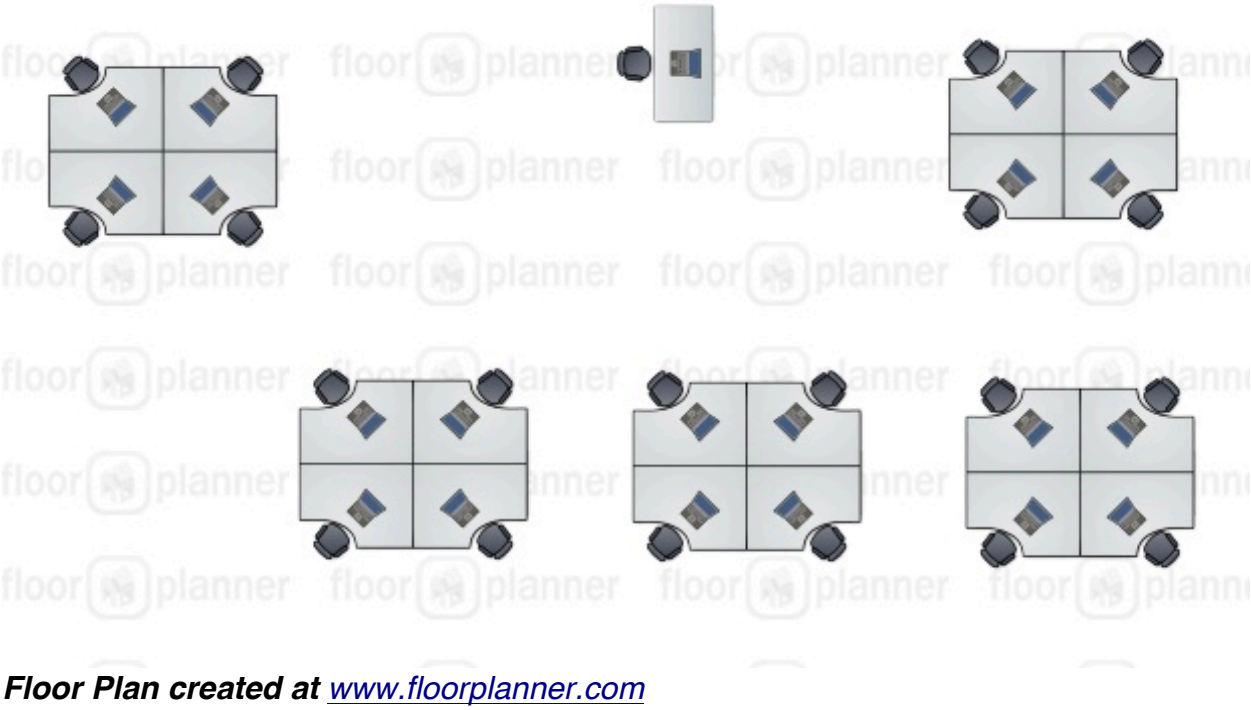
Part A: Nature of Learners



Total Number of Students: 23
Occupational Students: 2- *The OCS students are not included in the above data.

Exceptionalities: 1 Autistic Student

Part B: Physical Space Diagram and Rationale



Floor Plan created at *www.floorplanner.com*

Rationale

The above diagram represents only half of the classroom. The other half is a kitchen laboratory with 4 kitchens that each have cabinets, a sink, range, and an oven. There is one refrigerator for 2 kitchens. The classroom space is very tight and sits 20 students comfortably. I have 23 students in the class, which has presented some space issues for this class.

Students sit at a table in a group of 4 students. This encourages social interaction with their peers in the classroom and is helpful when we have cooking labs and the students must set the table for a portion of their grade. These table groups encourage a "classroom community" atmosphere.

Part C: Classroom Expectations, Policies, Procedures

CLASSROOM RULES:

1. Follow directions first time given.
2. Be seated and ready to begin work when the bell rings with appropriate materials.
3. Raise hand, gain recognition, and get permission before speaking or leaving seat.
4. Be courteous and respect the rights and property of others.
5. Keep all work areas neat and clean.
6. Refrain from distracting behaviors.
7. Be alert, attentive, and actively involved in all classroom activities.

SAFETY AGREEMENT

With the nature of this class and keeping it a SAFE and CLEAN environment for the students to learn and succeed it is IMPERATIVE that certain rules and procedures are followed. Students and parents are required to sign a Safety Agreement to be returned it to the teacher before the student will be allowed to participate in any kitchen lab related activities. Please read and complete the agreement (front and back) and return it, as soon as possible.

PARTICIPATION

Participation in the kitchen is an expectation and a course requirement. Students are required to participate in groups and demonstrate skills and prepare various food products. It is asked that each student try ALL foods prepared in the class unless allergic to the food. Please encourage your child to be open and willing to try new foods. A student will not be made to eat a food that he or she dislikes once tried. Please make sure the teacher is notified of any allergies that the student may have to food (Ex. Peanuts, chocolate, etc.). *Please list any allergies on the bottom of the Student Information Sheet.

EXPECTATIONS / DISCIPLINE

All students are expected to follow the Student Handbook, the student code of conduct, and classroom rules.

CLASSROOM CONDUCT

- Students are expected to report to class on time and be ready to work.
- Pencils may be sharpened upon entering the classroom.

- The only materials allowed on the tables are materials needed for this class. All other materials including book bags, pocket books, lunch bags, other text books, etc. must be placed on the floor beside your table upon entering the classroom.
- Students must remain in their assigned seats, working until the bell rings. Chairs may not be moved from their spot unless otherwise stated by the teacher.
- Talking is permitted only during designated times. Talking while others are talking is not permitted.
- Sleeping in class and/or putting head on table (including lounging on table top or books) will not be permitted.
- The ideal time for bathroom use and/or business is before and after class. Students are asked not to request a bathroom break during the first or last 15 minutes of class. This is to ensure that students will not miss any pertinent information given by the instructor.
- Room equipment is strictly off limits, except on lab days.Unauthorized usage will result in disciplinary actions.
- Refrain from distracting/unnecessary/unwanted behaviors. This includes, but is not limited to: inappropriate language, grooming, eating, etc. The classroom is a learning environment Only.
- Clear beverages will be tolerated until/unless they become a problem – Ensure lids are tightened on water bottles when not in use, and placed on the floor. Do not practice drinking near or around laptops.
- CELL PHONES and other ELECTRONIC DEVICES ARE NOT PERMITTED FOR PERSONAL USE.

ASSIGNMENTS

All assignments must be completed by the due dates assigned and must be placed in the designated area by the end of class or time given by the teacher. Any late assignments will be deducted 10 pts. for every day late.

All make-up work is YOUR responsibility. DO NOT SUBMIT LATE OR MAKE-UP TO A DIGITAL DROPBOX!! Complete the assignment, print a copy,and turn into me. Notify the teacher of planned absences due to school-related activities so arrangements can be made prior to the attendance.

ORDER OF OPERATIONS

When you have completed your work for the day, if time permits, you may read, study, or work on other class work independently at your seat.

Remain in your seat until you are dismissed BY ME. The bell is a signal for me to indicate the end of class; however, students are expected to remain in their seats until dismissed. Also, please do not start packing before class is over in anticipation of the bell as it is disrespectful.

Class and materials must be left neat and in order. Push chairs in and, if necessary, pick up any trash around your seat.

CONSEQUENCES:

1ST Offense—Warning
2nd Offense—1 minute after class/teacher conference/attempted parent contact.
3rd Offense— After school detention/ attempted parent contact.
4th Offense and Subsequent Offenses; Refer to administration.
SEVERE OFFENSES--Immediately sent to administration!

Part D: Strategies to Promote Classroom Community

The following is a list of strategies that I use to create and promote a classroom community:

- A procedure to welcome students at the beginning of the semester and new students during the semester has been implemented that does not put the students on the spot.
- Students are assigned class jobs.
- Students work in groups often. Sometimes these are assigned groups and at other times they are allowed to pick their groups.
- I attempt to be in the classroom or by the door to greet students as they enter the classroom. I attempt to learn names as soon as possible.
- I have the seating arranged so that they face one another.
- When social issues or problems arise, I address them immediately. I encourage my students to respect everyone through their differences.
- Treat students like adults. I allow my students to decide what groups they will work in at times.
- In the future, I may try to bring in a cake at the end of the month and celebrate everyone that has a birthday during that month.
- I periodically check to see that students know each other's names.
- For team or class builder activities, I try to choose topics that everyone has in common at the beginning of class – food. I use "tell me about" questions.
- I attempt to find out why students are in my class and what they expect to learn.
- I attempt to challenge the students with high expectations. Set rules for the class. Students respect this type of environment.
- I attempt to do a lot of interactive group work. For example, in a group of 4, each student is responsible for a part of a reading or part of the questions about a reading. I assign group work that involves critical thinking and problem solving.
- I work on setting a positive atmosphere in the classroom. (Teacher sets the tone.)

