EDU 320 – Synthesis Paper

Emily Richter

University of Mary

### EDU 320 – Synthesis Paper

This paper explains what I have learned and what content we have covered throughout this semester. It discusses what each module consists of, how it will be used in my classroom, and the artifact I created. Each artifact shows how the content from the modules would be incorporated into the classroom. The different modules have taught me to someday become a well-rounded student.

### **The Effective Teacher**

The first module focused on the effective teacher. In this module, we talked about what goes into being an effective teacher and how teachers can affect the students they teach in the long run. Someday it will be important to look back and remember what I did and did not like doing during class. For example, I did not like when on tests, teachers would have the students change the false questions to make them into true statements. The artifact we created for this module was a reflection about a teacher that we admired and respected. This module and what we learned in this section will be used in my future classroom through talking with my students. I think that it will be important to get feedback about what the students do like, do not like, and what can be changed.

#### **Understanding Your Students**

In module two, we learned strategies to understand our students better. We talked about how each student is different. Thus, each student learns a different way. It will be important to know how the students in my classroom learn best. One method of differentiated instruction I would like to use in my classroom is flexible grouping. I think that if I would group together students who have the same interests or learning styles, the students would be able to take in more information. I would also use choice activities. This will give the students some

2

independence in the classroom. The artifact I created for module two was an art project. In this art project, the students would draw their names in bubble letters and would fill in their bubble letters with their top interests or some of their favorite things. This is an easy and fun art project that would allow me to get to know my students better.

#### Goals, Standards, and Objectives

In module four, we focused on writing goals, looking up standards, and writing objectives to go along with the standards we picked. When writing goals, a teacher needs to think what direction she/he would like to take the class. It will be important to relate the objectives that the teacher wrote back to the standards. In this module, we also learned how to create a lesson plan. We talked about what it is, why we do it, and how to overcome the hardest parts of creating a lesson plan. I will use the information I learned in this module in the classroom when creating lesson plans throughout the year. These lesson plans will help me stay consistent and organized. The artifact I created was a lesson plan about life cycles of plants and animals. This artifact was one of the first lesson plans I created this semester, therefore it was difficult in some parts.

### **Unit and Lesson Planning**

This module focused on lesson planning and interdisciplinary planning. We worked on lesson planning. It is important to work on and perfect the differentiation part, and with each lesson plan we write, we come closer to doing that. I found it very interesting to learn about how a whole team of teachers will work together on a specific project. Interdisciplinary planning is a fun and effective way to engage the students. Someday, I would like to do this with my team of teachers. The students will be engaged and will reach the specific standards needed in each content. The artifact I created for this module is an interdisciplinary unit about planning a vacation to Hawaii. In this unit, the students learned about volcanoes, the symbols of Hawaii, and how to budget for this specific trip.

### **Technology Integration in Instruction**

In module six the lesson focused on how to include technology in our lesson plans and why that is important to do. Technology is an important part of our generation and has the opportunity to help teach children in a different way than directed instruction. Technology has the ability to help students with communication, knowledge-building, process skills, and interpretation skills. However, this all depends on how well the teacher can integrate it into the lesson. I will use technology in the classroom for many different reasons. One reason is to make the students more independent in their learning. The artifact I created for this module was a lesson plan with the integration of technology. In this lesson plan, I will give the students the basic knowledge they will need for the project they are going to create. Then, the students will need to use technology to find the information needed for their project. They will also use technology to create a presentation and present it to the class.

### **Questioning Strategies**

In module seven, we learned about questioning strategies and how to ask the right questions. Questions are very helpful for many reasons. They help teachers check where the students are, they get the interest of the students, they encourage higher thinking processes, and they help structure or restructure learning. Questions can be either convergent, closed answer questions, or divergent, open ended questions. I will use the six questioning levels in my own classroom. These levels will help me form the correct answers to ask the students. The artifact I created for this module was a lesson plan that included questions based on the six levels of cognitive complexity. This lesson plan helped me realize how most of the questions I was asking in my past lesson plans were convergent questions, which did not allow higher levels of thinking.

### **Teaching Strategies for Direct Instruction**

In module eight we learned about direct instruction and indirect instruction. Direct instruction is a specific way to teach that involves a high pace and organization. It starts with explanations and examples, then leads to practice, which leads to feedback. A teacher will teach students in a presentation or rehearsal format. Direct instruction allows the teacher to check to see if the students understand the content. I will use direct instruction when the information is very complex for the students. After learning more about direct instruction, I found that this specific instruction does have a place in the classroom, however not all the time. The artifact I created for this module was a science lesson plan. The students will learn about the structure and properties of matter. I created a presentation and notes to go along with this artifact as well.

#### **Teaching Strategies for Indirect Instruction**

In module eight we learned how to teach students indirectly. Indirect instruction makes the student more independent, because it is mainly student-centered. This type of instruction encourages higher order thinking skills. I will use indirect instruction in my classroom to mix things up. I think it will be important for the students to work with each other and take their learning in their own hands. The artifact I created for this module was a lesson plan. In this lesson plan the students are creating their own businesses and running them for two days. After each day, they will be asked a certain number of questions about supply and demand. This way, the students will be able to understand the demands of running a business because they are actually doing it.

### **Assessing Learners**

In module nine we learned how to assess learners in different ways. One part we focused on was how to write a test. We wrote true false questions, multiple choice, matching, completion, extended-response questions, and restricted-response questions. Each question aimed at a different part of blooms taxonomy. Therefore, it was important to make sure each part of blooms taxonomy is reached. I will use the information I learned in this classroom to make my own tests. This will allow me to make sure that the students fully understand the content. The artifact I created for this module was a test. It had each part of blooms taxonomy reached, and the questions varied from strength.

### Conclusion

I have gained many insights through taking this course. Throughout this semester, I have taken away many important ideas. One of these is, how important it is to plan ahead to do complete lesson plans. Lesson plans help teachers stay ahead of the game and stay organized. Another take away is the different instructions a teacher can do, such as, direct and indirect. I have grown as a pre-service teacher with more respect to the people in the field. I did not realize how much time and effort it will take to plan ahead for each lesson. I also learned this through creating a test. I did not realize making a test would be so difficult, but it was because I wanted to make sure the students knew the material while still understanding the questions. Overall, this course has taught me an abundant amount of information needed to become a teacher someday.

