The University of the Arts

Division of Continuing Studies

Professional and Adult Program

DIGITAL FEEDBACK IN THE CLASSROOM:

A FAMILY AND CONSUMER SCIENCES CURRICULUM

By

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A Thesis submitted in Partial Fulfillment of the Requirements for the Degree

Master of Education

Educational Technology

May 7, 2020

Abstract

This thesis reviews literature researching the effective use of technology integration and digital feedback in today's classroom. Technology dominates the forefront of the 21st-century classroom. Before the inclusion of computers to the school environment and curriculum, students relied on written and oral feedback from their instructors. Today's students, however, utilize nuanced digital tech tools because of changes in accessibility. According to a review on the research exploring the use of learning technology assessment in the classroom, two items were identified which support using digital feedback (Hepplestone,et al 2011). Because digital feedback is generated and received by the student in real-time, students feel more relaxed about practicing without the oversight of the teacher or peer. In addition, student access to user-friendly digital online assessment tools have become commonplace in school environments. Assessment and feedback by peers has been helpful. The most important aspect of this process is students have become more receptive to this process simply by the practice of giving peer feedback themselves to others. Leveraging digital tools in this way to gain digital feedback facilitates more classroom time dedicated to supporting students (Hepplestone, et al 2011). Nonetheless, ineffective ways of using tech tools and techniques for digital feedback persist in practice. Many factors affect the successful integration of new technology, this four-unit curriculum will incorporate technology integration and digital feedback to extrapolate the most effective digital feedback needed for both student and instructor. It focuses on data to update the family and consumer sciences curriculum.

Keywords: digital feedback, digital curriculum, family and consumer science, technical tools, techniques for feedback, ineffective feedback, effective feedback

Introduction to Digital Feedback and the Family and Consumer Sciences Curriculum

A series of experiences working in the classroom with one-to-one computers led me to investigate the topic of digital feedback and a digitized curriculum. The following subset of digital feedback inquiries guided my research:

1) Define digital feedback.
2) Explore effective digital feedback.
3) Examine ineffective use of digital feedback.
4) Investigate student preparation to receive and use digital feedback.
5) Examine teachers' use of digital feedback to support students.

An atmosphere where an instructor can create interactive online learning that produces varying forms of digital feedback can help increase the level of engagement in the classroom. Combining the effective use of immediate digital feedback, learning tech tools, and implementing techniques for learning feedback has shown some positive impact. A research project looked into how students perceive three feedback systems: (1) pen-and-paper questionnaires; (2) verbal feedback, and (3) digital technology feedback. The goal of the research was to gain insight into students' mindset upon receiving the three types of feedback (Zou and Lambert, 2016). The volunteer study group consisted of ninety-three English freshmen, aged 17 to 20, who did not speak English. The female to male ratio was 3:2. The digital feedback tech tools included Socrative,TodaysMeet, and Google Drive. Zou and Lamberts, 2016 research survey data indicates 84 out of 93 (90.3%) volunteer students embraced the digital tech tools more than the other two options. The students prefered the anonymity and real-time aspect of digital feedback.

A search of the Google Scholar, ERIC and Power Library Databases highlighted some of the issues, growing interest, and focus on the effects of using technology and digital feedback in the 21st-century classroom. Both secondary and post-secondary education institutions mobilize digital feedback in the classroom. Understanding and using digital feedback to support students is important. Although commentaries, magazine articles, and social media sites document the implementation of digital feedback, as more school districts invest in technology tools, staff, and training. Unfortunately, there isn't a significant amount of information focused on technology integration and digital feedback in the family and consumer sciences curriculum.

Problem Statement

Despite the importance of student digital feedback in the classroom, the relevance of the digital feedback provided and the students' ability to understand this feedback is often an afterthought (Sutton, 2012). In addition to instructor or digital feedback, teachers receive student feedback. According to the 2018 study by Bijlsma, Visscher, Dobbelaer and Veldkamp, student feedback assisted teachers in improving their lesson plans. For instance, the faculty at California State University in Los Angeles transformed classroom teaching methods from a traditional engineering lecture structure to a flipped classroom strategy (Warter-Perez & Doug, 2012). In light of the change to a digital engineering course, using personal computer tablets with the DyKnow classroom management software, the Collaborative Project-Based Learning (CPBL) system was developed. The DyKnow learning management system helps instructors reduce student distraction and allows teachers to monitor student activity. Subsequently, the CPBL used both formative and summative

assessments to approximate the effectiveness of new teaching techniques on students' achievement in their designated field of study. Quantitative data was integrated using the following assessments: 1) Pre and post surveys; 2) Student surveys; 3) Focus Group; 4) Class observation. Review of the assessments highlighted the use of flipped learning strategies and decreased time lecturing was helpful to students. Subsequently, the new approach reduced lecture time and increased class time used for collaborative works. The regular incorporation of digital real-time assessments positively impacted student knowledge and skill development. (Warter-Perez & Doug, 2012). In addition, educators analyzing Collaborative Project-Based Learning data from pre- and post- surveys demonstrated the program helped students comprehend engineering design skills (Warter-Perez & Doug, 2012).

Evidence of digital feedback use in the family and consumer sciences curriculum is available. However, the research does not address many of the components involved in executing the family and consumer sciences curriculum directly. Training specifically addressing how to use tech tools and digital feedback in this environment is lacking.

Significance

The relevance of digital feedback provided and the students' ability to understand this feedback is often an afterthought (Sutton, 2012).This capstone curriculum project objective is to address the need for the alignment of student and teacher in the understanding and use of digital technology in the 21st century classroom. Incorporating technology to create formative assessments and summative feedback in the curriculum has two significant goals. First, produce an effective feedback process that occurs throughout the learning process. Secondly,

create an effective feedback process that happens at the end of each unit and is used to measure if the student achieves meets the standards set up in the assigned work.

The curriculum incorporates four important pedagogical practices, collaborative learning, self-directed learning, problem-based learning and learner-centered learning.

Definition of Terms

For a better understanding of the research of this curriculum the following terms are defined in the context of this paper.

Digital curriculum. Refers to electronic educational programs that are accessed through a computer.

Digital feedback. Incorporates electronic equipment, such as iPads, and education software in a learning setting.

Digital instructional tools. Electronic tools that enhance the instructor and student learning experience. Examples include Google, Canvas, Smartboard, educational applications, which can be used in collaborative projects and produces digital feedback.

Second-order thinking. Providing students with skills and abilities that move them to higher order thinking which allows for a transfer of skills to multiple areas.

Technology Integration. Inclusion of technology into the classroom which is used by students to learn unit information.

Literature Review

This literature review focuses on research related to the integration of technology and digital feedback into the 21st century classroom.The purpose is to locate scholarly materials highlighting research on the effectiveness of technology integration and digital feedback in the classroom. The review looks at information detailing the use of technology in the classroom today and in the past. Also, it incorporates the benefits of using technology to provide digital feedback to both the student and instructor. It explores what factors into creating an environment and curriculum using digital feedback that mobilizes student engagement and enhances critical thinking skills. In addition, how instructors can use digital feedback to fine tune their instruction techniques and curriculum effectiveness.The main purpose is to determine digital strategies that can be incorporated into an up-to-date digitized family and consumer sciences curriculum. The strategies used should provide student and instructor meaningful and actionable digital feedback.

Defining Digital Feedback

Feedback in an educational setting enables educator monitors to maintain information on a learner's performance. The information should also provide students insight into how well they understand their subject matter. In addition, students should also be able to determine action steps to increase comprehension and performance (Price and O'Donovan, 2008). In other words, if students have a gap in their learning process, the learner must be given the tools or steps to fill the gap. The digital feedback process provides educators and learners with tools and practical methods to give and receive feedback based on students' performance during a designated course of study (Hepplestone, et al, 2011). Similarly, digital

feedback performs a formative assessment. Formative assessment evaluates students' understanding, remediates needs and develops a course of study. Giving students digital feedback on how they are executing course requirements and gauging comprehension of course content is one of the main goals of active learning. Feedback cycles are a reciprocal event; both instructor and learner can benefit from the process. An instructor can improve instruction based on students' questions or gaps. Feedback provides the instructor an opportunity to examine the course content and determine what could be included or excluded to improve student knowledge.

In addition to what student feedback should encompass, teachers should prepare students to receive feedback. Carless and Boud (2018) indicate the importance of the need for student feedback literacy, which is the students' ability to comprehend and use the feedback information. The components of student feedback literacy includes four competencies needed for literacy to manifest itself in students: appreciating feedback; making judgments; managing affect; and taking action (Carless & Boud, 2018). Students gain the skills for success through experiencing two hands-on activities. These activities can be inserted in instructors' curriculum. The practice of peer-to-peer feedback is first. This is often used in writing situations. Both the discussion and review of student exemplar work is another activity. The final push for change is aimed at teachers. Carless and Boud (2018) indicated a curriculum designed with student feedback in mind, using learning management systems for feedback, and teacher "guidance and coaching" will contribute to "student feedback literacy" (Carless & Boud, 2018). For example, a collaborative nutrition project requires student research, preparation and presentation on the topic of vitamins. The instructor initially shows examples

of past projects meeting project criteria. Prior to the presentation, students review the work of another group and give digital feedback utilizing the Canvas app.

Explore Effective Digital Feedback

Effective feedback ensures that students move towards their learning goals with a degree of understanding. For example, an instructor teaching students strategies they will need to engage in their research, study habits, and planning to get to the finish line of a unit or project. Boud and Molly (2013) support the theory that responding to students' work goes beyond red marks on a writing assignment and oral feedback on students' work. Students must be beneficially impacted. Feedback can be used to effectively enhance the formative assessment process.

According to Carless and Boud (2018) research, a decisive ingredient in providing feedback to students provides information that helps students to progress in their learning. In addition, the feedback should be leading the student to a clearly defined learning goal. Feedback also provides information that will help teachers improve their lesson plans to meet the needs of their students (Kuntz, 2012). Incorporating technology to give feedback can increase teacher efficiency. Teachers can increase the likelihood of students using feedback by setting the stage for success during the formative assessment process. It is an instructor’s responsibility to highlight the learning goal for each task.

Examine Ineffective Use of Digital Feedback.

Digital feedback should not convey a disapproval of the student; however, it should be a serious review of their project or assignment (Mohr, 2010). Don’t overload the student with excessive feedback, but zero in on the most relevant areas where they may need to change to

make the project or assignment better (Costello and Crane, 2009). Ineffective feedback of any kind can disallow students from answering the following questions. What did they do well? What can they do better in the future? What do they have to work towards? Digital feedback contributes value in the educational space. Prior research suggests digital feedbacks' power lies in how it can change the trajectory of students' success in school. If more teachers would embed the giving and receiving of feedback into their teaching time, consistently, both teachers and students would benefit (Hounsell, 2007).

A study investigating the integration of Information and Communication Technology in a designated school district led researchers to make the conclusion that 21st-century classroom teachers must essentially change traditional teaching practices (Genlott and Gronlund, 2019). A number of authors have recognized teachers must essentially change traditional teaching practices (Gomez et al., 2013). The change educators are looking for with digital technology goes beyond handing an individual a computer and giving them exposure to technology tools. Change involves training and retraining over an extended period of time (Genlott & Gronlund, 2018). Creating an environment of shared practice must include first and second order changes. First-order change involves making moderate changes. For instance, a teacher responds to students through email for feedback. Is this teacher using technology? On the one hand, the instructor used a tech tool; however, this is using a tech tool like a typewriter or a pen. Second-order change requires teachers to transform their thinking. A teacher using Learning Management System analytics to help move a student forward incorporates a higher level thinking.

