# **UC-336**

## **Concrete Formwork Simulator**

#### **INTRO/ABSTRACT**

Concrete Formwork Simulator is a simulation game designed to help those learning construction or experienced with construction. Choose from wall, column, and slab formworks to practice with and be scored on each step of the way. Train buying the correct number of materials, cutting them efficiently, and assembling the structures in the correct order.

#### **METHODS**

Made with: Unity 2020.2.5f1 C# Scripting in Visual Studio

**Source Control:** Github

**3D Models:** Made with Maya

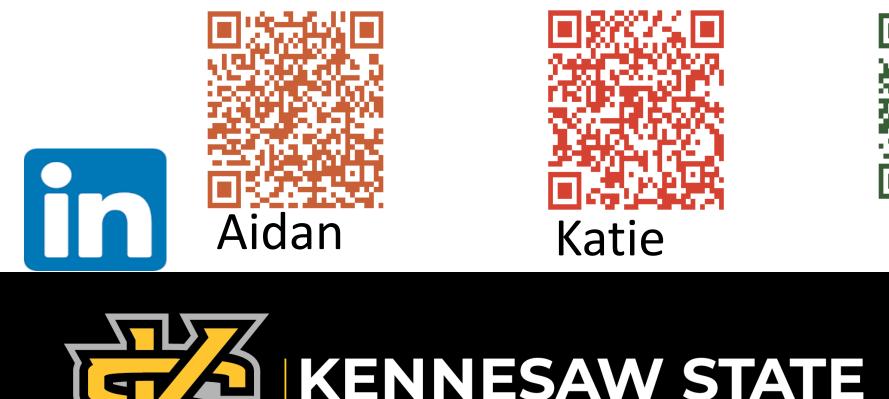
**Sound Effects and Music:** Freesound, HumbleBundle



Formwork and Construction expertise provided by Dr. Pavankumar Meadati

#### RESULTS

Our game successfully provides those learning construction a way to gain practice buying, cutting, and assembling formwork pieces in a more engaging way than traditional assignments.



EGE OF COMPUTING AND

SOFTWARE ENGINEERING





### **Concrete Formwork Simulator** is a simulation game designed to help those learning construction or experienced with construction practice efficiently buying, cutting, and assembling materials for concrete formwork.

