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| Grade Level: | **First Grade** | Subject: | Transportation Safety | Prepared By: | **Reeves Turner** |

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| Overview & Purpose Students will be able to understand transportation safety and use this understanding to create a vehicle that protects an egg during transportation. | Education Standards Addressed: S1CS3.  Students will use tools and instruments for observing, measuring, and manipulating objects in scientific activities.   1. Use ordinary hand tools and instruments to construct, measure, and look at objects. 2. Make something that can actually be used to perform a task, using paper, cardboard, wood, plastic, metal, or existing objects. 3. Identify and practice accepted safety procedures in manipulating science materials and equipment. |

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|  | Procedure |  |
| Objectives (Specify skills/information that will be learned.) | Students will be able to understand transportation safety and the different mechanisms used for keeping passengers safe. This understanding will transfer into the creation of a transportation vehicle that protects an egg like a passenger as the vehicle is put into motion. | Materials Needed For demonstration car:   * 1 bag of materials (2 axels, 2 wheels, 2 straws, 1 rubber band, 1 index card) * 1 piece of construction paper * 1 egg   For students’ activity:   * 1 bag of materials *per student* (2 axels, 2 wheels, 2 straws, 1 rubber band, 1 index card) * 1 piece of construction paper *per student* * 1 egg *per student*   General materials:   * Scissors * Tape * Decoration materials |
| Information (Give and/or demonstrate necessary information) | 1. Begin this activity by talking to students about cars. Ask students if their parents drive big cars or small cars. Ask students if they sit in the back seat. Ask students if they sit in a car seat. Ask students if they have ever been in a car accident. 2. Discuss car accidents and talk about different scenarios of when car accidents might occur. Lead into discussion about things that keep us safe in the car. (I.e.: seat belts, airbags, hood, trunk, car seats) 3. Show students the car that you premade to transport the demonstration egg. Point out different safety mechanisms such as the rubber band as a seat belt or tape on the front and back to act as trunk and hood. 4. In addition to transportation safety, address the safety procedures that you used to create your car. (I.e.: scissor safety; do not point at friends, do not run with them, be careful not to cut your fingers. Paper safety; do not leave on the floor because people might trip, be careful not to get a paper cut. Tape safety; do not touch the sharp part that cuts the tape, do not put tape on others.) 5. Explain to students why you created the different mechanisms to protect the egg (I.e.: rubber band keeps egg in place like a seatbelt, tape on front and back absorbs some of the impact from the crash like a trunk and hood, tape on the sides acts like airbags.) 6. Demonstrate how your car safely transports the egg down the ramp without breaking it. Release the egg car at the top of the ramp and let it ride down to the bottom of the ramp and run into the end block. |
| Verification (Steps to check for student understanding) | In order to verify students knowledge of transportation safety, ask some of the following questions to individuals as well as the class:   1. How did the egg stay safe and not break? 2. What did you see on the car that could have kept the egg safe? 3. Was the car moving fast or slow? 4. Did the egg move within the car? 5. What part of the car ran into the block at the end of the ramp? 6. What would you change about the car?   Then transition into safety with materials by having a class discussion about ways students will be safe while creating their own cars. Remind them about the key points you made earlier: scissors, paper, tape. | Other Resources  * Ramp for cars with block at the end * Plastic tarp for cracked egg mess |
| Activity (Describe the independent activity to reinforce this lesson) | Students will be asked to create their own egg car using the same materials that you used to create the demonstration car. Each student will be given the same bag of materials that you used, 1 piece of construction paper and tape.   1. Encourage students to be creative and create a vehicle that will use the transportation safety mechanisms that were discussed earlier. 2. Ask students to use only the materials given to them in order to protect the egg. 3. Once students have finished their vehicles, let them take turns sending their vehicles with eggs down the ramp to test the safety.   Follow up with class discussion on whose eggs cracked and who’s survived. Ask students about different constructions of their cars. |
| Summary | Students will be able to understand transportation safety and the different mechanisms used for keeping passengers safe. This understanding will transfer into the creation of a transportation vehicle that protects an egg like a passenger as the vehicle is put into motion. Teacher will verify understanding by class discussion and an independent activity of creating their own cars will reinforce students understanding of transportation safety as well as classroom materials safety. | Time Needed1.5 Hours |