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ECE 312 (0500): Completed Capstone
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Team Members:

Focused Curriculum Plan
ECE 312

Curriculum Topic: Recycling and Reuse

STEP 1: CHOOSE A DEVELOPMENTALLY AND CULTURALLY APPROPRIATE CURRICULUM TOPIC

1. Will this topic allow for **active, constructive learner participation and involvement**? Explain.

This curriculum topic is recycling and reuse. This topic allows for active, constructive learner participation and involvement because through a series of activities, I will guide children to understand what recyclable trash is, why recycling and reuse are important, and how we protect our environment.

2. Will this topic foster **social interaction**? Explain.

This topic fosters social interaction because I will use the main book "Sing A Whale Song" and some of the opening questions to guide students to understand what recycling and reuse are, and discuss why it is important to our environment, and stimulate their interest and creativity in art.

3. Will this topic be **meaningful** to your learners? How does it connect to ***their*** real world? Explain.

This topic is meaningful to your learners because it can support young children to understand what recycling and reuse are, and why it is important to our environment. This theme makes children understand the impact of climate change on our lives and gives them opportunities to discuss how recycling and reuse can protect our environment.

4. Does the topic allow learners to **connect to prior knowledge**? Explain.

The topic allows learners to connect to prior knowledge because I will read a series of books on green life and environmental protection at Circle Time, and use some opening questions to let the children discuss what they know about recycling and reuse. Moreover, I will encourage students to bring their own special views in combination with their own culture, and share their views with others in class in combination with their own understanding of recycling. That can help young children build each other's sense of identity between each other, stimulate their interest and motivation for learning this topic.

5. Will the topic allow learners to **develop problem-solving strategies** and **be creative**? Explain.

This topic allows learners to develop problem-solving strategies and be creative because I will combine books, pictures, music, and videos to guide children to understand environmental issues, which make them feel empathy with students. This allows students to think and share their views on environmental problems and discuss solutions.

6. Will the topic allow learners to **engage in self-regulation** and **be reflective**? Explain.

This topic allows learners to engage in self-regulation and be reflective because I will combine books, pictures, music, and videos to guide children to understand environmental issues, which make them understand why recycling and reuse are important to our environment. This makes students think about what they can do to protect our environment.

7. Will the topic help learners to **build on/change their current understanding**? Explain.

This topic helps learners to build on their current understanding because children have some knowledge of recycling at home. However, children do not have a deep understanding of how to reuse these recyclable garbage, and why it can protect our environment. Therefore, I will design a series of activities based on recycling to help children understand recycling.

8. Does the topic allow learners **to gain deeper knowledge of general principles and explanations** of the world? Explain.

This topic allows learners to gain deeper knowledge of general principles and explanations of the world because I will read a series of books on green life and environmental protection at Circle Time to let children learn about climate change, endangered animals, and climate activists. Deeper level of knowledge can help students understand the importance of the environment to us and how we protect our Earth.

9. Can children use the knowledge gained through this topic in **meaningful real world situations**? Explain.

Even though children are young, they have the ability to think. Children can use the knowledge gained through this topic in meaningful real world situations. Therefore, besides carefully planning the timetable, I have designed a series of artistic activities, so that children have more interest and motivation to learn to recycle and reuse.

10. Does the topic provide opportunities for children to **practice and gain mastery**? Explain.

For children with different learning styles and needs, I will design different activities to make children interested and motivated to learn. Let each child develop their language, social relations and imagination in these activities.

11. Can you present this topic in meaningful ways for diverse children with **developmental and individual differences**? Explain.

I can present this topic in meaningful ways for diverse children with developmental and individual differences because I will encourage students to bring their own special views in combination with their own culture, and share their views with others in class

in combination with their own understanding of recycling. Moreover, I will design different activities to make children interested and motivated to learn. This can support students to establish a sense of identity between each other and trust with teachers, so as to explore and learn to recycle and reuse better.

12. Will this topic be **interesting and motivating to the learners**? Does it allow for **autonomy/choice**? Explain.

This topic is interesting and motivating to the learners because I will design a series of activities on recycling, reuse, and climate change. Let students choose the group activities they want to participate in. Also, I will design indoor collective activities and organize students to explore outdoors. This guide stimulates their curiosity and interest in exploration, and makes children have more interest and motivation to learn to recycle and reuse.

STEP 2: LEARN THE CONTENT:

1. Brainstorm with your colleagues. What information do you (the teachers) already know about this topic? List everything you can think of:

Activities:

1. "What kind of garbage is recyclable?" : During group meeting time, students will use sorting games to identify which rubbish is recyclable and which rubbish is not recyclable.
2. "Sing and dance" : Students will learn simple dance movements for "Sing A Whale Song" and sing together in Circle Time.
3. "Collection" : Ask students to collect recyclable garbage and bring them to school.
4. "What is recycled paper" : Students will learn how to make recycled paper by interesting experiments. I will guide students to make recycled paper by themselves.
5. "What is green life" : Students will learn what a green life is by planting vegetables, and students can use plastic bottles and cans collected by themselves for flower pots for planting vegetables.
6. "Not A Box" : Students will use cardboard, paper boxes, etc. Which they collected to make musical instruments and decorate them.

7. "Water cycle" : We can use the transparent plastic bottles and markers collected by the students to draw the water circulation process, and then use colored water to experiment and observe.
8. "Small windmill": Students use art materials to make a small windmill. I will take the students to the outdoors, and let the students feel the wind and observe the speed of the rotation of the small windmill.
9. "Procession" : We will make posters of protecting the environment and simulate a parade for protecting the earth.
10. "Show and Tell" : Students will share their art works and ideas made with recyclable materials.
11. "Sing A Whale Song" Concert: Students will perform "Sing A Whale Song" to invited parents and teachers.