### References

L Borich, Gary D. (2017). *Effective teaching methods: Research based practice*. University of Texas at Austin: Pearson Education, Inc.

### Appendix A

### Module 1 Reflection Paper

Throughout this paper, I will talk about different educators that have had a very big impact on my life. There were two specific educators who have shown me the importance of caring for their students both academically and personally. Quintilian says, "the living voice, as it is called, feeds the mind more nutritiously, and especially the voice of the teacher, whom his pupils if they are but rightly instructed, both love and reverence. How much more readily we imitate those whom we like." These teachers relate to this quote through their love and reverence for their students each and every year.

### Teachers

Throughout my years in elementary, middle, and high school, I have found two very special teachers. The first teacher was Mrs. Axtman or Patty. I had Patty for health careers my senior year of high school for two hours. Throughout this year, she quickly became one of my favorite teachers because of the way she cared for each student individually. She would ask questions pertaining to each student, making every student feel like someone cared. An example of this is when I had a volleyball game and Patty would ask how it. As an education major, I now realize what Patty was doing and why she did those small things. This is something that I want to recreate in my classroom. My goal is to get to know each student personally and be able to ask them those questions. Another positive thing that Patty did in her classroom was switching between group work, lectures, guest speakers, and hands-on work. All of these created a new and exciting learning environment. In my future classroom, I hope to imitate how she kept the learning environment new and fresh. This relates well to the quote from Quintilian, because Patty

feeds the mind of her students with the knowledge they need to know, while also showing them that someone is there and cares for them.

The second teacher that had a big impact on my life is Mrs. Anderson. Throughout the years, I have gotten the chance to observe her in the library as well as a classroom. She is an educator and friend who feeds me with love. She does this for every one of her students. One thing that Mrs. Anderson does well is to look for the bright side or funny side of things. I want to imitate in my classroom because it will help the class feel more comfortable and make it easier to develop a relationship with the students. Over the years, I have gone to Mrs. Anderson for answers as well as advice. She is a teacher that will always be there for me, even though I am not one of her current students. I hope to become a teacher that students feel comfortable coming to me and asking for advice. It is something that someone will never forget. Mrs. Anderson relates well to the quote because I have learned how to develop relationships that will last with students, while also teaching them the knowledge they need to succeed.

### Conclusion

The two teachers I have written about, Patty and Mrs. Anderson, are teachers that I hope to imitate, both educationally and personally. Both teachers create an exciting and safe environment to learn. Patty and Mrs. Anderson have been able to develop relationships with their students that will always continue. These are the two things that I hope to imitate in my classroom. These teachers have solidified why I want to become an excellent educator because they taught me to put the students first.

9

### **Appendix B**

Getting to Know Your Students Better

One way I will be having my students better is by having them complete a project on the first day of school. For this project, the students will grab a sheet of paper and be writing their name in bubble of block letters. Once that is done, I will ask the students to fill in those letters with their favorite foods, colors, movies, television shows, family members, friends, subject, activities, sports, and anything else they would like me to know about themselves. I will show them an example of what I created so they get an idea of what the project should look like. Once all the students are done, I will have them share with their partners or table mates and then if they are comfortable with the class.



Grade: 3	Subject: Science
Materials: notebooks, pencils, markers, soil,	Technology Needed: Video
seeds, and pots	
InstructionalStrategies:PeerDirect instructionteaching/collaboration/Guided practicecooperative learningSocratic SeminarVisuals/GraphicLearning CentersorganizersLecturePBLTechnologyDiscussion/DebateintegrationModelingOther (list)Image: Seminar	Guided Practices and Concrete Application:         Large group activity       Hands-on         Independent activity       Technology integration         Pairing/collaboration       Imitation/Repeat/Mimic         Simulations/Scenarios       Other (list)         Explain:       Explain:
Standard(s)         LIFE CYCLES         3.4.2. Describe the life cycles of plants and animals (e.g., birds, mammals, grasses, trees, insects, flowers)         Objective(s)         After this lesson, the students will describe and illustrate what happens in the plant life cycle. The students will examine and assess their class plant.         Bloom's Taxonomy Cognitive Level:         • Knowledge         • Application         • Analysis	Differentiation         Below Proficiency: For the students who struggle with the material I will make sure to assign them to students who will understand the material fairly well for the class plant. If the students are having a hard time taking notes, I will print out my rock cycle diagram and give them that.         Above Proficiency: For the students who understand the lesson, I will push them to try to understand another life cycle of an animal or something else.         Approaching/Emerging Proficiency: The students are expected to take notes on their own and then participate and help any students who have questions in their assigned groups. They are also expected to answer questions at the end of the lesson.         Modalities/Learning Preferences:         Auditory: The students will listen to the diagram of the plant cycle and the video.         Visual: The student will watch myself take the notes and take them also and will watch a video of the plant cycle.         Kinesthetic: The students will be allowed to move around during the times I ask the students to talk to each other before I move on to the next part of the cycle.         Interpersonal: The students will be placed in their assigned groups once done taking notes.
Classroom Management- (grouping(s), movement/transitions, etc.) The students will independently mimic what I am drawing on the board at their desk. Once done, the students will put away their notebooks and split into their assigned groups of 5. I will tell where each group will go, because I will have the pots all set up in the back of the room. Once done planting their plants, one student from each group will put their plant by the window. The students will clean up and when done they will go sit quietly in their desks.	Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.) The students will be expected to have a notebooks, pencil, and markers for this lesson. They will be expected to work on their own while taking notes and work with their peers while in their group. They are expected to listen to the video and not talk to their neighbors during it. They are also expected to be engaged throughout the lesson, ask questions, and participate.
Minutes	Durandruga
Minutes	Procedures

