

Instructional Unit Bundle: Transportation

This instructional unit bundle provides an example of how teachers may design a Common Core aligned unit with culminating performance tasks. This bundle is a work in progress and continually revised based on feedback from teachers and administrators. Teachers may (a) use this bundle as it is described below; (b) integrate parts of this bundle into a currently existing curriculum unit; or (c) use this bundle as a model or support for a currently existing unit on a different topic.

This instructional unit bundle contains:

- I. [Unit snapshot](#), including:
 - a. Unit topic
 - b. Overarching question
 - c. Enduring understandings
 - d. Focus standards from the NYS Pre-Kindergarten Foundation for the Common Core
 - e. Unit sub-topics. Each sub-topic includes:
 - i. Anchor learning experiences
 - ii. Anchor texts
 - iii. Formative assessment opportunities
 - iv. Family engagement opportunities
 - f. Culminating tasks
- II. [Complete suggested alignment to the NYS Pre-Kindergarten Foundation for the Common Core](#)
- III. [Ideas for learning centers](#)
- IV. [Book list](#)
- V. [Family engagement](#)
- VI. [Culminating tasks and rubrics](#)
- VII. [Sample weekly plan](#)
- VIII. [Sample lesson plans](#)
- IX. [Sample student work](#)
- X. [Supporting resources](#)

This unit contains references to [Depth of Knowledge \(DOK\)](#) and [Universal Design for Learning \(UDL\)](#). DOK offers a common language to understand cognitive demand in curricular units, lessons, tasks, and assessments. Webb developed four DOK levels that grow in cognitive complexity and provide educators a lens on creating more cognitively engaging and challenging tasks. UDL is a set of principles that provides teachers with a structure to develop instruction to meet the diverse needs of all learners. A research-based framework, UDL suggests that each student learns in a unique manner so a one-size-fits-all approach is not effective. By creating options for *how instruction is presented*, *how students express their ideas*, and *how teachers can engage students in their learning*, instruction can be customized and adjusted to meet individual student needs.

I. Unit snapshot

This unit snapshot gives an overview of the unit. This is a helpful starting place; more details about how to design and execute the unit come later in this bundle.

<p>Unit Topic <i>The unit topic should build on students’ interests and explore topics that are relevant to your school community.</i></p>	<p>Transportation</p>
<p>Overarching Question(s) <i>Child-friendly question(s) that connect(s) the knowledge and skills that children should develop throughout the unit.</i></p>	<p>How does our community use various modes of transportation to meet our needs (e.g. food, clothing, emergencies)?</p>
<p>Enduring Understandings <i>These are the big ideas that students should remember throughout their educational careers.</i></p>	<ul style="list-style-type: none"> • We use different modes of transportation depending on what we’re moving, how far it needs to go, and how fast it needs to get there. • Vehicles are a common mode of transportation. Some examples of vehicles include trucks, trains, planes, carts, and boats. <ul style="list-style-type: none"> ○ Vehicles can be different sizes and colors and serve different purposes (e.g. planes are very large and used to transport materials or people across long distances, carts are small and used to transport materials over a short distance). ○ Some vehicles have engines and use motors to move (e.g. planes, trains, cars), and some vehicles are moved by people (e.g. carts, carriages). ○ Vehicles move across different settings – planes fly in the air, cars drive on the road, boats move through the water, trains move on their tracks.
<p>Focus standards from the Prekindergarten Foundation for the Common Core <i>These represent the 7-10 standards that will be emphasized throughout the unit. They cover different domains of development. You will</i></p>	<p><u>Communication, Language, and Literacy</u> <i>Approaches to Communication</i></p> <ul style="list-style-type: none"> • PK.AC.3. Demonstrate that he/she understands what he/she observes. <p><i>English Language Arts and Literacy</i></p> <ul style="list-style-type: none"> • PK.RIT.1. With prompting and support, ask and answer questions about details in a text. • PK.RIT. 10. With prompting and support, actively engage in group reading activities with purpose and understanding.

touch on other standards throughout the unit, but these should be the foundation.

- PK.W.2. With prompting and support, use a combination of drawing, dictating, or writing to compose informative/explanatory texts in which they name what they are writing about and apply some information about the topic.

Cognition and Knowledge of the World

Mathematics

- Mathematical Practice: Model with mathematics.
- PK.OA.1: Demonstrate an understanding of addition and subtraction by using objects, fingers, and responding to practical situations (e.g. if we have 3 apples and add two more, how many do we have?).
- PK.OA.2: Duplicate and extend (e.g., what comes next?) simple patterns using concrete objects
- PK.MD.1: Identify measurable attributes of objects, such as length, and weight. Describe them using correct vocabulary. (E.g. small, big, short, tall, empty, full, heavy, and light.)

Science

- PK.S.6g. Describe and compare the effects of common forces (pushes and pulls) on objects, such as those caused by gravity, magnetism, and mechanical forces.

Social Studies

- PK.SS.7c. Recognize the roles/contributions of community workers as they produce goods/services that people need.

Social and Emotional Development

- PK.SED.4: Develop positive relationships with their peers.
- PK.SED.5: Demonstrate pro-social problem solving skills in social interactions.

<p>Unit Sub-Topics <i>These represent the major inquiries of the unit. They build over time and require students to make connections across all content areas. Each sub-topic is designed to take 1-2 weeks to explore.</i></p>	<p>What modes of transportation do you use in your community? Who operates them? What do they carry?</p>	<p>How do different modes of transportation move? How do they transport people and materials?</p>	<p>What do all modes of transportation have in common? How are some modes of transportation similar/different?</p>	<p>Why is it important to have different modes of transportation? What would happen if we didn't have some modes of transportation?</p>
<p>Anchor Learning Experiences <i>One or two key real-world learning experiences (e.g. field trips, observations, materials in centers)</i></p>	<p>Take a neighborhood walk and discuss the different modes of transportation that you see. Take</p>	<p>Build ramps using blocks or other materials. Gather a variety of toy vehicles and other modes of</p>	<p>Build a vehicle. Provide materials such as boxes, toilet paper rolls, etc. Encourage students to</p>	<p>Have students measure two real trucks/cars/buses. Compare the sizes of the</p>

<p><i>for each sub-topic that provide ample opportunities to deepen students' understanding of the sub-topic.</i></p>		<p>pictures of the modes of transportation and use them throughout the unit.</p> <p>Have students graph the mode of transportation they use to get to school (e.g. car, bus, train, walk).</p> <p>Work with children to transform the dramatic play center into a garage, a truck stop, or a port.</p>	<p>transportation. Experiment to see how they move down the ramp, with different inclines, etc.</p> <p>At the science/discovery table, provide magnifying glasses and supplies such as spark plugs, engine parts, wheels, pulleys, etc. Allow the students to explore and discuss how they could be used in various vehicles.</p>	<p>discuss how their vehicles are similar/different. Talk about what all vehicles need and what parts make vehicles different.</p>	<p>trucks/cars/buses. Discuss why they are different sizes, what each vehicle is used for, and what would happen if we didn't have one of them.</p>
<p>Anchor Texts <i>A combination of literary and informational texts that can be read throughout the unit. Text based questions about each book build understanding of the sub-topic. The text based questions listed here are each associated with DOK levels (see page 1 or here for more information).</i></p>	<p><u>Transportation (Around the World)</u>, by Margaret Hall</p>	<p>What type of vehicles do you see in the book? Tell me about the vehicles. Who operates the vehicles? (DOK: Level 1)</p>	<p>How do the vehicles transport items? What signs do the vehicles follow? What do the signs mean? (DOK: Level 1)</p>	<p>What is similar about all the vehicles in the book? What is different? (DOK: Level 2)</p>	<p>Talk about why the vehicles are important. Do all of the vehicles help the community? Why or why not? (DOK: Level 4)</p>
	<p><u>Richard Scarry's Cars Trucks and Things That Go</u>, by Richard Scarry</p>	<p>What is similar about all of the vehicles in the book? What is different? (DOK: Level 2)</p>	<p>How do the vehicles move? How do people help move those vehicles? (DOK: Level 1)</p>	<p>What types of vehicles are there? How can you sort them? (DOK: Level 2)</p>	<p>What do the vehicles do? Why do communities need vehicles? (DOK: Level 4)</p>
	<p><u>The Little Engine that Could</u>, by Watty Piper</p>	<p>What types of vehicles did you see in the book? What are these vehicles carrying? (DOK: Level 1)</p>	<p>Where do the vehicles in the book go? What kinds of signs do they follow? What would happen if we didn't have signs? (DOK: Level 4)</p>	<p>Which vehicles are biggest? Which vehicles are smallest? Why do you think vehicles are different sizes? (DOK: Level 3)</p>	<p>What would happen if there wasn't a train in the book? What if the train was replaced with a truck? (DOK: Level 4)</p>
	<p><u>Mike Mulligan and his Steam Shovel</u>, by</p>	<p>Look at the pictures in the book. What is a vehicle? What isn't a vehicle? How</p>	<p>What is the vehicle's job in the book? How does it get its job done?</p>	<p>Use words like big, small, and heavy to describe and compare the vehicles.</p>	<p>Why does the community need Mike Mulligan? Are there any other vehicles</p>