- Involve students in problem solving.
- Encourage students to exchange numbers when appropriate; create a buddy system.
- Facilitate team projects.
- For “loner” students, I attempt to speak to them, sit and practice with student, giving a little extra attention, then I try to match that person with a compatible partner the next time. Using gentle persuasion with the very shy students.
- Let students know that they will be welcomed back to class if they have to be absent. Also let them know that they were missed when they were absent.

Section 3: Unit Plan with Appropriately Designed Lesson Plans

Part A: Unit Pre-assessment

5.01 Why Do I Eat?

Directions: People eat for three reasons: *hunger*, *emotional need*s, and *social need*s. A list of situations is given below. Next to each situation, place an ***H*** if you are eating for reasons of *hunger,* an ***E*** if you are satisfying an *emotional* need, or an ***S*** if the situation satisfies a *social* need. Some situations may satisfy more than one need. Add examples of your own for each letter. Add five examples of your own for each questions 16-18.

1. _____ Going out with friends for pizza after the school dance.
2. _____ Eating breakfast in the morning.
3. _____ Eating after an argument with your parents.
4. _____ Sharing a box of popcorn at the movies.
5. _____ Eating cake at a birthday party.
6. _____ Having an afternoon snack after school.
7. _____ Making chicken soup for your aunt who is ill.
8. _____ Having guests for Sunday dinner.
9. _____ Eating after you have missed a meal.
10. _____ Eating because you are home alone and bored.
11. _____ Eating after your best friend has moved away.
12. _____ Eating a morning school snack.
13. _____ Going out with friends for dinner before the school dance.
14. _____ Eating while watching a video with friends.
15. _____ Eating lunch at noontime.

16. Hunger _____

_____

17. Social_____

_____

18. Emotional _____

_____

List alternatives for emotional eating _____

_____

_____

_____

Name _____ Date _____Period _____

5.02 Pretest

UNDERSTANDING CURRENT GUIDELINES FOR HEALTHY FOOD CHOICES
Pretest

Directions: In your own words complete as much as you currently know. Keep this handout in your academic notebook and add to it during the activities for this objective.

Draw a picture of the ChooseMyPlate, making sure that each part is the correct color. Label each part of the picture.

6.01 Pretest Snack Inspection

Directions: Have students to bring in the package of their favorite snack. Also, ask them to bring in a second package of what they perceive as a "healthier" snack. Working in groups, have students to complete the following information projected on the screen in the prediction column first. Then read the labels and check the inspection column. Have students to discuss and compare their group decisions of each package of snacks. Complete as many label reviews as time.

Food Label_____	**Prediction**	**Inspection**
Number of calories	High_____ Low _____	High_____ Low _____
Sodium	High_____ Low _____	High_____ Low _____
Fat	High_____ Low _____	High_____ Low _____
Total Fat	High_____ Low _____	High_____ Low _____
Trans Fat	High_____ Low _____	High_____ Low _____
Sugar	High_____ Low _____	High_____ Low _____
Cholesterol	High_____ Low _____	High_____ Low _____

Dietary Fiber	High_____ Low _____	High_____ Low _____
Protein	High_____ Low _____	High_____ Low _____
Vitamin C	High_____ Low _____	High_____ Low _____
Calcium	High_____ Low _____	High_____ Low _____
Iron	High_____ Low _____	High_____ Low _____

Part B: Lesson Plans

	Lesson Plan
Teacher	[redacted]
Day	1
Class	4th Block
Course	Foods I
Unit	B: Food Choices, Health, Resources, and Meal Preparation
Competency/Essential Standard	5.00 Understand food choices.
Objective	5.01 Understand influences on food choices?
Essential Question(s)	Why do we eat the food we eat? What are the individual and external influences on an individual's food choices?

	Student Actions	Teacher Actions
Review/Focus	To introduce this objective, the students will complete the handout, "Why Do I Eat?" When complete, students will check and go over the handout.	While the students are completing the handout on their laptops, the teacher will circulate through the classroom. When the students have completed the handout, we will discuss the handout together.

	Student Actions	Teacher Actions
Introduction	Students will take notes and complete “Individual Influences on Food Choices Graphic Organizer” during the discussion. This will be saved for future reference.	The teacher will facilitate a discussion using the PowerPoint presentation, “Individual Food Choices and Influences.”
Guided Activity	Students will make an accordion graphic organizer that illustrates examples of individual food choices. Students will use the graphic organizer from the class discussion to list the individual influences on food choices and a description of each. Students that do not want to illustrate may interpret the influences by writing them in their own words.	The teacher will circulate through the classroom and assist students with making the accordion graphic organizer as needed.
Independent Activity	Students will complete a Five Minute Writing in their online journal about their personal illustration of a food choice or influence that they made during the past week. Students will share their entry with the class.	Teacher will circulate through the classroom as students write and answer questions as needed.
Closure	Students will complete accordion graphic organizers and will be instructed to use as a study aid of the material presented.	Teacher will evaluate, visually, the accordion graphic organizers.
Teacher reflections of lesson structure learning outcomes		Will be completed the following day during class.

	Student Actions	Teacher Actions
Resources/Equipment/Materials Needed	Student Laptop	Computer/laptop Projector Screen Construction Paper/Colored Paper Markers Handouts (as needed- handouts are posted online and students access handouts through Angel, an online school program)

	Lesson Plan	
Teacher	[redacted]	
Day	2	
Class	4th Block	
Course	Foods I	
Unit	B: Food Choices, Health, Resources, and Meal Preparation	
Competency/Essential Standard	5.00 Understand food choices.	
Objective	5.01 Understand influences on food choices?	
Essential Question(s)	Why do we eat the food we eat? What are the individual and external influences on an individual's food choices?	

	Student Actions	Teacher Actions
Review/Focus	Students will participate in answering review questions.	Conduct a "Blue Ticket Review"-- the teacher will ask questions from the previous day's lesson and the students will answer. Students who answer questions will receive blue tickets for their answers based on level of difficulty of the question. (The blue tickets are saved and redeemed at the end of the semester for prizes awarded by the teacher.)
Introduction	Students will complete a graphic organizer on External Food Choices.	The teacher will introduce and facilitate a discussion on external influences on food choices using a PowerPoint on External Influences.

	Lesson Plan	
Guided Activity	Students will complete an activity entitled, "Looks Good Enough To Eat?" Students will use the Internet and website, www.thewvsr.com/adsvsreality.html to review how mass media influences food choices. Students will respond with other examples of external influences.	The teacher will circulate through the classroom and assist students with questions as needed.
Independent Activity	Students will Google "Influences on Food Choices." They will read at least 2 articles on "Influences on Food Choices" and write a one page review of what they learned. Students will begin this assignment in class and complete for homework, if necessary.	The teacher will circulate through the classroom and assist students with using the Internet to find articles and assist with any other questions that the students may have about the assignment.
Closure	Students will participate in answering review questions.	The teacher will review and wrap-up this lesson on external food influences on food. A test/quiz is planned for the following day. Study Questions/Review will be posted on the class's website.
Teacher reflections of lesson structure learning outcomes		The teacher will assess the answers given by students in class to determine the students' level of understanding and make adjustments to the lesson as needed.
Resources/Equipment/Materials Needed	Student Laptop	Computer/Laptop Projector Screen Handout posted online

	Lesson Plan	
Teacher	[redacted]	
Day	3	
Class	4th Block	
Course	Foods I	
Unit	B: Food Choices, Health, Resources, and Meal Preparation	
Competency/Essential Standard	5.00 Understand food choices.	
Objective	5.01 Understand influences on food choices? 5.02 Understand guidelines for healthful food choices.	
Essential Question(s)	5.01 Why do we eat the food we eat? What are the individual and external influences on an individual's food choices? 5.02 What are credible sources of scientific nutrition and fitness information? What are the Dietary Guidelines for Americans, who compiles them, and why were they established? What are key recommendations provided by the Dietary Guidelines for Americans and why were they established? How does ChooseMyPlate.gov help one to follow guidelines for healthy food choices? How do calorie intake and physical activity influence weight management? What is the American Dietetic Association,(The Academy of Dietetics and Nutrition) what does it do, and why is the association so important?	