## Appendix C

15	Set up the 4 different pots, the tables in the back of the classroom. Make sure the window area is	e of a plant with arrows pointing to the next part in the cycle. seeds placed besides, and the right amount of dirt on different cleaned off, so the students will be able to place their pots there.	
20	/generate questions, etc.) Ask the students these question How do plants grow? What are some things that plan Show the students a video exp Explain: (concepts, procedur The animal cycle will go first.	<pre>ats need to grow? laining the processes of the plant cycle. res, vocabulary, etc.) The animal is going to be a duck. I will tell all the students to</pre>	
	grab a notebook, colors, and a pencil. The students will mimic what I am drawing on the board and I will explain each part of the cycle as I go. The first part of the cycle is an egg. The second part when the baby duck hatches from the egg when it's ready. The hatchling will turn into a chick from eating and growing bigger. Finally, the chick will become an adult chicken over time (about 3 months). I will ask the students if there are any questions, if not, I will tell the students to get up and get some water before the next part of this lesson.		
20	Explore: (independent, concreate practice/application with relevant learning task - connections from content to real-life experiences, reflective questions- probing or clarifying questions) The students will split up in their assigned groups of 5 or 4. I will explain what the students will be doing before they begin. The first part is filling the pot with dirt, then digging a hole and putting the seed into the hole. Next, the students will cover the seed with dirt and pour some water onto the seed. Once all the groups are done, one student will carefully carry the plant to their spot by the window. I will explain that they will be examining and describing what happens to the plant over the time it grows.		
5	hands. When all the students are back	<b>ion to next activity):</b> their plants by the window, we will all clean up and wash our in their seats, I will pull up a list of questions on the power er on a sheet of paper and will turn it in at the end of the day.	
Progress clarifying question in strat Once I a the cycle on the boa questions if they are After ever everyone understan explain it. Conside If taking t	egies, etc. am done giving the lesson and drawing rd. The students will be able to ask e confused. ry part of the cycle, I will make sure ds or if I need to go in greater detail to eration for Back-up Plan: he notes do not work, I will have a sheet out where the students can add notes or	Summative Assessment (linked back to objectives)         End of lesson:         Once the lesson is done, I will explain the cycle         once more and show the students that their plants are all in the         first stage right now. I will also ask the students to answer         questions on a sheet of paper.         If applicable- overall unit, chapter, concept,         etc.:         Once the end of the chapter is done, I will have the         students explain to me what happens in the plant cycle and         animal cycle. I will also have them write a short paper about         how their plant grew.	

# Reflection (What went well? What did the students learn? How do you know? What changes would you make?):

My partner gave me some ideas on what she thought could be better. The first one was integrating technology in some way, therefore I put a video in the beginning to engage the students in the topic. The second thing was explaining how the students will transition from one part of the lesson to the next in the classroom management section. Doing this will help organize the classroom and class better. The third thing was in my review, because I did not have any reflective questions or anything to wrap up the lesson with. I added some questions that the students will have to answer on a piece of paper and turn in at the end of the day. I also added the questions part in my summative assessment.

### Appendix D

Brandon Plasch, Emily Richter, Casey McDonald

Grade: 4

Unit Topic: Vacations in Hawaii

Course/ Study: Interdisciplinary

Approximate Time: 1 week.

Main Purpose of the Unit: The purpose of this unit is to have the students become familiar with Hawaii, using Math, Science, and Social Studies.

Standards:

- (4.NBT.4) Fluently add and subtract multi-digit whole numbers to the one millions place using strategies flexibly, including the standard algorithm.
- ESS2.B: Plate Tectonics and Large-Scale System Interactions
  - The locations of mountain ranges, deep ocean trenches, ocean floor structures, earthquakes, and volcanoes occur in patterns. Most earthquakes and volcanoes occur in bands that are often along the boundaries between continents and oceans. Major mountain chains form inside continents or near their edges. Maps can help locate the different land and water features areas of Earth.
- ESS3.B: Natural Hazards
  - A variety of hazards result from natural processes (e.g., earthquakes, tsunamis, volcanic eruptions). Humans cannot eliminate the hazards but can take steps to reduce their impacts.
- 4.2.1 Identify the symbols that represent Hawaii Performance Objectives:
- Making a budget plan to use in Hawaii.
- To calculate how much money, they will have to save, and how quickly they can save that money.
- Students will be able to describe how plate boundaries are involved in creating a volcano and why they erupt.

- Students will work in groups to explain and assess how humans can take steps to reduce the natural disasters impact.
- Students will be able to demonstrate their volcano erupting in their assigned groups.
- Students will be able to classify the state symbols of Hawaii.
- Students will work in groups to create a representation of the state symbols.

### Content Outline:

- Math: Budgeting for the trip:
  - o Hotel
  - o Food
  - Plane Ticket
  - o Vehicle
  - Other expenses
- Social Studies: Symbols that represent Hawaii
  - o Flag
  - Tree (Candlenut)
  - Bird (Nene Goose)
  - Flower (Yellow Hibiscus)
- Science:
- Volcano and Plate Boundaries
  - o Convergent Boundaries, Divergent Boundaries, Transform Boundaries
  - o Shield Volcano, Cinder Cone, Composite Cone, Basaltic Plateaus
  - Show what Volcanoes are in Hawaii
- Volcanoes Eruption
  - Why volcanoes erupt
  - o Different types of eruption: explosive and calmer
  - Model a Volcanic Eruption in their groups
- Taking Steps to Reduce Impact
  - The Destruction

- Not to build towns by the Volcano or on fertile soil
- Create a barrier wall
- Hazard Mapping

### Procedures:

- Worksheet with Expenses written on it.
- Adding/Subtracting numbers with two decimal places.
- Independent Activities
- Group Activities
- Worksheet with the Different Volcanoes
- Independent Research
- Partner work

Instructional Aids and Resources:

- Calculator
- Internet for Research.
  - Poster board
  - o Markers
  - Computers for research
- Model for Volcano
  - o Clay
  - o Markers
  - Baking Soda
  - Vinegar
  - $\circ \quad \text{Food Coloring} \quad$
  - o Paint
  - o Bottle of Pop
- Powerpoint

### Assessment:

- (Math) Once given a timeline, students will turn in their expense reports after being given 3 times to be reviewed by a peer or myself. This will show myself that they have truly learned the standards I wished to address.
- (Social Studies) After students research the symbols, and work together with a partner to make representations, they will present their projects in front the class.
- (Science) After researching and learning about the volcanoes and plate boundaries, the students will create a Volcano in groups. The students will present in class and then have their volcano erupt. The students create a poster with their groups about some steps humans can take to reduce the impact of a volcano erupting. Once they are done, they will present in front of the class. This will show myself that the students have learned the standard about plate boundaries, volcanoes, and steps to reduce the impact of volcanoes.