	Virginia Lee Burton	do you know? (DOK: Level 3)	(DOK: Level 2)	(DOK: Level 1)	that could replace his steam shovel? (DOK: Level 4)
	<u>Whose Vehicle is this?: A Look at Vehicles Workers Drive-Fast, Loud, and Bright</u> , by Sharon Katz Cooper	Where can we find vehicles? Who operates vehicles? (DOK: Level 1)	How do vehicles move? (DOK: Level 1)	Why do you think these vehicles all have ___? Why don't they all have ___? (DOK: Level 3)	How can we use vehicles? How do vehicles help the people in the book? How do you know? (DOK: Level 4)
Formative Assessment Opportunities <i>Key look fors and listen fors that will give you information about students' understanding of the standards and sub-topic. These can be based on strategic questions and/or observations of students working independently or with peers.</i>		During the community walk, ask students to describe different modes of transportation that they see. Listen for expanded vocabulary and justification about what is/isn't a vehicle.	As students are playing with ramps, ask how the vehicles are moving. Listen for students explaining the importance of wheels, differences between toy and real vehicles, etc.	As students are building vehicles, listen to conversations. See if students organically identify vehicles, what each vehicle does, similarities/differences between vehicles, etc.	After measuring the vehicles, talk to students about what would happen if all the vehicles in the world were the same size. Listen for students' ability to describe the implications.
Key Vocabulary <i>Academic vocabulary words that help students understand unit sub-topics and access complex texts. These words can be supplemented by vocabulary in read alouds.</i>		Transportation, community, vehicle, operate	Ramp, engine, transport, signs, wheels, axels	Similar, different	Important, longer/shorter, heavier/lighter, bigger/smaller
Family Engagement <i>Learning experiences that connect to classroom study that families can do at home with their children.</i>		Offer some questions that parents can ask to prompt conversations about the vehicles they see on the way home. For example, "How do you know this is a vehicle?" or "What is the same about these two	Send home a list of materials and/or drawings of various types of vehicles that families can use to make vehicles at home. Encourage families to create vehicles and discuss how they can be	Send home an example of a healthy recipe to make vehicles. Encourage families to share their own recipes, highlighting healthy ingredients. Make a class recipe book and send home to all families.	Encourage families to keep a journal about vehicles; children can keep track of vehicles they see, tracking how often they see what types of vehicles.

	vehicles? What is different?"	used.		
<p>Culminating Tasks <i>Tasks that take place in a small group during the last week of the unit. These tasks allow students to demonstrate the knowledge and skills they have gained throughout the unit.</i></p>	<p>At the end of this unit, students can engage in culminating tasks to demonstrate the content knowledge and skills they have developed throughout the unit. There are two culminating tasks. Both are grounded in social studies; one task is focused on math skills and the other is focused on literacy skills. During small group time (with 3-5 children), the teacher presents the students with one culminating task at a time. Students complete one task focused on math, patterning vehicles. Students complete one task focused on literacy, drawing, writing, and dictating information about their own vehicle. See Section VI for more information.</p>			

II. Complete suggested alignment to the NYS Pre-Kindergarten Foundation for the Common Core

Actual alignment to the NYS Pre-Kindergarten Foundation for the Common Core will vary depending on how the unit is designed and implemented.

Below is a suggested alignment that can be used with the unit as it is written in this bundle.

Domain	Standards	Example of Standards in Action
<i>Approaches to Learning</i>	<ul style="list-style-type: none"> PK.AL.3. Approaches tasks, activities and problems with creativity, imagination and/or willingness to try new experiences or activities. 	<ul style="list-style-type: none"> Student use various classroom materials to make ramps with different slopes. The students then conduct an experiment to determine whether the materials and slopes affect the speed at which vehicles travel down the ramp. <i>Home extension:</i> Students make ramps at home out of different materials (e.g. couch cushions, shoe boxes) and conduct experiments to see what vehicles move fastest down a ramp. Discuss how different ramp materials affect the speed of vehicles. Parents can take pictures and bring them in to share with the class.
<i>Physical Development and Health</i>	<ul style="list-style-type: none"> PK.PDH.9. Demonstrates awareness and understanding of safety rules. 	<ul style="list-style-type: none"> A student identifies the meanings of traffic signs and explains what vehicle operators do when they see signs. <i>Home extension:</i> Students and parents draw a picture of following a street safety rule.
<i>Social and Emotional Development</i>	<ul style="list-style-type: none"> PK.SED.4. Develops positive relationships with their peers. PK.SED.5. Demonstrates pro-social problem solving skills in social interactions. 	<ul style="list-style-type: none"> Students collaborate in determining the best way to create a variety of vehicles using different materials. <i>Home extension:</i> Students create vehicles at home with their parents. Ask probing questions such as: What kind of vehicle is this? What does it transport? Why is this vehicle helpful to the community?
<i>Communication, Language, and Literacy</i>	<p><i>Approaches to Communication</i></p> <ul style="list-style-type: none"> PK.AC.3. Demonstrates that he/she understand what they observe. <p><i>English Language Arts and Literacy</i></p> <ul style="list-style-type: none"> PK.RIT.1. With prompting and support, ask and answer questions about details in a text. PK.RIT. 10. With prompting and support, actively engage in group reading activities with purpose and understanding. 	<ul style="list-style-type: none"> A student writes in a journal about the vehicles s/he sees on a walk outside. A student explains who drives what vehicle after reading <u>Whose Vehicle is This?</u> Students chorally read “I think I can, I think I can” from <u>The Little Engine that Could.</u> Students engage in a discussion about how various vehicles

	<ul style="list-style-type: none"> • PK.W.2. With prompting and support, use a combination of drawing, dictating, or writing to compose informative/explanatory texts in which they name what they are writing about and apply some information about the topic. • PK.SL.1. With guidance and support, participate in collaborative conversations with diverse partners about pre-kindergarten topics and texts with peers and adults in small and large groups. • PK.L.6. With prompting and support, use words and phrases acquired through conversations, reading and being read to, and responding to texts 	<p>are useful in the community.</p> <ul style="list-style-type: none"> • A student uses words such as “vehicle” and “cargo” after reading the anchor texts. • <i>Home extension:</i> Students bring in stories about vehicles they have seen through pictures, drawings, home journals or show and tell. Families can be encouraged to send in pictures of children on a variety of vehicles (cars, bikes, airplanes, etc.).
<p><i>Cognition and Knowledge of the World</i></p>	<p><i>Mathematics</i></p> <ul style="list-style-type: none"> • Mathematical Practice: Model with mathematics. • PK.OAT.1: Demonstrate an understanding of addition and subtraction by using objects, fingers, and responding to practical situations (e.g. if we have 3 apples and add two more, how many do we have?). • PK.OA.2: Duplicate and extend (e.g., what comes next?) simple patterns using concrete objects • PK.MD.1. Identify measurable attributes of objects, such as length, and weight. Describe them using correct vocabulary. (E.g. small, big, short, tall, empty, full, heavy, and light.) • PK.CC.4: Count to answer “how many?” questions about as many as 10 things arranged in a line, a rectangular array, or a circle, or as many as 5 things in a scattered configuration; given a number from 1-10, count out that many objects. <p><i>Science</i></p> <ul style="list-style-type: none"> • PK.S.3. Generates explanations and communicates conclusions regarding experiments and explorations. • PK.S.6. Describes and compares the effects of common forces (pushes and pulls) on objects, such as those caused by gravity, magnetism, and mechanical forces. 	<ul style="list-style-type: none"> • Students work in small groups and discuss what happens when they get more/put away vehicles. • Students compare the sizes and/or weights of vehicles and use non-standard units of measurement to measure real and toy vehicles. • Students make patterns based on various characteristics of vehicles (e.g. wheels/no wheels). • Students explain why certain vehicles can sink or float and why certain vehicles move more quickly down a ramp. • Students explain how vehicles move on land, in water, and in the air. • Students explain how and why various cultures use a variety of vehicles. • Students pretend to be different vehicle operators. • Students explain how vehicles are used to provide services to the community. • Students identify signs in the community and discuss what they mean. • Students, with the help of adults, use digital cameras to document vehicles they see. • <i>Home extension:</i> Families take students on a walk to identify vehicles and bring in pictures or drawings of their

<p><i>Social Studies</i></p> <ul style="list-style-type: none"> • PK.SS.2. Demonstrates awareness and appreciation of their own culture and other cultures. • PK.SS.7. Recognizes the roles/contributions of community workers as they produce goods/services that people need. • PK.SS.8. Demonstrates interest and awareness about a wide variety of careers and work environments. <p><i>The Arts</i></p> <ul style="list-style-type: none"> • PK.A.1. Expresses oneself and represents what he/she knows, thinks, believes and feels through visual arts. • PK.A.5. Participates in a variety of dramatic play activities to represent fantasy and real life experiences. <p><i>Technology</i></p> <ul style="list-style-type: none"> • PK.T.5. Uses the knowledge of technology to increase learning. 	<p>observations.</p> <ul style="list-style-type: none"> • <i>Home extension:</i> Students count traffic signs on their trip into school. Students record the number of signs they saw on a bar graph when they enter the classroom.
--	--

III. Ideas for learning centers

These are examples of how you might use learning centers to advance the overarching question, enduring understandings, and unit sub-topics. These are only suggestions; you should add to and modify these ideas based on the resources available and the needs of children and families. As you plan your learning centers, keep the principles of [Universal Design for Learning \(UDL\)](#) in mind and consider how you will provide multiple entry points into the material for all students in your classroom. The activities and materials listed under each center can be rotated throughout the unit.

Notes:

- Hang visual representations of vehicles with labels around your classroom to create a print-rich environment connected to the unit.
- Many of these activities can be sent home to families in a newsletter, be posted on a bulletin boards outside classrooms, go on a website, etc. to keep families informed about classroom activities.
- Depending on your particular focus, you may choose to focus on one or two types of vehicles. For example, you may focus on vehicles that travel in air or water.

<p>Blocks</p> <ul style="list-style-type: none"> • Post pictures of vehicles moving on land, in the air, and in the water. • Create a highway, a bridge, an airport or a dock for vehicles; use painter’s tape. • Put Cars and Trucks and Things that Go in the block area. Encourage students to build vehicles and places to store vehicles. • Encourage students to build an airport. Talk about how planes have to follow signs and rules. • Include popsicle sticks, paper, writing implements, and tape so that students can make signs for a highway or loading area. 	<p>Dramatic Play</p> <ul style="list-style-type: none"> • Transform the dramatic play center into a space shuttle center, cargo port, airport, bus station, or mechanic’s shop. • Dramatize the process of flying a plane, driving a bus, or sailing a boat. • Have the book Whose Vehicle is This? in the dramatic play area with hats and coats from a variety of drivers; encourage students to dramatize being a conductor, a pilot, or a captain. • Include extra chairs or benches for children to arrange into vehicles.
<p>Art</p> <ul style="list-style-type: none"> • Provide collage materials and encourage students to create three-dimensional vehicles. • Provide a variety of shapes and encourage students to glue them together on paper to make vehicles. • Use small vehicles, roll their wheels in paint and create a painting. • Observe real vehicles and draw them- have the students take clipboards outside. • Make paper airplanes. 	<p>Science / Discovery</p> <ul style="list-style-type: none"> • Conduct experiments. See what types of vehicles move more quickly than others. Have a race down a ramp and make predictions. • Fill cans with a variety of objects- see how they roll when filled with different objects. Transfer this knowledge to thinking about how a truck moves when carrying objects. • Fill sandwich bags about ¾ full with water. Have students use sharpened pencils to poke holes in the bag and predict what will happen. Transfer this knowledge to how boats work.

