

## The 1875 Dr. Flick Cabin - Custer

Teaching Tip

Build It: Scale

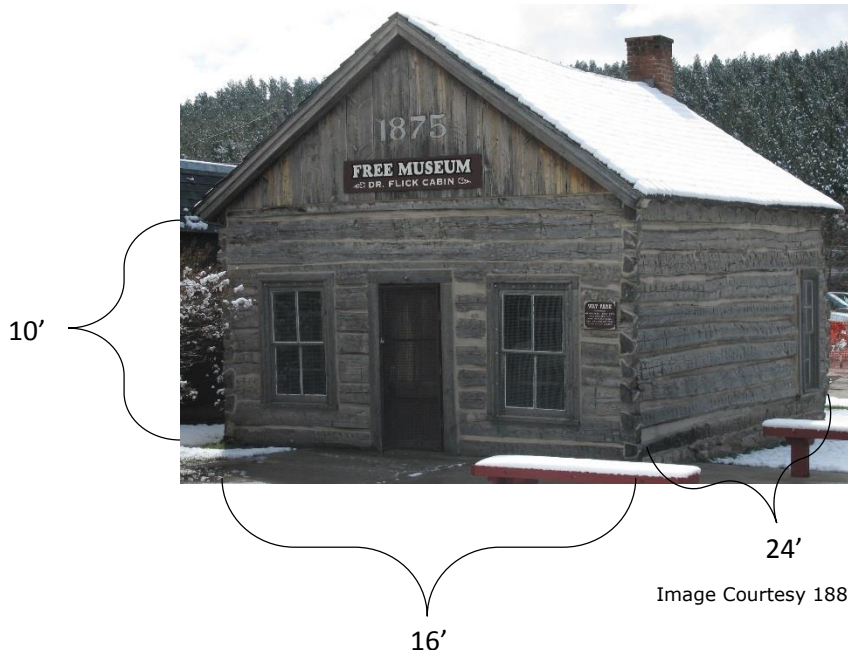
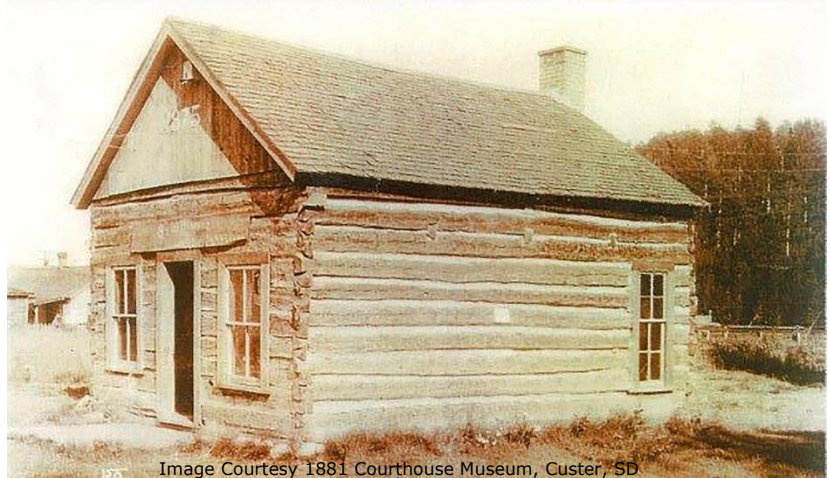
### Build It: Scale

During this activity your students will construct 3 "scaled" models of the Flick Cabin in Custer, SD. This is a perfect engineering/math activity for an afterschool group, club or elementary class.

### Process:

#### Classroom

- Introduce the activity by showing the information about the Flick Cabin on the following [website](#).
- Read the article and discuss the history of the cabin. Compare the cabin to similar structures in your community.
- Reference the section of the article about the dimensions of the cabin (24' X 16'). Assume a 10' height for this activity.