Genlott and Grunloud (2018), surveyed ninety-two primary school teachers over a period of five years across an entire city. The teachers were enrolled in a training course, Write to Learn, whose purpose was to engage teachers in a new technology-supported teaching pedagogics. The Write to Learn (WTL) method embraces digital feedback, sight learning, higher order thinking and more. The questionnaires in the study were given to 154 teachers who participated in the training program from 2011-2015. Sixty percent of the ninety-two teachers surveyed from ten schools in one city answered the questionnaires. Questionnaire and statement responses received online through Survey Monkey were analyzed for quantitative data. Instructors who took the course in the same year implemented the WTF method either completely or partially. One-third of the instructors fully incorporated it and two-thirds partially used the WTF method (Genlott and Grunloud, 2018). The results indicated that structured training programs given over a sustained period of time can succeed in moving teaching trainees to the second-order change.

Effective Use of Digital Feedback

Digital feedback is delivered in different forms. However, the most important factors necessary for a student to act upon digital feedback encompasses the following: (1) The information given must be understood by the student; (2) The feedback should be responsive; (3) The student must have the capacity to act on the feedback; (4) Understandings, capacities and dispositions needed to make sense of information and use it to enhance work or learning strategies (Kopp, 2015).

The investigators identified a five-step framework that can be used in most learning environments (Duron, Limbach, and Waugh, 2006). This framework can lead students forward to the area of critical thinking. Critical thinking occurs when a student is making connections to the ideas, questions, and problems presented in the classroom. The example described by Duron, Limbach and Waugh involves the five-step framework being applied in accounting education. The students involved learned how to analyze a basic financial statement. Each five-step model framework was incorporated in the lesson plan. As a result, the five-step framework model helped instructors move away from the more prevalent structured memorization and lecture model. Students were given additional opportunities to collaborate in problem-solving and given real-life learning opportunities (Duron,et al., 2006). For example, students accessed corporate financial information online and analyzed the data.

This framework as described in Table 1 describes the framework and action steps that support students in the learning and feedback process (Duron,et al.,2006).

Table 1

Five-Step Model to Move Students Toward Critical Thinking

Steps	Step Criteria
Determine learning objectives	Define behaviors students should exhibit
Teach through questioning	Employ questioning techniques; interactive
Practice before you assess	Choose activities that promote active learning

Review, refine, and improve	Monitor class activities; Collect feedback
Provide feedback and assessment of learning	Provide and utilize feedback to/from students

According to the literature on effective feedback, there is an advantage to using digital feedback in the classroom. Despite this advantage teachers are still underutilizing tech tools available in the digital ecosystem. For example, a study of family and consumer sciences teachers, located in North Dakota, results indicated Powerpoint was the most used tech tool. The researchers used a four-point scale to determine the amount of access the teachers had to twelve types of tech tools. The four-point scale included the following choices (1) 1= no access; (2) 2 = potential access; (3) 3 = limited access; and (4) 4 = easy access. Over 90 percent of the teachers had access to computers in the classroom (Borr, Napoleon, & Welch, 2013). Furthermore, the other digital tools available in the school districts were underutilized (Borr et al., 2013). Although the article, *Computer Applications in the Field of Family and Consumer Science,* was written in 2002 it identifies the timeline of how long family and consumer science teachers have been using technology. Technology was introduced to the curriculum in the 1980s. The teachers used the computer to improve their instruction, however, as indicated in the North Dakota study the available tech tools were underutilized (Keane, 2002). The opportunities to use technical tools and techniques for digital feedback expand opportunities in the 21st-century classroom. Teachers increasingly have access to a variety of technical tools, which can enhance students' learning experience. Investigators continue to seek data on finding new ways to effectively integrate technology in a meaningful

and sustainable way. The effectiveness of on-point digital feedback can result in improved student performance and participation. Digital feedback should enhance the family and consumer sciences nutrition curriculum using our technologically-rich resources, providing personalized and relevant feedback to students.

Duron, Limbach, and Waugh (2006) strongly advocate that students should be allowed to practice a new skill with the provision that teachers give students timely and relevant information on how to improve in the new skill level. These opportunities should be given before testing or final evaluation. Effective digital feedback and reinforcement practice will provide information for teachers to evaluate. If given the time and space to analyze the information, teachers can give students winning strategies to develop deeper thinking skills (Duron, 2018). Collectively, the research indicates effective feedback includes several ingredients. Both performance information for the learner and teacher must be available to analyze and use to make goals achievable. The teacher should create meaningful learning that meets the needs of the learners. Feedback should come from a variety of sources such as peers, teachers, and multimedia technology. Teachers' and students' responsiveness to traditional or digital feedback should be consistent (Gomez et al., 2013; Hepplestone et al., 2011).

The intent of feedback is widely agreed upon in the education arena. Effective feedback is designed to achieve improvement in student learning, continuously driving students' current performance towards a current learning goal (Hepplestone et al., 2011).

How does one effectively implement a digital ecosystem into a traditional curriculum? There are two components of the digital ecosystem, which is a model for integrating digital assessment into the learning system. The design and layout should be easy to access and pilot. The learning process should include intermittent opportunities throughout for receiving and distributing feedback needed by both teacher and student.

Investigate Students' Preparation to Receive and Use Digital Feedback

Classrooms that focus on students and are less teacher-centered create a favorable environment where students can receive feedback (Yilmaz, 2017). Ozkan Yilmaz (2017) conducted a qualitative research study that evaluated how a learner-centered designed classroom, which was used for the integration of interactive technology, would affect the digital feedback process for students. The study used mobile interactive technology for one term with a focus group and a teacher. The study measured the use of mobile technology as a feedback tool. Student interviews were conducted to determine if the feedback experience was positive or negative. The classes that participated were small. The science students sampling were eighteen undergraduate students who were a part of the student body at a Misconception in Science in 2015. The school is located in Eastern Turkey. The sampling size included 11 female (61.1%) and 7 male (38.8%) learners. The range of ages were from twenty-one to twenty-seven. The study concluded using the mobile phone was effective and had engaged the students (Yilmaz, 2017).

Examine Teachers' Use of Digital Feedback to Support Students

In the family and consumer sciences classroom a variety of digital feedback tools are available. For example, the Canvas learning management system can produce different types

of feedback. The online digital feedback environment created in Canvas includes the following: (1) rubrics; (2) annotations; (3) audio; (4) video; (5) computer assisted assessment; (6) peer review. The goal of using the digital feedback tools is to guide students in the learning process. The formative assessments and feedback embedded in this environment should promote discussion between instructors and students. The quality of engagement affects how students will react to digital feedback. Feedback should be informative, sustainable and actionable (Carless, Salter, Yang, & Lam, 2010).

Examine Family and Consumer Sciences Use of Digital Feedback

Digital feedback is a process in which an educator uses digital tools to give feedback on an assignment or project involving a student. The types of tech tools and techniques for feedback vary based on the technology available to students and teachers. Access to technology in schools depends on the decisions of the school district. What the schools invest in technology matters and is dependent on school budgets. Teachers only have access to the technology that schools chose to purchase. How well teachers are trained in the use of technology matters. Also, how effectively teachers use digital technology in their curriculum/classroom and/or provide feedback sets the stage for how students will most likely receive it.

According to Allison & Rehm (2016), in the field of family and consumer sciences, there is an upward trend to deliver the family and consumer sciences curriculum using digital tools. For example, teachers and students in family and consumer sciences may use webinars, digitally-driven discussions, electronic flip charts, virtual breakout rooms, graphing calculators, multimedia videos, whiteboards, and drawing tools (Alison & Rehm, 2016, p. 48).

Moore and Wallace (2012) set out to determine if providing audio feedback to a small diverse population of students would help students improve their work. Catherine Moore worked for twelve years lecturing and planning undergraduate programming. In addition, she worked on the online education programs at Open Universities in Australia. Ian Wallace is a software engineer lecturer at Swinburne University in Australia. According to Moore and Wallace (2012), interest in studying audio feedback stems from their work in online education with undergraduate students. The students, composed of 100 unknown online education students, received feedback on their completed research papers in two feedback formats. The researchers did not include the grades of the students. The investigators wanted the students to respond to qualitative and quantitative questions. The goal was to determine if the students would respond more to audio feedback versus the more traditional written feedback. Hatziapostolou and Paraskakis (2010) researched the theory based on students' learning experience being focused on formative feedback.

Fifty responses out of the one hundred surveyed students were analyzed (Moore & Wallace, 2012). All responders had received audio/written assignment feedback. Eighty percent of the respondents agreed the audio feedback was more helpful than the written response. Fifty-six percent agreed that they “preferred” audio or written feedback. Twenty-six percent concluded that audio was not better than written feedback. Eighteen percent disagreed that audio feedback impressed them more. In addition, the results indicated students wanted more “in-depth feedback” (pg 9). Finally, based on the research results, the audio feedback increased the time to give more constructive feedback (Moore and Wallace, 2012, p. 9)

Unlike Moore and Wallace, Hatziapostolou and Parskakis (2010), wanted to explore why some research indicated feedback was not received well by students because of "lack of motivation and difficulty in relating to feedback comments (pg. 111)." The investigators based the research on the implementation of an Online Feedback System (OFES). The goal of using this system was to integrate a feedback communication component into a digital system for students that would encourage curriculum engagement. The OFES enabled instructors to create a template for digital feedback. The website tech tool created quizzes, facilitated online discussion and digital feedback on students' comprehension. Records were kept on eighty students from 2005 through 2006. Over the two-year period engagement with the tool increased. Thirty percent of the students in both years revisited the site for additional learning activities (Hatziapostolou & Paraskakis, 2010).

A related theory in education, Bloom's Taxonomy, was created in the 1950s. Benjamin Bloom, a psychologist, created a hierarchy of learning experiences. The hierarchy of knowledge included levels of learning, ranging from low to higher level thinking skills. In the 1990s, the model was updated by David Krathworth and Lorin Anderson (Adams, 2015). They changed the hierarchy to include actionable steps versus passive (noun) steps. The updated steps incorporated the following action verbs with subcategories (Adams, 2015).

Table 2 is based on the original Bloom's Taxonomy created in the 1950s and updated version created in the 1990s (Adams, N. E., 2015). The chart lists learning objectives based on traditional and digital pedagogics.

Table 2

Bloom's Taxonomy Chart

Traditional Bloom's Taxonomy 1950s	Digital Bloom's Taxonomy 1990s
Knowledge	Remember - recognizing, recalling
Comprehension	Understand - interpreting and exemplifying,
Application	Apply - executing and implementing
Analysis	Analyze - differentiating and organizing
Synthesis	Evaluate - checking, critiquing
Evaluation	Create - generating, planning, producing

Adams, in her article "Bloom's Taxonomy of Cognitive Learning Objectives," cites two uses of the taxonomy. In the article, Adams indicates the hierarchy inspires instructors to set up learning objectives that consider what a student is capable of with instruction. First, creating a learning goal using action verbs should include better methods to evaluate students based on information they have received via the classroom; this includes media and flipped classroom experiences. Secondly, using Bloom's Taxonomy as a guide to creating learning objectives will help students reach higher levels of learning during the education process (Adams, 2015). In the new Digital Taxonomy, Adam notes that it puts the skill of synthesis, which is the ability to pull things together above the evaluation step. Teachers have the ability to elevate students to higher level thinking by providing different levels of feedback using all of the technical tools available in a manner that works for the student.