2. Gather information from various sources of research. List at least 3 resources for each of the following:

A. Children's literature

1. "Sing A Whale Song" by John Forster & Tom Chapin
2. "What a Waste: Trash, Recycling, and Protecting our Planet" by Jess French
3. "What Does It Mean to Be Green?" by Lisa French
4. "The Adventures of a Plastic Bottle" by Alison Inches
5. "The Adventures of an Aluminum Can" by Alison Inches
6. "The Story of Climate Change" by Catherine Barr
7. "Why Should I Recycle?" by Jen Green
8. "Greta Thunberg: Teen Climate Activist" by Rachel Rose

B. Website Information

1. Epic: https://www.getepic.com/
2. Climate change: https://www.youtube.com/watch?v=Sv7OHfpIRfU
3. Recycling for Kids: https://www.youtube.com/watch?v=6jQ7y_qQYUA&t=111s
4. Reduce, Reuse and Recycle, to enjoy a better life: https://www.youtube.com/watch?v=OasbYWF4_S8

5. Sing a whale song: https://www.youtube.com/watch?v=wiUBL3trs9Q

C. Materials/Resources

1. Multicultural Pencils
2. Kaplan Kolors Washable Multicultural Paint
3. SunWorks Color & White Paper
4. Multicultural Broad Markers
5. Count Multicultural Crayons
6. Non-Spill Paint Pots & Brushes Set
7. Kaplan Dough
8. Pom Poms
9. 12" Chenille Stems
10. Feathers
11. Colored Craft Sticks
12. White Card Stock & Glue
13. Safety scissors for children

3. What did you ***learn*** from your research?

Through my research, I have a clearer understanding of the content and goals of the course. The goals are to guide students to understand what recycling and reuse are, why it is important to our environment, and stimulate their interest and creativity in art.

4. What ***misinformation*** did you find in your original ideas?

For children aged 4, they need teachers to inspire and guide their curiosity and interest in exploration. Therefore, as a teacher, you don't have to worry about whether children can do perfect. Teachers need to guide the children's interest in making art works,

understand what recycling and reuse are, and why it is important to our environment. Let students make art works by using recyclable waste, so that they understand the meaning of recycling and reuse, and enhance students' awareness of environmental protection.

STEP 3: IDENTIFY KEY CONCEPTS:

What are the Big Ideas/Overarching Questions to be explored in your topic (one sentence for each idea/question) The Big Ideas should be connected to deep understandings of the general principles and explanations of the world.

1. Through this course, students will understand which rubbish is recyclable and which rubbish is not recyclable.
2. Through this course, students will understand what recycling and reuse are.
3. Through this course, students will learn why recycling and reuse are important to our environment, and how we can do something for our earth.

Identify and list **10** key vocabulary terms connected to this topic:

1. Recyclable
2. Reuse
3. Climate change
4. Green live
5. Endangered Animals
6. Recycle paper
7. Plastic
8. Aluminum Can
9. Climate Activist
10. Procession

Math Activity Plan

Objectives

Recycling and Reuse:

Content Objective: Through this math activity, children can be more interested in understanding mathematics, recycling, and reusing topics.

Language Objective: Through this math activity, children can learn how to measure the height of objects, and give them opportunities to express and show the measurement results, so that children are more interested and motivated to study.

Items that tall or short:

Content Objective: Through this math activity, children can learn how to measure and compare the height of objects.

Language Objective: Through this math activity, children can speak and write down the height of the objects they measure, and compare them.

Community Helpers:

Content Objective: Through this math activity, students have the opportunity to understand the growth of plants and understand green life from a new perspective.

Language Objective: Through this math activity, children can understand what recycling and reusing are, give them opportunities to express their ideas about green life, and encourage children to share their plant growth records. Let students have a deeper understanding of green life, recycling and reuse.

Math Activity Plan

Designed by: LiLiu

Curriculum Topic: Recycling and Reuse

OVERVIEW/FRAMING

TOPIC *Explain how the topic of this activity is developmentally and culturally appropriate for the group of learners for whom you are designing it.*	This math activity could let young children have more interest in participating in recycling and reusing topics. During this math activity, children can plant their favorite plants, and record and measure the height changes of plants every day. This activity also gives students a chance to know about the growth of plants and to understand green life from a new perspective.
BIG IDEAS/OVERARCHING QUESTIONS *What kinds of questions will be explored and/or what new connections and ideas will be engaged through this activity?*	What is necessary for plants? Why are plants so important to our environment? What is Green Life? Why can green life protect our environment?
CONTENT FOCUS: *Identify which content area(s) will be addressed in this activity*	Visual Arts Music Movement/Dance Drama Emergent Literacy Mathematics Science Social Studies
LANGUAGE AND CONTENT OBJECTIVES	During this math activity, not only can children learn about plants and green life through planting, the teacher can also guide children to observe, measure, discuss, and record the height changes of plants through this activity. Let children be more interested and motivated to learn mathematics, and give them the opportunity to express their opinions.

KNOWING THE LEARNERS	
AGE RANGE:	
CURRENT DEVELOPMENT:	For children aged 4, they need teachers to inspire and guide their curiosity and interest in exploration. Therefore, as a teacher, we need to guide the children's

What do you know about the current growth of learners in this age range for the content focus?	interest in doing math, understand the growth of plants, and why it is important to our environment. In addition, teachers can make use of students' knowledge of recyclable waste and encourage them to share their views. This will not only help students develop their social and language skills, but also help students to improve their understanding of environmental protection.
What misunderstandings might children in this age range have about the topic/content and how do you plan to address this?	Even though children are young, they have the ability to think. I will give the students the opportunity to observe, measure, discuss, and record the height changes of plants. Also, I will encourage them to share the growth records of their plants, and help them to supplement and improve some questions about green life. This enables students to have a deeper understanding of green life, recycling and reuse, and understand the importance of protecting the environment.
SOCIO-CULTURAL CONTEXT: *What do you know about this group of children in terms of their cultural backgrounds, learning styles, languages spoken, and learning experiences to date?*[1*]	There are a lot of children from different cultural backgrounds in the classrooms of kindergartens in New York. They have different languages and traditions, and they will bring their special views combined with their own culture into the classroom behaviors and interaction. When designing this series of activities, I hope they can combine their own understanding of recycling and share their views with others in class.

