



Anatomy of Hurricane Resistant Homes

Duration **2:05** (cc)

(Total class time dependent on readers' discussions)

Produced by [Deltec Homes](#)

STEAM Curriculum Lesson Extension:

Sustainably Sound, Grade 7

Goal

Students will analyze information from a video and essay to learn about innovations in building design that combat the negative impact due to the increase in extreme weather events.

Overview

This lesson synthesizes information from a short video, *Anatomy of a Hurricane Resistant Home*, and an informational essay, *Architecture for Extreme Weather Events*. Both of these materials review building design concepts that are being implemented to decrease negative impact to homes and the people living in them as the number of extreme weather incidents increases. Students may choose to view the video either prior to reading the essay or after, whichever will provide them with the best prior knowledge. They may also wish to view the video both before and after reading the passage.

Connections to [EarthX STEAM Curriculum Lesson: Sustainably Sound](#)

In the STEAM lesson, students explore the damage that is created from weather-related natural disasters and are asked to design a structure to better withstand a specific type of weather event. The video and accompanying informational essay detail particular design features to combat the effects of high wind on structures.

Guiding Questions

1. How is the story of the Three Little Pigs like the information found in both the video and the essay?
2. The information from both the video and essay detail how both shape and materials are important in the creation of wind-resistant homes. Which of these two concepts, shape or materials, do you think are most important, and why? (*Some students may suggest that a combination of both is desired.*)
3. Our climate is changing. What advice about enduring this change would you give to people?

Vocabulary

Video

- Hurricane resistant
- Raised foundation
- Storm surge
- Radial floor design
- Panelized construction
- Sheathing
- Steel compression ring
- psi
- Hurricane straps
- Uplift
- Continuous metal tie system
- Steel tension collar
- Roof pitch
- Wind deflection

Essay

- Architecture
- Extreme weather
- Super-cell storms
- Updrafts
- Continuous load path
- Domed roofs
- Hip roofs
- Foundation
- Reinforced concrete
- Multi-ply

Standards

Next Generation Science Standards

MS-LS2-4

TEKS Science Objectives

6.b.8B

7.b.8A

8.b.11