Finally, Adams indicates the culmination of Bloom's Taxonomy is evaluation. Why? Evaluation is the most vital component of critical thinking. A teacher's planning of instruction

is vital. The instructor who is giving feedback, evaluating the curriculum and using feedback from students is actively engaged in teaching and with the student. When students are engaged and use higher level skills, they are exercising the lower level skill as well. This leads to a better student and instructor (Adams, 2015).

Conclusion

The integration of technology and the use of digital feedback in the 21st century classroom has the potential to permanently change the classroom from the teacher-centered classroom of the past. How instructors use technology to reach and teach students is relevant. Every student and educator needs ongoing training to implement digitized curriculum strategies effectively. Digital feedback between student and instructor can be used as a powerful tool of change. Effective digital feedback needs to be timely, non-judgemental, relevant, and personalized. Digital feedback should be used in a variety of interactive strategies that include: (1) student to student; (2) student to teacher; (3) teacher to student; and (4) student to technology. Digital feedback should reflect the abilities of the students. In addition to feedback, studies must effectively be guided to use strategies that enable them to reach their educational goals. Currently, research reflects how learning management systems, educational applications, and other tech tools can help instructors in the classroom. However, despite the growing data indicating tech tools lead to better classroom management and move students in areas of critical thinking, there is still much to be learned and researched in this area.

By including the combination of different pedagogical frameworks, the family and consumer sciences curriculum will be enhanced. Bloom's revised taxonomy, UbD, and the

five-step framework models are helpful in creating a path to learning for all students. A digitized curriculum integrating theory and pragmatic learning experiences can be structured to include relevant activities and learning tools that lead students to higher level or critical thinking. The learning target goal of each student is achieved competency based on individual ability. Building competency and life skills are integral components that enable students to use what they learn in the classroom. The ability to give and receive constructive feedback builds students abilities to interact in an imperfect world.

A digitized curriculum meeting the core standards of the family and consumer sciences specialty area is needed. The new family and consumer sciences digitized curriculum will focus on the nutritional, sewing, child development and financial components of the family and consumer sciences curriculum. The digital movement in family and consumer sciences is creating a footprint where students' have online access to interactive lessons, different forms of communication, material sharing with peers or instructors and digital feedback (Allison and Rehm, 2016). For example, students' using Nearpod to create a nutrition presentation can create an informative presentation and integrate gaming in the same platform. Nearpod works on many school computer systems. An educator can also use Nearpod to upload google slides, presentations, pdfs and convert the information into interactive lessons. This is just one example of what a digital tool can do. Currently, the textbook available in class is over twelve years old. At this time, modifications in the curriculum have included the use of 1:1 iPads. The learning management system adopted by the school is Canvas, which is used more regularly given the inclusion of grades six through nine. Canvas provides analytical data and empowers the student to collaborate. Canvas also

affords an instructor the ability to give audio feedback, comment on projects, provide articles and extras outside of the classroom. The students no longer have to go to a computer lab, which was shared with multiple classes. The new curriculum will include the optimization of the Canvas learning management system (LMS), digitized educational applications, and inquiry tools that can give students immediate feedback. In addition, it embeds the regular use of analytics created by learning management systems such as Blackboard, Canvas, or Schoology to pinpoint student engagement and learning deficits.

Curriculum Overview

This curriculum aims to provide Family and Consumer Sciences students and teachers an opportunity to embrace the 21st century classroom. This curriculum encourages and supports students' personal growth. Student activities and assignments will strengthen life skills. In addition, technology integration will demonstrate the benefits of effectively using tech tools. Similarly, technology provides digital feedback. Digital feedback enhances the learning process by providing formative assessment options to both student and instructor. Embedding formative assessment through digital integration can support students in developing self-regulating skills. Nicole and Milligan (2006) indicate self-regulation can result in students taking the lead in setting personal learning goals and tracking project progress. For example, developing self-regulating behavior can assist a student who is determining how to approach a roadblock in their studies. Furthermore, they may decide a project needs to be broken down into smaller segments and timeframes to complete a task.Using digital tools can accelerate the feedback response time between student and teacher. Digital feedback tools in the curriculum include many forms such as online rubrics, digital assignment notes and/or comments, audio, video, and peer review. Creating good feedback practices in the curriculum is important. Effective digital feedback can strengthen the communication between the teacher and student. As a result, both student and teacher can become more engaged in the learning process (Nicole et al., 2006) In addition to providing different digital tools, teachers must provide feedback intermittently, specifically, and timely.

Framework

The curriculum is designed based on the Understanding by Design (UbD) framework for students. This framework is adopted and used in the Great Valley School District. Units will address the academic requirements for family and consumer sciences students in grades sixth through eighth grade.

Table 3 The UbD framework was designed by educators Grant Wiggins and Jay McTighe. The UbD framework is defined by three stages. (Roth, 2007)

Table 3

UbD Stages

Stages	Criteria
Identify desired results.	Define behaviors students should exhibit
Determine acceptable evidence	Focus on assessment tasks that determine student achievement.
Plan learning and experiences	Determine situations that center on situations and environments that simulate real life.

The guidelines used in the curriculum are based on the standards in the Pennsylvania Family and Consumer Sciences Curriculum and the National Standards for Family and Consumer Sciences. The 21st Century FCS standards require classroom instruction to include

assignments, activities and experiences that help students to develop into critical thinkers and productive future citizens.

Purpose of the Curriculum

The purpose of the curriculum units is to provide students with "real-world" and project-based scenarios. In addition, teachers will provide activities and materials to promote student engagement. The experiences provided will represent a variety of lifestyle skills. The curriculum includes units on nutrition, sewing, financial management and consumer responsibilities.

Assessments

Assessments will be used to gather information to evaluate student needs. Formative assessments incorporating tech tools will provide teachers and students with varying digital feedback options.Various technology tools will provide learning feedback i.e., audio, voice, electronic publishing, live polling, blogs and computer assisted assessment. The digital feedback will assist teachers in providing effective feedback to students. In addition, teachers will be able to use data to revise instruction to meet specific needs of students. Teachers can support students in the process of learning new materials and revise their instructions, if needed to improve student comprehension. Students will use the feedback to self-correct and formulate plans for self-correction in their learning process. The assessment criteria will include the following nine week schedule:

Table 4 represents the grading percentages established for the family and consumer sciences classes in the Great Valley School District.

Table 4

Assessment Criteria

Description	Weighting	Due
Assessment	10%	Weeks 2 - 7
Classwork/Homework	20%	Weeks 2 - 9
Labs	35%	Weeks 2 - 8
Project	35%	Week 4, 5, 6
Overall Grade	100%	9 Weeks

Target Audience & Procedure

The curriculum focuses on students with varying abilities, who are in sixth grade. The classes meet 45 periods within a nine-week marking period for 42 minutes each day. The lesson format includes: differentiated direct instruction, guided practice, discussion, group and independent work. All students are required to complete and submit their own assignments. The sixth grade course consists of learning materials addressing the following needs in each grade level: (1) ESL students; (2) hearing impaired; (3) attention deficit disorders.

Table 5 represents the course of study for sixth graders in the family and consumer sciences program in the middle school.

Table 5

Course of Study

Course of Study	Family and Consumer Sciences Grade Level	Content Area
Content Area / Dept.	Family and Consumer Sciences Department	**National Family and Consumer Sciences Standards**
Grade Level	Sixth Grade	Students will engage more closely with financial and resource management, exploring strategies that help balance family, work and community responsibilities, food science and nutrition, and child development.
Length of Course	9 weeks	

Apparatus and Materials

This curriculum includes real-life experiences using field trips to enhance students' interactions in their community. In addition, materials such as sewing tools, food preparation materials, access to kitchens and appliances are available to students. These materials and tools will help create lab experiences mirroring home life environments. Furthermore, the curriculum includes activities that require the integration and application of tech tools. The tech tools will provide intermittent feedback throughout the units. Tech tools will also be used for formative assessments including quizzes, live polling and peer collaborative activities. The

curriculum will use the technology available in the classroom on a routine basis. Including the Canvas Learning Management System, one-to-one iPads and iPad applications.. The use of technology requires instructors and students to steadfastly receive regular education and training on the devices and tech tools available.

Prior to starting a new unit, instructors will administer a pretest to the students to ascertain how much knowledge base, if any, the student may have about the new unit or subject. The pretest will be administered using paper and online assessments. Both written and digital feedback will be given during and after the completion of a unit, as well.

When students begin the course, instructors will give students instruction on the grading system and learning target goals for the class. Each student will be given a written or online rubric for the coursework. At the introduction of any new unit, new goals and deadlines will be reviewed with students. In addition, at the beginning of the marking period, teachers will discuss the importance of using digital, oral and written feedback to enhance their work. Instructors will emphasize the different digital feedback options available during the course and the timeline for receiving feedback after submitting a project.

6th Grade
Understanding by Design (UbD) Unit Plan

Unit 1: Kitchen, Food and Nutrition

STAGE 1 – DESIRED RESULTS	
Unit 1: Kitchen , Food and Nutrition **Unit Summary** In this unit, students are introduced to handling meal preparation. Manners and etiquette training will be covered and discussed throughout the course. Because cooking will be a central focus, students will learn how to read and adjust recipes to fit their dietary needs. Students will work together to plan how meals will be cooked. In addition, they will be responsible for handling prepping, cooking, and food storage in their kitchen labs. Kitchen clean-up and sanitation duties are to be rotated within the group during each food lab. Timeframe: 3 Weeks 21 sessions; 43 minutes per session	
Understanding(s)/goals: ● Explain how family mealtime is relevant to building relationships. ● Arrange table settings. ● Identify basic table manners. ● Follow safe food storage procedures. ● Avoid cross contamination. ● Read and adjust recipes based on dietary needs. ● Prepare food labs according to recipe directions.	**Essential Question(s):** ● What role does kitchen equipment and appliances play in the kitchen? ● How can cross contamination be prevented? ● Why is collaboration essential in the kitchen when cooking as a team? ● What role does kitchen equipment and appliances play in the kitchen?
Understanding(s)/goals: ● 21 Century Skills: Use technology to access recipes; create food videos/photography ● Explain the terms etiquette and manners. ● Plan meals .	**Students will be skilled at…..** ● Follow proper hand washing protocol. ● Choose the proper kitchen equipment for multiple cooking tasks.

• Learn safety and sanitation food protocol. • Learn strategies to avoid food cross contamination. • Explain how family mealtime is relevant to building relationships. • Arrange table settings. • Identify basic table manners. • Follow safe food storage procedures. • Avoid cross contamination. • Read and adjust recipes based on dietary needs. • Learn about five food groups and the MyPlate.gov website. • Prepare food labs according to recipe directions.	• Prepare basic food dishes following recipe directions. • Sanitize a kitchen. • Store food according to food safety guidelines. • Set a table according to manner and etiquette guidelines. • Basic cooking techniques terminology • Calculating the cost of kitchen equipment. • Selecting kitchen equipment that will expedite their cooking process and efficiency. • Using appliances in the kitchen safely. • Cleaning and sanitizing a kitchen. • Using laundry appliances. • Basic food preparation and storage. • Demonstrate personal cleanliness in the kitchen. • Using a dishwasher. • Using a microwave and understanding why it cooks faster. • Collaborating with other students in groups of 3-4 students and as a class to perform cooking and cleaning duties. • Choosing recipes based on the food appeal and basic dietary needs of their families or guests.