<ul style="list-style-type: none"> • Have pictures of vehicles and make a transportation mobile. 	<ul style="list-style-type: none"> • Use a balance scale to weigh vehicles made of different materials. Discuss which side is heavier/lighter. • Provide tools for students to use to take apart engines, toy trucks, etc. • Conduct various science experiments (see samples in the resources section)
<p>Toys and Games / Math Manipulatives</p> <ul style="list-style-type: none"> • Play a lotto or bingo game with different vehicles. • Use different vehicles for sorting and patterning by different characteristics (e.g. number of wheels, size, number of passengers, etc.) • Put out number cards and vehicles. Encourage children to place the appropriate number of vehicles on the matching number card. 	<p>Sand and Water / Sensory</p> <ul style="list-style-type: none"> • Build roads and bridges out of sand. Use wet sand to mold airports, barges, and spaceships. • See if different vehicles sink or float. Place cargo on them and see if they sink or float.
<p>Library</p> <ul style="list-style-type: none"> • Display a variety of informational and literary texts about transportation. • Create felt board pieces to retell familiar stories (e.g. <u>Trucks</u>). • Display class books about transportation (e.g. a photo book that shows a variety of vehicles seen on a class walk). 	<p>Cooking</p> <ul style="list-style-type: none"> • Make edible fruit boats- use bananas for the boat, cherries for windows, and apple slices for the sails! • Make vegetable trucks- use celery stalk for the body of the truck and small tomatoes or carrot rounds for wheels!
<p>Computers / Technology</p> <ul style="list-style-type: none"> • Show images or video clips of vehicles carrying cargo and/or passengers. • Visit Storybird (at http://storybird.com/) to create a visual story online. • Take digital photos of a vehicle moving over time. 	<p>Outdoors / Playground</p> <ul style="list-style-type: none"> • Take a transportation walk to look for modes of transportation. • Go on a transportation scavenger hunt. • Use magnifying glasses to inspect wheels, roads, etc. • Use rulers, snap cubes, string, etc. to measure cars and trucks. • Play “red light, green light.”
<p>Writing</p> <ul style="list-style-type: none"> • Reference maps to write routes for delivery trucks. • Write repair bills for the mechanics shop. • Write directions to the store, grandma’s house, etc. 	<p>Music and Movement</p> <ul style="list-style-type: none"> • Pretend to move like different types of vehicles, through stop and go traffic, etc. • Sing “wheels on the bus” and point to the different features of the bus on a picture

IV. Book list

Books are a foundational component of a well planned unit. Teachers are encouraged to engage children in several read alouds per day during large group, small group, and center time. Some books are read repeatedly throughout the unit; these are your anchor texts. Anchor texts are a mix of literary and informational texts that advance students' understanding of the overarching question, enduring understandings, and unit sub-topics. Some books will be read only once or twice throughout the unit; these are your supporting texts. Supporting texts focus on sub-topics and areas of interest or may be tangentially related to the overarching question or enduring understandings of the unit.

Throughout each of your reading experiences with students, consider the principles of [Universal Design for Learning \(UDL\)](#). You should develop strategies to ensure that all children are able to access and comprehend the text. For example, consider projecting illustrations from the text on a document camera, giving students a chance to point to illustrations when they answer, asking questions at different [Depth of Knowledge \(DOK\)](#) levels, etc.

<p>Anchor Texts <i>These texts are read throughout the unit; they can be read multiple times during the day and in a variety of settings. For example, you may read one book to a large group and then again that same day to a small group in the dramatic play area. The children should know these books and be able to read them with you.</i></p>	<p><i>Informational Texts</i></p> <ul style="list-style-type: none"> • Transportation (Around the World), by Margaret Hall: A look around the world at transportation. • Whose Vehicle is this?: A Look at Vehicles Workers Drive- Fast, Loud, and Bright, by Sharon Katz Cooper: Students guess who drives what vehicles. <p><i>Literary Texts</i></p> <ul style="list-style-type: none"> • Richard Scarry's Cars Trucks and Things That Go, by Richard Scarry. • Mike Mulligan and his Steam Shovel, by Virginia Lee Burton: Mike and his trusty steam shovel, Mary Anne, dig deep canals for boats to travel through, cut mountain passes for trains, and hollow out cellars for city skyscrapers. <p><i>Fairy Tales</i></p> <ul style="list-style-type: none"> • The Little Engine that Could, by Watty Piper: A train carrying goods gets stuck until a small engine stops to help.
<p>Supporting Texts <i>These texts are read throughout the unit; they can be read with a small group of children and incorporated into choice time. You can send them home using your Lending Library, place them in centers so students can use them, and read them throughout the day.</i></p>	<p><i>Informational Texts</i></p> <ul style="list-style-type: none"> • The Big Book of Things That Go, DK Publishing: Featuring an artwork frieze on every spread showing vehicles in action, a colorful collection of trucks, ships, planes, and trains includes entertaining text and questions to encourage children to think about how and why machines are useful. • Train, by John Coiley: Look inside a train and learn the different parts of a train. • National Geographic Readers Planes, by Amy Shields: Enticing photographs and fascinating facts ensure that a child's natural curiosity is both inspired and satisfied. • Emergency Vehicles, by Weldon Owen: Catch fire trucks, police cars, and helicopters speeding to the scene in

this exciting collection of photographs.

- Transportation in Many Cultures, by Martha E.H. Rustad: A look at how various cultures use modes of transportation.
- Construction Trucks, by Jennifer Dussling: Dump trucks, cranes, concrete mixers, backhoes, and pay loaders lift and push and smooth and dig in this fun and informative introduction to hardworking construction trucks for young readers.
- Roll, Slope, and Slide: A Book About Ramps (Amazing Science: Simple Machines), by Michael Dahl: Learn about the different kinds, uses, and benefits of inclined planes and ramps.
- Boats, by Bryon Barton: Learn about boats.
- Trucks, by Bryon Barton: Learn about trucks.
- Planes, by Bryon Barton: Learn about planes.
- Truck, by Donald Crews: Follow the big red truck on its cross-country journey in the classic wordless book, perfect for sharing with the very young.
- Freight Train, by Donald Crews: Practice identifying colors as a freight train drives down the tracks.
- I Read Signs, by Tana Hoban: This book has no text, but is illustrated with photographs of common signs. Children will recognize signs and can discuss what the signs mean and how they are used.

Literary Texts:

- Duck in the Truck, by Jez Alborough: Duck's truck is stuck in the muck. Can anyone help him get out of the muck?
- This is the Way we go to School: A Book about Children around the World, by Edith Baer and Steve Bjorkman: Learn how children around the world get to school.
- I Love Trucks! by Philemon Sturges: Vivid paintings by Shari Halpern and light verse by Philemon Sturges take readers through the roaring world of rumbling trucks and reveal each truck's special job.
- Boats, by Anne Rockwell: Simple language introduces boats to young children.
- Machines at Work, by Bryon Barton: Get a look at a variety of construction vehicles.
- The Little Airplane, by Lois Lenski: Follow the flight of a small plane.
- Lisa's Airplane Trip, by Anne Gutman and Georg Hallensleben: Lisa takes her first trip on a plane.
- Who Sank the Boat, by Pamela Allen: Find out who sinks the boat as all of the animals try to get on.
- The Wheels on the Bus go Round and Round, by Annie Kubler: Read and sing the famous song.
- Don't Let the Pigeon Drive the Bus!, by Mo Willems: When a bus driver takes a break from his route, a very unlikely volunteer springs up to take his place-a pigeon!
- Trashy Town, by Andrea Zimmerman and David Clemsha: Follow Mr. Gilly around as he drives his trash truck and cleans up Trashy Town. The rhythmic refrain encourages choral reading with children.

Fairy Tales

- The Polar Express, by Chris Van Allsburg: A young boy takes a Christmas Eve journey to the North Pole and learns a life lesson in the process.
- The Three Little Rigs, by David Gordon: When the three little rigs set out to build their own garages, each one thinks that his is going to be the strongest. But then the big bad wrecking ball comes to call and threatens to smash their new homes to smithereens. The brothers learn that it's only by bravery and teamwork that they can win the day.
- The Ugly Truckling, by David Gordon: The ugly truckling runs away from home in search of her own identity -- and finds out that she may not be such an ugly truckling after all.
- Hansel and Diesel, by David Gordon: Hansel and Diesel set out to search for fuel in their junkyard, get lost, and have to fight the Wicked Winch.

Alphabet and Number Books

- Firefighters A to Z, by Chris L. Demarest: Learn the alphabet with firefighters.
- The Construction Alphabet Book, by Jerry Pallotta and Rob Bolster: Learn the alphabet on a construction site.
- B is for Bulldozer: A Construction ABC, by June Sobel and Melissa Iwai: Find objects that start with each letter on a construction site.

V. Family engagement

As you develop your family engagement plans for this unit, you should consider the pillars of family engagement. Below are some examples of how those pillars can be actualized in this unit. These are just examples; you should adapt and modify them to fit the needs of your children and families.