	Student Actions	Teacher Actions
Review/Focus	Students will be given 5-10 minutes to review for their test on Objective 5.01. The assessment is posted online on the class website.	The teacher will monitor students as they take the online assessment and ensure an optimal testing environment for all students.

	Lesson Plan	
Introduction	Students will discuss the question that has been presented to them on the screen. They will participate in the class discussion of the picture.	The teacher will place a picture, “Car/Person” on the screen, showing only the question and the car. At their tables of 4 students each, they will be asked to make a list of answers. The teacher will go around to each group/table and ask for one answer, listing on the board as they are given. The question will be left unanswered until later in the unit.
Guided Activity	Students will complete “Key and General Recommendations Graphic Organizer.”	The teacher will facilitate a discussion using the PowerPoint, “Dietary Guidelines.”
Independent Activity	Students will work individually (depending on time, they may work with a partner or as a group) to complete “Dietary Guidelines.” To complete this activity, they will have to use www.dietaryguidelines.gov website to research the 2010 Dietary Guidelines.	The teacher will be assist students as needed throughout this activity. When the students have completed the activity, the teacher will review answers with the class.
Closure	Students will complete a “Think-Pair-Share” on the material presented during class. This is a cooperative learning strategy that encourages students to think about course content and then talk about it with a partner.	The teacher will circulate through the classroom as students work on this assignment and answer questions as needed.
Teacher reflections of lesson structure learning outcomes		

	Lesson Plan	
Resources/Equipment/Materials Needed	Student Laptop	Computer/Laptop Projector/Screen Handouts (posted online)

	Lesson Plan
Teacher	[redacted]
Day	4
Class	4th Block
Course	Foods I
Unit	B: Food Choices, Health, Resources, and Meal Preparation
Competency/Essential Standard	5.00 Understand food choices.
Objective	5.02 Understand guidelines for healthful food choices.
Essential Question(s)	What are credible sources of scientific nutrition and fitness information? What are the Dietary Guidelines for Americans, who compiles them, and why were they established? What are key recommendations provided by the Dietary Guidelines for Americans and why were they established? How does ChooseMyPlate.gov help one to follow guidelines for healthy food choices? How do calorie intake and physical activity influence weight management? What is the American Dietetic Association,(The Academy of Dietetics and Nutrition) what does it do, and why is the association so important?

	Student Actions	Teacher Actions
Review/Focus	Students will participate in answering questions.	The teacher will conduct a “Blue Ticket Review.”

	Student Actions	Teacher Actions
Introduction	The students will complete a "Pretest" to assess students' current level of knowledge of ChooseMyPlate.gov. After the test, students will write one personal goal in their own words for the essential question. Students will also be asked: "How does www.ChooseMyPlate.gov provide assistance for following and interpreting current guidelines for healthy food choices?"	The teacher will guide students in the activities listed and facilitate a discussion on ChooseMyPlate.gov.
Guided Activity	Students will go to www.ChooseMyPlate.gov and complete the handout on ChooseMyPlate. Students will also complete the handout on ChooseMyPlate Scavenger Hunt. Students will review answers with the teacher in class.	The teacher will facilitate a discussion using "5.02J ChooseMyPlate" Students will be provided with a copy of "5.02L ChooseMyPlate Scavenger Hunt" and the students will be instructed to complete in class. The teacher will review questions with the class.
Independent Activity	Students will be provided with a copy of "My Food Record." They will record what they have eaten since midnight. This will be repeated for a total of three days. Each student will compare what he/she has eaten to his/her ChooseMyPlate food plan, with the recommended amounts for his/her age, gender, body size, and activity level. Students will be provided with "5.02M Activity Tracker" to record physical activity.	The teacher will provide a copy of "My Food Record" and explain the assignment to students. The teacher will circulate through the classroom and assist students as needed.

	Student Actions	Teacher Actions
Closure	Students will take a Post-It sticky note and write 2 things they learned today during the lesson. As they exit the classroom, they will post the sticky note on the inside of the classroom door.	"Post-It Review"---The teacher will conduct a review where each student will be given a Post-It sticky note and asked to write 2 things that they learned today in class. As they exit the classroom, they will post their sticky note on the inside of the classroom door. The teacher will review the sticky notes to see what students have learned.
Teacher reflections of lesson structure learning outcomes		Reviewing classroom activities and the Post-It notes that were left by the students on the door.
Resources/Equipment/Materials Needed	Student Laptop	Computer/Laptop Projector/Screen Handouts (posted online)

	Lesson Plan
Teacher	[redacted]
Day	5
Class	4th Block
Course	Foods I
Unit	B: Food Choices, Health, Resources, and Meal Preparation
Competency/Essential Standard	5.00 Understand food choices.
Objective	5.02 Understand guidelines for healthful food choices.
Essential Question(s)	What are credible sources of scientific nutrition and fitness information? What are the Dietary Guidelines for Americans, who compiles them, and why were they established? What are key recommendations provided by the Dietary Guidelines for Americans and why were they established? How does ChooseMyPlate.gov help one to follow guidelines for healthy food choices? How do calorie intake and physical activity influence weight management? What is the American Dietetic Association,(The Academy of Dietetics and Nutrition) what does it do, and why is the association so important?

	Student Actions	Teacher Actions
Review/Focus	Students will record food intake for the second day in "My Food Record" and their physical activity in "Activity Tracker." Students will answer questions during the "Blue Ticket Review."	The teacher will assist as needed. The teacher will conduct a "Blue Ticket Review."

	Student Actions	Teacher Actions
Introduction	Students will take notes on the PowerPoint using the "Weight Management Graphic Organizer."	The teacher will facilitate a discussion using the PowerPoint "Weight Management."
Guided Activity	The students will participate in a Mini Lab in which they will prepare Hawaiian Haystacks. (25 minutes)	The teacher will present in the kitchen lab to assist students with the preparation of the Hawaiian Haystacks and keep students focused.
Independent Activity	Students will be given a brochure template and will need to create a brochure on weight management for a specific population (i.e. women, men, teens, athletes, pregnant women, infants, toddlers, elderly, etc.) Students will complete this assignment as homework.	The teacher will be available to assist students as needed, circulating through the classroom.
Closure	Students will participate in a discussion on evaluating the mini lab and how the food prepared relates to the American Dietary Guidelines and an individual's health.	The teacher will facilitate a discussion on the mini lab and how the food prepared relates the American Dietary Guidelines and the health of individuals.
Teacher reflections of lesson structure learning outcomes		The teacher will evaluate student feedback from the discussion on the lab evaluation and how they were able to relate the information to practical, real-life situations.

	Student Actions	Teacher Actions
Resources/Equipment/Materials Needed	Student Laptop	Computer/Laptop Projector/Screen Food Ingredients for the Mini-Lab on Hawaiian Haystacks Brochure Template (posted online)

	Lesson Plan
Teacher	[redacted]
Day	6
Class	4th Block
Course	Foods I
Unit	B: Food Choices, Health, Resources, and Meal Preparation
Competency/Essential Standard	5.00 Understand food choices.
Objective	5.02 Understand guidelines for healthful food choices.
Essential Question(s)	What are credible sources of scientific nutrition and fitness information? What are the Dietary Guidelines for Americans, who compiles them, and why were they established? What are key recommendations provided by the Dietary Guidelines for Americans and why were they established? How does ChooseMyPlate.gov help one to follow guidelines for healthy food choices? How do calorie intake and physical activity influence weight management? What is the American Dietetic Association,(The Academy of Dietetics and Nutrition) what does it do, and why is the association so important?

	Student Actions	Teacher Actions
Review/Focus	Students will participate in the “Blue Ticket Review.” Students will also enter their food intake for the third day in their “My Food Record” and their physical activity in the “Activity Tracker.”	The teacher will conduct a “Blue Ticket Review” based on the PowerPoint on “Weight Management” from the previous day.
Introduction	Students will take notes on the PowerPoint presentation using “Physical Activity Graphic Organizer.”	The teacher will facilitate a discussion using the PowerPoint “Physical Activity.”
Guided Activity	Students will complete the module at ChooseMyPlate.gov on Physical Activity.	The teacher will circulate through the room and assist students as needed.
Independent Activity	Students will complete “Estimate Calorie Requirements.”	The teacher will assist and help students as needed on the assignment.
Closure	Students will participate in the teacher-led review.	The teacher will review the information from today’s lesson with students.
Teacher reflections of lesson structure learning outcomes		The teacher will evaluate students’ responses from the end of class review.
Resources/Equipment/Materials Needed	Student Laptop	Computer/Laptop Projector/Screen Handouts (posted online)

	Lesson Plan
Teacher	[redacted]
Day	7
Class	4th Block
Course	Foods I
Unit	B: Food Choices, Health, Resources, and Meal Preparation
Competency/Essential Standard	5.00 Understand food choices.
Objective	5.02 Understand guidelines for healthful food choices.
Essential Question(s)	What are credible sources of scientific nutrition and fitness information? What are the Dietary Guidelines for Americans, who compiles them, and why were they established? What are key recommendations provided by the Dietary Guidelines for Americans and why were they established? How does ChooseMyPlate.gov help one to follow guidelines for healthy food choices? How do calorie intake and physical activity influence weight management? What is the American Dietetic Association,(The Academy of Dietetics and Nutrition) what does it do, and why is the association so important?