STAGE 2 – ASSESSMENT EVIDENCE	
Performance Task(s): • Describe the process of planning meals. • Prepare healthy snacks. • Store food according to industry standards. • Clean and sanitize the kitchen lab according to industry standards. • Prepare food labs according to the instructions of each recipe.	**Digital Assessment/Other Evidence:** • Quizlet: Kitchen Equipment (Appendix A) • Quizlet: Measurements and Abbreviations (Appendix B) • Kitchen Equipment Card Game • Collaborative Discussions • Teacher Observation

Learning Activities

Day 0: Orientation
Unit Introduction

- Introduce Goals: Describe guidelines for the Food and Nutrition Unit and the unit learning goals.
- **Pre Assessment**
- Quizlet: Kitchen Measures and Abbreviations. Students will take a short quiz to pre-assess their knowledge of kitchen measurements and abbreviations.

Digital/Assessment, Reflection & Review

- Review kitchen measurements and abbreviations based on digital feedback from the Quizlet.

Homework

- Retake the Quizlet: Kitchen Measurements and Abbreviations.

Digital Assessment, Reflection & Review

- Write a response in Canvas highlighting the questions they improved upon when retaking the Quizlet. Also, indicate if they needed to do further studying on the topic.

Day 1: Kitchen Equipment

- Small Group Discussion: Describe what kitchen equipment you would purchase if you had just moved into a new apartment.
- Describe the kitchen equipment available in the kitchen labs. Discuss how the equipment is utilized for food preparation.

Digital Assessment, Reflection & Review

- Kitchen Equipment Matching Card Game
- Homework: Digital Assessment, Quizlet: Kitchen Equipment

Day 2: Kitchen Equipment Cost

- Warm-up Complete Kitchen Equipment Worksheet Fill- In the Blank
- Review and discuss an Expense Worksheet
- Research using the Internet the average price of the Kitchen Equipment listed on the Kitchen Equipment worksheet.
- Complete the Expense worksheet in Canvas.
- Discuss results of the research.

Digital Assessment, Reflection & Review

- Digital Assessment: Discuss what three things you learned in doing the Expense worksheet. Teacher will give a digital response in Canvas.
- *Homework*: Kitchen Equipment Vocabulary

Day 3: Manners and Etiquette

- Manners and Etiquette Slideshow Presentation

Digital Feedback/Assessment, Reflection & Review

- Discussion: Each family group will discuss 4 major table manners. Each group will illustrate the 4 discussed on the Sketch App. Submit to the teacher for digital comments.
- *Homework*: Choose one of the following tasks: 1) Set the family dining table and submit photos via Canvas; Create a collage of table decor in Canva and submit via email.

Day 4: Practice Safe-Food Handling Techniques

Day 1- Introduction to Kitchen Procedures
Discussion: What responsibilities do you have in your home kitchen?
Rotation Chart - hand out
Review hair tying procedures.
Review hand washing procedures.
Review dishwashing procedures.
Review table/stove cleaning procedures.
Review food storage procedure.
Review dishwashing procedures
Review table/stove cleaning procedures
Digital Assessment, Reflection & Review
Seek and Find Game: Teacher will name certain items and students must locate them in the kitchen.
Homework: Create a 2 minute video on how to wash your hands using iMovie.

Day 5: Practice Safe-Food Handling Techniques

- Day 2 - Introduction to Kitchen Procedures
- Practice a "real lab"
- Practice a basic table place setting
- Demonstrate stove, oven and microwave
- Demonstrate laundry room use
- Demonstrate floor cleaning
- Demonstrate towel replacement and dish detergent storage
- Review end of lab procedures

Digital Assessment, Reflection & Review

- Seek and Find Game: Teacher will name certain items and students must locate them in the kitchen.
- Homework: Research safe food storage procedures on MyPlate.gov. Create a Food Storage protocol chart to hang in their home kitchen for reference.

Day 6: My Plate Dietary Guidelines

- Go to MyPlate.gov and view the following videos: (See Appendix C)
    - Video 1: Start Simple with MyPlate
    - Video 2: What's Your Healthy Eating Style
    - Video 3: Why Kids Should Eat Healthy and Exercise

Digital Assessment, Reflection & Review

- Complete Food Group Quizzes on MyPlate.gov; review group sections after receiving digital feedback on quizzes.

Day 7: How to Read and Choose a Recipe

- Define the term recipe.
- Introduce a recipe roadmap to students that demonstrates how to choose a recipe.
- Discuss what questions you should ask of yourself when choosing a recipe for the family.

Digital Feedback/Assessment, Reflection & Review

- Writing Activity: Think about your favorite recipe. Brainstorm and write all of the ingredients and quantities needed for each ingredient. Search allrecipes.com and locate a recipe that matches your recipe. Compare and contrast what you brainstormed with the recipes. What did you miss? Were you missing ingredients or correct quantities?

Day 8: Practice Family Organization and Leadership Responsibilities

- Rotation Chart complete form during each lab.

Digital Feedback/Assessment, Reflection & Review

- Rotate kitchen positions every lab.

Day 9: Time Management Skills in the Kitchen

- Complete kitchen job rotation.

Digital Feedback/Assessment, Reflection & Review

- Follow the rotation job sheet.
- Complete prep work, cooking, and cleaning before the end of class.
- Kitchen should be neat, organized and clean before dismissal.

Day 10 - 23 Food Prep Labs

- Follow designated recipe instructions.
- Prepare and make one recipe per week in one or two day labs.

Digital Feed/Assessment, Reflection & Review

- Food Lab Evaluation form - complete the form in Canvas.
    - Digital Feedback from instructor via comments and grading.
    - Use cooking technique terms in question responses

Introduction to Kitchen Procedures Guide Sheet

Introduction to Kitchen Procedures

National FCS Standard: 2.1 Demonstrate management of individual and family resources such as food, clothing, shelter, health care, recreation, transportation, time and human capital.

Time Frame: 2 period; 43 minutes

Review Rotation Chart: A chart used to rotate roles and responsibilities in the kitchen lab. (Washer, Dryer, Stove, Table, Dryer) The form is located in Canvas under the Lab Module.

DAY 1 ***PROCEDURE***	***JOB*** ***Use the rotation chart and go to the kitchen and locate the following items:***
Locate *Seek and Find*	Locate their kitchen and explore each of the numbered cabinets and drawers. Locate cooking utensils and cookware in the kitchen
Dishwashing Procedures	Locate items needed to wash dishes
Dishwasher Procedures	Introduce students to how the dishwasher works. . .

Table/Stove Cleaning Procedures	Demonstrate proper cleaning procedures and use of cleaning products.

Practice a table place setting	• Discuss table setting procedures and have students practice table setting. • Refer to the chart on the wall.	
Demo Kitchen Aid Mixer *Demo stove, oven and microwave*	• How to use attachments • How to clean and stow away attachments • How to turn on the burner and assemble correctly; Students each practice • How to turn on oven; students each practice • How to turn on the microwave and discuss what may go in and may not go into the microwave; student practice • Review cleaning all again from Day 1	
Day 2 **Procedure** *Demo laundry room use*	• Demo washer use – detergent storage and washer settings .	
Demo floor cleaning	• Use of dustpan and brush and where to stored • Use of broom and where stored • Cleaning a major spill and safety procedures	
Paper Towel replacement and Dish Detergent Storage	• Demo where store • Demo replacing paper towels	
End of lab procedures	• Hand to teacher one copy of evaluation • Lab inspection	
Table Manners	• Have each "family" discuss four major Table manners and illustrate on iPad- to be worked on at the end of the labs – due_____	

6th Grade
Understanding by Design (UbD) Unit Plan

Unit 2: Hand Sewing

<table>
<tr><th colspan="2">STAGE 1 – DESIRED RESULTS</th></tr>
<tr><td colspan="2">

Unit 2: Hand Sewing

Unit Summary

In this unit, students are introduced to hand sewing techniques and pattern making. Sewing tools will be covered and discussed throughout the course. The principles of design are reviewed and integrated with the use of technology.

- Familiarize students with sewing and clothing repair terms.
- Develop basic sewing skills.

Timeframe: 2 Weeks

10 sessions; 43 minute per session

</td></tr>
<tr><td>Understanding(s)/goals:
21st Century Skills integrate technology to create fabric paper patterns.
Students will know approximately how much they can save doing basic clothing repair themselves versus using clothing repair service.</td><td>Essential Questions:
What are the benefits of knowing how to repair clothing?
How can you use your sewing skills to benefit you financially?
How can you use appliques in other design projects?
How do you handle simple clothing repairs, if you don’t have sewing skills.
How much does it cost to get basic clothing repairs?</td></tr>
<tr><td>Students will know:
Key hand sewing terms
How to create a silhouette</td><td>Students will be able to:
Design fabric patterns/appliques
Hand sew buttons</td></tr>
</table>

● Describe how to create patterns pieces for sewing. ● How to use Sketch App to create pieces ● Hand sew a hem stitch. ● Hand sew a button. ● Hand sew a running stitch. ● How to describe elements of design using fabrics. ● Categorize a variety of fabrics. ● Organize sewing tools and fabrics. ● Solve time management challenges when preparing sewing tools and completing sewing projects. ● Follow sewing instructions. ● How to use a small saw. ● How to use a glue gun. ● How to press using a steam iron on a padded ironing board. ● Identify hand sewing tools. Vocabulary: silhouette, pattern, threading, back stitch, hem stitch, running stitch, sewing needle, hem, measuring tape, seam gauge, straight pins, fabric scissors, applique.	● Measure, create and sew hems. ● Use a hand saw to cut wooden rods ● Use a hot glue gun for crafting ● Participate in class discussions on how to create sewing designs. ● Demonstrate how to use a saw safely. ● Demonstrate how to use a crafting glue gun safely. ● Demonstrate how to use a manual saw to cut a wooden rod. ● Demonstrate how to secure a hanging string to a wooden rod using a crafting glue gun. ● Collaborative design process with 2-3 students. ● Create a “Me Banner” o Materials needed: ▪ Yarn ▪ Wooden rod ▪ Burlap and Felt fabric ▪ Sewing Needle ▪ Thread ▪ Hot glue gun ▪ Glue gun sticks ▪ iPad ▪ Scissors ▪ Small hand saw

STAGE 2 – ASSESSMENT EVIDENCE

Performance Tasks:

- Make patterns.
- Place, pin and cut out pattern and fabric.
- Measure, fold, pin and iron hem on banner.
- Sew hem using the hem stitch.
- Sew on pattern pieces using the running stitch.
- Sew on buttons according to instructional video.
- Make a wall hanging banner
  - Cut 12”x16” burlap fabric
  - Create a design
  - Create paper pattern
  - Cut out paper design
  - Pick felt fabric
  - Pin pattern to felt fabric and cut
  - Pin design pieces to burlap
  - Create 1” hem
  - Sew hem using hem stitch
  - Sew pieces onto fabric using the running stitch
  - Sew on two buttons
  - Cut ¼” wooden rod

Digital Feedback/Assessment/Other Evidence:

- *Homework*: Submit a photo of your project’s hem stitch in Canvas for teacher digital feedback via comments and assessment.
- Create a tutorial video in iMovie demonstrating how to sew on a button, hem stitch or running stitch.
- “Me Banner” Rubric

DIRECTIONS FOR COMPLETING THIS “Me Banner” RUBRIC
Tape name and period number on the back. Give yourself 5 pts.
Give a title to your banner (just like an artist does to a painting). Write it to the right of the word: “Title”. Give yourself 15 pts.

Look at the pocket on your banner. Are the stitches small? Can you see them on the front of the banner? Decide how well you sewed the casing and give yourself up to 20 points.
Do the same for each line of the evaluation.
Total your points. The highest score possible is 100.
Attach your needle to the bottom front of this sheet.
Pin this evaluation sheet to the back of your banner with <u>one</u> pin.