Grade: 3	Subject: Social Studies
Materials: Pencil, IPad, Paper	Technology Needed: IPad, Video
InstructionalStrategies:PeerDirect instructionteaching/collaboration/Guided practicecooperative learningSocratic SeminarVisuals/GraphicLearning CentersorganizersLecturePBLTechnologyDiscussion/DebateintegrationModelingOther (list)Image Seminary	Guided Practices and Concrete Application:         Large group activity       Hands-on         Independent activity       Technology integration         Pairing/collaboration       Imitation/Repeat/Mimic         Simulations/Scenarios       Other (list)         Explain:       Explain:
Standard(s) 3.2.1 Explain the importance of the accomplishments of scientists and inventors (e.g. light bulb, automobile, discovery of electricity, computer, telephone) Objective(s) After this lesson, the students will identify and describe the importance of the accomplishments of scientists, inventors, and inventions. After this lesson, the students will design a presentation using their photos they took during the day of different inventions they saw and describe how the pictures relate to the earlier created inventions. Bloom's Taxonomy Cognitive Level:     Knowledge     Comprehension     Synthesis	<ul> <li>Differentiation</li> <li>Below Proficiency: For the students who struggle with the material I will make sure to assign them to students who will understand the material fairly well. If the students are having a hard time taking notes, I will enlarge the text and print the notes out completely filled.</li> <li>Above Proficiency: For the students who understand the lesson, I will push them to try to learn more about the scientists and different inventions. These students will also be expected to help other students in their assigned group understand the material better.</li> <li>Approaching/Emerging Proficiency: The students are expected to take notes on their own and participate in the project and activities. They are also expected to take pictures of different inventions they see throughout the school. Students will participate in creating the presentation and giving it as well. They are expected to fill out the worksheet at the end of the day and come back with questions if they have any.</li> <li>Modalities/Learning Preferences:</li> <li>Auditory: The students will watch the video, take pictures using the IPad, and take notes.</li> <li>Kinesthetic: The students will be allowed to move around during the times where I ask students to turn to their neighbors and talk. They also will be walking around the school taking pictures.</li> </ul>
Classroom Management- (grouping(s), movement/transitions, etc.) The students will begin by independently filling out the notes. Once done, I will call each of their assigned groups to go grab an IPad and sit quietly together where I assign them. The students will quietly go around the school to take pictures of objects they find interesting and I will be roaming around as well. I will tell the students to come back	Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.) The students will be expected to bring a pencil for this lesson. They will fill out their notes independently and quietly while I explain the notes to them. They are expected to quietly and respectfully walk around the school while they take pictures. They are expected to work with their peers

## Appendix E

assigned groups. On	ontinue to work on their project in their ce done, one student will put the iPad rs clean up and put the desks back in the	when creating the presentation and finally are expected to be engaged throughout the lesson, ask questions, and participate.	
Minutes		Procedures	
10	Set-up/Prep: I will get my notes ready to teach the students about scientists, inventors, and their inventions and print out the notes for the students. I will make sure that IPad are charged and ready to be used. Make the assigned groups and then assign them to a specific IPad. Pull up the video on the screen and make sure it is ready to play.		
10	/generate questions, etc.) I will have the students sit in a After the game telephone, I wi between them?" (Knowledge, Diagnosin tell me 3 inventions that they have seen	nticipatory Set – access prior learning / stimulate interest circle and play the game telephone for 3 rounds. Il ask, "What is an invention and inventor and the difference g and Checking) "Has anyone seen an invention?" "Can anyone before?" (Getting interest and attention) ack in their seats, I will show them a video about the different	
25	created. The students will be filling the of PowerPoint. After I introduce each inventor partners and discuss how those inventior Once done, I will ask the stude (Recalling specific facts or information)	the and explain the different inventors and their inventions they but the holes in the notes, they will be highlighted in my and their inventions, I will tell the students to turn to their table as helped and influenced the world. ents to paraphrase about on inventor and their invention. (Comprehension) cameras – how they were created, who created it, how they have	
30	connections from content to real-life er questions) I will explain the project to the After explaining the project, I expectations and the project. (Managing) presentation using the pictures you have (Synthesis) Once done, the assigned group assigned IPad. The groups will have 15 minut the inventions that we have talked about The students will come back in will upload their pictures they took and er important part in our daily lives. If the st	to the classroom and continue to work in their groups. They explain in their presentation why they think each invention is an udents are stuck I will ask, "What would be your next step and ng and Redirecting) "Can you use the pictures to describe how	
5	they will save them on their IPad/compu while the other students in the group are Before I give the students their presentation?" (Allowing expression of a I will have the students present their pres	and the students have had time to work on their presentations, ter. The one student who grabbed the IPad will put it away, putting the desks back to where they found them. worksheet I will ask, "How do you all feel about your	

### EDU 320 SYNTHESIS PAPER

Formative Assessment: (linked to objectives)	Summative Assessment (linked back to
Progress monitoring throughout lesson-	objectives)
clarifying questions, check-	End of lesson:
in strategies, etc. Once I am done introducing each inventor and their inventions I will have the students turn to each other and talk about that invention and how it has helped the world. After each inventor, I will ask, "What questions do you still have about this inventor?" The students will also have the opportunity to ask questions if they are confused at the end of the lesson.	Once the lesson is done, I will review the different inventions and inventors. Then I will tell the class that I will not move on and give them their worksheet until 3 questions are ask. I will have the students show me where they are in their presentations and will have them complete a worksheet that is due the next day. After they finish their presentation I will ask, "Can you assess why these inventions were important for our daily lives?" (evaluation) "Why did you choose to take these pictures?" (allow expression)
<b>Consideration for Back-up Plan:</b> If filling the notes out do not work, I will have notes that are already filled in, but the students will have to highlight the important words so they can still recognize what important words are.	If applicable- overall unit, chapter, concept, etc.: Once the end of the chapter is done, I will have the students discuss the different inventions. They will also choose one invention and write a short paper about this invention.
Reflection (What went well? What did the studen make?): I wrote a new lesson plan and did not have time to h	tts learn? How do you know? What changes would you ave my partner give me feedback.

