



Gingerbread Contest with TRSA



Suggested Engineering Supplies

- Gingerbread
- Graham Crackers
- Pop-tarts
- Icing
- Other items you wish to include!

Suggested Decorating Supplies

- Sprinkles
- Marshmallows
- Candy Canes
- Pretzels
- Other items you wish to include!

2021 THEME

2021 Theme: Innovative Spaces! Innovation has to start somewhere! Think about all the buildings, labs, and spaces where amazing advancements in STEM have taken place to plan your design.

ASK

How can we engineer a gingerbread house that can stand on its own? What building, labs, and spaces did advancements in STEM take place? NOTE: Be sure to have a blueprint or schematic design showing the scale of your structure.

BRAINSTORM

Before you begin to build your gingerbread house think...

- How will you build your gingerbread house?
- What materials will you use?
- How will you provide proof that it is a scale model? (justification, scale factor, etc.)
- Create a rough draft using MagSnaps, Lego, or other building items or a sketch of what you would like your gingerbread house to look like.
- Reflect: What will be different when you use the engineering materials versus the rough draft?

CREATE

Once you have finished your rough draft begin creating your gingerbread house.

IMPROVE

Reflect on your design.

- What was the best part about your gingerbread house?
- How can you improve the gingerbread house?





BEFORE YOU START

Building a Gingerbread House



IF YOU HAVE NOT DECIDED ON YOUR STRUCTURE THINK...

Innovation starts somewhere! Think about the places where advancements in science, technology, engineering, or mathematics have taken place. This can be where a company started, a scientist's lab of discovery, or even where innovation happening today.

Once you have decided on your innovative space list the name of the structure you and your group will be building:

A paragraph explaining the architectural and innovative significance of the structure and why you chose it:





BRAINSTORM

Building a Gingerbread House



Draw a model of your gingerbread house using graph paper. Make sure to incorporate scale.

What materials will you use?

How will you build your gingerbread house?





IMPROVE

Building a Gingerbread House



What was successful in your design?

What did you struggle with and what strategies did you use to overcome the obstacles?





IMPROVE

Building a Gingerbread House



How might you change their design in the future to improve stability?

What would you do differently if you had more time and materials?