MATERIALS & LEARNING ENVIRONMENT PREPARATION		
MATERIALS	**LEARNING ENVIRONMENT**	**EVENTS/RESOURCES**

[1*] Note: You are designing this activity for the three children observed for your Student Profiles assignment.

What materials will you need to teach this activity? *List **all books and materials**, including any used during the launch/reflection and during set up and cleanup*	*What modifications will you need to make to the classroom to support this activity?* *(e.g., centers, bulletin boards, meeting spaces)*	*What events or resources, including people, might you need to arrange in advance?*
For this math activity we used the following materials: Color pencils Paint brush Color & White Paper Crayons Markers Pom Poms Chenille Stems Feathers Glue Safety scissors for children Glue Kettle Flowerpot Soil Flower seed Tape measure "What Does It Mean to Be Green?" by Lisa French	For the math activity, I will use the library because the library is a relatively independent space, and students will not run around in the library area, which reduces accidents of knocking down flower pots. In addition, I will place each student's name card and record card on the wall of the library, so that the children can better observe, record, and understand the changes in the growth height of each classmate's plant.	This math activity requires the teacher to set the name of each student on the wall of the library in advance, and make some cards for each student to record the growth of plants. In addition, teachers need to organize the library area in advance and arrange the position of flower pots, so that students can observe and record the growth of plants at any moment.

THE LEARNING EXPERIENCE	
The launch *How will you engage the children in this learning experience? How will you introduce the concepts and vocabulary of the topic? How will you describe the procedures of the learning activity? What will you say and do?*	Before this math activity starts, I will ask the students to grow their favorite plants. When the students' plants begin to sprout, I will introduce and discuss the knowledge about "Green life" to the children, so that students can understand what "Green life" is, why it can protect our environment, and how we can do it. After that, I will guide the students to observe and measure the height of their plants in different ways, and record them. For example, I will guide the students to record the height of the plant with sticks or Pom Poms, then measure sticks or Pom Poms with a ruler and record the height of students' plants on the cards.
The activity *List the step-by-step procedures.. What will the children be doing? What will you say or do to facilitate and scaffold their learning? Be specific and detailed in your description.*	First of all, I would let students grow plants of their choice in pots and instruct them to water them. At the circle time, I will read "What Does It Mean to Be Green?" by Lisa French, that can support students to have a better understanding about "Green life." Also, I will give students some questions, which makes students think and discuss why "Green life" is important for our environments, and what we can do for our environments. After, when the plants germinate, I will guide the students to observe, measure, and record the daily height changes of their plants. This can not only make students understand the importance of plants to our environment, but also stimulate children's interest in mathematics and encourage them to study.

Reflection *As the activity wraps up, what opportunities will you offer the children to respond to and reflect on this activity?*	As the activity ends, I will give the children the opportunity to show their plants and their recorded plant height changes. Let the children share their views on "Green life" and discuss what you can do by yourself. Then, I will let each child take a photo with their plants, arrange the photo on the wall of the library, and attach the data they have recorded for easy viewing at any time.
Possible Extensions *What could you do on another day to build on this activity?*	I will add some books about plants and the environment in the library and arrange time for the students to water their plants.
Multimodal Engagement *Identify and explain the ways in which this activity offers opportunities to use at least three different learning modalities (kinesthetic, tactile, linguistic, visual/spatial, auditory, musical)*	Linguistic: This part of the activity asks children to think and talk about what they know about the relationship between plants and the environment, and what we can do to protect our environment. Bodily -kinesthetic /Tactile: This part of the activity requires children to measure the height of their plants. They can use their favorite methods to record the data.
Differentiation *How will you modify this activity for learners with different learning styles*	For children with different learning styles and needs, I will give them the opportunity to share what they know about green life. Then, by observing students' different understandings of green life, guide and help them understand what green life is, why we should do it, and the meaning of protecting the environment. For highly active children, I will encourage

and/or special needs (SLLs, physically active, etc.)?	him/her to lead other children, let them play together, form a partner, and praise their efforts. For second language learners, I will spend more time helping them understand the theme of the event, such as helping them explain words and meanings they don't understand in different languages, and making dual language labels on each game center and toy.

GROWTH AND LEARNING *How will this learning experience support the children's growth and learning in the following domains? Use your knowledge of child development.*	
Cognitive/thinking	This activity will help children understand what recycling means and think about the benefits of green life. Let children know about the importance of recycling and how to protect our environment.
Physical	This activity can help children develop fine motor skills. For example, children water the plants, measure the height, and record the data with paper and pen.
Social/emotional	During the circle time, I will lead the children to share and discuss their understanding of recycling and green life. Let the children have the opportunity to express their ideas and deepen their understanding of recycling and green living on the basis of each other's ideas.
Language/literacy	Children will learn new vocabulary words. List 10-15 target vocabulary words: Recycling, reuse, green life, measurement, record, global warming, climate change, industrial pollution, Plastic, Aluminum Can.
Content Area(s)	This activity allowed children to develop their interest in math, while understanding green life, students also learned how to measure and record the height of objects.

STANDARDS/GOALS *What Pre-K Common Core Learning Standards are addressed in this activity?* *Use the PKFCC to respond.* *Be specific—choose those standards that are **actually targeted** by this learning activity (e.g., can development in regard to the standard be measured by the evidence gathered (authentic assessment) during this learning activity?*	
Domain 1: **Approaches to Learning**	Interacts with a variety of materials and peers through play. Self-selects play activity and demonstrates spontaneity Demonstrates awareness of connections between prior and new knowledge. Engages with peers and adults to solve problems. Seeks additional clarity to further understanding. Demonstrates innovative thinking.
Domain 2: **Physical Development and Health**	Demonstrates appropriate body awareness when moving in different spaces. Demonstrates ability to use fine motor skills (e.g., engages in finger plays, uses materials such as pencils, paint brushes, eating utensils and blunt scissors effectively) Exhibits appropriate body movements when carrying out a task. Maintains balance during sitting, standing, and movement activities.
Domain 3: **Social and Emotional Development**	Expresses feelings, needs, opinions and desires in a way that is appropriate to the situation Interacts with significant adults Interacts with other children (e.g., in play, conversation, etc.) Offers support to another child or shows concern when a peer seems distressed. Identifies likes and dislikes, needs and wants, strengths and challenges.