STAGE 3 – LEARNING PLAN

Day 0: Orientation
Unit Introduction

- Introduce Goals: Describe guidelines for the Sewing Unit and the unit learning goals.
- **Pre Assessment**
- Quizlet: Sewing Tools. Students will take a short quiz to pre-assess their knowledge of basic hand sewing tools. (See Appendix D)

Digital Feedback/Assessment, Reflection & Review

- Review hand sewing tools based on digital feedback from the Quizlet.
- Canvas - Have students use a sewing tool checklist created in Canvas to determine what tools they have in their homes. They will submit the completed list in Canvas.
    - Sewing Kit Tools Checklist
        - Buttons and Other Fasteners
        - Fabric Marking Pens
        - Hand-Sewing Needles
        - Measuring Tape
        - A Needle Threader
        - A Pincushion or Magnetic Pin Holder
        - Sewing Scissors or Fabric Shears
        - A Seam Ripper.

Homework

- Retake the Quizlet: Sewing Tools.

Digital Feedback/Assessment, Reflection & Review

- Write a response in Canvas highlighting what areas they improved in upon retaking the Quizlet. Also, indicate if they needed to do further studying on the topic.

Day 1: Sewing Tools

- Small Group Discussion: Describe what sewing tools you might need to repair a hem in your pants.
- Describe the sewing equipment available in your home. Discuss how you have observed the sewing tools used in your home.

Digital Feedback/Assessment, Reflection & Review

- Sewing Tools Jeopardy Game
- *Classwork*: Compose a list of common clothing repairs. Research the cost of repairing clothing on the Internet.
- *Homework*: Find a video on Youtube that demonstrates how to thread a needle. Type the steps and submit in Canvas.

Day 2: Introduce Sewing Project: "Me Banner"

- Teamwork Activity: Discuss your hobbies or sports you are involved in after school.
- Introduce the "Me Banner" Project
- Review the "Me Banner" Rubric
- Show examples of banner projects that did and didn't meet standards on the rubric. Have students indicate what they like and dislike about the projects. Instructors will highlight different attributes of each project that indicate acceptable or unacceptable sewing practices.
- Discuss the fabrics used in the project and where they are located in the classroom.
- Review Sketch App and how it can be used to create a personal design and patterns. Define sewing patterns.
- Discuss how to research silhouettes for making different sewing patterns shapes and sizes..

Digital Feedback/Assessment, Reflection & Review

- Digital Feedback/Assessment: Students will use the Sketch app to create four potential designs that reflect their personality. Each student will submit their drawings for instructor review and digital feedback.
- Peer to peer discussion on what design may be best suited for integrating into the Banner project.
- Homework: Interview a parent to determine if they have any sewing skills. Also, determine how and where sewing tools are organized in your home. If you don't have sewing supplies, create a basic list of items you would need to create a sewing kit for making simple clothing repairs.

Day 3: How to Use A Steam Iron and Create Pattern Pieces form Sketch Drawings

- Demonstrate how to use a Steam Iron
- Demonstrate how to create and cut out pattern pieces for the "Me Banner" Project

Digital Feedback/Assessment, Reflection & Review

- Discussion: Each family group will discuss 4 major table manners. Each group will illustrate the 4 discussed on the Sketch App. Submit to the teacher for digital comments.
- Homework: Choose one of the following tasks: 1) Set the family dining table and submit photos via Canvas; Create a collage of table decor in Canva and submit via email.

Day 4: How to Choose Background Fabric

- Discuss How to Choose Fabric By Color
- Show photos of previous student work in a Banner Project Slideshow.
    - Discuss how background fabric colors enhance the project.

Digital Feedback/Assessment, Reflection & Review

- Students will give their opinion on what they would choose as a background fabric color in group discussion format on Canvas.
-

Day 5: How to Use A Steam Iron and Create Pattern Pieces form Sketch Drawings

- Demonstrate how to use a Steam Iron
- Demonstrate how to create and cut out pattern pieces for the "Me Banner" Project
- Discuss how to safely use and carry scissors in the classroom.
- Demonstrate how to use the scissors to cut fabric without creating jagged edges.

Digital Feedback/Assessment, Reflection & Review

- *Homework*: Print out the banner design and cut out the pattern pieces.

Day 5: Fabric Choice

- Introduce and describe fabric choices for the "Me Banner" project.
- Discuss sewing tools available for the project. (measuring tape, seam gauge, straight pins, fabric scissors)
- Students will choose background burlap fabric.
- Students will choose felt fabric colors and sizes..

Digital Feedback/Assessment, Reflection & Review

- Measure pattern pieces.
- Create a list of sizes and color fabrics needed for banner design.
- Place, pin and cut out pattern and fabric.

Day 6: 'Me Banner" Hem Guidelines

- Review measuring tools (measuring tape, seam gauge)
- Demonstrate how to use tools to measure the hem according to guidelines.

Digital Feedback/Assessment, Reflection & Review

- *Classwork***:** Peer will review your hem measurement before you iron it.

Day 7: How to Use a Sewing Needle

- Demonstrate using Elmo the steps to threading a needle and tie a knot.

Digital Feedback/Assessment, Reflection & Review

- Students will practice creating the knot successfully 15 times.

Days 8- 10: How to Sew on Fabric Appliques

- Define the term applique.
- Demonstrates how to place and pin applique onto burlap fabric.
- Demonstrate how to use a running stitch to sew on fabric applique.

Digital Feedback/Assessment, Reflection & Review

- Students will practice running stitches on a 3x3 fabric square.
- Teacher will approve stitch and move student forward to sew the felt material on the burlap fabric

Day 8: How to Sew on A Button

- View the video tutorial on sewing on a button. (See Appendix E)
- Students will have access to the tutorial in Canvas.

Digital Feedback/Assessment, Reflection & Review

- *Homework*: Create a short video demonstrating how to sew on a button using iMovie.

Day 9: How to Use Saw and Glue Gun

- Review the steps to finishing the banner slideshow with the students.
- Demonstrate how to cut the wooden rod and glue gun to secure the hanging rod for the banner.
- Create a safe area for cutting and using the glue gun.
- Tie the hanging yarn to each end of the wooden rod.
- Hot glue the yarn on each end with the glue gun.

Digital Feedback/Assessment, Reflection & Review

- *Classwork***:** Complete the "Me Banner" Self- reflection rubric. Attach to the complete project with the sewing needle and submit to the instructor.

6th Grade

Understanding by Design (UbD) Unit Plan

Unit 3: Child Development

STAGE 1 – DESIRED RESULTS	
Unit 3: Unit Summary This unit will focus on the developmental milestones and skill sets acquired through each stage of development from infancy to school-age children. Students will learn babysitting skills, and assess age appropriate toys and literature. Timeframe: 3 Weeks 6 sessions; 43 minute per session	
Understanding(s)/goals: ● 21 Century Skills integrate technology to create presentations. ● Students will now be able to describe the main areas of growth in each stage of development.	**Essential Questions:** ● How do you choose the appropriate age appropriate literature for each stage of development? ● What are the responsibilities of a babysitter? ● Explain what types of toys are appropriate for each age and stage of development? ● What are the five areas of child development? ● What are the ages and stages of development? ● What are the attributes of a qualified babysitter? ● What is the difference between caring for a toddler and an infant?
Students will know…... ● How to prepare for a babysitting job. ● Child developmental stages. ● Characteristics of the five age groups. ● Age range of each stage of development.	**Students will be skilled at...** ● Basic babysitting requirements. ● Choosing age appropriate literature. ● Choosing age appropriate toys. ● Peer to peer collaborating on Ages and Stages presentations.

• Safety concerns for each stage of development. *Vocabulary*: large motor skills, small motor skills, eye-hand coordination, developmental milestones, parallel play, consciences, cooperative play, developmental stages	• Collaborative group projects with 2-3 students.

STAGE 2 – ASSESSMENT EVIDENCE	

Performance Tasks:
• Review Ever-Fi Financial
• Vault Understanding Money Online Training Course
• Financial Discussion
• Look a Babysitter DVD (See Appendix F)
• How to Start a Babysitting Service (Howcast.com)
• Create a Babysitting Business Plan
  ○ Read online article "How to be a Teenage Babysitter" by Robin McClure
• Choose age appropriate literature and read-a-loud voice techniques.
  ○ Plan a virtual read-aloud session with the daycare center at the High School.
• Toy Shopping Activity - shop on the internet for age appropriate toys with a budget of $200.
• Read parenting magazines that suggest activities for different age groups.
	Digital Feedback/Assessment/Other Evidence:
	• Ages and Stages Assessment
	• Ages and Stages presentation highlighting the characteristics and safety concerns for a designated age group. Use Canva or Powerpoint.
	• Design a toy for a designated age group. Use Sketch App.
	• Collaborative Discussions
	• Teacher Observation

Day 0: Orientation
Unit Introduction

- Introduce Goals: Describe guidelines for the Child Development unit and the unit learning goals.
- Warm-up: Peer to peer discussion. Discuss and list five characteristics of a newborn.

Digital Feedback/Assessment, Reflection & Review

- Discussion and request feedback from peers.

Homework

- Choose one of the following writing activities:
    - Interview your parent (s) and ask them to describe your characteristics as an infant and toddler.
    - Read an article on infant and toddler development. Write 2-3 sentences describing what you learned.

Day 1: Birth Order

- Define birth order.
- Small Group Discussion: Students discuss what birth order they are in their family. (First Born, Middle Child, Youngest Child, Only Child)
- Birth Order Slideshow
    - Characteristics of each birth level.

Digital Feedback/Assessment, Reflection & Review

- Complete Birth Order Worksheet (Appendix G)
- *Classwork*: Writing Activity: If you could switch your birth order, what would you change it to? Explain why or why not.

Day 2: Introduce Ages and Stages

- Teamwork Activity: Students will work in groups to create a presentation on a designated age group.
    - Each group will be assigned an age group: Newborn, Young Infant, Young Toddler, Older Toddler, School Age
    - Research designated groups and create a presentation which includes photos, age characteristics, safety concerns and accident prevention.
    - The group will present to the class and the students will write notes during the presentation.

Digital Feedback/Assessment, Reflection & Review

- Digital Feedback/Assessment: Students will fill out a presentation critique form after presentation.
- *Homework*: Ask students to imagine they had auditioned for the school play with a friend, but only the friend got a part in the play. Write a response in Word from the perspective of a school-age child. Students will pair up and respond online to the written response.

Day 3: How to Choose an Age Appropriate Toy - Day 1

- Review age appropriate toys for different age groups. Discuss the characteristics and safety features of the toys.

Digital Feedback/Assessment, Reflection & Review

- Complete Toys and Activities Worksheet (Appendix H)
- *Classwork: Collaboration.*Have students shop for toys based on the criteria for a designated age group. Have students work in teams of 2-3 to shop for toys online with an imaginary $200 spending budget. The group will create a poster on Canva. The poster will include a photo of the toys purchased and the retail price of each item. They will present the poster to the class and explain their choice of toys.

Day 4: Designing an Age Appropriate Toy - Day 2

- Review the toy design features from the toy shopping activity.
- Show examples of previous student toy design work in a Slideshow.
    - Discuss how age appropriateness in design and safety features matter.

Digital Feedback/Assessment, Reflection & Review

- *Classwork: Collaboration.*Have students design a toy based on the criteria for a designated age group. Draw a design using the Sketch App. Indicate **Digital Feedback/Assessment, Reflection & ReviewDigital Feedback/Assessment, Reflection & Review**
- Have students work in teams of 2-3 to enhance each other's designs.