	Student Actions	Teacher Actions
Review/Focus	Students will review "Estimate Calorie Requirements" to see if they had adequate nutrition over the past three days based on their 3-day recall. Students will review their personal learning goals from previous activities and write a reflection of the their strengths and weaknesses.	The teacher will assist students with the review and help with the assignment as needed.
Introduction	Students will take notes using "Junk Science Guided Note-taking30."	The teacher will facilitate a discussion using the PowerPoint on "Junk Science."
Guided Activity	Students will complete "White House Dinner." They will plan a menu, taking into consideration the special health needs of certain guests. This will be a 4-course meal which needs to include healthy options.	The teacher will assist and provide suggestions for the plans as needed.
Independent Activity	Using old magazines, students will find ads that relate to the "red flags" as outlined by the American Dietetics Association." Students will identify which "red flag" each ad raises.	The teacher will circulate through the room and assist students as needed.

	Student Actions	Teacher Actions
Closure	Students will participate in the discussion about the picture. Also, a review of study questions will be presented for the test on the following day.	The teacher will put the picture of “Car/Person” back onto the screen/white board for students to view. The teacher will ask students “if they know how the body is like a car?” and then show the entire picture after the questions have been answered. The teacher will also conduct a test review for the objective test on the following day.
Teacher reflections of lesson structure learning outcomes	[redacted]	The teacher will assess students’ responses during Closure activities for the day.
Resources/Equipment/Materials Needed	Student Laptop	Computer/Laptop Projector/Screen Handouts (posted online)

	Lesson Plan
Teacher	[redacted]
Day	8
Class	4th Block
Course	Foods I
Unit	B: Food Choices, Health, Resources, and Meal Preparation
Competency/Essential Standard	6.00 Apply methods for meal planning and preparation.
Objective	6.01 Understand strategies for selecting and storing food.

	Lesson Plan
Essential Question(s)	What factors affect how someone shops for food? What store options are available when shopping for food? What are shopping strategies? What are the components of a household budge/food spending plan and its benefits? What are cost-saving strategies and their benefits? How do food labels compare and how are they used to select healthy foods? What are the guidelines, categories, examples, and effects of storing food properly?

	Student Actions	Teacher Actions
Review/Focus	Students will take the test on Objective 5.02 online through the class website.	The teacher will monitor students during the test and the classroom environment to ensure proper behavior and an optimal testing environment.
Introduction	Students will take notes on the PowerPoint using the Graphic Organizer on “Factors that Affect Food Selection.”	The teacher will facilitate a discussion using the PowerPoint on “Factors that Affect Food Selection.”

	Student Actions	Teacher Actions
Guided Activity	Students will be asked to make a list of stores and places where they shop for food, individually. Once their lists are complete, compare lists and students will add those they did not include in their lists. Students will then get into groups and will be assigned a type of store that sells food. Using the Internet, they will research the store assigned. During the teacher's discussion, the students will complete "Selecting Store Options" graphic organizer.	The teacher will guide the students in this activity and facilitate a discussion as a review of the assignment.
Independent Activity	Students will return to their lists they made individually and group their list into classifications or types of food stores.	Once the students have made their classifications of stores, the teacher will discuss the advantages and disadvantages of each option.
Closure	Students will participate in a Post-It review.	The teacher will ask students to participate in a Post-It review.
Teacher reflections of lesson structure learning outcomes		The teacher will assess and evaluate what the students wrote on the Post-It notes as they exited the classroom.
Resources/Equipment/Materials Needed	Student Laptop	Computer/Laptop Projector/Screen Handouts (posted online)

	Lesson Plan
Teacher	[redacted]
Day	9
Class	4th Block
Course	Foods I
Unit	B: Food Choices, Health, Resources, and Meal Preparation
Competency/Essential Standard	6.00 Apply methods for meal planning and preparation.
Objective	6.01 Understand strategies for selecting and storing food.
Essential Question(s)	What factors affect how someone shops for food? What store options are available when shopping for food? What are shopping strategies? What are the components of a household budge/food spending plan and its benefits? What are cost-saving strategies and their benefits? How do food labels compare and how are they used to select healthy foods? What are the guidelines, categories, examples, and effects of storing food properly?

	Student Actions	Teacher Actions
Review/Focus	Students will participate in a "Blue Ticket Review."	The teacher will conduct a "Blue Ticket Review" from information obtained from yesterday.

	Student Actions	Teacher Actions
Introduction	Students will be asked to define the terms written on the board by the teacher. They will need to write what each means to students as it relates to the family food budget. Students may reference textbooks: “Guide to Good Food” p.206 or “Food for Today” pp.222-223.	The teacher will write the words “Household Budget” and “Food Spending Plan” on the board. The teacher will also facilitate a discussion on formulating a household budget and food spending plan
Guided Activity	Students will participate in the discussion and take notes using a graphic organizer.	The teacher will facilitate a conversation on the importance of following a household budget and food spending plan and the benefits of following a plan using the PowerPoint “Household Budget and Spending Plan.”
Independent Activity	Students will complete “Planning a Household Budget” as it relates to the Food Spending Plan. Students may use the “Guide to Good Food” textbook p. 205 to help complete the assignment.	The teacher will assist the students in completing the assignment as needed.
Closure	Students will participate in a teacher-led review of the material covered in today’s lesson.	The teacher will conduct of material covered in today’s lesson.
Teacher reflections of lesson structure learning outcomes	[redacted]	The teacher will assess students’ responses from the Closure activity.
Resources/Equipment/Materials Needed	Student Laptop	Computer/Laptop Projector/Screen Handouts (posted online)

	Lesson Plan
Teacher	[redacted]
Day	10
Class	4th Block
Course	Foods I
Unit	B: Food Choices, Health, Resources, and Meal Preparation
Competency/Essential Standard	6.00 Apply methods for meal planning and preparation.
Objective	6.01 Understand strategies for selecting and storing food.
Essential Question(s)	What factors affect how someone shops for food? What store options are available when shopping for food? What are shopping strategies? What are the components of a household budge/food spending plan and its benefits? What are cost-saving strategies and their benefits? How do food labels compare and how are they used to select healthy foods? What are the guidelines, categories, examples, and effects of storing food properly?

	Student Actions	Teacher Actions
Review/Focus	Students will work in pairs to complete “Surviving the Supermarket”	The teacher will circulate through the classroom and assist students as needed.

	Student Actions	Teacher Actions
Introduction	Students will read the handout “Ways to Stretch Your Food Dollar” and participate in a class discussion.	The teacher will facilitate a discussion on the handout “Ways to Stretch Your Food Dollar.”
Guided Activity	Students will complete a graphic organizer on the Powerpoint being presented by teacher on “Selecting and Storing Foods.”	Next, the teacher will facilitate a discussion using the Powerpoint “Selecting and Storing Foods.”
Independent Activity	Students will complete “Using Food Labeling” and “Labeling Guided Practice.” They will compare information on the labels.	The teacher will provide empty food packages with labels for students to complete this assignment. Students will choose 4 food packages and complete 4 sample labels. The teacher will explain how reading and interpreting labels affects healthy food choices.
Closure	Students will review for test on Objective 6.01 which will take place on the following day.	The teacher will participate in a review with students of previously posted review/study questions for the Objective 6.01 test.
Teacher reflections of lesson structure learning outcomes		Scores will be assessed from the test which will be conducted online the following day.
Resources/Equipment/Materials Needed	Student Laptop	Computer/Laptop Projector/Screen Handouts (posted online) Empty food packages with labels

Modifications will be made to the above lessons as needed. Typically, occupational students will complete the same assignments and tasks, however, the number of questions will be reduced.

Part C: Culminating Activity

DOES IT REALLY MATTER IF I HAVE A FOOD SPENDING PLAN?

Using the 6.01 Planning a Household Budget,

1. Your group must create a shopping list of nutritious foods for your assigned family for one week. (That's 21 meals!)
2. "Buy" the food on the list, using the prices in the store ads.
3. Help make the families' food dollars go as far as possible.
4. Use the following prices for foods not found in your ads. If you find an ad price lower, you may use that price.