Grade: 3	Subject: Social Studies
Materials: Pencil, IPad, Paper	Technology Needed: IPad, Video
InstructionalStrategies:PeerDirect instructionteaching/collaboration/ cooperative learningGuided practicecooperative learningSocratic SeminarVisuals/GraphicLearning CentersorganizersLecturePBLTechnologyDiscussion/DebateintegrationModelingOther (list)Integration	Guided Practices and Concrete Application:         Large group activity       Hands-on         Independent activity       Technology integration         Pairing/collaboration       Imitation/Repeat/Mimic         Simulations/Scenarios       Other (list)         Explain:       Explain:
<ul> <li>Standard(s)</li> <li>3.2.1 Explain the importance of the accomplishments of scientists and inventors (e.g. light bulb, automobile, discovery of electricity, computer, telephone)</li> <li>Objective(s)</li> <li>After this lesson, the students will identify and describe the importance of the accomplishments of scientists, inventors, and inventions.</li> <li>After this lesson, the students will design a presentation using their photos they took during the day of different inventions they saw and describe how the pictures relate to the earlier created inventions.</li> <li>Bloom's Taxonomy Cognitive Level: <ul> <li>Knowledge</li> <li>Comprehension</li> <li>Synthesis</li> </ul> </li> </ul>	<ul> <li>Differentiation</li> <li>Below Proficiency: For the students who struggle with the material I will make sure to assign them to students who will understand the material fairly well. If the students are having a hard time taking notes, I will enlarge the text and print the notes out completely filled.</li> <li>Above Proficiency: For the students who understand the lesson, I will push them to try to learn more about the scientists and different inventions. These students will also be expected to help other students in their assigned group understand the material better.</li> <li>Approaching/Emerging Proficiency: The students are expected to take notes on their own and participate in the project and activities. They are also expected to take pictures of different inventions they see throughout the school. Students will participate in creating the presentation and giving it as well. They are expected to fill out the worksheet at the end of the day and come back with questions if they have any.</li> <li>Modalities/Learning Preferences:</li> <li>Auditory: The students will watch the video, take pictures using the IPad, and take notes.</li> <li>Kinesthetic: The students will be allowed to move around during the times where I ask students to turn to their neighbors and talk. They also will be walking around the school taking pictures.</li> <li>Interpersonal: The students will be placed in their assigned groups once done taking notes. They also will turn and talk to their neighbor.</li> </ul>
Classroom Management- (grouping(s), movement/transitions, etc.) The students will begin by independently filling out the notes. Once done, I will call each of their assigned groups to go grab an IPad and sit quietly together where I assign them. The students will quietly go around the school to take pictures of objects they find interesting and I will be roaming around as well. I will tell the students to come back	Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.) The students will be expected to bring a pencil for this lesson. They will fill out their notes independently and quietly while I explain the notes to them. They are expected to quietly and respectfully walk around the school while they take pictures. They are expected to work with their peers

### Appendix F

assigned groups. On	ontinue to work on their project in their ce done, one student will put the iPad rs clean up and put the desks back in the	when creating the presentation and finally are expected to be engaged throughout the lesson, ask questions, and participate.	
Minutes	nutes Procedures		
10	Set-up/Prep: I will get my notes ready to teach the students about scientists, inventors, and their inventions and print out the notes for the students. I will make sure that IPad are charged and ready to be used. Make the assigned groups and then assign them to a specific IPad. Pull up the video on the screen and make sure it is ready to play.		
10	/generate questions, etc.) I will have the students sit in a After the game telephone, I wil between them?" (Knowledge, Diagnosing tell me 3 inventions that they have seen b	ticipatory Set – access prior learning / stimulate interest circle and play the game telephone for 3 rounds. Il ask, "What is an invention and inventor and the difference g and Checking) "Has anyone seen an invention?" "Can anyone before?" (Getting interest and attention) ack in their seats, I will show them a video about the different	
25	created. The students will be filling the o PowerPoint. After I introduce each inventor partners and discuss how those invention Once done, I will ask the stude (Recalling specific facts or information)	e and explain the different inventors and their inventions they ut the holes in the notes, they will be highlighted in my and their inventions, I will tell the students to turn to their table is helped and influenced the world. nts to paraphrase about on inventor and their invention. (Comprehension) cameras – how they were created, who created it, how they have	
30	connections from content to real-life ex questions) I will explain the project to the After explaining the project, I we expectations and the project. (Managing) presentation using the pictures you have (Synthesis) Once done, the assigned groups assigned IPad. The groups will have 15 minute the inventions that we have talked about. The students will come back in will upload their pictures they took and e important part in our daily lives. If the stu	to the classroom and continue to work in their groups. They explain in their presentation why they think each invention is an udents are stuck I will ask, "What would be your next step and and Redirecting) "Can you use the pictures to describe how	
5	they will save them on their IPad/comput while the other students in the group are Before I give the students their presentation?" (Allowing expression of a I will have the students present their pres	and the students have had time to work on their presentations, ter. The one student who grabbed the IPad will put it away, putting the desks back to where they found them. worksheet I will ask, "How do you all feel about your	

### EDU 320 SYNTHESIS PAPER

Progress monitoring throughout lesson- clarifying questions, check- in strategies, etc. Once I am done introducing each inventor and their inventions I will have the students turn to each other	objectives) End of lesson: Once the lesson is done, I will review the different inventions and inventors. Then I will tell the class that I will not move on and give them their worksheet until 3 questions
in strategies, etc. Once I am done introducing each inventor and their inventions I will have the students turn to each other	Once the lesson is done, I will review the different inventions and inventors. Then I will tell the class that I will
Once I am done introducing each inventor and their inventions I will have the students turn to each other	inventions and inventors. Then I will tell the class that I will
and talk about that invention and how it has helped the world. After each inventor, I will ask, "What questions do you still have about this inventor?" The students will also have the opportunity to ask questions if they are confused at the end of the lesson.	are ask. I will have the students show me where they are in their presentations and will have them complete a worksheet that is due the next day. After they finish their presentation I will ask, "Can you assess why these inventions were important for our daily lives?" (evaluation) "Why did you choose to take these pictures?" (allow expression)
<b>Consideration for Back-up Plan:</b> If filling the notes out do not work, I will have notes that are already filled in, but the students will have to highlight the important words so they can still recognize what important words are.	If applicable- overall unit, chapter, concept, etc.: Once the end of the chapter is done, I will have the students discuss the different inventions. They will also choose one invention and write a short paper about this invention.