Domain 4: Communication, Language, and Literacy	Makes choices about how to communicate the ideas he wants to share. Uses facial expressions, body language, gestures, and sign language to express ideas. Uses new and rare words introduced by adults or peers
Domain 5: Cognition and Knowledge of the World	Expresses and engages using movement elements and skills. Engages in self-directed imaginative play with a variety of materials and/or art-making tools. Imagines, invents, and creates art that tells a story about life

AUTHENTIC ASSESSMENT	
What will you do to gather evidence to assess each child's developmental progress? *How will you determine whether or not individual children are getting the Big Ideas and/or exploring the Overarching Questions?* *Evidence may include responses recorded during a group discussion, a visual*	First of all, I will evaluate each child's understanding of the curriculum topic based on the record data of each child's plant height and the ideas they shared on Circle Time. At Circle time, I will read books about recycling and green life, which can make children understand what recycling and green life is, why we should do it, and the benefits of doing it to our environment. Moreover, according to the children's respective learning needs, I will give the children to choose their favorite measurement method, take the measurement and record it. Although the children are still very young, they have the ability to think. Therefore, while the teacher guides the students to observe, measure, and record plants, they must also cultivate the children's awareness of environmental protection. Let students have more interest in this activity, so as to learn the importance of recycling and protecting the environment. Also, in this activity, the teacher guides the children how to correctly measure the height of the item is a challenge. Therefore, teachers should give more patience and guidance to help children overcome this challenge. Let the children know the basic knowledge of mathematics, and develop their skills in the activity.

arts project, a performance, etc. *Your assessment activity MUST be connected to the Big Ideas and Overarching Questions.*	

Social Studies Activity Plan

Objectives

<u>Recycling and Reuse</u>:

Content Objective: Through this social studies activity, children can learn what recycling and reuse are, share what they know about recycling, reuse knowledge, and complement each other.

Language Objective: Through this social learning activity, children have the opportunity to learn how to make posters for parade, learn how to peacefully parade, express and show their views on recycling and reuse, and make children more interested and motivated to learn.

<u>Procession:</u>

Content Objective: Through this social studies activity, I will introduce to the children Teen Climate Activist-Greta Thunberg, which let students understand what they can do to protect the environment.

Language Objective: Through this social studies activity, children can learn some slogans about environmental protection and make posters about environmental protection parades.

Community Helpers:

Content Objective: Through this social studies activity, students have the opportunity to understand what climate change is, the harm it brings to us, and what students can do to support the protection of our Earth.

Language Objective: Through this social studies activity, children can learn about recycling and reuse, and give them the opportunity to express their thoughts on climate change, make posters to protect the environment, and simulate a parade to protect the earth.

Social Studies Activity Plan

Designed by: LiLiu

Curriculum Topic: Recycling and Reuse

OVERVIEW/FRAMING	
TOPIC *Explain how the topic of this activity is developmentally and culturally appropriate for the group of learners for whom you are designing it.*	This social studies activity could let young children have more interest in participating in recycling and reusing topics. During this social studies activity, children can learn and understand about climate change and make posters.
BIG IDEAS/OVERARCHING QUESTIONS *What kinds of questions will be explored and/or what new connections and ideas will be engaged through this activity?*	What is climate change? Why does climate change affect us? What should we do?
CONTENT FOCUS: *Identify which content area(s) will be addressed in this activity*	Visual Arts Music Movement/Dance Drama Emergent Literacy Mathematics Science Social Studies
LANGUAGE AND CONTENT OBJECTIVES	During this social studies activity, the teacher will guide the children to read books about Teen Climate Activist-Greta Thunberg, so that students can understand and discuss what climate change is, why climate change affects our environment, and

	what we can do to protect the Earth. In addition, I will instruct students how to make posters, and I will simulate climate change parades with children, which will make children more interested and motivated to participate.

KNOWING THE LEARNERS	
AGE RANGE:	
CURRENT DEVELOPMENT: *What do you know about the current growth of learners in this age range for the content focus?*	For 4-year-old children, they need teachers to stimulate and guide their curiosity and interest. Therefore, as teachers, we need to guide children to stimulate their interest and understand what climate change is and why it will affect our environment. This will not only help students develop their social and language skills, but also help students to improve their understanding of environmental protection.
What misunderstandings might children in this age range have about the topic/content and how do you plan to address this?	Even though children are young, they have the ability to think. I will give the students the opportunity to share their own views on climate change and help them record it. In addition, I will encourage my students to bravely shout out the slogan of the Climate Change Parade, and help them to supplement and improve the issues of recycling and climate change, so that the children can have a deeper understanding of protecting the environment.
SOCIO-CULTURAL CONTEXT: *What do you know about this group of children in terms of their cultural backgrounds, learning styles, languages spoken, and learning experiences to date?*[2*]	There are a lot of children from different cultural backgrounds in the classrooms of kindergartens in New York. They have different languages and traditions, and they will bring their special views combined with their own culture into the classroom behaviors

[2*] Note: You are designing this activity for the three children observed for your Student Profiles assignment.

	and interaction. When designing this social studies activity, I hope they can combine their own understanding of recycling and share their views with others in class.

