



Transportation

Essential question: How are materials transported safely?

Engage: Draw a concept map or timeline illustrating the journey of an egg transported from the farm, to the store then home to you.

How are easily breakable materials transported safely?

Explore: Can you come up with a better material to transport an egg from the farm to the store than is currently used? Assume that all egg cartons are lost or destroyed. Your challenge is to find a new way to transport an egg from the farm to the store assuming the egg was on a truck on a bumpy road.

1. Make several different containers to transport the egg and test each. (You may want to put the egg in a plastic bag to keep the mess at a minimum.) Talk with an adult about what materials you might use and collect them. (You might consider using items such as a small container or cup with plastic, paper, cloth, grass, Popsicle sticks).
2. Place your designed container, with egg inside, on a vehicle such as bicycle, wagon, skateboard or wheelbarrow and travel across various surfaces to see how well your container protects the egg. You could also drop the designed container from a certain height. Check with an adult before testing and be sure you are somewhere that you don't make a mess or break anything.

Think about: What type of materials work best for transportation of an egg and why?

Explain: Look back at your concept map/timeline. Where on your map does carton design and testing occur? If you did not include this originally then where would you add it?

Based on your results, what changes would you make to your best design and why?

Expand: List five items you use daily and write a recommendation to the parent company of how they should transport these items.

How are your recommendations different based on the product, give specific examples?

What should be considered when transporting items that must remain cold?

Evaluate: Revisit and answer the essential question.

Discuss with a family member your most successful egg design and describe how you would further improve your design.