Pillars of Family Engagement				
<i>Welcoming Environment</i>	<i>Sharing Expectations & Making Joint Decisions</i>	<i>Extending Learning</i>	<i>Ongoing Communication</i>	<i>Supporting Transitions</i>
Families will experience warmth and respect from program staff, demonstrated by the collaborative tone of program staff and in the program's policies, protocols and offerings that are sensitive to their linguistic, cultural and social emotional needs.	Families will be partners in supporting school readiness by helping to define school readiness goals, implementing school readiness strategies and participating in policy-setting and program evaluation.	Families will have the opportunity to support and extend their children's learning and development at home with the assistance of complementary learning activities developed by the program and shared with families regularly in newsletters, at parent-teacher conferences, and other school events.	Families will experience multiple methods of communication between themselves and the program demonstrated by timely, routine efforts by the program to share information in a linguistically and culturally sensitive way and through effective communication channels.	Families will be equipped with the resources and skills to support their children through the transition into and out of the program, as demonstrated by program policy, and ongoing, meaningful discussions with between program staff and families.
Examples for this Unit				
<ul style="list-style-type: none"> • Encourage families to find and discuss vehicles in their environment. <ul style="list-style-type: none"> ○ Send home a list of local gas stations, bus stations, subway stations, etc. that parents can visit with their children. ○ Encourage families to try an alternate form of transportation with their child. If they usually take the subway to get around, try the bus. If they usually drive, try taking the bus somewhere this weekend. Invite families to come to class and talk (along with their child) about exploring this new kind of transportation. ○ Offer some questions that parents can ask to prompt conversations about the vehicles they see outside. For example, "How do you know this is a vehicle?" or "What is the same about these two vehicles? What is different?" ○ Encourage families to take a "listening walk" with their children. As parents and children walk in their neighborhood parents may ask the children to stop walking and close their eyes to listen for the sounds of the vehicles that are passing and identify them (motorcycle, bus, helicopter, airplane, truck etc.) Parents may ask questions such as how do you know what type of vehicle you hear? How can you tell? What sound is the vehicle making that tells you what it is? ○ Encourage families to take pictures of themselves and their children with the vehicles they are observing and send copies of these pictures 				

- to school. They can be used to create a bulletin board or class book.
- Encourage families to visit museums around the city that have a focus on transportation or have transportation exhibits.
- Encourage families to read informational and literary texts about transportation.
 - Send home a list of books that you will be reading during the unit.
 - Let your local library know that your class is studying transportation; encourage families to visit the library and talk with the librarian for book recommendations.
 - Encourage families to notice vehicles in the illustrations of books they are reading together with their children.
- Encourage families to talk with their children about how they use transportation every day.
 - Encourage families to share examples of vehicles that are used in their home countries (pictures, etc.).
 - Send home an example of various materials to make a vehicle; send a quick drawing of that the vehicle could look like. Encourage families to create their own vehicle at home using the list of materials and drawing of various vehicles with various uses at home.
 - Over a weekend, ask families to keep a list of ways they used transportation. (e.g. going to a friend's house, going to the store, etc.).
 - At drop-off or pick-up, ask families to answer a question on a bar graph outside the classroom: "What is your favorite mode of transportation?"
- Keep families informed about what and how students are learning about transportation.
 - At the beginning of the unit, share information about what questions you will explore, what you want children to learn, and the types of learning experiences that you will present to children.
 - Display ample photographs and pieces of authentic student work in a place that families will see (e.g. bulletin board, classroom door).
- Invite family members to participate in classroom activities.
 - Family members who have expertise in transportation (bus driver, pilot, engineer who designs vehicles, etc.) can talk to the class about their experiences.
 - Family members can help the class take transportation walks, read books, support during center time, etc.

VI. Culminating tasks and rubrics

Units of study end with two culminating tasks that provide students with an opportunity to apply the knowledge they have gained throughout the unit. Culminating tasks are small group activities that take place during the final week of the unit, and provide students with an opportunity to apply the knowledge they have gained throughout the unit. Culminating tasks are focused in math and literacy, but the content can be grounded in science or social studies and make connections to other domains of development (e.g. approaches to learning, social emotional, and physical). Teachers take anecdotal notes throughout each of the tasks to capture evidence of students' thinking and understanding of the content. Students' performance on the tasks can be measured using mathematics and literacy rubrics and used as evidence in an authentic assessment system (Work Sampling System, Teaching Strategies GOLD, High Scope COR). .

Mathematics Task

Focus Standards

- PK.OAT.2. Duplicate and extend (e.g. what comes next?) simple patterns using concrete objects.
- Mathematical Practice. Model with mathematics.
- PK.AL.3. Approach tasks, activities and problems with creativity, imagination and/or willingness to try new experiences or activities.

Depth of Knowledge

- Level 2

Task Experience

During small group time (with 3-5 children), the teacher shows the students different vehicles. They discuss the similarities and differences between the vehicles – some have wheels, some have wings, some move on land, etc. – and ways that they could sort them based on those similarities/differences. Teacher prompts students:

We have been learning all about vehicles, how they're similar and different, and how they help us. We've learned about all different kinds of vehicles, and how we can sort them based on similarities and differences. Look at the vehicles in front of you and think about all the different ways you could sort them (give wait time, then have some students share ideas). Today you're going to get to sort your vehicles and then make them into a pattern.

**Note: The pre-k standard asks students to "duplicate and extend" patterns, not create patterns independently. One student has sorted their vehicles, the teacher should give them the chance to create a pattern on their own. If the student struggles, the teacher should start an AB pattern with two repetitions and ask the child to extend the pattern.*

Questions to ask as students are working:

- How did you sort your vehicles? How else could you sort them?
- How can you place the vehicles so that the vehicles represent a pattern?
- What would happen if I put (wrong vehicle) here? Would it still be a pattern? Why? How could you fix it?

In order to push the students to the next level and encourage higher-order thinking, have the students talk about vehicles:

- Who operates these vehicles? Why are they important?

Materials Needed

- Pictures or toys representing a variety of vehicles- [trains](#), [boats](#), [planes](#), etc.
- Blank paper or work mat for students to put vehicles on
- (optional) Glue for students to glue their pictures
- (optional) Texts that were read during the unit, specifically [Freight Train](#)

- What types of vehicles are there? How are they the same and how are they different?
- How do people stay safe while operating these vehicles?
- What happens if a vehicle cannot reach its destination?
- Tell me how the vehicles you placed represent a pattern.

Alternative ideas for task:

- For students who have trouble grasping small vehicles, use larger ones.
- For students who are not yet verbal, students with disabilities (SWDs), or English Language Learners (ELLs), have additional photographs and books available to help them express ideas and connections.
- For students who are having trouble sorting, help them sort by an easily identifiable characteristic (e.g. color, wheels/no wheels).

Collecting Information

Take anecdotal notes about the students' process for patterning with their vehicles/pictures. Anecdotal notes should be factual, low-inference observations about students' words and actions. You should focus your notes on students' work around patterning, but may also take notes that document other domains of development (e.g. social-emotional, approaches to learning, physical) during this small group.

You can use the [template](#) in the resources section to help organize your notes.

You may include work samples, anecdotal notes, photos, etc. collected from this task as part of their authentic assessment systems (e.g. Work Sampling System, Teaching Strategies GOLD, or High Scope Child Observation Record).

Rubric

This rubric can be used to evaluate student’s work on the mathematics culminating task.

Mathematics		
Standards: PK.OAT.2. Duplicate and extend (e.g. what comes next?) simple patterns using concrete objects. Mathematical Practice. Model with mathematics.		
Not Yet	In Process	Proficient
<p>Student doesn’t duplicate or extend a pattern with vehicles/pictures. Student may sort vehicles/pictures and/or discuss their characteristics.</p>	<p>Student duplicates/extends a teacher created pattern by at least two repetitions, but then starts placing random vehicles. Student sometimes explains how a pattern repeats itself.</p> <p>-OR-</p> <p>Student independently creates two repetitions of a patterned sequence but then loses the patter. Student sometimes explains how a pattern repeats itself.</p>	<p>Student duplicates/extends a teacher created pattern by at least three repetitions and explains how a pattern repeats itself.</p> <p>-OR-</p> <p>Student makes at least three repetitions of a patterned sequence and explains how a pattern repeats itself.</p>
<p><i>Example:</i> AAAAAAA BBB CCC</p>  <p>“The planes go here. These trucks are all the same, so they go here. And these buses.”</p>	<p><i>Example:</i> ABABCAD</p>  <p>“First is yellow, then green. And then again. It’s the same.”</p>	<p><i>Example:</i> ABABABABAB</p>  <p>“First yellow plane then blue boat and it goes over and over again.”</p>

Literacy Task

Focus Standards

ELA/Literacy

- PK.SL.1. With guidance and support, participate in collaborative conversations with diverse partners about pre-kindergarten topics and texts with peers and adults in small and large groups.
- PK.W.2: With prompting and support, uses a combination of drawing, dictating, or writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.
- PK.AL.3. Approach tasks, activities and problems with creativity, imagination and/or willingness to try new experiences or activities.

Social Studies

- PK.SS.7. Recognizes the roles/contributions of community workers as they produce goods/services that people need.

Depth of Knowledge

- Level 2

Task Experience

During small group time (with 3-5 children), the teacher sets up the following scenario:

We have learned so much about transportation; we have learned about different vehicles, who drives vehicles, and what vehicles carry. Now you are going to have the chance to make your own vehicle! Think about the books we have read, the walks we have taken, and the ideas we have discussed. Now, look at these materials. Either draw or create a vehicle- any kind you want!

Here are some things to think about when creating a vehicle:

- What is my vehicle called? What does my vehicle do?
- What type of vehicle am I creating and who operates it? What does my vehicle carry?
- How does my vehicle transport passengers and/or cargo?
- How does my vehicle help my community?

Materials Needed

- Paper
- Drawing/writing materials
- Craft materials such as boxes, glue, and toilet paper rolls
- Texts that were read during the unit

Have students draw, dictate, and write about their vehicles. Encourage students to reference texts read during the unit and talk to one another and you as they work.

As students work, you can encourage conversation by asking questions and making comments about their work. For example:

- I see you're drawing brown dots on your paper. (open-ended comment)
- What kind of vehicle are you making? (open-ended question)
- Which vehicle would go more quickly down a ramp- this one or another one (show another vehicle)? Why? (Science)
- What can we do to make sure vehicles are safe? How can we work together to create a vehicle? (Social Emotional)
- Tell me more about your vehicle- think about some of the books we have read [show book covers here] and tell me what we learned about vehicles. (Literacy)
- What can we do with the things that vehicles carry? How do various parts of the world use vehicles? (Literacy and Social Studies)

Alternative ideas:

- For students who are not yet verbal or who are Students with Disabilities (SWDs) or English Language Learners (ELLs), you may ask them to draw pictures, hold up fingers, or demonstrate their answers by dramatizing them.
- For students who need extra help, have some books with pictures of vehicles prepared so students can get ideas of what types of vehicles they can make.