Food List

Gallon of milk	$3.99
Dozen Eggs	$2.29
Loaf of bread	$1.99
Jar of peanut butter	$3.50
Pound of margarine	$1.29
Jar of Spaghetti sauce	$2.50
Box of spaghetti	$ .99
Box of Mac n cheese	$1.19

BE ABLE TO DISCUSS THE FOLLOWING:

After the shopping, groups must report back on the decision making process.

1. How were foods selected for the meals?

2. Who was the meal manager?

3. Were foods selected based on likes and dislikes?

4. Was age a factor on some food selections?

5. How much did they have to spend each week on food? Did it seem like enough when you started? Did you have enough in the end?

6. What strategies did you use to stretch the food dollar? Were you able to plan healthy, nutritious, balanced, and tasty meals? What kinds of foods did your family have to leave out because they did not fit into the food budget?

7. What kinds of foods were the most expensive to purchase (fresh produce and lean meats vs. foods like hot dogs and baked goods)? Were you able to include at least some of the healthy, fresh foods?

8. How has this assignment affected your understanding of food spending plans and providing for nutritious meals?

9. What effects would long-term lack of money for nutritious meals possibly cause each of the families?

10. How important is it to have a spending plan and why?

11. What shopping strategies can be used for saving money?

Each group must also analyze a snack.

Snack Nutritional Analysis

Name _____

Block _____

NAME OF SNACK _____

SERVING SIZE		**TOTAL CALORIES**	
TOTAL FAT CALORIES		SATURATED FAT CALORIES	
TRANS FAT CALORIES		CHOLESTEROL	
PROTEIN		VITAMIN A	
VITAMIN C		CALCIUM	
FIBER		SUGARS	
TOTAL CARBS.			

Part D: Post-Assessments

Assessments for this unit are listed in the Appendix.

Section 4: Analysis of Student Work

5.01 Post-Assessment Scores

Student	Post-Assessment Score
1	69
2	62
3	88
4	69
5	88
6	88
7	81
8	100
9	88
10	75
11	88
12	75
13	94
14	81
15	94
16	81

Student	Post-Assessment Score
17	94
18	81
19	75
20	94
21	88
22	69
23	100

Class Average: 83.56

5.02 Post-Assessment Scores

Student	Post-Assessment Score
1	88
2	100
3	77
4	57
5	97
6	54
7	57
8	89
9	49
10	100
11	71
12	94
13	54
14	100

Student	Post-Assessment Score
15	57
16	69
17	51
18	63
19	51
20	91
21	100
22	97
23	100

Class Average: 76.78

6.01 Post-Assessment Scores

Student	Post-Assessment Score
1	100
2	100
3	97
4	100
5	91
6	74
7	71
8	62
9	94
10	87
11	94
12	75

Student	Post-Assessment Score
13	69
14	88
15	69
16	88
17	88
18	75
19	75
20	94
21	100
22	100
23	100

Class Average:86.56

Student Performance and Goals of the Lesson

Student achievement goal setting is a process that begins with a pre-assessment to pinpoint students' current performance level on skills or depth of content knowledge in relation to the curriculum they will be learning in the classroom during the length of the course. When the pre-assessment has been analyzed, the teacher has the information necessary to devise a learning goal that reflects mastery of the curriculum content and skills. Thus, the teacher uses the pre-assessment data to create a student achievement goal. Once the goal is created, instructional strategies are selected that will be most effective in helping students attain the goal. Then, upon implementation, these instructional strategies are implemented and monitored for effectiveness. They are refined or revised, as necessary, based upon student performance and progress. At

the end of the course or year, a post-assessment is administered to ascertain whether the goal has been achieved.

Simply stated, the purpose of student achievement goal setting is to increase learning as measured by appropriate student achievement assessments. Goal setting can facilitate learning by focusing attention on student growth and on instructional improvement. It is based on a process of determining students' baseline performance, setting a measurable student learning goal, developing instructional strategies for goal attainment, and assessing results at the end of the academic course/year.

The intent of student achievement goal setting is to:

- Make explicit the connection between teaching and learning;
- Make instructional decisions based upon student data;
- Provide a tool for school improvement;
- Increase the effectiveness of instruction via continuous professional growth;
- Focus attention on student results; and ultimately
- Increase student achievement.

Results

Our school strives to obtain 90% on VOCATS tests. (This goal was exceeded last year at 92%.) In order to pass or be proficient in the content area, a score of 77% has to be obtained. This range of scores is what I use to evaluate each objective. In objective 5.01 and 6.01, the average post-assessment scores fall within the range of scores and meets the expectation. In objective 5.02, the average post-assessment

score did not meet the expectation. This is a cause for concern because the information needs to be re-taught to ensure that the students have mastered the information.

Section 5: Reflection

Overall, the unit and the instructional strategies used went well. The students were able to learn the information and perform well on two of the three assessments given during the unit. The students seemed to be engaged with the information and the activities. The lessons contained information that was relevant to real-life situations and they were able to internalize and apply the content to their own lives. That is essentially just as important, if not more important, than scoring high on the test. We as teachers must maintain the perspective that we are preparing students for life.

The area of most concern is objective 5.02 and the low class average on the post-assessment. Instructional strategies need to be re-assessed and some new strategies need to be developed and implemented to determine if improvements would produce higher assessment scores. Another factor to be considered is the inclement weather that we experienced during this unit. This resulted in the students missing two consecutive days of school. These missed days could have also contributed to low

assessment scores. In the future, it may be necessary to re-teach some concepts and perform additoinal review activities.

With the exception of objective 5.02, I will continue to use the same instructional strategies, while taking into consideration the current state of society ane the community. Evaluating new strategies could be done to provide for a change of pace for the teacher as well so that I will not become complacent or bored with the information. There is certainly an opportunity to integrate technology on a higher level and provide more hands-on activities.

This activity challenged me to be become better. I should always seek out new strategies to teach. I can always improve. Doing things differently is not a bad thing. I should embrace change, if not just for myself, but for my students. I am here for the students and I can help them make nutrition decisions that impact their lives.

Appendix

Assessments

5.01 Post-Assessment

1.
A male teenager's caloric needs are different than a female teenager's caloric needs. This is an example of which individual influence on food?
A) Cultural
B) Physiological
C) Psychological
D) Situational factors

2.
Which is an example of a technological factor influencing food choices?
A) Changes in climate
B) Decreasing amounts of available land
C) Development of shelf-stable foods
D) Increasing supplies of a type of food product

3.
Growing a garden in a vacant city lot to save on food costs is an illustration of what two types of external food influences on food choices?
A) Economic and technological
B) Environmental and economic
C) Media and environmental

D) Technological and media

4.
Choosing to eat pizza with friends at lunch is an example of which food choice factor?
A) Economy
B) Entertainment
C) Nutrition
D) Wellness

5.
Choosing to eat pizza at home with friends and family when a parent just became unemployed helps meet which type of need?
A) Economic
B) Emotional
C) Hunger
D) Intellectual

6.
Which is an example of an external influence affecting food choices?
A) Attitudes toward food
B) Health limitations
C) Religious restrictions
D) Vitamin fortification

7.
Food processed in aseptic packaging is an illustration of what type of external food influence?
A) Economic
B) Environmental
C) Media
D) Technological

8.
Picking a certain brand of bottled water because of the attractive advertisement in a magazine is an illustration of what type of external food influence?
A) Economic
B) Environmental
C) Media
D) Technological

9.
Eating convenience foods because a person doesn't know how to cook is an example of which factor affecting food choices?
A) Family schedules

B) Knowledge and skills
C) Peer groups
D) Stages of life

10.
Eating foods because everyone else likes them, even when one doesn't, is an example of which factor affecting food choices?
A) Family schedules
B) Knowledge and skills
C) Peer group
D) Stages of life

11.
Losing a job and attending culinary school are both examples of which individual influence on food?
A) Personal beliefs
B) Religious and cultural
C) Situational factors
D) Social factors

12.
Eating sushi for the first times is an example of which food choice factors?
A) Adventure
B) Enjoyment
C) Entertainment
D) Wellness

13.
Selecting low-sodium foods is an example of which food choice factor?
A) Comfort
B) Enjoyment
C) Entertainment
D) Nutrition

5.02 Post-Assessment

1.
To encourage good nutrition, ChooseMyPlate.gov recommends choosing foods that are high in:
A) fiber and dense in nutrients.
B) sodium and added sugars.
C) sodium and added fats.
D) water and calories.

