

Model Home Design Brief

Name _____

Essential Question: How Are We Energized?

Grade 3

Title: Model Home Design Brief

Background: We have been learning about natural resources, conservation of resources, energy sources, and conservation of energy. We have also been studying the pros and cons of our energy choices. We have learned about measurement, multiplication, and area.

Design Challenge: You will use your research to compete in the creation of the best energy efficient model home.

Criteria: Your team must:

- ❖ create a blueprint of your model home
- ❖ use construction paper to create a blueprint using actual measurements
- ❖ create a model home design with walls that don't exceed 12 in. x 12 in.
- ❖ use exact measurements on your blueprint for all features and include perimeter and area for each (walls, doors, windows...)
- ❖ create a model home that exactly matches the specifications on your blueprint
- ❖ create a model home with a roof that can open or be removed so people can see inside
- ❖ include at least 4 energy efficient features
- ❖ create a Pic Collage that includes pictures of your model and your team name
- ❖ create a Thinglink using the Pic Collage and use touch points to explain your energy efficient features
- ❖ write a persuasive paragraph to convince the audience to vote for your model home

Resources:

drywall base	cotton balls	foil
glue	straws	solar panels
scissors	cardboard	plastic wrap
tape	fabric	colored pencils
construction paper	yarn or string	wallpaper
other materials brought in by your team	paint	other materials supplied by your teacher



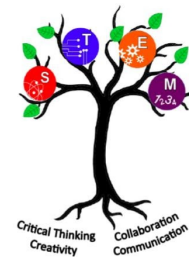
Synergize

Group Members and role: _____

1. What is the challenge? State the problem/task in your own words.

Begin with the End in Mind

Create a slide for your presentation that includes a picture of your group and the title of your design challenge.



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Brainstorm solutions. Share your individual solutions.

Scamper them to create a group solution. Make sure that you label materials and measurements on the blueprint. Draw a blueprint of your group solution.

Think Win- Win

Seek First to Understand, then to be Understood

Synergize

Take a picture of your group blueprint for your presentation.

Use graph paper to draw an official blueprint with measurements labeled.



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Energy Efficient Choices:

Energy Feature	How would your team represent this?

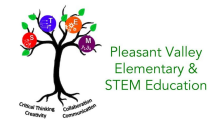


Begin with the End in Mind

Supply List

area = length x width

Material	Number	Length	Width	Area





Be Proactive

Think Win-Win

Synergize

Create the solution you think is best.

Keep notes in the chart about problems that you faced or new decisions you had to make as you built and tested your first plan. Include any suggestions that were given during your consultation session with the energy auditor.

Problem Faced	Solution or Suggestion

Take pictures of your model home in progress and the final model.



Brainstorm solutions. Draw blueprints of any changes that your group makes during the build and revisions after testing. Include any ways that your group can improve your design.

A large graphic consisting of four rounded rectangular boxes arranged in a 2x2 grid. The boxes are connected by a central vertical line and a central horizontal line, which intersect at a glowing lightbulb. The lightbulb is drawn with radiating lines around it, indicating it is lit. The boxes are empty, intended for drawing blueprints or solutions.



Test your final design.

Put First Things First

- | | | |
|---|-----|----|
| 1. Did your group create a blueprint of your design? | YES | NO |
| 2. Did your group use exact measurements on your blueprint for all features and include the area for each (walls, doors, windows...)? | YES | NO |
| 3. Did your group create a model home that exactly matches the specifications on your blueprint? | YES | NO |
| 4. Did your group include 4 energy efficient features? | YES | NO |
| 5. Did your group write a paragraph persuading the audience to vote for your home? | YES | NO |
| 6. Did your group make a Thinglink with touchpoints to explain each of your energy efficient features? | YES | NO |



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Evaluate your solutions.



Were they the best solutions? Would any other ideas have been better? Why or why not?

Could you add to it to make it better? What would you add to it?



Write a paragraph that persuades the community audience that your model home is the best. Include a topic sentence, at least three details, and a conclusion sentence. Type your final draft.



How does your project match our essential question?
How are we energized?



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A large, empty rounded rectangular box intended for student responses.

KWL: {Energy Conservation}

What we <u>K</u> NOW.	What we <u>W</u> ANT to know.	What we <u>L</u> EARNED.