Collecting Information

Take anecdotal notes about the students' process of writing, drawing, and dictating. Anecdotal notes should be factual, low-inference observations about students' words and actions. You should focus your notes on students' work to draw, write, or dictate an informational text, but may also take notes that document social-emotional, approaches to learning, or literacy skills during this small group.

Take dictations on sticky notes and post them on the students' pages. You can use the [template](#) in the resources section to help organize your notes.

You may include work samples, anecdotal notes, photos, etc. collected from this task as part of their authentic assessment systems (e.g. Work Sampling System, Teaching Strategies GOLD, or High Scope Child Observation Record).

Rubric

This rubric can be used to evaluate student’s work on the literacy culminating task.

English Language Arts		
Standard: PK.SL.1. With guidance and support, participate in collaborative conversations with diverse partners about pre-kindergarten topics and texts with peers and adults in small and large groups. PK.W.2: With prompting and support, uses a combination of drawing, dictating, or writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.		
Not Yet	In Process	Proficient
Student doesn’t describe – through drawing, creating, dictating, or writing – what a vehicle is or what a vehicle does.	Student describes – through drawing, creating, dictating, or writing – at least two pieces of information about their vehicle (e.g. how it moves, transports, helps people, stays safe).	Student describes – through drawing, creating, dictating, or writing – at least three pieces of information about their vehicle (e.g. how it moves, how it transports, how it helps people).
<i>Example:</i> Student draws with green and brown and says, “This is a truck. Vroom vroom. “	<i>Example:</i> Student draws with green, brown, red, yellow, and blue and says, “This is a truck. The truck drives on the road. The truck driver has to look at the lights and stop at red.	<i>Example:</i> Student draws with green, brown, red, yellow, and blue and says, “This is a truck. The truck driver fills it with bananas to bring the bananas to the store. It has a big place for cargo in the back. People need to eat bananas so they need the trucks to bring them the bananas and other healthy foods!

VII. Sample weekly plan

This is an example of a sample weekly lesson plan. Weekly plans are based on the focus standards and enduring understandings for the unit. The template below can be modified to reflect your daily schedule (e.g. morning activities, morning meeting). Copy and paste this table for each week of the unit. This schedule will ultimately translate into more specific lesson plans. The daily lesson plans will reflect individual schedules, students' and families' needs, school context, etc.

UNIT TITLE: Transportation!					
<p><i>Overarching Question:</i> How does our community use various modes of transportation to meet our needs (e.g. food, clothing, emergencies)? <i>Unit Sub-Topic:</i> What modes of transportation do you use in your community? Who operates them? What do they carry?</p> <p><i>Sub-Topic Vocabulary:</i> Transportation, community, vehicle, operate <i>Enduring understandings:</i> We use different modes of transportation depending on what we're moving, how far it needs to go, and how fast it needs to get there. Vehicles are a common mode of transportation. Some examples of vehicles include trucks, trains, planes, carts, and boats.</p> <p><i>**These activities are described in detail in the sample lesson plans, Section VIII.</i></p>					
<i>Week 1 of 6</i>	Monday	Tuesday	Wednesday	Thursday	Friday
Morning activities	What do you know about vehicles? Draw a picture of a vehicle and tell about it.	Put some toy vehicles or pictures of vehicles around the room and encourage students to think, draw, and write about vehicles.	Put some toy vehicles or pictures of vehicles around the room and encourage students to think, draw, and write about vehicles.	Put vehicles on a table. Have students draw, sort, and describe vehicles.	Put some vehicles and non-vehicles on a table. Encourage students to identify the vehicles and the non-vehicles and explain why items fall into a specific category.
Morning meeting	Use a KWL chart to engage students in a discussion about what they already know and wonder about vehicles prior to reading a book such as Whose Vehicle is this?: A Look at Vehicles Workers Drive-Fast, Loud, and Bright , by Sharon Katz Cooper. **	Use a projector or document camera to enlarge images of vehicles from books, magazines, or photographs to introduce new vocabulary words to students. Always integrate students' native languages when introducing new words.	Sing and dramatize a song about vehicles and dramatize. Revisit KWL chart.	Create a graph about to analyze how students get to school. Students can create the graph during morning activities or morning meeting. Ask students to analyze the graph – which mode of transportation do the most children take? How do you know? How many children walk? Etc.	Revisit KWL chart Show students a variety of vehicles. Ask them to predict where each vehicle goes and what it transports.

Read aloud (anchor)	<p><u>Richard Scarry's Cars Trucks and Things That Go</u>, by Richard Scarry</p> <p>What vehicles do you see in the book? What is similar about all of the vehicles in the book? What is different?</p> <p>(DOK: Level 2)</p>	<p><u>The Little Engine that Could</u>, by Watty Piper</p> <p>What types of vehicles did you see in the book? What are these vehicles carrying?</p> <p>(DOK: Level 1)</p>	<p><u>Whose Vehicle is this?: A Look at Vehicles Workers Drive- Fast, Loud, and Bright</u>, by Sharon Katz Cooper</p> <p>Where can we find vehicles? Who operates vehicles?</p> <p>(DOK: Level 1)</p>	<p><u>Richard Scarry's Cars Trucks and Things That Go</u>, by Richard Scarry</p> <p>Create a Venn Diagram to record similarities and differences between two vehicles in the book.</p> <p>(DOK: Level 2)</p>	<p><u>Whose Vehicle is this?: A Look at Vehicles Workers Drive- Fast, Loud, and Bright</u>, by Sharon Katz Cooper</p> <p>Look at the pictures in the book. What is a vehicle? What isn't a vehicle? How do you know?</p> <p>(DOK: Level 3)</p>
Small groups	Sort vehicles and non-vehicles and discuss why each item belongs with its group.	Sort vehicles by color, size, shape, function, parts, etc. Discuss the similarities and differences between vehicles.	Observe pictures of vehicles and their drivers and identify what the vehicles might transport. Help students make text-to-real world connections after reading <u>Whose Vehicle is this?: A Look at Vehicles Workers Drive- Fast, Loud, and Bright</u> , by Sharon Katz Cooper.	Observe pictures of vehicles and their drivers and identify what the vehicles might transport. Help students make text-to-real world connections after reading <u>Whose Vehicle is this?: A Look at Vehicles Workers Drive- Fast, Loud, and Bright</u> , by Sharon Katz Cooper	Sort vehicles and non-vehicles and make a list characteristics that are common among all vehicles (e.g. all have a place to hold people/things, all have a way to move).
Outdoors	Take a few books about vehicles outside and encourage children to look for vehicles in the books and outdoors.	Encourage children to draw one vehicle that they find outdoors.	Go on a neighborhood walk with clipboards, writing tools, and magnifying glasses to examine vehicles and parts of vehicles. Create a classroom mural about the vehicles you observe.	Provide chalk for children to draw vehicles and their drivers.	Provide rulers, snap cubes, blocks, etc. for students to measure toy and real vehicles.

Read aloud (supporting)	<u>Emergency Vehicles</u> , by Weldon Owen	<u>Construction Trucks</u> , by Jennifer Cambria	<u>The Three Little Rigs</u> , by David Gordon	<u>Don't Let the Pigeon Drive the Bus!</u> , by Mo Willems	<u>Freight Train</u> , by Donald Crews
Lunch	Talk about foods that arrive on vehicles. For example, if eating bananas, talk about how those bananas get from where they are grown to the city. If eating apples, talk about how apples get to the city.				
Centers	See above section on centers for details. This week, introduce the following materials: books about vehicles, such as <u>The Little Engine that Could</u> and <u>Trucks</u> . Put a variety of vehicles in the science, art, and water table centers.				
Closing Meeting	What did we learn about vehicles today?	Look around the room—turn and talk with your neighbor about a vehicle in the room.	Share something you learned about vehicles today.	Tell us one thing that vehicles transport.	What types of vehicles did you see today?

VIII. Sample lesson plans

The following are sample lesson plans that can be used during the unit. You can use the plans as written or adapt to best fit the needs of your students.

- [Sample 1](#): Know, Wonder, Learn
- [Sample 2](#): Reading Truck by Donald Crews
- [Sample 3](#): Reading Whose Vehicle is This? By Sharon Katz Cooper
- [Sample 4](#): All around town!
- [Sample 5](#): How Many Trucks?
- [Sample 6](#): Building Ramps

Sample 1: Know, Wonder, Learn

Standards

- *Literacy:* PK.SL.1. With guidance and support, participate in collaborative conversations with diverse partners about pre-kindergarten topics and texts with peers and adjust in small and large groups.
- *Social-Emotional Development:* PK.SED.4. Develops positive relationships with their peers.

Objective

- Students will work together to document their discussion about what they know, what they wish to know, and what they have learned.

Time Needed

- 10 minutes during large group each week.

Materials and Prep

- Create a chart with three columns to document what students know, wonder and learned about transportation and help organize their thoughts.

Learning Experience

1. Before you read any books in the unit, ask students what they know and wonder about vehicles and transportation.
2. Use this opportunity to introduce some vocabulary words that they'll experience throughout the unit.
3. Throughout the unit, read the informational texts and discuss what they learned about transportation from each book.
4. You may want to alter the chart to reflect the kind of questioning you've been doing with your students. For example, ask what they noticed on a walk.
5. Throughout the unit, revisit the chart and ask students what they have learned about transportation. Chart their responses. You can also encourage students to add to the "wonder" column throughout the unit.

