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

**Gingerbread Contest**

**with TRSA**

<table>
<thead>
<tr>
<th>Suggested Engineering Supplies</th>
<th>Suggested Decorating Supplies</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Gingerbread</td>
<td>• Sprinkles</td>
</tr>
<tr>
<td>• Graham Crackers</td>
<td>• Marshmallows</td>
</tr>
<tr>
<td>• Pop-tarts</td>
<td>• Candy Canes</td>
</tr>
<tr>
<td>• Icing</td>
<td>• Pretzels</td>
</tr>
<tr>
<td>• Other items you wish to include!</td>
<td>• Other items you wish to include!</td>
</tr>
</tbody>
</table>

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

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