Grade: 2		Subject: Science
Material	s: Pencil, Paper, Highlighters	Technology Needed: PowerPoint, Video
InstructionStrategies:Direct instructionGuided practiceSocratic SeminingLearning CentreLectureTechnology integrationOther (list)	Peer       ion     teaching/collaboration/       e     cooperative learning       nar     Visuals/Graphic	Guided Practices and Concrete Application:         Large group activity       Hands-on         Independent activity       Technology integration         Pairing/collaboration       Imitation/Repeat/Mimic         Simulations/Scenarios       Fxplain:
Different kind can be either temperature. classified by Objective After this define what each pr After this matter is. Bloom's 7	Structure and Properties of Matter ds of matter exist and many of them solid, liquid, or gas, depending on Matter can be described and its observable properties. e(s) lesson, the students can describe and operty of matter is. lesson, the students can define what <b>Taxonomy Cognitive Level:</b> m Management- (grouping(s),	Differentiation         Below Proficiency:         Above Proficiency:         Approaching/Emerging Proficiency:         Modalities/Learning Preferences:         Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)
Minutes	1	Procedures
5	Set-up/Prep: Make sure I have copies of t Review my PowerPoint Set up the beginning video to	he notes o set up a person
10	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.) I will ask the students, "What is everything made out of? What is matter?" I will then show them the video about matter and the properties of matter. After the video, I will ask them to have a conservation with their table mates about matter and what is made out of matter. While they are having a conversation, I will be handing out the notes.	
20		res, vocabulary, etc.) and the students will be filling into the notes. vhat matter is and then go into explaining each property and

## Appendix G

	ask the students to paraphrase each p	r, I will ask the students what some examples are and I will roperty. all the examples we talk about into their notes.	
15	Explore: (independent, concreate practice/application with relevant learning task - connections from content to real-life experiences, reflective questions- probing or clarifying questions)		
	ask what other examples they see arou I will hand out a worksheet a	bout the structure and properties of matter. If some t quicker than the others, they may read, do other	
	Review (wrap up and transition to next activity): After the students have turned in their worksheets, I will ask the students for 3 questions and if some properties can change because of temperature. Once done, I will tell the students to clean their desk off so we can transition into a new activity.		
Formative Assessment: (linked to objectives)       Summative Assessment (linked back to objectives)         Progress monitoring throughout lesson-       objectives)         clarifying questions, check-       End of lesson:         in strategies, etc.       End of lesson:			
Conside	eration for Back-up Plan:	If applicable- overall unit, chapter, concept, etc.:	
Reflection make?):	n (What went well? What did the studen	ts learn? How do you know? What changes would you	
evaluators states th visuals and notes w	nat they had liked my questions, visuals,	essed that I had met the components of the lesson. My video, and the fill in the blank notes. They said that the ut to learn about it in more than once (they would write it	

Grade: 3		Subject: Social Studies
Materials:		Technology Needed:
Instructional		Guided Practices and Concrete Application:
Strategies:         Direct instruction         Guided practice         Socratic Seminar         Learning Centers         Lecture         Technology integration         Other (list)	<ul> <li>Peer teaching/collaboration/ cooperative learning</li> <li>Visuals/Graphic organizers</li> <li>PBL</li> <li>Discussion/Debate</li> <li>Modeling</li> </ul>	<ul> <li>Large group activity</li> <li>Independent activity</li> <li>Technology integration</li> <li>Pairing/collaboration</li> <li>Imitation/Repeat/Mimic</li> <li>Simulations/Scenarios</li> <li>Other (list)</li> <li>Explain:</li> </ul>
Standard(s)		Differentiation
wants 3.3.2 Explain how supply	e (e.g., fundraisers, food means) to meet needs and and demand affect personal ow scarcity forces people to services to obtain, what is	<ul> <li>Below Proficiency: For the students who struggle understanding the material and what supply and demand require I will allow time before and after class for a group to teacher discussion. Therefore, they can ask any questions they have or if they are struggling I can help.</li> <li>Above Proficiency: For the students who understand the material, I will push them to try to gain more money in their business. I will also have those groups help other</li> </ul>
<b>Objective</b> (s)		groups that are struggling.
The students will b	be able to create their own hat will break down how their ers.	<b>Approaching/Emerging Proficiency:</b> The students are expected to understand supply and demand. I expect them to adjust their products and prices to what is selling well and what is not.
	be able to choose what product their money they receive from	Modalities/Learning Preferences: Kinesthetic: The students will be allowed to set up their "business" wherever they would like in the classroom. They will be on their feet for most of the lesson.
<b>Bloom's Taxonon</b> Application and S	ny Cognitive Level:	<b>Interpersonal:</b> The students will have the option to work with another student.
		<b>Intrapersonal:</b> The students will have the option to work alone.
		<b>Visual:</b> The student will be able to watch what products are selling and not selling. They will also be able to see how other businesses are doing.
Classroom Mana movement/transitions, etc.	gement- (grouping(s), )	Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)
would like to work alone or along with their partners wil would like them to be. The s day of business. Some stude can shop. Once done, the stu	I move the desks to how they tudents will then begin the first nts will not be "open" so they dents will gather all their ve the desks back, and sit down	The students will be expected to be prepared for each day of business. They will need to have their products, money, and any other supplies for their day to run ready. They will be expected to move the desks around quietly and swiftly They will be expected to stay on task and write their reflection right away when the business day is done. They are expected to be engaged throughout the lessons, ask questions, and participate.