Sample KWL Chart:

What do we <u>know</u> about transportation?	What do we <u>wonder</u> about transportation?	What did we <u>learn</u> about transportation?
<ul style="list-style-type: none">• Cars and trains• Planes• Some things have wheels and go fast• Some things have wings to fly• Some things go in the water• You have to drive the things to go	<ul style="list-style-type: none">• Who drives a boat? How do you learn that?• What goes on the freight trains?• How fast can a car go?• Can a boat captain fly a plane?	<ul style="list-style-type: none">• Captains drive boats and have special licenses• Things that go are called vehicles• Vehicles help us get food and clothes and get to see places• Vehicles have to follow safety rules

Sample 2: Reading Truck by Donald Crews

Standards

- *Social Emotional Development*: PK.SED.4. Develops positive relationships with their peers.
- *ELA/Literacy*: PK.RIT. 10. With prompting and support, actively engage in group reading activities with purpose and understanding.

Objective

- Students will work together to discuss trucks and identify aspects of a truck.

Time Needed

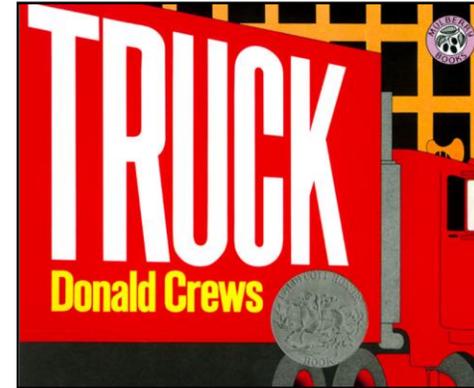
- 15 minutes for read aloud

Set up and Materials

- Truck, by Donald Crews
- Chart paper

Learning Experience

1. Review the content of the book prior to reading with students. Mark the pages with Post-it notes with your prompts to students.
2. Explain to students that you'll be reading an "informational book about trucks." This book will provide "real life information and facts about trucks through pictures."
3. Introduce the front cover of the book and underline the title of the story with your finger from left to right while reading the title, "Truck." State the author/illustrator's name, "Donald Crews." Take a moment to closely examine the front cover. Prompt students to "look closely at the picture to figure out what the story is about."
4. As you read point to illustrations that connect to the key words. Provide definitions in the students' dominant and heritage languages if applicable.
5. Frequently summarize what is happening and pause to prompt the students with questions:
 - a. "What do you notice in this picture?" (pp. 1-2)
 - b. "Signs provide signals and information to the truck drivers. Can you tell me about these signs here?" (pp.3-4: Left arrow crossed out, one way, stop sign)
 - c. "Tell me about the trucks on these two pages. What do you think is happening here?" (pp. 9-10: Trucks in gridlock traffic)
 - d. "I notice the front of a truck exiting the tunnel and the back of a truck entering the tunnel. What is the red truck doing...entering or exiting? What do these two signals tell us?" (pp. 11-12: Buses exiting and entering with red x and green arrow.)
 - e. "What is happening in this picture? What do you think trucks need to do to drive safely in the rain?" (pp. 19-20: Rainfall on Route 101N)



- f. “The truck is on a ramp. Ramps loop around so that cars and trucks can travel in different directions. I wonder where the red truck is headed. Where do you think the truck is headed?” (pp. 23-24: Ramps with vehicles)
6. After the read aloud ask students what they learned about trucks. Dictate what the students say on chart paper and write their ideas name and date next to their thoughts. Keep notes in file folders with the student’s responses on a teacher note sheet.

Sample 3: Reading Whose Vehicle is This? By Sharon Katz Cooper

Standards

- *Literacy*: PK.RIT.1. With prompting and support, ask and answer questions about details in a text.
- PK.RIT. 10. With prompting and support, actively engage in group reading activities with purpose and understanding.
- PK.SL.1. With guidance and support, participate in collaborative conversations with diverse partners about pre-kindergarten topics and texts with peers and adults in small and large groups.

Objective

- Students will listen to a book, answer questions about it, and engage in a brief discussion about the book.

Time Needed

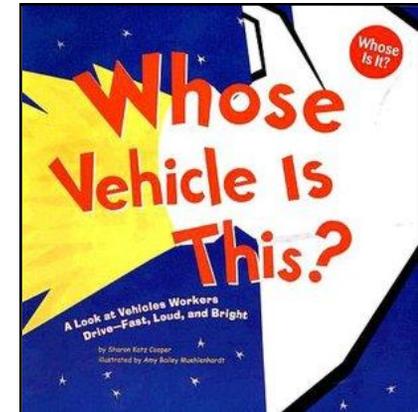
- 15 minutes in small or large group

Materials and Prep

- Book
- KWL chart, specifically the “Learn” piece

Learning Experience

1. Explain to students that you will be reading an “informational book on transportation and vehicles.” This book will provide “real life information, or facts, on transportation.”
2. Introduce the front cover of the book and underline the title of the story with your finger from left to right while reading the title, Whose Vehicle is this?: A Look at Vehicles Workers Drive- Fast, Loud, and Bright
3. State the author/illustrator’s name, “Susan Katz Cooper.” Briefly explain that this author wrote the words and illustrated the pictures.
4. Take a moment to closely examine the front cover. Prompt students to “look closely at the pictures to figure out what the story is about.”
5. Start reading the text while pausing to prompt the students with the following:
 - a. What types of vehicles do you notice in this picture?
 - b. Who drives these vehicles?
 - c. How do the vehicles stay safe?
 - d. What are some cargo items that the vehicles carry?
 - e. What do we do with the cargo on vehicles?
6. As you read, point to illustrations that connect to the key words listed above. Provide definitions in students’ dominant and heritage languages.
7. After the read aloud, chart what students learned about transportation from the book under LEARN. Label what they say in response with their names.



Sample 4: All around town!

Standards

- *Math*: PK.OAT.1. Demonstrate an understanding of addition and subtraction by using objects, fingers, and responding to practical situations (e.g. if we have 3 apples and add two more, how many do we have?).
- *The Arts*: PK.A.5. Participates in a variety of dramatic play activities to represent fantasy and real life experiences.
- *Approaches to Learning*: PK.AL.3. Approaches tasks, activities and problems with creativity, imagination and/or willingness to try new experiences or activities.

Objective

- In this activity students will explore various linguistic concepts, such as moving trucks “into tunnels” and “onto bridges” and the mathematical concepts of addition and subtraction.

Time Needed

- 15-20 minutes as a center time activity

Set-Up & Materials

- Truck by Donald Crews.
- Variety of materials – cardboard, glue, paper, containers, blocks, trucks, etc.

Learning Experience

1. Read Truck by Donald Crews.
2. Facilitate a discussion around the illustrations in the text.
3. Provide students with paper, crayons, tape, cardboard, scissors, and boxes to create props from the text.
4. Explain to students that they need to build a roadway for trucks that includes bridges, tunnels, a large gas station, and a main road.
5. Encourage students to create signs for the roads and gas station.
6. Introduce what it means to go into something, like a tunnel, and onto something, like a bridge.
7. Encourage students to move their vehicles into, over, under, and through the tunnels, bridges, roads, etc. Encourage students to use positional words as they describe the movement of their vehicles.
8. Encourage students to discuss how many vehicles are on the road, at the gas station, etc. Encourage students to add and subtract small quantities of vehicles (e.g. There were four vehicles on the road, but one stopped for gas. How many are there on the road now?).



Sample 5: How Many Trucks?

Standard

- *Math*: PK.OAT.1: Demonstrate an understanding of addition and subtraction by using objects, fingers, and responding to practical situations (e.g. if we have 3 apples and add two more, how many do we have?).
- PK.AL.3. Approaches tasks, activities and problems with creativity, imagination and/or willingness to try new experiences or activities.

Objective

- Students will explore the concept of addition and subtraction by combining and separating up to 5 trucks while playing in centers.

Time Needed

- 5-10 minutes in small groups or centers

Set-Up and Materials

- Build a roadway on the floor as a center time activity with students.
- Have a designated “main road.”
- Have a variety of trucks available for students to explore with in open-ended play before engaging in the structured task.
- Have pictures of trucks ready to stick to a wall, chart paper, or magnetic board to model verbal directions to students (see “truck photographs”).
- A variety of five trucks, safe for small children.
- Story cards with mathematical prompts for students (see sample [teacher story](#) cards in the resources section)
- A child-created bridge, tunnel, gas station, roads, and street signs
- Images of trucks
- A wall, chart paper, or magnetic board to model adding and subtracting trucks to the road using real images of trucks.



Learning Experience

1. During center time invite a small group of 3-5 students to play a game using the trucks and roadway they created on the floor.
2. Explain that you will be playing a mathematical game using addition and subtraction. Reinforce that addition means to “combine trucks” and subtraction means to “separate trucks.” Show them what you mean when you say, “Add 2 trucks to the road” and “Subtract 1 truck from the road.”
3. Explain to the students that they will be listening to a story and adding and subtracting trucks to the road. They need to listen and watch the teacher to know when it’s their turn
4. Take a moment to practice a few suggested teacher prompts:

- a. Two trucks drive through the tunnel and onto the road. How many are on the road?
 - b. One truck needs gas and stops at the station. Subtract one truck from the road. How many are on the road? How many are at the gas station?
5. Now start playing the game! Create your own story about trucks while prompting students to add and/or subtract within five trucks.
6. Possible questions to ask students during the game:
- a. Please explain your answer.
 - b. Did anyone find a different answer?
 - c. How many more trucks?
 - d. How many fewer trucks?
 - e. How many trucks are on the road / at the gas station / on the bridge?
 - f. Subtract ___ number of trucks.
 - g. Add ___ number of trucks?
 - h. When we separate trucks, do we end up with more or fewer trucks all together?
 - i. When we combine trucks, do we end up with more or fewer trucks all together?



Sample 6: Building Ramps

Standards

- *Approaches to Learning:* PK.AL.3. Approaches tasks, activities and problems with creativity, imagination and/or willingness to try new experiences or activities.
- *Science:* PK.S.3. Generates explanations and communicates conclusions regarding experiments and explorations.
- *Science:* PK.S.6. Describes and compares the effects of common forces (pushes and pulls) on objects, such as those caused by gravity, magnetism, and mechanical forces.