2.
To encourage good nutrition, ChooseMyPlate.gov recommends that your plate should be filled with:
A) a variety of foods from eau of the food groups.
B) grains and vegetables.
C) fruits and grains.
D) fruits and vegetables.

3.
Vegetables are encouraged by ChooseMyPlate.gov through the use of the:
A) blue glass to the right of the plate

B) green section on bottom left of plate
C) purple section on bottom right of plate
D) red section on upper left of plate

4.
The food groups recommended in lesser amounts on the plate on ChooseMyPlate.gov are:
A) fruits and grains.
B) fruits and protein.
C) grains and protein.
D) grains and vegetables

5.
A whole-grain product:
A) cornmeal muffin.
B) old fashioned oatmeal.
C) refined flour tortilla.
D) white dinner roll.

6.
A recommendation found in the Dietary Guidelines for American is to:
A) follow a lifestyle that enables one to achieve a healthy weight.
B) get physical exercise at least once a week.
C) select foods that are high in saturated fats.
D) select more fruits and fewer vegetables for your diet.

7.
For a person trying to lose weight, each meal in a healthy eating plan should include:
A) eight glasses of milk.
B) foods high in nutrients and low in calories.
C) foods with low nutrient density.
D) three meals totaling 3000 calories per day.

8.
A recommendation found in the Dietary Guidelines for Americans is to eat:
A) fewer processed and red meats.
B) fish or seafood every other day.
C) ice cream and cheese daily.
D) potatoes boiled in water for 5 minutes.

9.
People and vehicles are similar because both require:
A) fats and carbohydrates.
B) proteins and minerals.

C) sources of energy and water.
D) starches and sugars.

10.
People and vehicles are similar because they both require:
A) acceptance.
B) clothing.
C) energy.
D) esteem.

11.
An example of nutrition information that a person should be cautious of is:
A) consuming 1800 calories per day and burn 2100 calories per day.
B) encouraging one to choose orange juice instead of lemonade.
C) replacing corn with brown rice in an evening meal.
D) the grapefruit diet that guarantees one will lose five pounds per week.

12.
Carrying an armful of wood uphill into one's home is an example of:
A) heavy activity.
B) light activity.
C) moderate activity.
D) very light activity.

13.
Which is the BEST example of a high-fiber product?
A) Banana
B) Flour tortilla
C) Hamburger bun
D) Shredded wheat

14.
Deborah is searching for a credible source of science-based nutrition and fitness information. Which should she use?
A) Atkins Diet
B) Dietary Guidelines for Americans
C) National Inquirer
D) South Beach Diet

15.
An example of food in the red section on ChooseMyPlate.gov site is:
A) black-eyed peas.
B) corn-on-the-cob.
C) skim milk

D) sliced peaches

16.
Which is a credible source of science-based nutrition and fitness information?
A) ChooseMyPlate.gov
B) Food TV.com
C) The Atkins Diet
D) The National Inquirer

17.
Which person should be sure to reduce sodium intake to 1500 mg?
A) Female in the first trimester of pregnancy
B) Forty-year-old male
C) New mother breastfeeding her infant
D) Teenage male with diabetes

18.
A recommendation found in the Dietary Guidelines for Americans is to consume foods rich in potassium, such as:
A) beef and pork.
B) cheese and yogurt.
C) dinner rolls and oatmeal.
D) potatoes and bananas.

19.
A recommendation found in the Dietary Guidelines for Americans is to:
A) burn fewer calories than one consumes.
B) burn more calories than one consumes.
C) gradually decrease calories burned by increasing food eaten.
D) gradually increase calories consumed by eating more carbohydrates.

6.01 Post-Assessment

1.
The BEST reason for storing foods properly at home is:
A) fewer calories in foods.
B) fewer servings per person.
C) less retention of nutrients.
D) more cost-effective meals.

2.
A person can make healthier food choices when shopping for packaged and canned foods by:
A) buying more canned than packaged foods.
B) buying only organic food products.
C) purchasing larger sizes.
D) reading the nutrition labels.

3.
Nutrition information included on a food label provides information about;
A) diseases the food might prevent.
B) how good the food will taste.
C) nutrients and calories in the food.
D) the color and shape of the food.

4.
In which category of a household budget is the cost of food found?
A) Fixed expenses
B) Flexible expenses
C) Income
D) Spending money

5.
In addition to food products, the Jolly Mart sells hair care par ducts at a higher price. This type of store is MOST LIKELY a:
A) convenience store
B) farmer's market
C) specialty store
D) supermarket

6.
Which food product is found in the bakery section of a supermarket?
A) Fresh sourdough bread
B) Frozen biscuits
C) Muffin mix

Which food product is found in the bakery section of a supermarket?
A) Fresh sourdough bread
B) Frozen biscuits
C) Muffin mix
D) Seafood breeder mix

7.
Mrs. Flores bought a 40-ounce box of cereal, stored it in three one-gallon containers, and saved one dollar by purchasing this way. The type of store at which Mrs. Flores MOST LIKELY shopped is a/an:
A) food cooperative
B) online store
C) supermarket
D) warehouse store

8.
Which category of food is selected by color, smell, and touch?
A) Canned beans
B) Citrus and fresh vegetables
C) Frozen foods
D) Milk and cheese

9.
The BEST reason for storing foods properly at home guarantees:
A) freshness, nutrition, and value.
B) higher nutritional values after cooking.
C) more leftovers
D) more servings per person

10.
Fresh meat, purchased for use more than just a few days, should be stored:
A) dry
B) frozen
C) on the counter
D) refrigerated

11.
Marcus has hypertension. The doctor told him to check for which nutrient on the food label?
A) Carbohydrates
B) Fat
C) Protein
D) Sodium

Marcus has hypertension. The doctor told him to check for which nutrient on the food label?
A) Carbohydrates
B) Fat
C) Protein
D) Sodium

12.
Debbie noticed a date on the label of sliced ham. What is this information?
A) Barcode date
B) Date it was processed
C) Date it was sold
D) Date food expires

13.
What is an example of information that can be found on a food label?
A) Barcode date
B) Date it was processed
C) Date it was sold
D) Expiration date

14.
Developing a food spending plan involves using which strategy?
A) Determining cost per serving
B) Shopping every day
C) Shopping without a shopping list
D) Spending all flexible income on food

15.
What is an important cost-saving strategy to consider when shopping for foods?
A) Buy by unit pricing and need
B) Buy foods only that you have coupons and discounts for
C) Buy only in bulk
D) Buy only store brands

16.
What is an important cost-saving strategy to consider when shopping for foods?
A) Buy beauty products and cleaning products at the grocery store
B) Buy national brands only
C) Never shop when hungry
D) Use whole milk over other types of milk

17.

What is an important cost-saving strategy to consider when shopping for foods?
A) Buy beauty products and cleaning products at the grocery store
B) Buy national brands only
C) Never shop when hungry
D) Use whole milk over other types of milk

17.
Janis wants to purchase ingredients for a casserole. Which categories of foods for a casserole would she select by color, cut, grade, fat content, expiration date, smell, and packaging:
A) Canned
B) Dairy
C) Fruits and Vegetables
D) Red Meats

18.
Stan bought all fresh seafood at Sam's Seaside Shop. This type of store is MOST LIKELY a:
A) convenience store.
B) farmer's market.
C) specialty store.
D) supermarket.

19.
After work, Stacy stopped at the supermarket and purchased a pre-cooked rotisserie chicken and a bag of pre-cut lettuce and vegetables for a salad for dinner. The factor that MOST LIKELY affected her food choices was:
A) family food preferences.
B) family income
C) family values
D) time available for preparing food.

UNIT 2 Looking for a Hero

Author: [redacted]
Date created: 12/10/2012 1:50 AM EDT ; **Date modified:** 12/10/2012 2:23 AM EDT

VITAL INFORMATION

Subject(s)
English

Grade/Level
Grade 12

Time Required
1 week

Objective(s)
I can understand what differences exist among cultures with regard to their concept of heroes.

I can understand the anatomy of a hero.

I can understand how heroism is based on social, cultural, and personal perceptions.

Summary
This unit will help students cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain. They will also be able to analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text. This unit will prove to students that literature is timeless.

IMPLEMENTATION

Learning Activities

1. Analytical Essay
2. Read Excerpt from Grendel
3. Interactive questioning from PowerPoint

Resources and Unit Handouts

ASSESSMENT & STANDARDS

Standards

Standards addressed by entire unit

NC- North Carolina Professional Teaching Standards (2012)

Standard: STANDARD II: TEACHERS ESTABLISH A RESPECTFUL ENVIRONMENT FOR A DIVERSE POPULATION OF STUDENTS

Descriptor:
Teachers provide an environment in which each child has a positive, nurturing relationship with caring adults. Teachers encourage an environment that is inviting, respectful, supportive, inclusive, and flexible.

