

Build It Better Design Plan

Name: _____

Objective

Work as an agricultural engineer to design a model corral and alley way for loading cattle onto trucks for transportation. The goal of your design is to keep the animals calm and safe. Your group will be graded on the effectiveness, efficiency, and durability of your design.

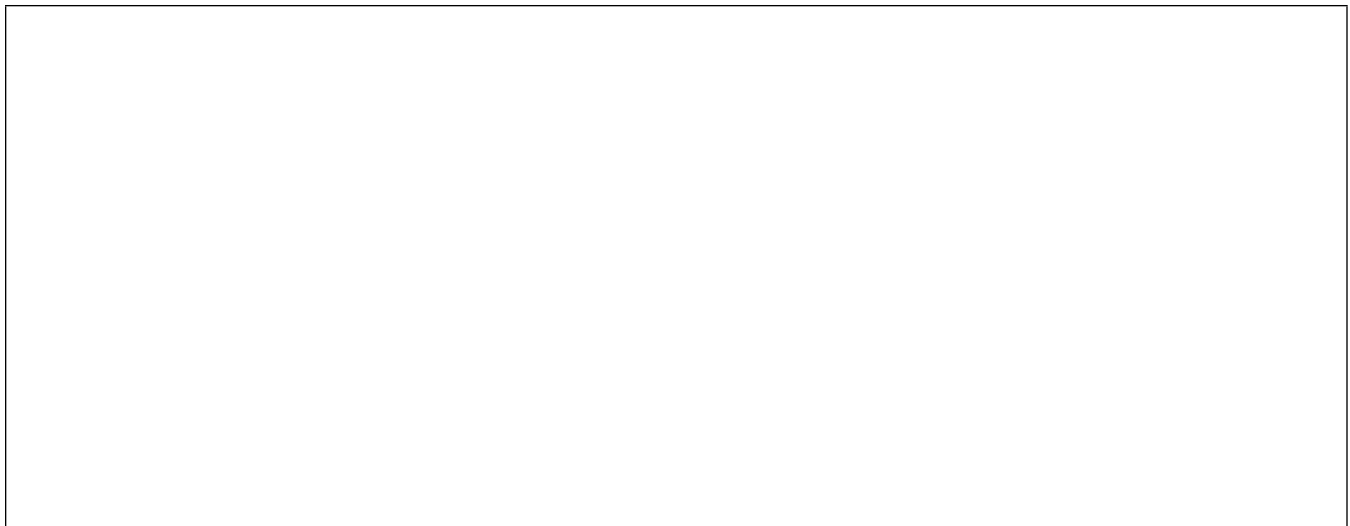
Research

Research and record at least five design characteristics that your group will include in your model. Write the reason each characteristic was included.

Design Characteristic	Reason for Inclusion
Example: <i>Curved Path for Cattle</i>	<i>Cattle prefer to return to where they came from.</i>

Design Drawing

Sketch a design that incorporates all the design characteristics listed above. Label each design characteristic. Use arrows to indicate the direction cattle will move.



Build It Better Design Plan *(continued)*

Teacher Approval

Each group’s drawing must be approved by your teacher before starting construction. Present your design drawing to your teacher. Be sure to identify and describe the design characteristics.

Once approved, have your teacher initial here: _____

Construction

Use your design drawing to construct a three-dimensional model. Label design characteristics and include measurements for all sides.

Reflection

1. List the materials required to construct your design model. You may use any of the materials provided in class or bring materials from home.
2. Describe, in detail, the procedure your group used to construct the model. The procedure must include at least ten steps.

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____
- g. _____
- h. _____
- i. _____
- j. _____

3. List any modifications required to create an effective, efficient, and durable design.

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4. How will you motivate the cattle to move through the chute?

5. What is your favorite feature of your design? Why?

6. What aspect of your design could be improved? How?

7. Is your design effective, efficient, and durable? Provide at least one example of how your model meets each of these specifications.

Effective: Successful in producing a desired or intended result.

Efficient: Achieving maximum productivity with minimum wasted effort or expense.

Durable: Able to withstand wear, pressure, or damage.