Day 5: How to Choose Age Appropriate Literature

- Determine the child's age and reading level.
- Research the books using the online resource Common Sense Media
- Demonstrate using the resource. Pick a book and show how you research it on a smartboard.

Digital Feedback/Assessment, Reflection & Review

- Place a significant amount of multi-level books out for students to review.
- Students should be able to choose 5 books to review for age appropriateness. The students can discuss their book choices and the age level categories they should be placed.

Day 6: Babysitter Skills

- Warm-Up - Ask students if they had experiences with babysitters. How old were you? What did the babysitter do for you?
- View video "Look… a Babysitter" (See Appendix F)
    - Complete video worksheet and review with students.

6th Grade

Understanding by Design (UbD) Unit Plan

Unit 4: Financial and Resource Management

STAGE 1 – DESIRED RESULTS

Unit 4: Introduction to Financial and Resource Management

Unit Summary

In this unit, students are introduced to making basic financial management decisions. Students will learn about financial terminology, Because saving and investing will be covered, students will experience creating a basic budget and business plan.

Established Goals:

- Familiarize students with savings and investment terms.
- Develop basic business skills related to earning money within their age group.
- Develop an understanding of how making sound financial decisions can benefit the family.

Timeframe: 1.5 Weeks

7 sessions; 43 minute per session

Understanding(s)/goals:	**Essential Questions:**
● Knowledge of different careers ● Define wages, earnings and salaries.. ● Prepare a balance sheet for babysitting business	● How does a spending plan help you manage your money? ● How do you make responsible money choices? ● What are smart income and career choices? ● How to make plans with money? ● What are credit and borrowing terms? ● What are insurance and safety terms? ● What should you do to plan for the future?

	• How to save and invest money?
Students will know: • Difference between needs and wants. • Information and steps needed to prepare a budget. • Banking terms • Benefits of health insurance. • Various investment options. • Various savings options. • How to determine when you should or should give out financial information.	Students will be able to: • Prepare a budget plan. • Define banking terms. • Define saving and investment terms. • Determine the benefits of saving versus spending • Define short-term goals. • Define long-term goals. • Explain why taxes are paid to the government. • Difference between paying for products/services with credit versus cash.

STAGE 2 – ASSESSMENT EVIDENCE	
Performance Tasks: Review Ever-Fi Financial Vault Understanding Money Online Training Course Financial Discussion Look a Babysitter DVD How to Start a Babysitting Service (Howcast.com) Create a Babysitting Business Plan Business Plan Rubric	**Other Evidence:** Collaborative Discussions Teacher Observation

STAGE 3 – LEARNING PLAN

Learning Activities

Day 0: Introduction to Course & Expectations

- The teacher will request students bring a charged iPad to class each day.
- **Warm-Up**: Students will discuss what types of businesses they can start based on their age group. Make a list of business skills they are interested in learning to create a plan to earn extra money at home or in their community.
- Teacher will describe to the students the goals of the Ever-Fi Financial Software.
    - Vault - Understanding Money Course
- Teacher will demonstrate how to access the Ever-Fi - Financial Software unit for sixth graders (www.everfi.com)
    - Steps to access the program:
        - Sign-in to Clever.com
            - Input full school email address
            - Input school username
            - Click on the Ever-Fi icon
            - Click on the Vault program for 6th grade
- Students will take the pre-assessment quiz in the Vault program.
    - Introduction - Quiz Me. The quiz will assess the students knowledge on financial terms commonly used in their age group.
- Students will have peer to peer discussion on what they learned from the results of the digital assessment “Quiz Me”.
- Teacher discusses the importance of money management as a pre-teen and how money lessons learned today can help you set up stable financial practices in the future.
- **Digital Classwork**: Using the Canva App make a poster subscribing the following:

- Make a list of the type of job, career or entrepreneurship you would like to pursue.
- Draw a picture of a character that represents yourself.
- Write 2-3 sentences indicating why you are interested in the field
- Write 2-3 sentences indicating what you are good at doing.
- Write 2-3 sentences on what skills they would need to acquire to reach these goals.
- Students will share their Canva posters with the class.
    - Peers will have an opportunity to ask questions about the poster and the choices the presenter made.

Learning Activities

Day 1: Complete Module 1 - Responsibility Money Choices

- Module will review savings and spending.

Digital Feedback/Assessment, Reflection & Review

- Complete the I Want, I Need worksheet. (see nearpod.com) Indicate what products are a want or need.

Homework/ Classwork

- Students will make a list of new needs and wants and create a puzzle with their words on the Puzzle Maker App.
- Teacher will give a digital critique on word choices.

Day 2: Complete Module 2 - Income and Careers

- Students will learn about career options and why taxes are collected.

Digital Feedback/Assessment, Reflection & Review

- Quizlet:Game: Taxes (see quizlet.com)

Homework/ Classwork

- Quizlet: Ever-Fi Insurance and Taxes Quiz (see www.quizlet.com)

Day 3: Complete Module 1 - Making Plans with Money

- Plan a budget.
- Determine the difference between needs and wants.
- Identify various types of payment options.

Digital Feedback/Assessment, Reflection & Review

- Students will complete the lesson on Values, Needs & Wants on the Nearpod App. (See nearpod.com)
    - Students will answer the following questions:
        - In ten years what do you hope to be doing, or have accomplished?
        - List the goods or services that are needed for survival.

Homework/ Classwork:

- Make a drawing on the Sketchbook App depicting where you want to be in 10 years.
- Write a caption under the drawing.
- Teacher will give digital feedback on drawing.

Day 4: Complete Module 4 - Credit and Borrowing

Warm-up: Ask students if they believe it is better to pay with cash/credit/atm.

- Differences between Cash and Credit and ATM Card
- What facts are important to the bank when making a decision to give someone a loan?

Digital Feedback/Assessment, Reflection & Review

- Collaborative: Group researches a designated credit card company.
- Students will research the attributes of the card.
- Make a chart listing the pros and cons of getting a credit card.

Homework/ Classwork

- What is the best way to pay for the following items? Write cash, check , credit card, Venmo, Paypal.
    a. Mobile phone bill $300_____
    b. Faux fur coat $75 _____
    c. Lunch $10_____
    d. Racing Bike $500 -_____
    e. Electric Toothbrush $25_____
    f. Movie Tavern $15_____
    g. Adidas Sneakers $45_____

h. Starbucks Latte $5_____

i. Football Equipment $99.99_____

Day 5: Complete Module 5 - Insurance and Safety

- Why is it important to have health insurance?
- What type of risks can you face as a homeowner?

Digital Feedback/Assessment, Reflection & Review

- Students make an Insurance Bingo Game on the Puzzlemaker App
    - Word Bank:
        - Liability Coverage
        - Life Insurance
        - Long Term Care Insurance
        - Out of Pocket Expense
        - Good Driving Discount
        - AllState, State Farm, Geico
        - ALFA
        - Travel Insurance
        - AFLAC
        - Blue Cross Blue Shield
        - COBRA
        - Term Life Insurance
        - Cash Value Life Insurance

Homework/ Classwork

- Life Insurance Handout
    - Directions; Mark an "X" in front of the person who needs the most needs life insurance.
        - ____ Janet, 16, attends Beaver High School and works at the candy store five hours per week.
        - _____Stacy Hall, age 24, works in the marketing department in a retail store.
        - _____Lisa and Stanley Shark, 34 respectively, have a daughter who is 6 years old.
        - _____Sam, 27, does not have a college degree and works as a cashier at Wallex and has a son who is 3 years old.
        - _____Mike, 40 years old, is a widow with 3 children ages 10, 13, and 7.

Day 6: Complete Module 6 - Savings and Investing

Warm-Up: Ask the students to create a list of basic accounts for saving and investing money in a group of 2-3 students.

- Types of savings methods
- How should making a budget affect spending habits?

Digital Feedback/Assessment, Reflection & Review:

- Collaboration: Students will work in a group to create an Investment and/or savings brochure using the Canva app.
    - Online research of different banks and the financial products they offer.
    - Create a tri-fold brochure with artwork and suggested accounts.

Homework/ Classwork

- Play online game Financial Football (practicalmoneyskills.com)
- Nearpod: Managing Money (see nearpod.com)
    - Students will give responses to real-life financial situations.

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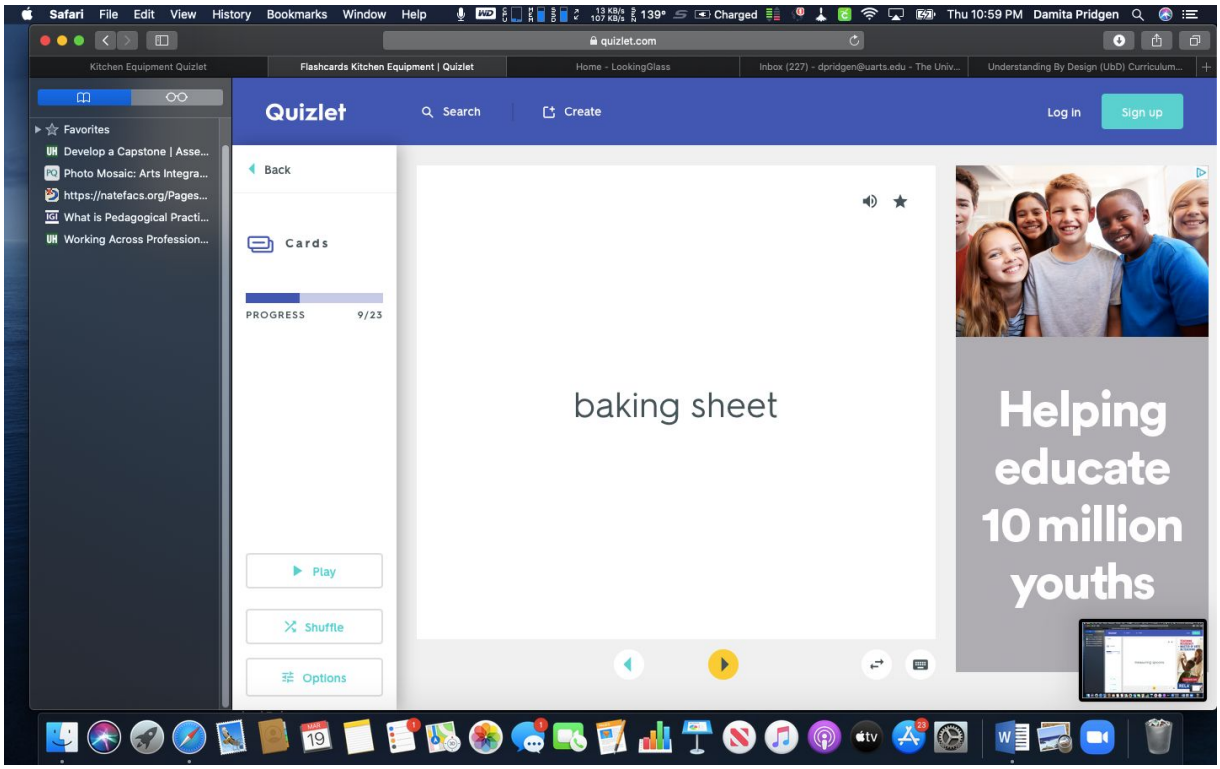
Appendix A