Indicator:
Encourage an environment that is inviting, respectful, supportive, inclusive, and flexible

Assessment/Rubrics

Grammar Quiz

Interpretive questions

Active reading questions

Graphic Organizer

Essay

Introduction

Mathematics is a subject that many students seem to struggle with, especially geometry. Research "indicate[s] a weakness in students' geometric achievements" (Clements & Sarama, 2011). "One of the areas where students rated weak was geometry. Results from the National Assessment of Educational Progress (NAEP) echoed these findings with eighth grade students showing improvement in geometry over the past decade but still performing well below the proficiency level" (Boakes, 2009). There are many factors that are assisting in this problem. One factor is that students struggle with some geometrical concepts such as models, patterns, drawing shapes, visualizing, 3-D dimensional shapes and other areas. Educators are unable to pinpoint where students are having difficulty or a step that they may be missing; therefore, the concepts are never fixed or explained and students stay confused. Also according to Gardner's Theory of Multiple Intelligences, there are different learning styles that students have. Some students are efficient in spatial ability which is necessary for geometry, while others may not be as skillful in this area. Spatial ability "…is an essential human ability that contributes to mathematical ability" (Clements & Sarama, 2011).

Another difficulty that students have with learning geometry is that sometimes they are not developmentally ready to learn some of the material that they are required to learn. According to Pierre Van Hiele, there are five levels of geometric thinking which are as follow: visual level, descriptive/analytic level, abstract/informal deduction level, formal deduction level, and the mathematical rigor level. The levels are sequential and hierarchical. The progress from one level to the next is more dependent upon instruction than on age or maturity. If students do not have the information that they need from level one, they will not be able to move on to the next level.

Another important factor is that students are not introduced to these concepts early enough, so they have difficulty learning these concepts later. Early childhood education is when topics like geometry should be introduced to help enhance students' spatial ability skills. Many students also tend to find math boring, not engaging, and difficult. Several students feel this way because they do not understand why they need to learn these particular concepts. Students find these concepts useless to their lives. It is not only important for students to learn these mathematical concepts, but it is also important to learn and understand how important it is to have these skills and to be successful in applying these skills to their lives.

Even though there are several issues hindering students from being successful in geometry, there are also many strategies that teachers have found to be effective. Not only is it important for teachers to learn about the different strategies, but it is also important for teachers to learn how to implement these strategies in the classroom, for the benefit of students. Some of these strategies include providing hands-on experience (manipulatives), incorporating technology, and using literature. This text will discuss the previously mentioned problems that students face when approaching geometry, and will suggest methods to eradicate these issues.

Review of Literature

One issue that is prevalent in geometry is that students struggle with some of the main concepts of geometry. Students struggle with concepts such as drawing shapes, being able to interpret patterns, and they also struggle with three-dimensional shapes. "Spatial explorations involving two-and three-dimensional shapes are an important part of school curricula" (Ayebo, Dornoo & Wiest, 2010). If students do not have this skill, they will not be able to be successful with portions of the school curriculum. Students also struggle with visualization which is an

important component for spatial thinking. Even though students are struggling with these concepts, they are not receiving much help from their instructors. Teachers have difficulty identifying where exactly students are having troubles. According to the Gal (2011), "[Teachers] were unaware of the difficulty their students had in comprehending them [mathematical concepts]. The teachers were often unable to analyze these difficulties, pinpoint their source, and so often failed to cope with identified problems." Therefore, educators have difficulty clarifying or explaining the confusion that students are having. Teacher's lack of content knowledge to help assist their students in this problem could be that they are not prepared. "Teachers ….are not always provided with adequate preparation in geometry and the teaching and learning of geometry" (Clements & Sarama, 2011). "Of all mathematics topics, geometry was the one prospective teachers claimed to have learned the least and believed they were least prepared to teach" (Clements & Sarama, 2011). This tells us that colleges, universities, and education programs need to do better in preparing teachers for the future because the lack of preparedness affects students' academic abilities.

Learning styles is also an issue that causes students to not be successful in geometry. According to Gardner's Theory of Multiple Intelligences (which is a theory that recognizes that every child is different and learns differently) there are nine different intelligences that students may display. They are logical, spatial, linguistic, bodily-kinesthetic, musical, interpersonal, intrapersonal, naturalistic, and existential. Each student will have different strengths and weaknesses in each category. That is why it is so important for teachers to get to know their students and learn how they learn best. When this happens, instruction will be more effective. "Students learn more effectively when learning material is presented to them in a manner that fits their preferred mode of learning or when teaching material complements and widens their modes

of learning" (Pantazi & Christou, 2009). In order to be successful in geometry, spatial ability is something that is important to have. Unfortunately, a lot of students are not strong in this area, which is correlated to how well they do in geometry. It is important for students who do not have the innate ability to be successful in spatial ability to receive more practice so that they can grow in this particular area. Even though all students are not strong in spatial ability, the teacher can incorporate other learning styles with spatial intelligence which will allow students to be able to access the material, but will also help them grow in the spatial area. Teachers may ignore this information that all students learn differently and may teach only one way. Some teachers teach verbally (give lectures) the entire time or may teach visually (showing diagrams, charts, graphs, etc.), but not everybody learns best these ways. What about those students who are more bodily-kinesthetic inclined? It is important for the teacher to approach geometry through all of the different kinds of learning styles so that every child will be able to benefit from instruction.

"Defined as 'building and manipulating metal representations of two-and-three dimensional objects and perceiving an object from different perspectives', spatial visualization is viewed as an essential part of geometric thought" (Boakes, 2009). Unfortunately, students lack spatial ability/reasoning which is vital for geometry. "Individuals are harmed in their progression in mathematics due to lack of attention to spatial skills" (Clements & Sarama, 2011). Spatial reasoning, which is one of the nine intelligences, have to deal with being able to see things visually, whether it be concretely or abstractly. "Within geometry, one standard calls for students to use visualization, spatial reasoning, and geometric modeling to solve problems" (Boakes, 2009). There has been proof that students who are visual thinkers excel in geometry. "Visual thinking training may improve geometric reasoning via the learned cognitive skill of visualization" (Walker, Winner, Hetland, Simmons & Goldsmith, 2011). "Art and geometry

entail visualization and mental manipulation of images" (Walker et al., 2011). That is why it has been said that students who are artistic or who are visually inclined tend to do well in geometry because manipulation of images is necessary in geometry. "…mathematics achievement is related to spatial abilities" (Clements & Sarama, 2011).

"Obstacles may arise as a result of teachers' specific choices of methods or because of their limited knowledge of their students' cognitive capacities" (Kuzniak & Rauscher, 2011). According to Van Hiele's levels of geometric thinking, students are able to understand certain geometric concepts depending on what level they are at. For example, at the visual level students are expected to identify, compare, and sort shapes on the basis of their appearance as a whole. At the descriptive/analytical level students will be able to recognize and describe a shape in terms of its properties. At the abstract/informal deduction level students can define a figure using minimum sets of properties. At the formal deduction level students will be able to create, compare and contrasts different proofs. At the mathematical rigor level students will be able to rigorously establish theorems in different axiomatic systems in the absence of reference models. Unlike Piaget's theory of cognitive development, which deals with age and maturity, Van Hiele's levels of geometric thinking are sequential and hierarchical.

> Van Hiele model was formed to improve geometrical comprehension...In this model, students…find out the characteristic of geometrical concepts. The most important characteristics of Van Hiele model is that it explains the development of geometrical thinking process with five related stages. Each of these stages determines the thinking processes that are necessary for finding geometrical relations out. These stages define the process of thinking and the types of geometrical ideas… (Durums & Erodogan, 2009).

Before a student understands the abstract levels of geometry, they must first be able to do the concrete levels of geometry. That is why it is important to know where each child stands developmentally because teachers can be giving students work to do that is not developmentally appropriate for students' cognitive skills. This can cause students to fail. It is important for teachers to reflect on the type of course work that they expect their students to complete before giving it to them. Students may also be at different developmental levels, this is when it will be up to the teacher to differentiate instruction to make sure that each student in the classroom is being challenged, but is also being successful.