MATERIALS & LEARNING ENVIRONMENT PREPARATION		
MATERIALS *What materials will you need to teach this activity?* *List **all books and materials**, including any used during the launch/reflection and during set up and cleanup*	**LEARNING ENVIRONMENT** *What modifications will you need to make to the classroom to support this activity? (e.g., centers, bulletin boards, meeting spaces)*	**EVENTS/RESOURCES** *What events or resources, including people, might you need to arrange in advance?*
For this social studies activity we used the following materials: Color pencils Paint brush Color & White Paper Crayons Markers Pom Poms Chenille Stems Feathers Glue Safety scissors for children Glue "Greta Thunberg: Teen Climate Activist" by Rachel Rose	For the social studies activity, I will use the Art Center. Because the Art Center has suitable materials for production. In the library, I will add a series of books about climate activists to the children. In addition, I will prepare some big paper to record Children's views on climate change on Circle Time, and reserve places for posting on the classroom walls.	This social studies activity requires the teacher to prepare the materials needed to make the parade poster in the Art Center. In addition, the teacher needs to communicate with the school in advance about the external venue of the parade, and work with the teacher's assistant to look after the students participating in the parade, and allow them to march in a peaceful and orderly manner.

THE LEARNING EXPERIENCE

The launch *How will you engage the children in this learning experience? How will you introduce the concepts and vocabulary of the topic? How will you describe the procedures of the learning activity? What will you say and do?*	Before this social studies activity starts, I will read "Greta Thunberg: Teen Climate Activist" by Rachel Rose to students at Circle Time, introduce change and climate change, use some questions to make children think, and encourage them to share their opinions about the perception of climate change. Let students understand why climate change will affect our lives and what we should do to protect our Earth. After that, I will guide students to make posters about the climate change parade, so that the children can participate in the simulated parade with interest and motivation.
The activity *List the step-by-step procedures.. What will the children be doing? What will you say or do to facilitate and scaffold their learning? Be specific and detailed in your description.*	First of all, I will read the book "Greta Thunberg: Teen Climate Activist" by Rachel Rose to students at Circle Time, introduce change and climate change, use some questions to make children think, and encourage them to share their opinions about the perception of climate change. And, I will use a big paper to help every student record their thoughts and let students understand why climate change will affect our lives and what we should do to protect our Earth. Then, I will tell the children We will hold a simulated climate change parade, and guide students to make posters about the climate change parade, so that the children can participate in the simulated parade with interest and motivation.
Reflection *As the activity wraps up, what opportunities will you offer the children to respond to and reflect on this activity?*	As the activity ends, I will ask each child to hold a poster made by himself and take a photo with the big paper that writes their views on climate change. In addition, I will stick these photos around the big paper, so that children can see photos of their participation in the parade and their views on climate change.
Possible Extensions *What could you do on another day to build on this activity?*	I will add some books about climate activists, so that children can learn who the climate activist is, and the Teen Climate Activist-Greta Thunberg story.

Multimodal Engagement *Identify and explain the ways in which this activity offers opportunities to use at least three different learning modalities (kinesthetic, tactile, linguistic, visual/spatial, auditory, musical)*	Linguistic: This part of the activity asks children to think and talk about the impact of climate change on our lives, and share what they think is the solution to climate change. Bodily -kinesthetic /Tactile: This part of the activity requires children to conduct a parade to simulate climate change and encourage students to truly understand how recycling can help protect our environment.
Differentiation *How will you modify this activity for learners with different learning styles and/or special needs (SLLs, physically active, etc.)?*	For children with different learning styles and needs, I will give them the opportunity to share what they think about climate change. Then, by observing students' different understandings of climate change, guide and help them understand what climate change is, why climate change will affect our life, and the meaning of protecting the environment. For highly active children, I will encourage him/her to lead other children, let them play together, form a partner, and praise their efforts. For second language learners, I will spend more time helping them understand the theme of the event, such as helping them explain words and meanings they don't understand in different languages, and making dual language labels on each game center and toy.

GROWTH AND LEARNING *How will this learning experience support the children's growth and learning in the following domains? Use your knowledge of child development.*	
Cognitive/thinking	This activity will help children understand what recycling means, and think about what we can do in the face of climate change issues.

Physical	This activity can help children develop fine and gross motor skills. For example, children who make parade posters can develop their fine skills, and simulated climate change parade activities can develop children's gross motor skills.
Social/emotional	During the circle time, I will read "Greta Thunberg: Teen Climate Activist" by Rachel Rose to students and introduce the work of Climate Activist and let students know about Climate Activist and their efforts to climate change. Moreover, I will lead the children to share and discuss their understanding of recycling and climate change. Let the children have the opportunity to express their ideas and deepen their understanding of recycling and climate change issues on the basis of each other's ideas.
Language/literacy	Children will learn new vocabulary words. List 10-15 target vocabulary words: Recycling, reuse, green life, measurement, record, global warming, climate change, industrial pollution, Plastic, Aluminum Can.
Content Area(s)	This activity allowed children to develop their language and expressive ability. Let the children be interested and motivated in participating in the climate change parade, and think and discuss what they can do to protect the earth.

STANDARDS/GOALS *What Pre-K Common Core Learning Standards are addressed in this activity?* *Use the PKFCC to respond.* *Be specific—choose those standards that are **actually targeted** by this learning activity (e.g., can development in regard to the standard be measured by the evidence gathered (authentic assessment) during this learning activity?*	
Domain 1: **Approaches to Learning**	Interacts with a variety of materials and peers through play. Engages in pretend and imaginative play – testing theories, acting out imagination. Self-selects play activity and demonstrates spontaneity

	Demonstrates awareness of connections between prior and new knowledge. Engages with peers and adults to solve problems. Seeks additional clarity to further understanding. Demonstrates innovative thinking
Domain 2: **Physical Development and Health**	Demonstrates appropriate body awareness when moving in different spaces. Demonstrates ability to use fine motor skills (e.g., engages in finger plays, uses materials such as pencils, paint brushes, eating utensils and blunt scissors effectively) Exhibits appropriate body movements when carrying out a task Maintains balance during sitting, standing, and movement activities.
Domain 3: **Social and Emotional Development**	Expresses feelings, needs, opinions and desires in a way that is appropriate to the situation Interacts with significant adults Interacts with other children (e.g., in play, conversation, etc.) Offers support to another child or shows concern when a peer seems distressed. Identifies likes and dislikes, needs and wants, strengths and challenges.
Domain 4: Communication, Language, and Literacy	Makes choices about how to communicate the ideas he wants to share. Uses facial expressions, body language, gestures, and sign language to express ideas. Uses new and rare words introduced by adults or peers
Domain 5: **Cognition and Knowledge of the World**	Expresses and engages using movement elements and skills. Demonstrates observed or performed movements originating from diverse genres. Visual Arts Engages in self-directed imaginative play with a variety of materials and/or art-making tools. Shares and talks about personal artwork. Selects a preferred artwork