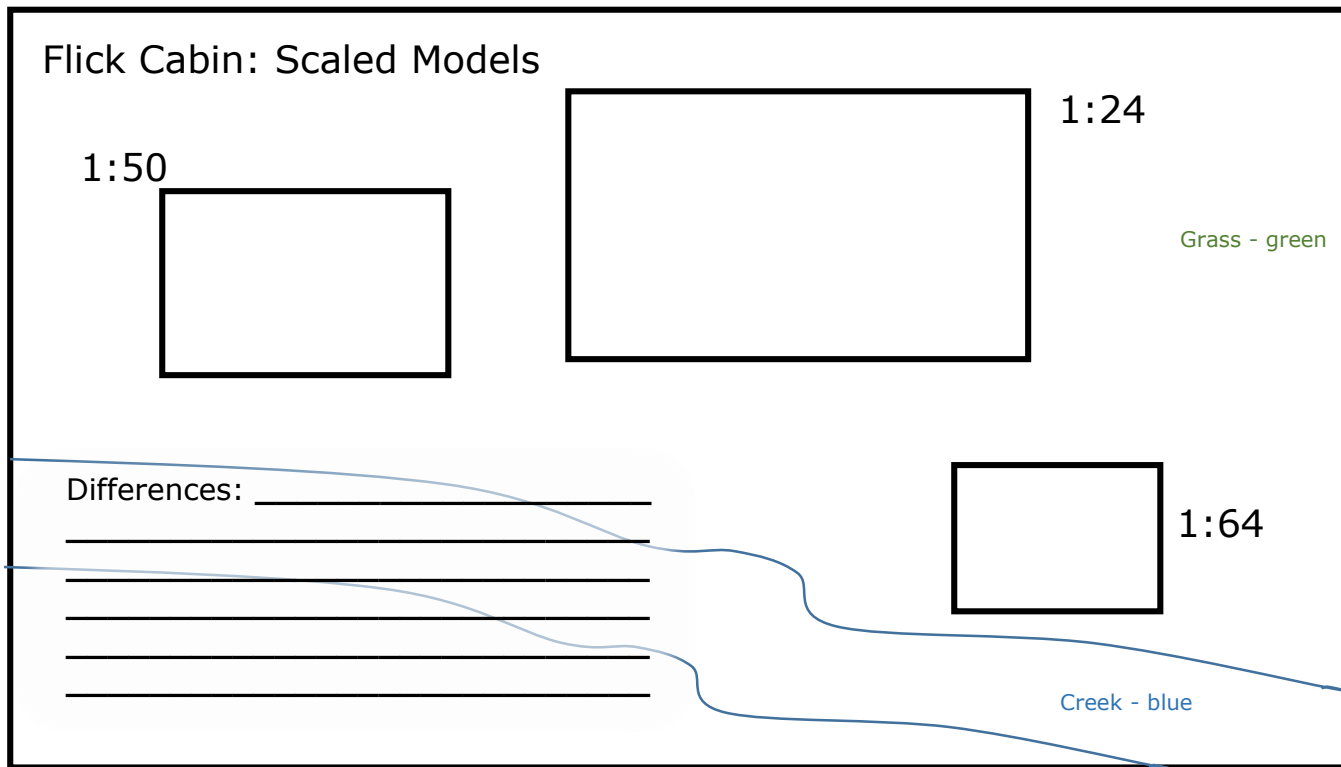
- Use a tape measure to demonstrate the dimensions in your classroom.
- Show your students a Hot Wheels car or model car. Explain that the car is a scaled model of the original car. Most Hot Wheels cars are 1:64 and models are 1:24. Tell the students that they will construct three separate models of the Flick Cabin. The models will be displayed on the same piece of tag board.

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- The following scales will be used to construct the models: 1:24, 1:50 and 1:64. Displaying multiple models on the same tag board will help the students understand scale. Below is an example setup to display the models.



- The three dimensions for the cabin are: length - 24', width - 16' and height 10'. The students should calculate the scaled dimensions for each model.
- Below are the formulas for calculating the dimensions.

Scale	Original Dimension		Conversion	Converted Dimension
1:24	24 feet	X	12 inch/foot X (1/24)	12 inch
1:24	16 feet	X	12 inch/foot X (1/24)	8 inch
1:24	10 feet	X	12 inch/foot X (1/24)	5 inch
1:50	24 feet	X	12 inch/foot X (1/50)	5.8 inch
1:50	16 feet	X	12 inch/foot X (1/50)	3.8 inch
1:50	10 feet	X	12 inch/foot X (1/50)	2.4 inch
1:64	24 feet	X	12 inch/foot X (1/64)	4.5 inch
1:64	16 feet	X	12 inch/foot X (1/64)	3 inch
1:64	10 feet	X	12 inch/foot X (1/64)	1.9 inch

## Home: Construction of the models

- The students should construct each model. Different materials can be used for each model.

### Example materials:

- Branches/ twigs
  - Scrap wood
  - Styrofoam
  - Cardboard
  - Etc.
- The students should describe differences between modern homes in comparison to a dwelling like the Flick Cabin.
  - Display the models

## Taking it to the Next Level:

- Take a field trip to look at a cabin in your community.



Image Courtesy 1881 Courthouse Museum, Custer, SD