KOHL CHILDREN'S MUSEUM

STEAM Explorers

THE PLACE WHERE AWESOME LIVES

What Pet Should I Get?

Help Emma get her newly rescued puppy from the animal shelter to her home. Design and construct the best way to carry animals to and from a shelter.

Big Idea

Students will plan and construct a pet carrier that will be able to hold a five-pound pet, as well as any necessary pet care items it might require.

Standards

K-PS2-1 Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.	Students will investigate the impact of the five-pound weight on their pet carrier, determining whether or not their carrier is able to successfully transport the weight of the pet.
K-PS2-2 Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or pull.	Students will conclude the effectiveness of their carrier and determine whether or not it worked as originally intended, or if additional change is needed.
11.A.ECb Express wonder and curiosity about their world by asking questions, solving problems, and designing things.	Students will identify the design challenge and use their knowledge about the given materials to solve the problem.

Materials

- Reusable resources such as boxes, cardboard, pipe cleaners, string, fabric, and newspaper
- Connectors such as tape, brads, glue, wire, and staples and staplers
- Tools such as scissors, measuring tapes, child-safe cardboard cutters, and rulers
- A balance scale and a 5lb. weight
- Pet care items such as unbreakable water bowls, pet toys, and blankets
- Paper and markers, crayons, or pencils

Setup

Materials should be organized so children can collect their items before returning to their workspace to construct. Have the five-pound weights (or other similarly heavy object to serve as a pet-like weight) lined up next to an open space, so students can test their pet carrier with the weights to gauge if it is an effective structure for their pet.

Directions

1. This lesson is inspired by the book *A Home for Dixie: The True Story of a Rescued Puppy* written by Emma Jackson. Begin the lesson by reading this book, and introduce the design challenge to the students: How can you design a pet carrier that a pet owner could use that is strong enough to carry a five-pound pet and other pet care items?
2. Have students brainstorm the following questions:
    a. What animal will you be carrying?
    b. What kind of space does it need?
    c. How will you make sure your carrier is secure when your pet is inside?
3. During or after brainstorming, they can draw and sketch their ideas. Following the design stage, they can collect their materials and build their carrier. After they've constructed their carrier, they can move to the open space and try to test their design. Is the carrier able to hold a five-pound weight while walking with it? Would the students feel comfortable or confident transporting a pet inside their carrier?
4. If the carrier doesn't work, have the students revisit their constructions and investigate where there is room for improvement. Students can explore how they can change the handle and overall construction of their carrier to hold a pet and the materials they require for the inside of their carrier.

Investigation Questions:

- What do you think will happen if…?
- What animal will you be carrying?
- What kind of space does it need?
- Tell me about your carrier.
- How could you change your design so that it…?