Sheep Leap- Adapted from Picture Perfect Science Lessons

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Course: 3rd Grade Science

Unit: Forces and Motion

Standards: 3-5.1, 5.2, 5.3, and 5.4

BIG IDEAS: Gravity, friction, air foil, refraction, inertia, resistance

Essential Question: Can you construct a device that will slow the descent of an object?

Scenario: The students will be given lots of different materials to construct a device that will slow the fall of a toy sheep. Once students have created the devices they will test the devices and see which will make the sheep fall the slowest. The students will release the sheep from a designated point/height and they will time the fall. The device that allows the sheep to fall the slowest will be the winning device.

Materials:

Sheep in a Jeep kits  Trash bags  Newspaper  Tissue paper  Scraps of cloth  Paper Towels

tape  String  Toy sheep  Sheep Leap Assessment sheet

Content Information: The students will have learned about force, motion, pushes, pulls, and gravity (to include friction and inertia) in previous direct instruction lessons. The students will have completed previous investigations on forces and motion using the Sheep in a Jeep kit.

Deliverables: The students will construct a device that will slow the fall of a toy sheep from the height of a ladder in the slowest amount of time.

Parameters: This activity will be completed in 1 hour and 30 minutes. The students will only be allowed to use the materials provided by the teacher. The students will work in teams of 3. The students will drop the device from the height of a ladder. A stop watch will be used to record the time of the descent.

Assessment: Completion of the device for each group, Sheep Leap Assessment sheet, Engineering Journals