ORLANDO Shakes
In partnership with UCF

THE TRUE STORY OF THE 3 LITTLE PIGS!

Matter Matters - The True Story of Substances!

Grade Level(s): 4th
Subject: Science STEM
Florida Standards: Big Idea 8: Properties of Matter
SC.4.P.8.1 Measure and compare objects and materials based on their physical properties including: mass, shape, volume, color, hardness, texture, odor, taste, attraction to magnets.
SC.4.P.8.3 Explore the Law of Conservation of Mass by demonstrating that the mass of a whole object is always the same as the sum of the masses of its parts.

Description: Students will observe real-life straw, sticks, bricks, and sugar (or pictures/videos if not available) and determine their physical properties (shape, color, size/volume, mass, texture, odor, etc.). They will then attempt to build a house like the pigs, measuring the mass of the house vs. the mass of the building materials on a pan balance (conservation of mass).

Objectives:

- Measure and compare objects based on their physical properties.
- Describe the Law of Conservation of Mass.

THE TRUE STORY OF THE 3 LITTLE PIGS!

Matter Matters - The True Story of Substances!

Materials:

- Straw (real or pictures/videos)
- Sticks (real or pictures/videos)
- Bricks (real or pictures/videos)
- Sugar (real or pictures/videos)
- Pan balance or scale
- Various materials for building (suggestions: straws, clay or playdoh, tape, paper, cardboard, pipe cleaners, glue, scissors, etc.)
- Data recording sheet
- Pencil

Procedures:

1. Pass out the data recording sheet.
2. Introduce the materials mentioned in "The True Story of the Three Little Pigs" allowing students to observe the materials directly or via pictures.
3. Have students record their observations on the data recording sheet.
4. Have students plan and build their pig houses.
5. Measure and record the mass of the pig house before knocking it down.
6. Tell the students to blow, stomp, crush, and break down their house.
7. Measure and record the mass of the pig house after it is broken into pieces.
8. Describe the Law of Conservation of Mass (the mass of the whole object is the same as the mass of its parts).

Name _____

Matter Matters

Directions: Draw and label a diagram of your pig house. Make it as strong as possible to avoid any wolves blowing it down (even if by accident due to a nasty cold).

Directions: Measure and record the mass of your pig house before and after it is destroyed.

Mass Whole Pig House (grams)	Mass of Pig House Pieces (grams)

Question:

What did you notice about the mass of the whole pig house versus the mass of the pieces of the destroyed pig house?

_____

_____

_____

_____

_____

_____

_____

Name _____

Matter Matters
Data Recording Sheet

Directions: Observe the materials described in "The True Story of the Three Little Pigs." Then, record your observations of the physical properties in the data chart below.

Name of Object	**Physical Properties Observed** (Examples: Describe the object's texture, color, mass, size/volume, shape, etc.)
Straw	
Stick	
Brick	
Sugar	

Question:

Which physical properties of the straw, stick, and brick made it strong or weak for a pig house?

_____

_____

_____

_____