	Imagines, invents, and creates art that tells a story about life Recognizes that people make works of art and design

AUTHENTIC ASSESSMENT	
What will you do to gather evidence to assess each child's developmental progress? *How will you determine whether or not individual children are getting the Big Ideas and/or exploring the Overarching Questions?* *Evidence may include responses recorded during a group discussion, a visual arts project, a performance, etc.* *Your assessment activity MUST be connected to the Big Ideas and Overarching Questions.*	First of all, I will evaluate each child's understanding of the subject of the course based on each child's ideas about climate change shared on Circle Time. At Circle time, I will read books about recycling, climate change, and climate activists, which can make children understand what recycling and climate change are, who are climate activists, what is their job, why we should do recycling, and what we can do to protect the earth. Moreover, according to the children's respective learning needs, I will give the children to choose their favorite art materials to make posters about the climate change parade. Children are very young, but they have the ability to think. Therefore, while the teacher guides the students to understand climate change, they also need to inspire empathy, so that children can empathize and understand the impact of climate change. This can also make students understand the importance of recycling and protecting the environment. Also, in this activity, the teacher leads the children to simulate a climate change parade that will be a challenge. Therefore, in addition to arranging the timetable, the teacher should also actively communicate with the person in charge of the school to allow the children to participate in this activity under the premise of ensuring safety.

Science Activity Plan

Objectives

<u>Recycling and Reuse</u>:

Content Objective: Through this science activity, children can learn how to make recycled paper, what recycling and reuse are, share their thoughts on making recycled paper, and complement each other.

Language Objective: Through this science activity, children have the opportunity to know what recycled paper is, how to make recycled paper, and express and show their views on recycling, so that children are more interested and motivated to learn.

Recycled paper:

Content Objective: Through this science activity, I will introduce the knowledge of recycling and reuse, so that children understand what recycling is and why we need to recycle.

Language Objective: Through this science activity, I will guide students to make recycled paper by themselves, and children can learn how to make recycled paper by interesting science experiments. Then, I will give them time to write and draw on the recycled paper I made, and share their thoughts on making recycled paper.

Community Helpers:

Content Objective: Through this science activity, students have the opportunity to understand the importance of recycling to our environment, and how the recycled items are used again. Let children make recycled paper through scientific experiments, let them know how we reuse recycled materials, and let children have a deeper understanding of recycling.

Language Objective: Through this scientific activity, children can learn about recycling and reuse, and give them the opportunity to express their thoughts on recycling and reuse.

Science Activity Plan

Designed by: LiLiu

Curriculum Topic: Recycling and Reuse

OVERVIEW/FRAMING

TOPIC *Explain how the topic of this activity is developmentally and culturally appropriate for the group of learners for whom you are designing it.*	During this scientific activity, children can learn how to turn waste paper into usable recycled paper. This makes children more interested and motivated to learn about recycling and reuse, and to understand why recycling is important to our earth.
BIG IDEAS/OVERARCHING QUESTIONS *What kinds of questions will be explored and/or what new connections and ideas will be engaged through this activity?*	What is recycling and reuse? Why is recycling important to our environment? How to reuse the recovered items? What should we do?
CONTENT FOCUS: *Identify which content area(s) will be addressed in this activity*	Visual Arts Music Movement/Dance Drama Emergent Literacy Mathematics Science Social Studies
LANGUAGE AND CONTENT OBJECTIVES	During this scientific activity, I will guide the children to read books about recycling and reuse, so that students can understand and discuss what recycling and reuse is, why recycling is important to our environment, and how to reuse the recovered items. In addition, I will instruct students how to make recycled paper and share their own ideas of making recycled paper, which will make children more interested and motivated to participate.

KNOWING THE LEARNERS	
AGE RANGE:	
CURRENT DEVELOPMENT: *What do you know about the current growth of learners in this age range for the content focus?*	For 4-year-old children, they need teachers to stimulate and guide their curiosity and interest. Therefore, as teachers, we need to guide children to stimulate their interest and understand what recycling and reuse is, why recycling is important to our environment,

	and how to reuse the recovered items. This will not only help students develop their social and language skills, but also help students to improve their understanding of environmental protection.
What misunderstandings might children in this age range have about the topic/content and how do you plan to address this?	I will give students the opportunity to share their views on recycling and reuse and help them record it. In addition, I will guide students to participate in the experiment of making recycled paper, and encourage students to share their views on recycling bravely, so as to help them have a deeper understanding of environmental protection.
SOCIO-CULTURAL CONTEXT: *What do you know about this group of children in terms of their cultural backgrounds, learning styles, languages spoken, and learning experiences to date?*[3*]	There are a lot of children from different cultural backgrounds in the classrooms of kindergartens in New York. They have different languages and traditions, and they will bring their special views combined with their own culture into the classroom behaviors and interaction. When designing this scientific activity, I hope they can combine their own understanding of recycling and share their views with others in class.

MATERIALS & LEARNING ENVIRONMENT PREPARATION		
MATERIALS *What materials will you need to teach this activity?* *List **all books and materials**, including any used during the launch/reflection and during set up and cleanup*	**LEARNING ENVIRONMENT** *What modifications will you need to make to the classroom to support this activity? (e.g., centers, bulletin boards, meeting spaces)*	**EVENTS/RESOURCES** *What events or resources, including people, might you need to arrange in advance?*
For this scientific activity we used the following materials: Color pencils	For scientific activity, I will use the Art Center. Because the Art Center has suitable materials for production. In the	This scientific activity requires the teacher to prepare the materials needed to make the recycled paper in the

[3*] Note: You are designing this activity for the three children observed for your Student Profiles assignment.