Objective

- Students will explore beginning concepts of physics as they build ramps and experiment with different angles and materials on the ramps

Time Needed

- About 20 minutes in a small group

Materials and Prep

- Unit blocks, cardboard boxes, containers, etc.
- Toy vehicles
- Materials such as Velcro or tape to add to the ramp
- Books/pictures showing ramps



Learning Experience

1. Gather students in a small group and show them the vehicles and the blocks. Ask what they think they are going to do with the materials.
2. Encourage children to recall information from the texts about vehicles and how they travel. Ask guiding questions such as: “What does a train do when it goes down a mountain?” or “What happens when a truck goes down a hill?” You may want to chart children’s responses.
3. Explain that today everybody will work together to build a ramp and see how different vehicles travel down the ramp.
4. Show students pictures of ramps. Then ask them how they might build a ramp out of the materials in the center. You may have to demonstrate for the students.
5. Allow students to build a ramp; if students have a hard time working together, they can each build a ramp. As they work, narrate their behavior and prompt them to talk with their classmates.
6. When students are done, have them make predictions as to which vehicle will go down the ramp the fastest. Then have them try the vehicles, track the results, and make hypotheses as to why certain vehicles are faster than others. Document by taking pictures.
7. In follow-up sessions, have the students add Velcro to the ramps or use various materials such as paper towel tubes to make ramps and see the differences in how the vehicles travel down the ramps.

IX. Sample student work

Below are examples of student work that was produced throughout this unit. Note the alignment to standards and relationship to the overarching question, enduring understandings, and unit sub-topics. Some examples may fit under more than one standard, essential understanding, and/or subtopic.

Example 1: ELA/Literacy and Social-Emotional



Standards:

- *ELA/Literacy*: PK.SL.1. With guidance and support, participate in collaborative conversations with diverse partners about pre-kindergarten topics and texts with peers and adults in small and large groups.
- *Social-Emotional*: PK.SED.4. Develops positive relationships with their peers.

Essential Understanding:

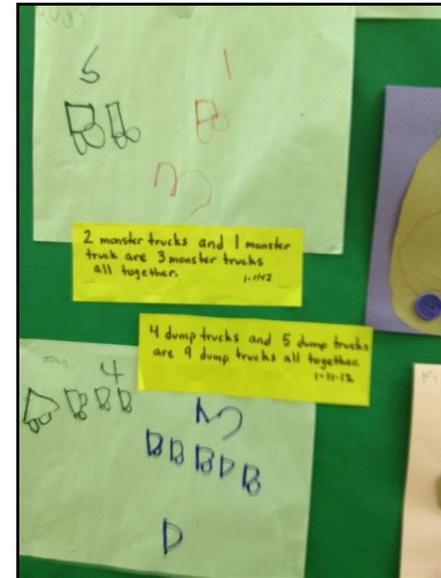
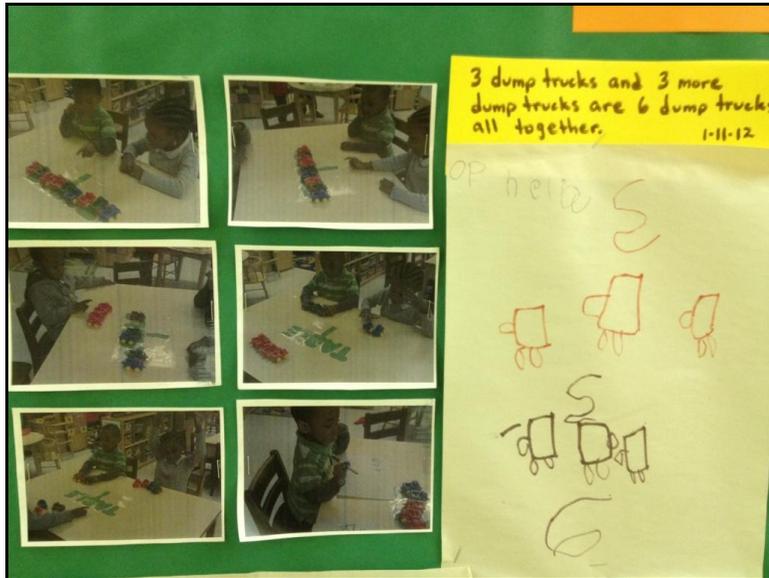
- Vehicles are important to our community for many reasons; for example, vehicles carry food, clothes, and people.

Unit Sub-Topic:

- How do different vehicles carry cargo and passengers? What are the features of different vehicles and how do vehicles move? How do vehicles know where to go and how to stay safe?

Example 2: Math

Students used manipulatives to add and subtract quantities of vehicles, and then they drew pictures about their process.



Standards:

- *Math*: Mathematical Practice: Model with mathematics.
- *Math*: PK.OA.1: Demonstrates an understanding of addition and subtraction by using objects, fingers, and responding to practical situations (e.g. if we have 3 apples and add two more, how many do we have?).

Essential Understanding:

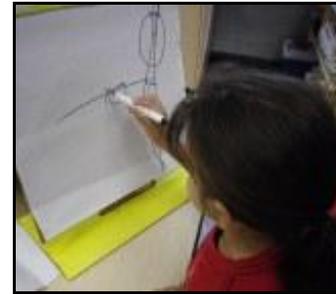
- We can measure, count, add, subtract, and make patterns out of toy vehicles.

Unit Sub-Topic:

- How are vehicles the same and different? How can we sort vehicles based on their characteristics? How can we count, measure, add, and subtract vehicles?

Example 3: Science, ELA/Literacy, and Social-Emotional

Students used different materials to make ramps and then drew pictures to document their process and findings.



Standards

- *Science:* PK.S.6. Describes and compares the effects of common forces (pushes and pulls) on objects, such as those caused by gravity, magnetism, and mechanical forces.
- *ELA/Literacy:* PK.W.2. With prompting and support, use a combination of drawing, dictating, or writing to compose informative/explanatory texts in which they name what they are writing about and apply some information about the topic.
- *Social-Emotional:* PK.SED.4. Develops positive relationships with their peers.

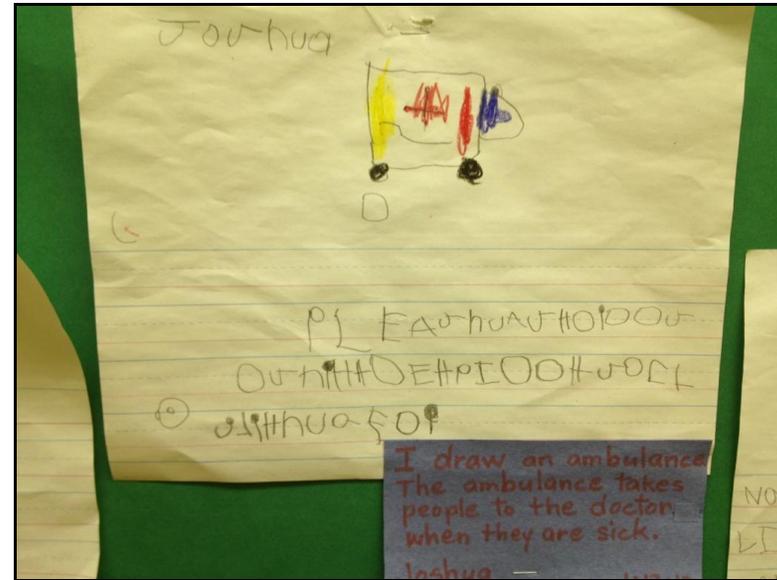
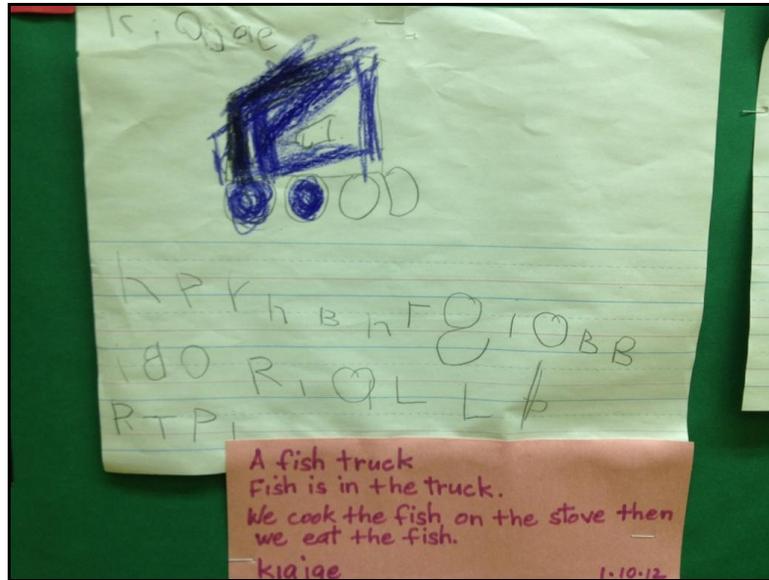
Essential Understanding

- Vehicles use different modes to transport people and/or things- for example, planes fly in the air, boats float in the water, and cars drive on land- but they all have a way to move and a place to put cargo and/or passengers.

Unit Sub-Topic

- How do different vehicles carry cargo and passengers? What are the features of different vehicles and how do vehicles move? How do vehicles know where to go and how to stay safe?

Example 4: ELA/Literacy



Standard:

- *ELA/Literacy*: PK.W.2: With prompting and support, uses a combination of drawing, dictating, or writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

Essential Understanding:

- Vehicles are important to our community for many reasons; for example, vehicles carry food, clothes, and people.

Unit Sub-Topic:

- Why are vehicles important? How do vehicles help us?

Example 5: ELA/Literacy and Social-Emotional

Students engaged in a collaborative conversation about trucks. The teacher documented their language.

What can trucks do?
Jayla- trucks can drive and build
Nakhia- They can fix other trucks, clean the road, drive and go to the gas station.
Jaden- Trucks can take gas to the gas station.
Leilani- Trucks can drive on the highway.
John- Trucks can take cars that are broken.
Qudir- Fire trucks have water for the fire.
Ophelia- Trucks can drive on the street.
Zion- Garbage trucks can pick up the garbage.
Zyara- Trucks can drive and say, "VROOM".
Zedarn- Fire trucks can go to the fire and put out the fire.