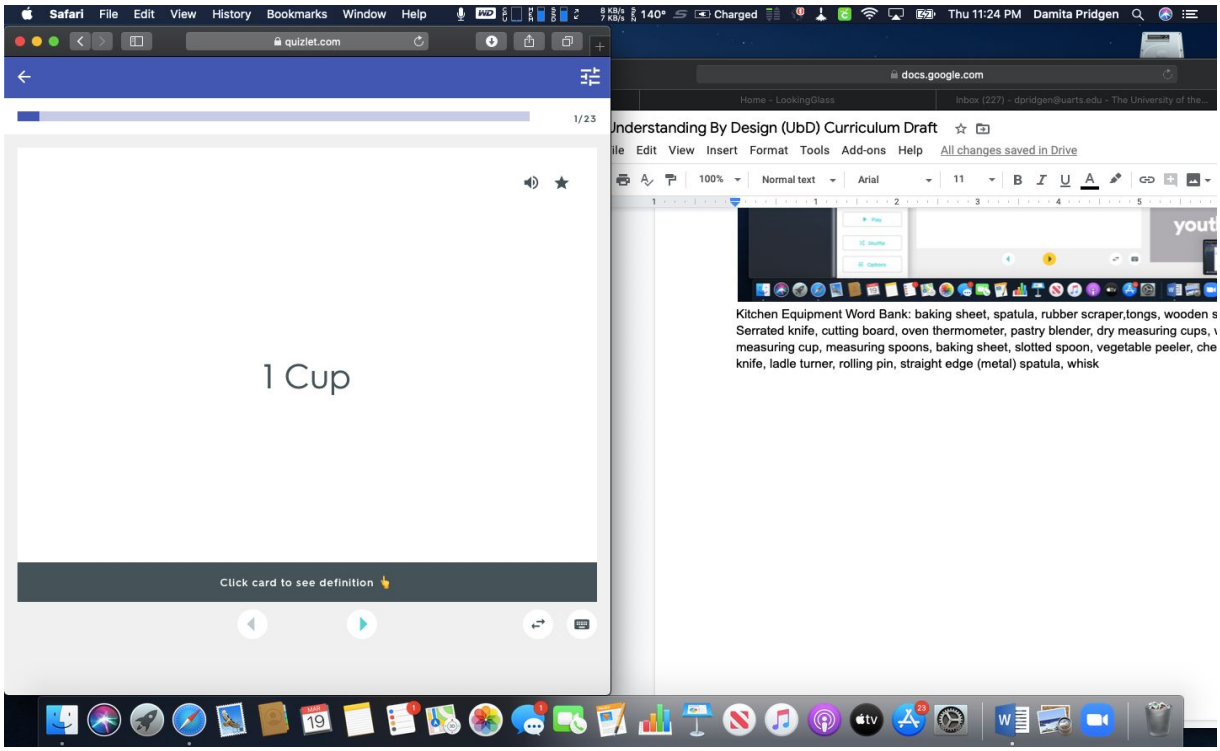
Quizlet: Kitchen Equipment



Kitchen Equipment Word Bank: baking sheet, spatula, rubber scraper,tongs, wooden spoon, Serrated knife, cutting board, oven thermometer, pastry blender, dry measuring cups, wet measuring cup, measuring spoons, baking sheet, slotted spoon, vegetable peeler, chef's knife, ladle turner, rolling pin, straight edge (metal) spatula, whisk

Appendix B

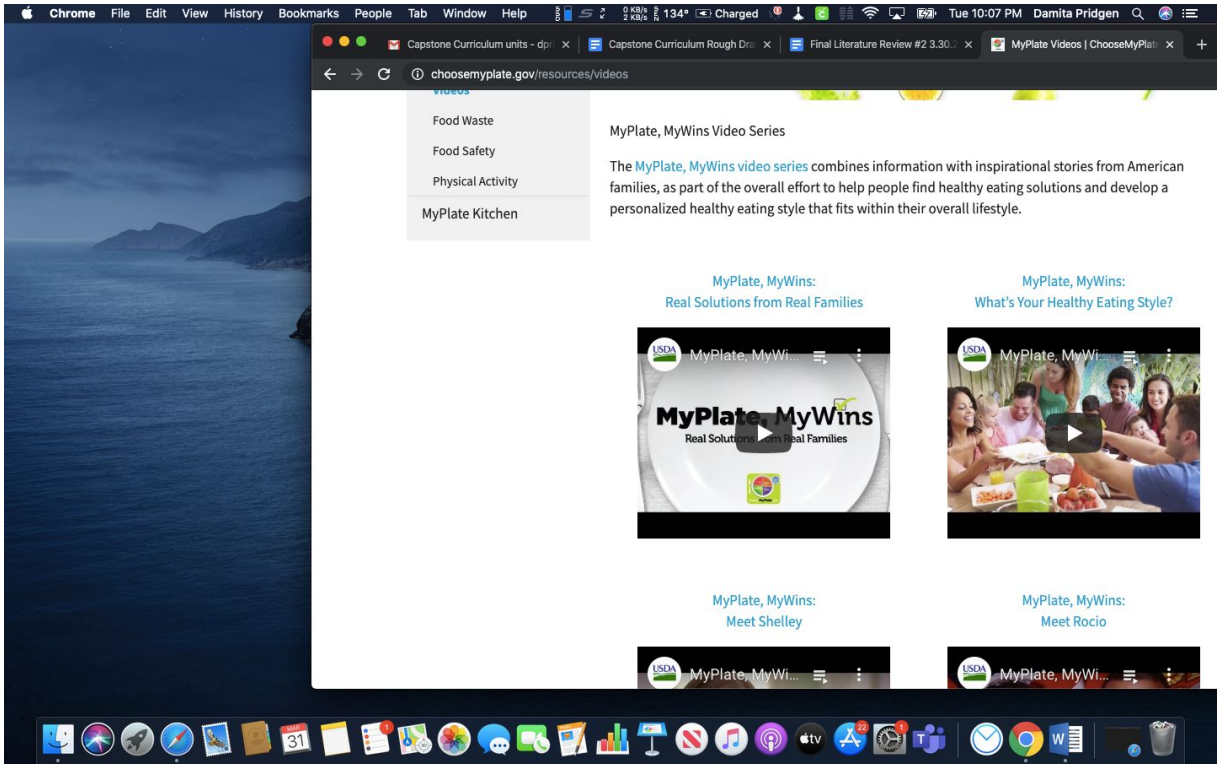
Quizlet Measurements and Abbreviations



Word Bank: 1 cup, 1 C, tablespoon, tbl, TBS, tsp, teaspoon, 16 T, 1 T, cup, ounce, Pound, lb., 1 stick of butter, pinch, dash, 1fluid ounce, ¼ cup