## Appendix H

connections from content to real-life experiences, reflective questions- probing or clarifying questions)Once the day is done, the students will take inventory on a piece of paper. This will show what sold well, which they will need to replace and the products that didn't sell well. The things the didn't sell may be at too high of a price or they will need to lower the price so the product will sel products that sold well, the students need to think if they should raise the price or keep it the same then will talk in their groups and what went well, what didn't, and what they will need to change the become successful for the next day. Each person will then write their thoughts on the handout in the	person. the		
"business." I will have the fake money printed out, cut out, and in piles ready to hand out to each in the students will be have brought in their products already, which will be gathered in the back of classroom ready for the students to come and pick up.         20       Engage: (opening activity/ anticipatory Set – access prior learning / stimulate inter /generate questions, etc.)         I will ask the students to paraphrase what supply and demand affects everyday life. I will ask for three groups to explain how they are going to meet the needs of their busin: The students will have time to get their business ready. They will be moving the desks, their signs up, and getting their products organized. The students will need to take inventory befor begin the day. Once all students are done, the business day will begin.         25       Explain: (concepts, procedures, vocabulary, etc.)         The students will begin their first day of business. Each group will start with 500S and e person will start 150S. Some students will be walking around, while they business is on "lunch bre they can go and support and buy other things from their classmate's businesses. Each group will their break whenever they choose too. The students will decide on what they spend their money (massage, fruit roll up, root beer float, shoe cleaner). I will be walking around if any group has qu or is confused on what they should be doing.         20       Explore: (independent, concreate practice/application with relevant learning task connections from content to real-life experiences, reflective questions- probing or clarifying questions)         20       Explore: (independent, concreate practice/application with relevant learning task connections from content to real-life experiences, reflective questions - probing or c	person. the		
/generate questions, etc.)         I will ask the students to paraphrase what supply and demand affects everyday life. I will ask for three groups to explain how they are going to meet the needs of their busin The students will have time to get their business ready. They will be moving the desks, stheir signs up, and getting their products organized. The students will need to take inventory befor begin the day. Once all students are done, the business day will begin.         25       Explain: (concepts, procedures, vocabulary, etc.)         The students will begin their first day of business. Each group will start with 500\$ and e person will start 150\$. Some students will be walking around, while they business is on "lunch bre they can go and support and buy other things from their classmate's businesses. Each group will their break whenever they choose too. The students will decide on what they spend their money (massage, fruit roll up, root beer float, shoe cleaner). I will be walking around if any group has qu or is confused on what they should be doing.         20       Explore: (independent, concreate practice/application with relevant learning task connections from content to real-life experiences, reflective questions- probing or clarifying questions)         Once the day is done, the students will take inventory on a piece of paper. This will show what sold well, which they will need to replace and the products that didn't sell well. The things the didn't sell may be at too high of a price or they will need to lower the price or keep it the same then will talk in their groups and what went well, what didn't, and what they will need to change t become successful for the next day. Each person will then write their thoughts on the handout in the	est		
I will ask for three groups to explain how they are going to meet the needs of their busin The students will have time to get their business ready. They will be moving the desks, s their signs up, and getting their products organized. The students will need to take inventory befor begin the day. Once all students are done, the business day will begin.25Explain: (concepts, procedures, vocabulary, etc.) The students will begin their first day of business. Each group will start with 500\$ and e person will start 150\$. Some students will be walking around, while they business is on "lunch bre they can go and support and buy other things from their classmate's businesses. Each group will ta their break whenever they choose too. The students will decide on what they spend their money (massage, fruit roll up, root beer float, shoe cleaner). I will be walking around if any group has qu or is confused on what they should be doing.20Explore: (independent, concreate practice/application with relevant learning task connections from content to real-life experiences, reflective questions- probing or clarifying questions)0Once the day is done, the students will take inventory on a piece of paper. This will show what sold well, which they will need to replace and the products that didn't sell well. The things the didn't sell may be at too high of a price or they will need to lower the price so the product will sell products that sold well, the students need to think if they should raise the price or keep it the same then will talk in their groups and what went well, what didn't, and what they will need to change the become successful for the next day. Each person will then write their thoughts on the handout in the			
<ul> <li>The students will begin their first day of business. Each group will start with 500\$ and e person will start 150\$. Some students will be walking around, while they business is on "lunch brot they can go and support and buy other things from their classmate's businesses. Each group will ta their break whenever they choose too. The students will decide on what they spend their money (massage, fruit roll up, root beer float, shoe cleaner). I will be walking around if any group has quo or is confused on what they should be doing.</li> <li>20 Explore: (independent, concreate practice/application with relevant learning task connections from content to real-life experiences, reflective questions- probing or clarifying questions)</li> <li>Once the day is done, the students will take inventory on a piece of paper. This will show what sold well, which they will need to replace and the products that didn't sell well. The things the didn't sell may be at too high of a price or they will need to lower the price so the product will sell products that sold well, the students need to think if they should raise the price or keep it the same then will talk in their groups and what went well, what didn't, and what they will need to change the become successful for the next day. Each person will then write their thoughts on the handout in the second successful for the next day. Each person will then write their thoughts on the handout in the second successful for the next day. Each person will then write their thoughts on the handout in the second successful for the next day. Each person will then write their thoughts on the handout in the second successful for the next day. Each person will then write their thoughts on the handout in the second successful for the next day. Each person will the successful for the next day.</li> </ul>	setting		
<ul> <li>person will start 150\$. Some students will be walking around, while they business is on "lunch brot they can go and support and buy other things from their classmate's businesses. Each group will ta their break whenever they choose too. The students will decide on what they spend their money (massage, fruit roll up, root beer float, shoe cleaner). I will be walking around if any group has que or is confused on what they should be doing.</li> <li>20 Explore: (independent, concreate practice/application with relevant learning task connections from content to real-life experiences, reflective questions- probing or clarifying questions)</li> <li>Once the day is done, the students will take inventory on a piece of paper. This will show what sold well, which they will need to replace and the products that didn't sell well. The things the didn't sell may be at too high of a price or they will need to lower the price so the product will sell products that sold well, the students need to think if they should raise the price or keep it the same then will talk in their groups and what went well, what didn't, and what they will need to change the become successful for the next day. Each person will then write their thoughts on the handout in the source source source of the write their thoughts on the handout in the source source</li></ul>			
connections from content to real-life experiences, reflective questions- probing or clarifying questions) Once the day is done, the students will take inventory on a piece of paper. This will show what sold well, which they will need to replace and the products that didn't sell well. The things the didn't sell may be at too high of a price or they will need to lower the price so the product will sel products that sold well, the students need to think if they should raise the price or keep it the same then will talk in their groups and what went well, what didn't, and what they will need to change the become successful for the next day. Each person will then write their thoughts on the handout in the students in the same then will talk in the students.	eak" so ake		
what sold well, which they will need to replace and the products that didn't sell well. The things the didn't sell may be at too high of a price or they will need to lower the price so the product will sell products that sold well, the students need to think if they should raise the price or keep it the same then will talk in their groups and what went well, what didn't, and what they will need to change the become successful for the next day. Each person will then write their thoughts on the handout in the same the successful for the next day.			
front of the room and turn that in once they are done.	hat l. The . They o		
15 Review (wrap up and transition to next activity):			
The students will clean up their business, take everything down, and put the desks back where they found them. They will clean up if they had made a mess. Once the students are done and sitting down in their seats, I will ask 3 groups to share he they thought their "business" day went. I will ask the students to turn and talk about what some needs and wants are for each bu I will tell them to talk about what are some thing you may want from another business, but do not it. Once the students are done talking, I will ask them if they can explain how the needs an wants to relate to a real-life business? Can you connect how your business is doing affects your ch of what you want to buy? I will tell the final reflection for the next day so they can think about it. This will be due next day when all the businesses are done. How do you think businesses have grown into chains? What needs to be done to done to this to happen?	ow siness. need d noices the		
this to happen?			
Formative Assessment: (linked to objectives)       Summative Assessment (linked back to objectives)         Progress monitoring throughout lesson-       objectives)         clarifying questions, check-       End of lesson:         in strategies, etc.       Once both days of this lesson is over, I will review the			