Where does the garbage truck take the garbage?
Nakhia- to the water
Derick- to the garbage station
Jayla- to the gas station
Savannah- to the dump
Ophelia- to the a boat it carry the garbage can
Zedarn- to the garbage
Moriye- to the garbage station
John- to the garbage
Kiajae- to the garbage bag
Jaden- to a hole in the garbage station
Qudir- to the garbage
Jerome- to the garbage

What would happen if we didn't have any garbage trucks?
Nakhia- The garbage will be full.
Kiajae- Its garbage.
John- Cant put it in the trash.
Leilani- There is going to be garbage on the sidewalk.
Moriye- There is going to be to much garbage in the can.
Ophelia- You have to take the garbage to the garbage can.
Savannah- The garbage will fill all over the world.

What is a dump truck? What does it do?
Jayla- It takes rocks in the park way.
Jada- It pick up everything up the floor.
John- It can pick up the garbage.
Derick- Drive.
Ophelia- It pick up dirt.
Jaden- It pick up sand, dirt and rocks and put it on the ground.
Joshua- It pick up dirt.
Jerome- It can pick up rocks and take it to the rock place.
Leilani- It can pick up sand, dirt and rocks.
Kiajae- It can get the dirt and rocks then the man pick up the dirt.

Standards:

- *ELA/Literacy*: PK.SL.1. With guidance and support, participate in collaborative conversations with diverse partners about pre-kindergarten topics and texts with peers and adults in small and large groups.
- *Social-Emotional*: PK.SED.4. Develops positive relationships with their peers.

Essential Understanding:

- Vehicles are important to our community for many reasons; for example, vehicles carry food, clothes, and people.

Unit Sub-Topic:

- How do different vehicles carry cargo and passengers? What are the features of different vehicles and how do vehicles move? How do vehicles know where to go and how to stay safe?

Example 6: ELA/Literacy and The Arts

Students use paint, glue, and collage materials to respond to informational and literary texts about trucks.



Standards:

- *The Arts*: PK.A.1. Expresses oneself and represents what he/she knows, thinks, believes and feels through visual arts.
- *ELA/Literacy*: PK.W.2. With prompting and support, use a combination of drawing, dictating, or writing to compose informative/explanatory texts in which they name what they are writing about and apply some information about the topic.

Essential Understanding:

- A variety of vehicles, such as cars, trucks, trains, planes, and boats, transport materials and people. Vehicles can be different sizes and colors and are used to meet different needs.

Unit Sub-Topic:

- What is a vehicle? Who operates various vehicles and what do the vehicles carry?

Supporting resources

These are some ideas of how you can help students connect what they are learning in school with the real world. You can use these ideas to help children students make the connection between books and what they see to how these concepts affect their everyday life.

Field Trips

- Visit a gas station, garage, or a truck service center.
- Take a virtual field trip to the Henry Ford Museum: <http://www.thehenryford.org/education/transportationInAmerica.aspx>
- Visit the New York Transit Museum in Brooklyn: <http://www.transitmuseumeducation.org/>

Guest Speakers

- Invite a truck driver to your classroom to speak with students about trucks and how s/he uses her/his truck. Try the local UPS driver!
- Invite a storeowner to your classroom to discuss how s/he uses trucks to deliver goods. For example, ask a grocery store manager to explain how trucks deliver food.
- Invite an EMT to talk to the students about how they use ambulances to help people.
- Invite a firefighter, a pilot, or a captain to talk about how their vehicles work.

Science Experiments

Magnetic Roads

- Materials Needed: poster board, paper clips, magnets, toy vehicles
- On a large piece of poster board, draw a road. Tape large paper clips under transportation themed items. Give the children a magnet wand or other magnet.
- Balance board over the backs of two chairs. Show the children how to move the magnet under the board to move the cars on the road! Note: This can also be done in your Sand and Water table if you have a clear bin in the table. The children would lay on the floor under the table and use the magnet wands to move metal cars, trucks, etc. that are in the bin.

Oceanic Bottles

- Materials needed: small plastic bottle, food coloring, hot glue gun, toy vehicles
- Fill a plastic bottle plastic bottle (we use smaller bottles such as 1 liter bottles. The 2 liter bottles are difficult for the children to manipulate.
- Fill 2/3 of the way with blue colored water and the other 1/3 with mineral oil. Hot glue the cap on.
- Show the children how to move it to make waves in the bottle.
- Extension. Use bottles with a large mouth opening (like a juice bottle). Fill 3/4 of the way with water and color with blue food coloring. Add sand. Add small transportation theme items. Hot glue cover on and let the children search for the items by moving it around!

Sail Boating

- *Materials Needed:* Index cards, scissors, bin to put water in, dish detergent.
- Cut an index card to a 2 1/2 inch wide by 1 1/2 inch long triangle.

- Cut a small notch on the back (not the point of the triangle).
- Place the card on water. Pour a small amount of dish detergent into the notch and watch it push the sail boat across the water!
- Note: The water tension is broken by the soap.

Air Balloon

- *Materials needed:* Small plastic bottle, 1 tablespoon of sugar, water, 1 packet of yeast, one small round balloon.
- Put sugar into bottle.
- Fill 1/3 of the way with water.
- Add the packet of yeast.
- Mix (lightly shake until mixed).
- Cover bottle with the balloon.
- Watch bottle over the next 1/2 hour.
- Note: The yeast consumes the sugar and then creates carbon dioxide gas which fills the balloon!

Websites

- <http://peepandthebigwideworld.com/media/pdf/peep-guide-ramps.pdf> - Sample unit with ideas about how to explore ramps.
- http://www.naeyc.org/files/naeyc/Ramps_Pathways.pdf - Article about ramps and science in pre-k.
- http://www.ehow.com/info_7843819_preschool-truck-crafts.html - Make trucks out of a variety of materials.
- <http://www.lindaslearninglinks.com/transportation.html> - Songs, crafts, and other transportation ideas.
- <http://www.kididdles.com/lyrics/b014.html> - The Wheels on the Bus.
- <http://www.songsforteaching.com/trainongs/> - Songs about transportation
- <http://storybird.com/> - Web 2.0 application for sharing observations and stories.
- <http://illuminations.nctm.org/> - Resources for teaching math concepts.

Teacher Texts

- Heroman, Cate & Jones, Candy (2004). *Literacy: The Creative Curriculum Approach*. Washington, DC: Teaching Strategies, Inc.
- Copley, Juanita V., Jones, Candy & Dighe, Judith (2007). *Mathematics: The Creative Curriculum Approach*. Washington, DC: Teaching Strategies, Inc.
- Neumann-Hinds, Carla. (2007). *Picture Science: Using digital Photography to Teach Young Children*. St. Paul, MN: Red Leaf Press
- Campbell, P.F., & Langrall, C. (1993). Making equity a reality in classrooms. *The Arithmetic Teacher*; 41, 2
- ProQuest Education Journals. Sarama, J., & Clements, D.H. (2000). Standards for preschoolers. *Teaching Children Mathematics*, 7 (1), 38-41

Family Communication

- [Sample family letter](#)
- More ideas can be found in the [family engagement](#) section

Sample Family Letter

Dear Families,

We are beginning a unit on transportation that will expose children to various modes of transportation in the community and around the world. Here are some of the questions that we will try to answer:

- What is transportation?
- Why is transportation needed?
- How do things get transported?
- How do we know if something is a vehicle?
- How do vehicles move?
- Why is it important for people to have various modes of transportation? How do vehicles to help us?

We need *your* help. You can help extend your child's learning at home by:

- Talking to your child about transportation. Ask what types of books we're reading and what vehicles we have looked at in class.
- Look around your home and on when you are on the go. Take a picture of vehicles around you or have your child share something about a vehicle they see at home or on the go with us in class.

If you work in transportation, please let us know. We would love for you to come in and talk with the students about transportation!

Please let us know if you have any questions.

Thank you so much,

XXX

Sample Story Cards for "How Many Trucks?"

<p>Five trucks drive through a tunnel and into NYC.</p> <p><u>Student Prompt:</u></p> <ul style="list-style-type: none"> • Can you add <i>five</i> trucks to the road and drive them through the tunnel? 	<p>After the <i>five</i> trucks drive through the tunnel into NYC, <i>three</i> trucks stop at a gas station.</p> <p><u>Student Prompts:</u></p> <ul style="list-style-type: none"> • Subtract <i>three</i> trucks from the road to stop at the gas station. • How many trucks are left on the road? [2] 	<p>Now <i>two</i> of the trucks at the gas station are ready to drive! Add <i>two</i> trucks to the road b with the other <i>two</i> trucks.</p> <p><u>Student Prompt:</u></p> <ul style="list-style-type: none"> • How many trucks are on the road? [4] 	<p>Suddenly it starts raining so <i>one</i> truck pulls off the road and goes back into the gas station. Subtract <i>one</i> truck from the road?</p> <p><u>Student Prompts:</u></p> <ul style="list-style-type: none"> • How many trucks are in the gas station? [2] • How many trucks are on the road? [3]
<p>The rain finally stops and all five trucks are ready to drive!</p> <p><u>Student Prompts:</u></p> <ul style="list-style-type: none"> • Let's think...we have <i>three</i> trucks on the road but want five trucks on the road. How many more trucks do we need? [2] • Now all <i>five</i> trucks are back on the road! 	<p>All <i>five</i> trucks are driving on the road together, but then <i>two</i> trucks turn to go through the tunnel.</p> <p><u>Student Prompts:</u></p> <ul style="list-style-type: none"> • Teacher prompts two students to drive their trucks through the tunnel. • We had <i>five trucks</i> and subtracted <i>two</i>. How many trucks are left on the on the road? [3] 	<p>Oh no! The <i>two</i> trucks in the tunnel realize that they made a wrong turn! They need to go back to the road.</p> <p><u>Student Prompts:</u></p> <ul style="list-style-type: none"> • Do we need to add or subtract trucks? • Add the <i>two</i> trucks to the road. • How many trucks do we have all together? [5] 	<p><i>Three</i> trucks turn off the road and drive onto the bridge.</p> <p><u>Student Prompts:</u></p> <ul style="list-style-type: none"> • How many fewer trucks are on the road? [2] • How many trucks are on the bridge? [3]

