

The Cardboard Kingdom: A Multi-Subject Gingerbread Adventure

Materials Needed

- Cardboard (boxes, cereal boxes, or large sheets)
- Scissors (child-safe)
- Glue (strong craft glue, hot glue gun with adult supervision, or strong masking tape)
- Markers, crayons, or paint
- String, yarn, foil, or scrap paper (for decorations)
- Paper and pencil (for drawing plans)
- Ruler or measuring tape
- Festive Music source (optional)
- Book or summary of "Hansel and Gretel" (optional)

Part 1: Introduction (Tell Them What You'll Teach)

Time: 10 minutes

1. Hook & Engagement (History & English)

Educator Prompt: "Imagine you are walking through a forest and suddenly you see a tiny house made entirely of candy and cake! Would you go inside? Today, we are going to explore why people started building these fantasy houses, and then we are going to build our own amazing one out of cardboard."

Talking Point (History): "Did you know that gingerbread houses became popular in Europe during the 19th century after a famous story about a witch and a candy house was written? Let's learn more about it!" (Briefly introduce the concept of "Hansel and Gretel" or historical use of edible architecture.)

2. Learning Objectives

By the end of this lesson, you will be able to:

- Design a 3D structure using a 2D plan (Art & Math).
- Successfully cut, measure, and assemble cardboard pieces (PE & Science).
- Use your house to tell a creative story (English).
- Identify how glue works and how different shapes fit together (Science).

3. Success Criteria

You know you are successful if:

1. Your cardboard house stands up securely.
2. You have decorated your house using at least three different materials.
3. You can tell me a short story about the people or creatures who live inside!

Part 2: Body (Teach It) – Building the Interdisciplinary

House

Activity 2A: Design Planning and Basic Math (I Do/We Do)

Time: 20 minutes

I Do (Modeling): The educator demonstrates drawing a simple plan on paper, emphasizing the need for opposite sides to be the same size. "I want my front wall to be 5 inches wide and 4 inches tall. I must make sure my back wall is exactly the same so they fit the roof!"

We Do (Guided Practice - Art & Math):

1. **Design Planning:** Have the learner draw their gingerbread house design on paper. Encourage them to think about how many walls, what shape the roof will be, and where the doors and windows go.
2. **Measuring and Counting:** Use the ruler to measure the planned dimensions.

Talking Point (Math): "How many pieces of cardboard do we need for the walls and the roof? Let's count them together! We need 4 walls and 2 roof pieces. That's 6 pieces in total."

3. **Cutting Practice:** Use the measured plans to begin cutting the cardboard pieces.

Formative Assessment: Check the learner's measurements. Are the pairs (front/back, side/side) the same size?

Activity 2B: Structural Assembly and Physical Activity (We Do)

Time: 30 minutes

We Do (Science & PE Integration):

1. **Assembly:** Help the student cut out the pieces needed for the walls and roof. Discuss the shapes (rectangles, squares, triangles for the gable roof).
2. **The Power of Glue:** Use the adhesive (glue or tape) to connect the walls.

Talking Point (Science): "What happens when we glue two pieces of cardboard together? Let's explore how glue works! It changes from a liquid to a solid to hold things tightly." Discuss the importance of waiting for the glue to dry or using tape for immediate structure.

3. **Building the Structure:** Securely attach all walls and the roof pieces.
4. **Movement Break (PE):**

Talking Point (Physical Education): "Building this house is hard work! Can you stretch your arms up high like you're reaching for the roof? Can you wiggle your legs? Taking breaks helps our brain work better!" (Incorporate 60 seconds of focused stretching or movement.)

Activity 2C: Decoration, Storytelling, and Global Fun (You Do)

Time: 40 minutes

You Do (Independent Practice - Art, English, Music, Social Studies):

1. **Decorating the House:** Once the structure is built, let the student use markers, crayons, string, and foil to decorate their house. Encourage creativity and use of different textures.

Talking Point (Art): "What colors do you want to use for your gingerbread house? Color can make art really special! How can we make the windows look shiny using foil or bright colors?"

2. **Music While Working:** Play some festive or upbeat music in the background.

Talking Point (Music): "What song makes you feel happy when you create art? Let's listen to it while we work! How does the music change the way you feel about decorating?"

3. **Global Sweet Traditions (Social Studies):** While decorating, discuss how different cultures celebrate with unique sweets or architecture.

Talking Point (Social Studies): "How do people celebrate with sweets around the world? Some countries build towers of pastries, and others make special rice cakes. Let's share some fun facts about global treats!"

4. **Story Time Creation (English):** As the house nears completion, have the learner prepare a story about it.

Talking Point (English): "Can you tell me a story about what happens inside your gingerbread house? Who lives there? What is the main problem they need to solve?"

Part 3: Conclusion (Tell Them What You Taught)

Time: 15 minutes

1. Closure and Recap

Review: Display the finished house. Review the subjects used throughout the project.

- "We used **Math** when we measured our pieces." (Ask: "What was the width of your largest wall?")
- "We used **Science** when we saw the glue stick everything together."
- "We used **English** when we created a brand-new story about our house."

2. Summative Assessment: The House Tour and Calculation

1. **The Story Presentation:** Have the learner give a "tour" of their house, explaining the decorations, and sharing the short story they created (Success Criterion #3).
2. **Simple Area Calculation:** Use the ruler one last time. Select two large pieces (e.g., the front wall and the roof). Have the learner state the measurements of the pieces.

Educator Prompt: "Let's assume one square inch is one piece of candy. If your front wall is 20 square inches and your roof is 30 square inches, how many pieces of candy (total square inches) would you need just for those two sides?" (Use simple addition based on previously measured dimensions.)

3. Reflection

Question: "What was the hardest part about building your house? What was your favorite part of the

design process?"

Differentiation and Adaptability

Scaffolding (For struggling learners or limited time):

- **Pre-Cut Shapes:** Have the basic wall and roof shapes pre-cut. The student only needs to measure the placement of windows/doors and decorate/assemble.
- **Simplified Math:** Focus only on perimeter (measuring around the edge) rather than introducing the concept of area.
- **Guided Story Prompts:** Provide a story starter (e.g., "One snowy night, a tiny mouse named Pip found the house...") to aid the English component.

Extension (For advanced learners or classroom context):

- **Advanced Design & Wiring:** Challenge the student to incorporate functional elements, like an opening door or safe low-voltage LED lights (Science extension, requires additional materials).
- **Complex Calculations:** Introduce the formula for perimeter and basic area (length x width). Have the student calculate the total surface area of all six sides.
- **Historical Research Project:** Assign a mini-research task on the actual architecture of 19th-century European cottages, comparing it to their gingerbread design (History/Social Studies extension).
- **Group/Collaborative Build (Classroom/Training):** Students can work in pairs, with one focusing on the structure (Math/Science) and the other focusing on the decoration/story (Art/English).