I will be walking around during their business day and will be answering any questions and asking each group different questions about their business. The students will have the opportunity to ask questions after the business day is done when they are doing their reflection. I will be looking at the inventory after the day is done to see if the students completed it.

#### **Consideration for Back-up Plan:**

If the students do not have their business ready, they will be able to just shop the whole day. However, they will not have the opportunity to shop the next day. different concepts of wants and needs in a business aspect. I will also review the supply and demand and how it affects personal choices. I will ask the students certain questions that will start a class discussion on each day. On each day, I will ask the students to write a couple of sentences about what went well and what didn't.

### If applicable- overall unit, chapter, concept,

etc.:

Then finally, the students will have to write a reflection about how businesses grow into chains and what needs to be done to allow this to happen.

Reflection (What went well? What did the students learn? How do you know? What changes would you make?):

The person who gave me feedback told me that this is a very good indirect lesson plan. He told me add a final reflection to see how far the students have grown from just starting this the other day.

Grade: 4	Subject: Science
Materials: Technology, Notes, Clay, Paint, Soc Bottle, Markers, Pencils, Cardboard, Baking Soda, Vinegar	la Technology Needed:
Instructional	Guided Practices and Concrete Application:
Strategies:       Peer         Direct instruction       teaching/collaboration/         Guided practice       cooperative learning         Socratic Seminar       Visuals/Graphic         Learning Centers       organizers         Lecture       PBL         Technology       Discussion/Debate         integration       Modeling	<ul> <li>Large group activity</li> <li>Independent activity</li> <li>Technology integration</li> <li>Pairing/collaboration</li> <li>Simulations/Scenarios</li> <li>Other (list)         <ul> <li>Explain:</li> <li>Hands-on</li> </ul> </li> </ul>
Standard(s)	Differentiation
• ESS2.B: Plate Tectonics and Large-Scale System	Below Proficiency:
Interactions	Above Proficiency:
• The locations of mountain ranges, deep	Approaching/Emerging Proficiency:
ocean trenches, ocean floor structures,	
earthquakes, and volcanoes occur in	Modalities/Learning Preferences:
patterns. Most earthquakes and	
volcanoes occur in bands that are often	
along the boundaries between continen	ts
and oceans. Major mountain chains for	m
inside continents or near their edges.	
Maps can help locate the different land	
and water features areas of Earth.	
Objective(s)	
• Students will be able to demonstrate their volcan	)
erupting in their assigned groups.	
• Students will be able to describe how plate	
boundaries are involved in creating a volcano and	
why they erupt.	
Bloom's Taxonomy Cognitive Level:	
Application, Synthesis	
Classroom Management- (grouping(s), movement/transitions, etc.)	Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)
Minutes	Procedures
Set-up/Prep:	

## Appendix I

Engage: (opening activity/ ar /generate questions, etc.)	nticipatory Set – access prior learning / stimulate interest
Explain: (concepts, procedures, vocabulary, etc.)         Explore: (independent, concreate practice/application with relevant learning task - connections from content to real-life experiences, reflective questions- probing or clarifying questions)	
Formative Assessment: (linked to objectives) Progress monitoring throughout lesson- clarifying questions, check- in strategies, etc.	Summative Assessment (linked back to objectives) End of lesson:
The formative assessment will be questions about the groups specific volcano that each person in the group separately will turn in (however they can work together to answer these questions). Consideration for Back-up Plan:	The students will be modeling a real-life volcano. They will be working in groups of two and together I will give them a list of volcanoes that they will be able to pick from. Each group will be doing a different volcano. Once the groups have decided what volcano they will create. They will go into a more in-depth research about the environment and history of the volcano (looking at what
	kind of eruption, how many times has the volcano erupted, the environment around the volcano). These questions will be answered together on a piece of paper, which will become a check point for the students. Once the questions are turned in and the students have an idea where to go next, they will begin to create the volcano. The students will need to keep notes of each step that they did to create
	the volcano. This will be turned in along with the volcano at the end of the project. I will give them a certain number of days to create the volcano in class. It will be important that the students get the environment correct around the volcano (If there is a forest, river, desert, mountains around the volcano it will need to be shown). Once all the students have completed the volcano, they will take turns of erupting and presenting their volcano in class. They will be graded on how they present, the knowledge they know, how they answer questions, the volcano, and the eruption.
Reflection (What went well? What did the students learn? How do you know? What changes would you make?):	