Paint brush Color & White Paper Crayons Markers Pom Poms Chenille Stems Feathers Glue Safety scissors for children Glue Waste paper Cardboard Paper boxes "What a Waste: Trash, Recycling, and Protecting our Planet" by Jess French "The Adventures of a Plastic Bottle" by Alison Inches "The Adventures of an Aluminum Can" by Alison Inches	library, I will add a series of books about recycling and reuse to the children. In addition, I will be in the Sensory Center that guides children to participate in and do scientific experiments on recycled paper.	Sensory Center and Art Center. In addition, the teacher needs to ask the students in advance to collect the recyclable garbage at home, such as cartons, waste paper, plastic water bottles, etc., brought to school for students to discuss and classify.

THE LEARNING EXPERIENCE

The launch *How will you engage the children in this learning experience? How will you introduce the concepts and vocabulary of the topic? How will you describe the procedures of the learning activity? What will you say and do?*	Before this social studies activity starts, I will read books about recycling and reuse, and ask students in advance to collect the recyclable garbage at home, such as cartons, waste paper, plastic water bottles, etc., brought to school for students to discuss and classify. This scientific activity needs to be produced in the Sensory Center and Art Center, so I will prepare the materials needed for the experiment to ensure that all students participate in this activity.
The activity *List the step-by-step procedures.. What will the children be doing? What will you say or do to facilitate and scaffold their learning? Be specific and detailed in your description.*	First of all, I will read the books about recycling and reuse to students at Circle Time, introduce what recycling and reuse is, use some questions to make children think, and encourage them to share their opinions about the perception of recycling and reuse. And, I will use a big paper to help every student record their thoughts and let students understand why recycling is important to our environment and how to reuse the recovered items. Then, I will ask students in advance to collect the recyclable garbage at home, such as cartons, waste paper, plastic water bottles, etc. brought to school for students to discuss and classify. Next, I will guide students how to use their collected waste paper, cartons, cardboard and other items to make recycled paper in the Sensory Center. Moreover, students can choose their favorite color to dye their recycled paper in the Art Center. After the recycled paper is dried, I will ask the students to share their thoughts on recycling and reuse this scientific activity through drawing, and I will help the students record their thoughts on the work. Finally, I will let students and their own works take photos and post them on the wall so that they can see them at any time.

Reflection *As the activity wraps up, what opportunities will you offer the children to respond to and reflect on this activity?*	After the activity, I will ask each child to take a group photo with the recycled paper made by himself, help them write down their opinions on recycling and reuse, and stick their children's painting on the wall.
Possible Extensions *What could you do on another day to build on this activity?*	I will add some books on recycling and reuse so that children can understand recycling and why recycling is important to our environment.
Multimodal Engagement *Identify and explain the ways in which this activity offers opportunities to use at least three different learning modalities (kinesthetic, tactile, linguistic, visual/spatial, auditory, musical)*	Linguistic: This part of the activity asks children to think and talk about what recycling and reuse is, and share what they think about recycling and reuse. Bodily -kinesthetic /Tactile: This part of the activity requires children to participate in the activity of making recycled paper, and encourages students to bravely express their views on recycling and reuse.
Differentiation *How will you modify this activity for learners with different learning styles and/or special needs (SLLs, physically active, etc.)?*	For children with different learning styles and needs, I will give them the opportunity to share what they think about recycling and reuse. Then, by observing students' different understandings of recycling and reuse, guide and help them understand what recycling and reuse is, why recycling is important to our environment, and how to reuse the recovered items. For highly active children, I will encourage him/her to lead other children, let them play together, form a partner, and praise their efforts. For second language learners, I will spend more time helping them understand the theme of the event, such as helping them

	explain words and meanings they don't understand in different languages, and making dual language labels on each game center and toy.

GROWTH AND LEARNING *How will this learning experience support the children's growth and learning in the following domains? Use your knowledge of child development.*	
Cognitive/thinking	This activity will help children understand what recycling means, and think about why recycling is important to our environment, and how to reuse the recovered items.
Physical	This activity can help children develop fine motor skills. For example, children who make recycled paper and draw on it can develop their fine skills.
Social/emotional	During the circle time, I will read books about recycling and reuse to students and introduce what recycling and reuse is, why recycling is important to our environment, and how to reuse the recovered items. Moreover, I will lead the children to share and discuss their understanding of recycling. Let the children have the opportunity to express their ideas and deepen their understanding of recycling and reuse on the basis of each other's ideas.
Language/literacy	Children will learn new vocabulary words. List 10-15 target vocabulary words: Recycling, reuse, green life, measurement, record, global warming, climate change, industrial pollution, Plastic, Aluminum Can.
Content Area(s)	This activity allowed children to develop their language and expressive ability. Let the children be interested and motivated to participate in the scientific experiment of making recycled paper, and draw their own ideas about protecting the environment on the recycled paper made by themselves. This will

	enable students to deepen their understanding of recycling and reuse and develop their language and expression skills.

STANDARDS/GOALS *What Pre-K Common Core Learning Standards are addressed in this activity?* *Use the PKFCC to respond.* *Be specific—choose those standards that are **actually targeted** by this learning activity (e.g., can development in regard to the standard be measured by the evidence gathered (authentic assessment) during this learning activity?*	
Domain 1: **Approaches to Learning**	Interacts with a variety of materials and peers through play. Engages in pretend and imaginative play – testing theories, acting out imagination. Self-selects play activity and demonstrates spontaneity Demonstrates awareness of connections between prior and new knowledge. Engages with peers and adults to solve problems. Seeks additional clarity to further understanding. Demonstrates innovative thinking
Domain 2: **Physical Development and Health**	Demonstrates appropriate body awareness when moving in different spaces. Demonstrates ability to use fine motor skills (e.g., engages in finger plays, uses materials such as pencils, paint brushes, eating utensils and blunt scissors effectively) Exhibits appropriate body movements when carrying out a task Maintains balance during sitting, standing, and movement activities.
Domain 3: **Social and Emotional Development**	Expresses feelings, needs, opinions and desires in a way that is appropriate to the situation Interacts with significant adults Interacts with other children (e.g., in play, conversation, etc.) Offers support to another child or shows concern when a peer seems distressed.