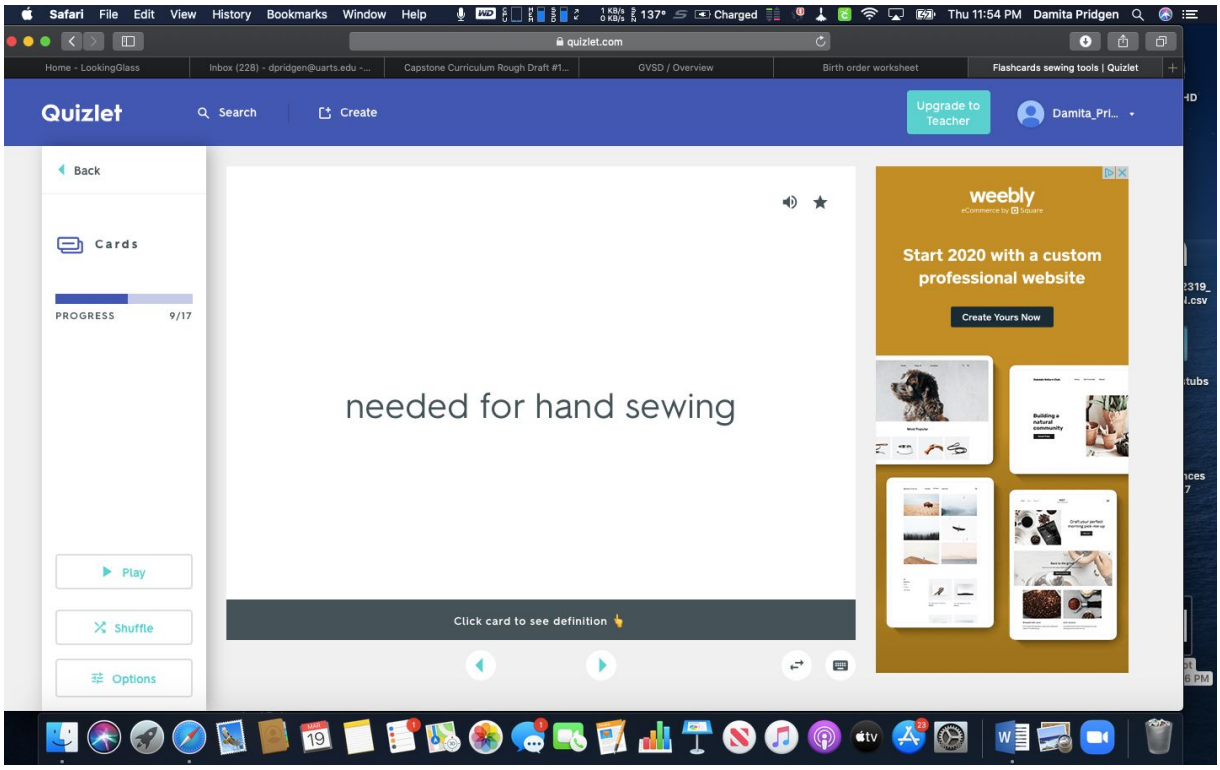
Appendix C

Myplate.gov Videos



Appendix D

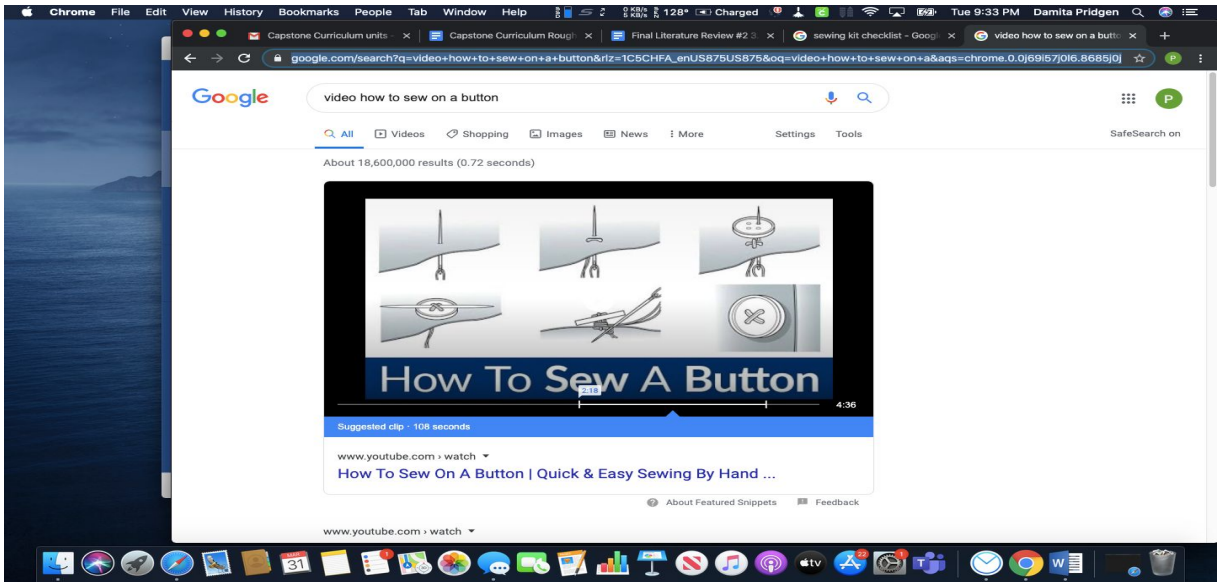
Quizlet: Hand Sewing

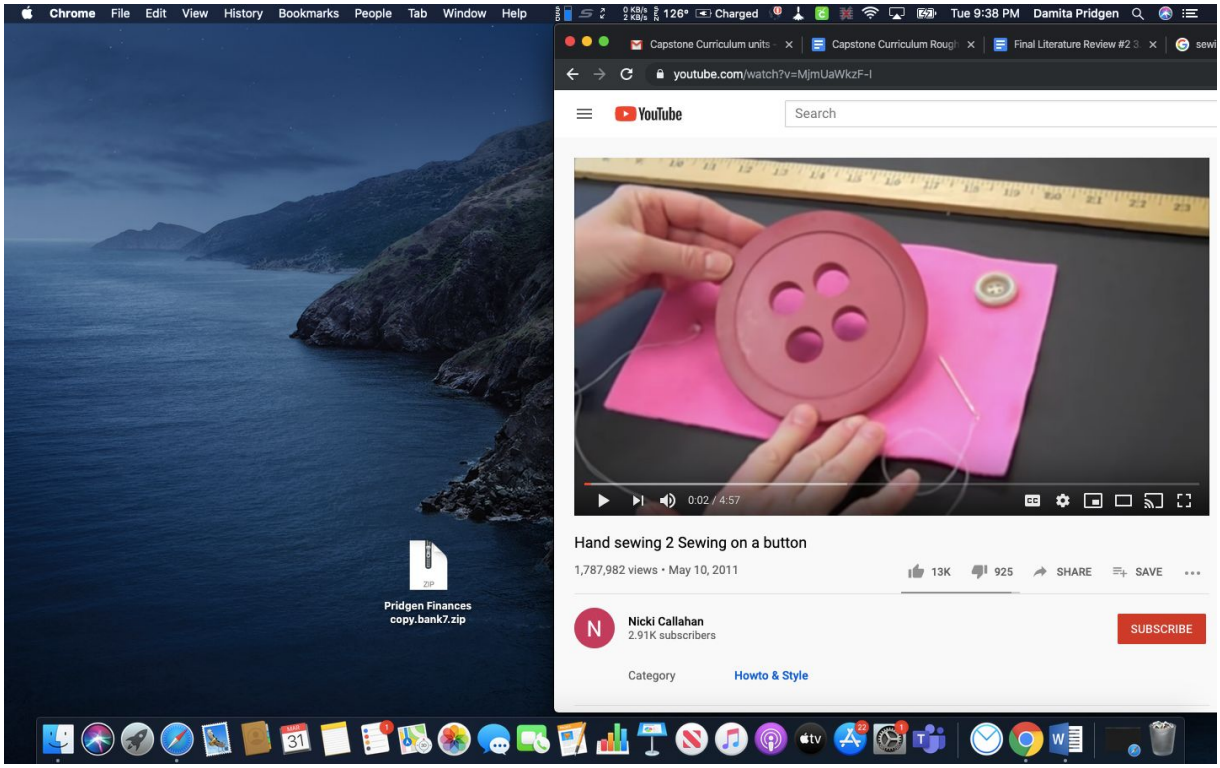


Word Bank: silhouette, pattern, threading, back stitch, hem stitch, running stitch, sewing needle, hem, measuring tape, seam gauge, straight pins, fabric scissors, applique, needed for hand sewing

Appendix E

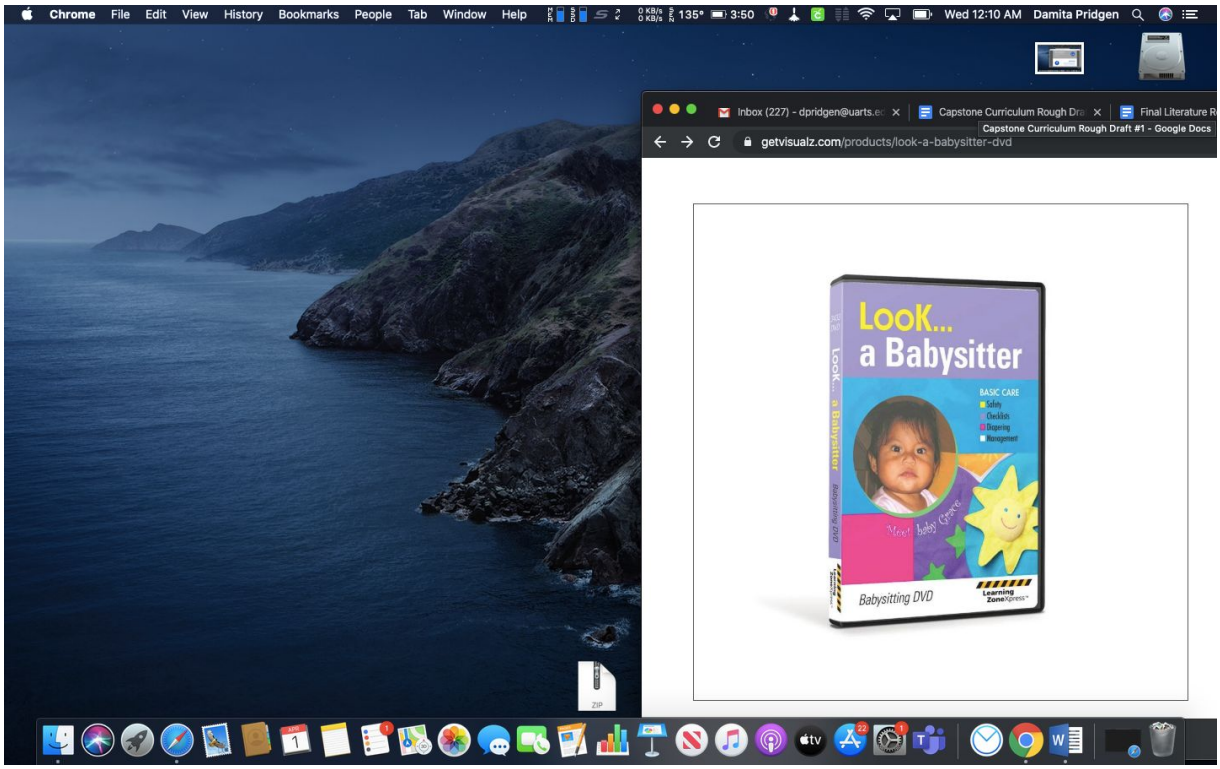
How to Sew on A Button





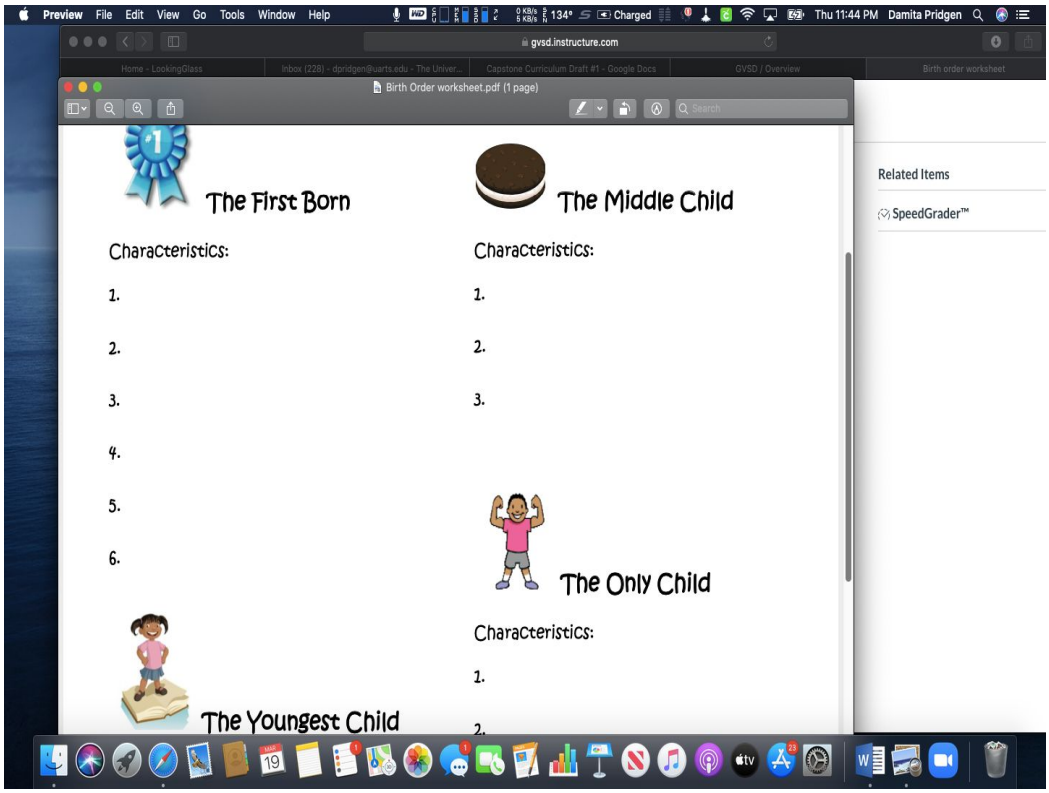
Appendix F

"Look a Babysitter" DVD



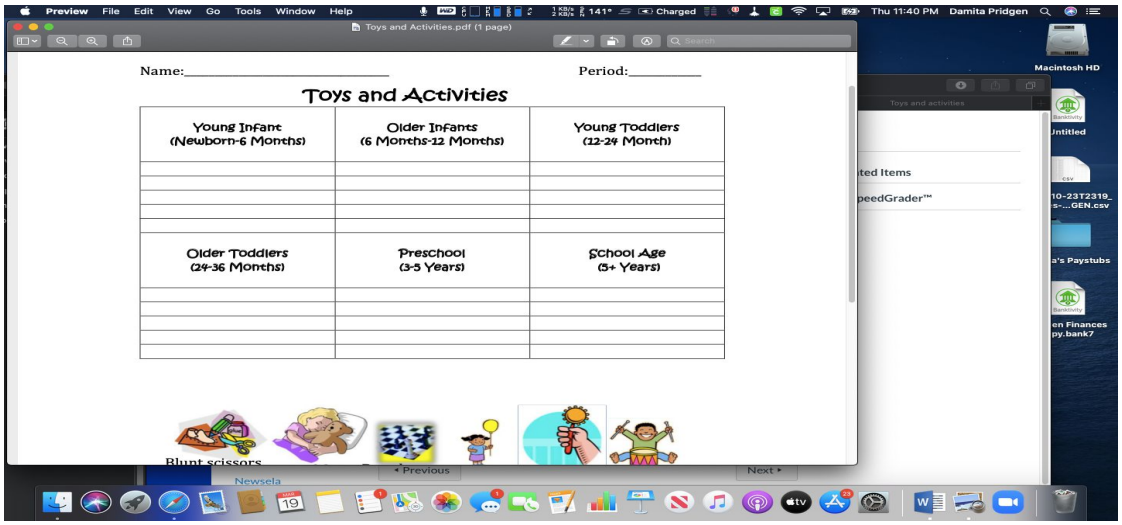
Appendix G

Birth Order Worksheet



Appendix H

Toys and Activity Worksheet



Curriculum Vitae

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- Great Valley School District Teacher, Malvern, PA
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