It is also crucial to introduce geometry to students at a young age. "It is through geometry that children begin to develop an understanding of "geometric shapes and structures" and how to analyze their characteristics and relationships. Part of this development includes the building of spatial visualization skills" (Boakes, 2009). "Unfortunately, geometry and spatial thinking are often ignored or minimized in… early education" (Clements & Sarama, 2011). Geometry should be introduced to students during early childhood education. "For early childhood the domain of geometry and spatial reasoning is an important area of mathematics learning" (Clements & Sarama, 2011). "Geometry should be a focus at every age, in every grade, every year" (Clements & Sarama, 2011). This is why the Common Core Standards has been adopted by many states throughout the country. With the new Common Core Standards, it is changing the kind of information or concepts that students must learn. Before, there were many concepts that teachers were responsible for teaching. Now, Common Core has lessened the amount of material taught and has moved to more in depth material being taught. In this new curriculum, students will learn geometry in every grade, but each ascending grade level will include a deeper understanding. Common Core is moving students to higher levels of Bloom's

Taxonomy, such as the synthesis and evaluation level. Hopefully, with this curriculum, students will be able to think more critically.

Another issue with students learning geometry is that they do not know the importance of them learning it. "…students did not seem to have insight into the concepts [geometry] that they were being taught" (Gal, 2011). "No mathematical subject is more relevant than geometry" (Clements & Sarama, 2011). "Geometry is recognized as an important part of the kindergarten through grade 12 mathematics curriculum" (Boakes, 2009). Teachers need to take time to explain why geometry is relevant. Students need to know that geometry is a skill that they will need to learn in order to be successful in higher-order mathematics thinking skills (which they will have to encounter in grades to come). Geometry is useful in math skills such as "….proportional reasoning, judgmental application of knowledge, concepts and properties, and managing data and processing skills…" (Clements & Sarama, 2011). Not only is geometry useful for math skills that they will have to learn later in their education career, but geometry is used in everyday life. Geometry is used when people want to understand how a football is thrown, how cars move and how buildings are built. It is useful in measurement and also for home decoration. When students understand why they are learning geometry and how it relates to their own lives, they are more open to learning. "Instruction needs not only focus on mathematical relationships represented in the technological environment but also to attend to students' current understanding and to bridge new learning to those understandings" (Hannafin, Liu, Truxaw &Vermillion, 2008). When relating information to students' lives it is important to use the understanding that they have now, so that they can be moved into the direction of discovering new information by using scaffolding and using Vygotsky's Zone of Proximal Development. (The difference between what learners can do without help and what he or she

can do with help). “Children learn mathematics from meaningful contexts, and teaching should build on the informal knowledge children have acquired both before starting school and outside school hours” (Doig, Van Den Boogaard & Van Den Heuvel-Panhuizen, 2009) .Once students are able to make connections with their prior knowledge to their new knowledge, understanding of geometry will be more attainable and more engaging. It has been proven that when students are engaged in the lesson, their achievement levels will improve significantly.

Even though there are many issues in geometry there are also many solutions. Many of these solutions to these problems deal with using resources that will help students understand complex geometric concepts. “Many educators and researchers believe that dynamic geometry programs can support higher order thinking skills such as generalization ….Students can conduct these explorations using materials such as geoboards, dot paper, multiple-length cardboard strips with hinges, and dynamic geometry software to create two-dimensional shapes" (Hannafin, Liu, Truxaw & Vermillion, 2008). It is believed that dynamic geometry programs (using technology) can be beneficial in students understanding geometrical concepts. Also, the use of geoboards, dot paper, and other things like this can be considered manipulatives (hands-on materials) which will benefit a bodily-kinesthetic learner (hands-on learner, athletic). “Student could use geoboards when trying to identify simple geometric shapes. They could also use geometric solid models when learning about spatial reasoning” (Boggan, Harper & Whitmire, 2010).

Manipulatives are very helpful when students are learning geometry. “Manipulatives can be used in teaching a wide variety of topics in mathematics” (Boggan, Harper & Whitmire, 2010). Manipulatives are important because many students can listen to a teacher all day explain the same concept over and over, but until they are able to execute the concept themselves, teachers may never be able to reach them. “Within the study of geometry in the middle school

curriculum is the natural development of students' spatial visualization, the ability to visualize two and three-dimensional subjects. The national mathematics standards call specifically for the development of such skills through hands-on experiences" (Boakes, 2009). Also many students feel that they are able to understand a concept more, if they are able to practice on their own. Manipulatives give these students the opportunity to do that. Using manipulatives are also highly effective. Research shows that "Manipulatives help students learn by allowing them to move from concrete experiences to abstract reasoning. When students manipulate objects, they are taking the first steps toward understanding math processes and procedures. For example, students can learn about a triangle but if students are able to pick up a triangle and explore and play with it, students' understanding of this shape will be more sufficient. This coincides with constructivism which states that knowledge is constructed when prior knowledge comes into contact with experiences, which can be done through manipulation of objects. "Furthermore, manipulation of instructions presented as virtual 3-D visualizations or real-life tasks also seems to benefit learning. Allowing learners to explore the instructional content from different perspectives by (manually) changing viewpoint is an effective way to foster learning" (Koning & Tabbers, 2011). This shows that manipulatives allows for geometric concepts to come alive and help students apply these concepts to their lives. "The effective use of manipulatives can help students connect ideas and integrate their knowledge so that they gain a deep understanding of mathematical concepts" (Boggan, Harper & Whitmire, 2010).

Manipulatives can also be very inexpensive. (Some manipulatives can also be expensive). Manipulatives can be something as simple as working with beans to help students understanding a certain concept, such as grouping. Inexpensive manipulatives can be just as effective as the expensive manipulatives. An example of an inexpensive manipulative is by using

origami (paper folding). Origami not only provides students with hands-on experience but it also helps with the development of students visualization, which has been stated earlier, is necessary for learning geometry. Origami is said to be effective because "The act of folding is said to enable children to learn three-dimensional geometry concepts" (Boakes, 2009). "Results imply that Origami lessons blended within mathematics instruction are as beneficial as traditional instruction in building an understanding of geometric terms and concepts" (Boakes, 2009).

It is no secret that children often do not find math fun. "They [students] do not find mathematics fun, motivating, and engaging, and they think it is difficult to learn. Computer-based games have the potential and possibility of addressing this problem" (Sedig, 2008). Integrating computer games in the curriculum is using technology. Technology is very important in today's classroom. It is important for teachers and students to be able to keep up with new technology, and to learn how to use it. It is important for teachers to prepare students for the world that they will be living in, which is now surrounded by technology. Employers are now looking for certain skills when they are hiring, and some of these skills have to deal with someone's knowledge base of technology. Not only is technology necessary for the real world, it allows teachers to think of new creative ways to engage their students in the classroom. Computer-based games are just one example of technology that teachers can integrate into the curriculum.

Another way to improve students understanding of geometry is by implementing literature. By incorporating literature can help students relate to math and to real-life situations which may help them understand the content more. Picture books are a good genre to start with. "…using picture books…provide[s] young children (five- to six-year-olds) with a learning environment where they can explore and extend preliminary notions of mathematics-related

concepts" (Doig, Van Den Boogaard & Van Den Heuvel-Panhuizen, 2009). This also reinforces that it is important to start introducing mathematics concepts in early childhood education. "…geometric shapes can be described, analyzed, transformed and composed, and decomposed into other shapes'; that 'mathematics can be used to specify precisely directions, routes and locations in the world'; that 'mental images can be used to represent and manipulate shapes, directions and locations'; and that 'objects can be represented from different points of view" (Doig, Van Den Boogaard & Van Den Heuvel-Panhuizen, 2009). When students are read to, or when they read, they learn to visualize images in their heads. Visualizing images can also coincide with a student's imagination. "…the importance of imagination to invention and problem solving in mathematics and science has been well documented" (Ayebo, Dornoo & Wiest, 2010). By using literature in the classroom, it can help develop students' mental images (spatial reasoning). "Picture books can offer a meaningful context for learning mathematics, and provide an informal basis of experience with mathematical ideas that can be a springboard for more formal levels of understanding" (Doig, Van Den Boogaard & Van Den Heuvel-Panhuizen, 2009). This also shows that picture books can help students reach the higher levels of Bloom's Taxonomy. An important goal for students to achieve is to become critical thinkers, and picture books help with the development of this.

Conclusion

There are many issues that can stop students from successfully mastering geometry. Most of these issues revolve around the main idea that students lack spatial ability which is needed in understanding geometry. Students' issues with main concepts in geometry such as shapes, coincide with the lack of students being able to visualize. There are things that can help with this by strengthening this skill which can be done several ways which are: starting the

geometry curriculum at a young age, using manipulatives to help students enhance their spatial reasoning, incorporating literature, and using technology. Understanding what students can do depending on their developmental thinking plays a huge role in understanding the concepts of geometry. With this information, it is possible for geometric concepts to become attainable for students.

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