	Identifies likes and dislikes, needs and wants, strengths and challenges.
Domain 4: Communication, Language, and Literacy	Makes choices about how to communicate the ideas he wants to share. Uses facial expressions, body language, gestures, and sign language to express ideas. Uses new and rare words introduced by adults or peers
Domain 5: Cognition and Knowledge of the World	Expresses and engages using movement elements and skills. Demonstrates observed or performed movements originating from diverse genres. Visual Arts Engages in self-directed imaginative play with a variety of materials and/or art-making tools. Shares and talks about personal artwork. Selects a preferred artwork Imagines, invents, and creates art that tells a story about life Recognizes that people make works of art and design

AUTHENTIC ASSESSMENT	
What will you do to gather evidence to assess each child's developmental progress? *How will you determine whether or not individual children are getting the Big Ideas and/or exploring the Overarching Questions?* *Evidence may include responses recorded during a group discussion, a visual*	First of all, I will evaluate each child's understanding of the subject of the course based on each child's ideas about recycling and reuse shared on Circle Time. At Circle time, I will read books about recycling and reuse, which can make children understand what recycling and reuse is, why recycling is important to our environment, and how to reuse the recovered items. Moreover, according to the children's respective learning needs, I will give the children to choose their favorite art materials to make recycled paper, and express their ideas about recycling and reuse through paintings. Children are very young, but they have the ability to think. Therefore, while the teacher guides the students to understand the meaning of recycling and reuse, they also need to inspire empathy, so that

arts project, a performance, etc. *Your assessment activity MUST be connected to the Big Ideas and Overarching Questions.*	children can empathize and understand why recycling is important to our environment. This can also make students understand the importance of protecting the environment. In addition, in this activity, teachers need enough cardboard, paper boxes, and waste paper to support scientific experiments in making recycled paper. Therefore, in addition to asking students to collect recyclables at home, I also put recyclable trash cans in the classroom. Let children collect waste paper and other items in the classroom in daily classroom activities, and deepen their understanding of recyclability and reuse.

Commentary

Learning Experience Unit Commentary

Describe topic of your Learning Experience Unit

My topic of learning experience unit is recycling and reuse, which through three activities lets students understand recycling and reuse, and stimulates students' interest and motivation to learn and understand more deeply why recycling and reuse are important to our environment. Also, I teach 4-year-old children, so they need teachers to stimulate and guide their curiosity and interest.

Implementation of Activities

I will follow the order of Activity 1, Activity 3, and Activity 2 for the entire week. Because Activity 1 and Activity 3 are long term activities. Activity 1 requires students to plant their favorite plants, and observe and measure their own plants every day. The growth situation of plants takes a certain amount of time, so I prioritize activity 1. Moreover, Activity 3 also takes a certain amount of time because the scientific activity of making recycled paper needs a certain amount of time to air dry the recycled paper. Therefore, Activity 1 and Activity 3 need to be prioritized so that the children will have more time to discuss and share this week. In addition, Activity 2 is about discussing climate change, making posters, and conducting a parade that simulates climate change. I put Activity 2 at the end because at the early stage I needed to communicate with the school and arrange the location of the climate change parade,

and organize the students while ensuring safety, so that they have a better sense of participation. Therefore, the entire week I will follow the order of activity 1, activity 3 and activity 2.

The theme of the three activities is recycling and reuse, which allows children to understand the importance of protecting the environment. Through the activities of Activity 1, children understand what green life is and why we need to recycle and reuse. Through a series of questions in Activity 1, children can learn about the problems that climate change causes in our environment. This will affect participation in Activity 2, thus helping children understand the impact of climate change on our environment and life, and thinking and discussing how to solve the problem. Also, children learn from Activity 2 that can influence engagement in Activity 3. Activity 3 is about how to reuse recycled materials, so that children can understand why recycling and reuse can protect our environment and mitigate the impact of climate change on the environment.

Relationship of the Activities

The common point of these three activities is to stimulate children's interest and motivation through interesting activities to learn and understand what is recycling and reuse, so that children learn the importance of protecting the environment.

Even though children are young, they have the ability to think. I will give the students the opportunity to discuss and share each other's ideas, and complement each other. In addition, I will encourage my students to take an active part in activities, stimulate their interest, help students to supplement, improve and record their ideas, and make children have a deeper understanding of environmental protection. Moreover, there are a lot of children from different cultural backgrounds in the classrooms of kindergartens in New York. They have different languages and traditions, and they will integrate their own special views with their own culture into the classroom behavior and interaction. When designing this series of activities, I hope that they can share their views with others in class in combination with their understanding of recycling. For second language learners, I will spend more time helping them understand the theme of the event, such as helping them explain words and meanings they don't understand in different languages, and making dual language labels on each game center and toy.

Strategies and Connections

The teaching strategies and plans I recommend support the development of children groups in need because I think that although the children are small, they already have the ability to think. Therefore, through my teaching strategies and plans, children's interest and motivation can be stimulated, and children can actively participate and understand the importance of protecting the environment. In addition, through this series of activities, children can not only learn environmental protection knowledge, but also support them to develop various skills and encourage them to express their ideas bravely. Moreover, every activity of this learning experience unit I created is related to the theme recycling and reuse. This allows me to guide the children to participate in the activities and at the same time let the children have a deeper understanding of the importance of recycling and inspire empathy. Let children learn what they can do to help our environment by activities.

Assessment

I will evaluate what each student has learned from my Learning Experience Unit through observation methods such as students' art works, checklists, running records, anecdotal records, etc. This helps me understand students' needs and personalities and improve teaching practice, plan the course. Also, I understand that individualized or differentiated teaching is very important, because each student's development level is different. Therefore, based on my observations and records, I will research and plan courses that are more suitable for these students to stimulate their interest and help them make progress in my learning experience unit.