

September 22, 2017

## MakerDay - Design Thinking

Three Little Pigs - Teacher reference

Theory of Loose Parts - gems, shells, and sticks, whatever you have in your Makerspace bin

Loose parts, natural substances, no glue, green challenge, give the students loose parts, ideas are fluid when their ideas are not glued down, not permanent

Start with the story of the three pigs: three houses have been destroyed, what would a pig want for a house? Maybe a pig apartment, multi-family home. Our friend pig's house is destroyed and we need to build a recycled house.

(Loose parts - moved, carried, designed, and re-created.)

(Loose parts - environmentally friendly, moveable structure for the kids. In our ever changing world we need to be aware of our environment.)

(Children can walk away and they can add to it and make it fluid. By not gluing them down we can re-use the supplies again for another purpose. Conversations about what or why those items are placed are organic. Also, connects to Indigenous culture of having moveable homes for seasonal changes.)

## Design Challenge: Beyond the Pen - Designing a Pig Home



**Optional Jumping off Point- Read the Three Little Pigs to the Learners**

### **Overview:**

Our friends the three little pigs and their families have recently lost their homes. As building supplies are scarce and in an effort to build a green home, they want to use readily available and locally sourced supplies.

### **Design Rationale:**

The students are building a home from loose parts (locally sourced materials) so that the home can be moved at a moment's notice. We need to build a house for the pigs so they can move it if the wolf returns. In addition, to be moved in a moment's notice, it's environmentally friendly.

### **Home design:**

A home needs to protect you from the environment.

A home needs to protect us from predators.

Aesthetically pleasing.

Supports family interaction.

### **Problem Scenario:**

Your team has been selected to design and build a housing structure that is environmentally sustainable and portable/moveable in nature. Currently, the pigs find themselves without a permanent home and need to protect themselves from predators and move with their changing needs. For example, if they need to move to a food sources or a predator attack.

### **Parameters:**

- You must use something of everything in the Participant Group Kit provided to you
- You can use items from the local environment (classroom, outdoors, imagination station)
- You can only use the tools provided
- Your prototype should be a scale version and not the actual size

Success will be determined by degree to which your design solution:

- Addresses the design challenge
- Addresses an identifiable need
- Uses the provided materials, resources, and tools
- Is helpful and unique for the pigs who are choosing an environmentally friendly and appropriate design

Questions to further extend your thinking

What do you know?

Why do you think that way?

How do you know?

Can you tell me more?

What questions do you still have?

# **Our Design Thinking Notebook**

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**names**

**Words**

**Ideas**

# **What Do We Know About**

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# **How Do We Know?**

# **What Else Do We Need to Learn?**

# **What Did We Learn?**



# **Sketching Our Ideas**



# **Sketching Our Ideas**



# **Combining Our Ideas Into One Sketch**