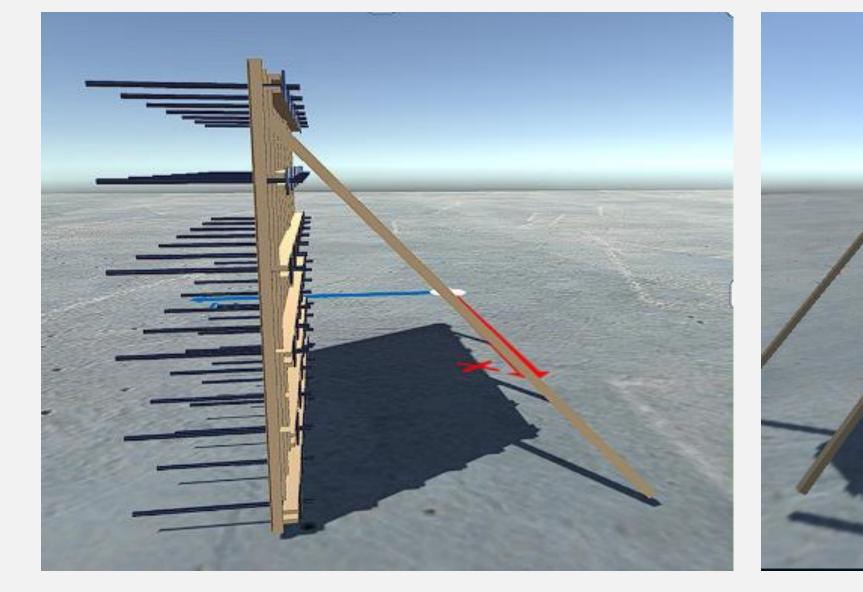


Figure 1: Wall Formwork Model



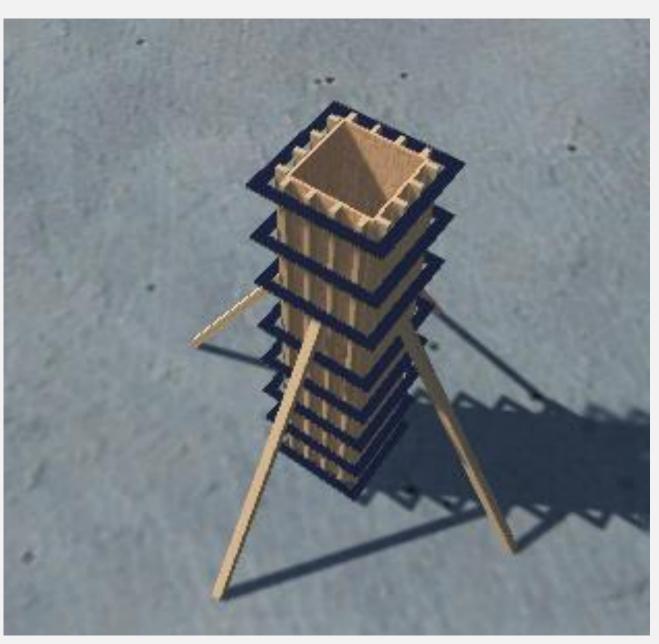
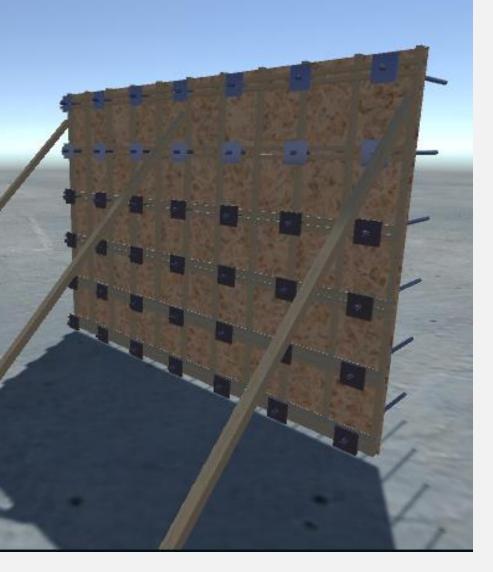
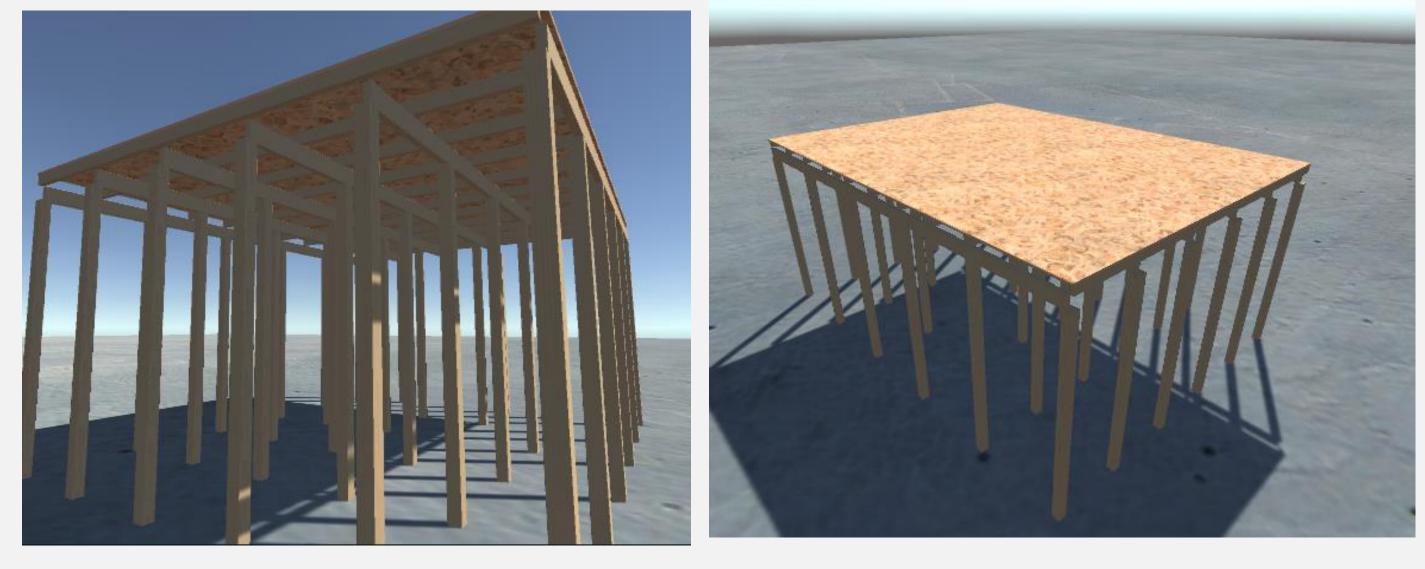


Figure 3: Column Formwork Model



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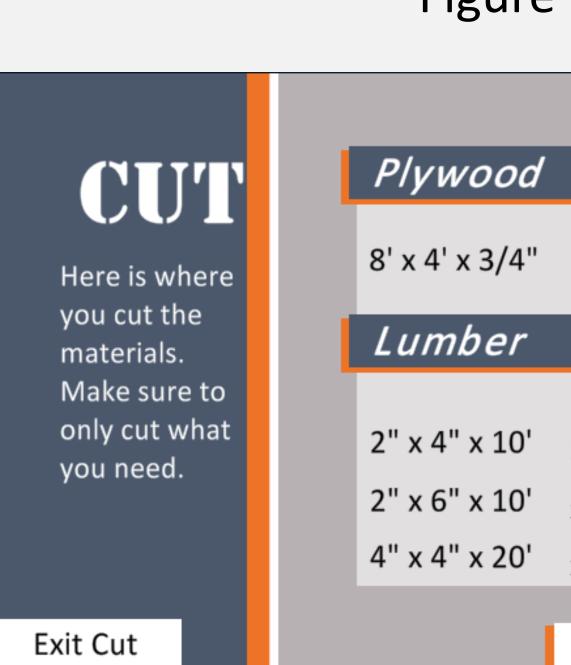


Figure 4: Cut User Interface

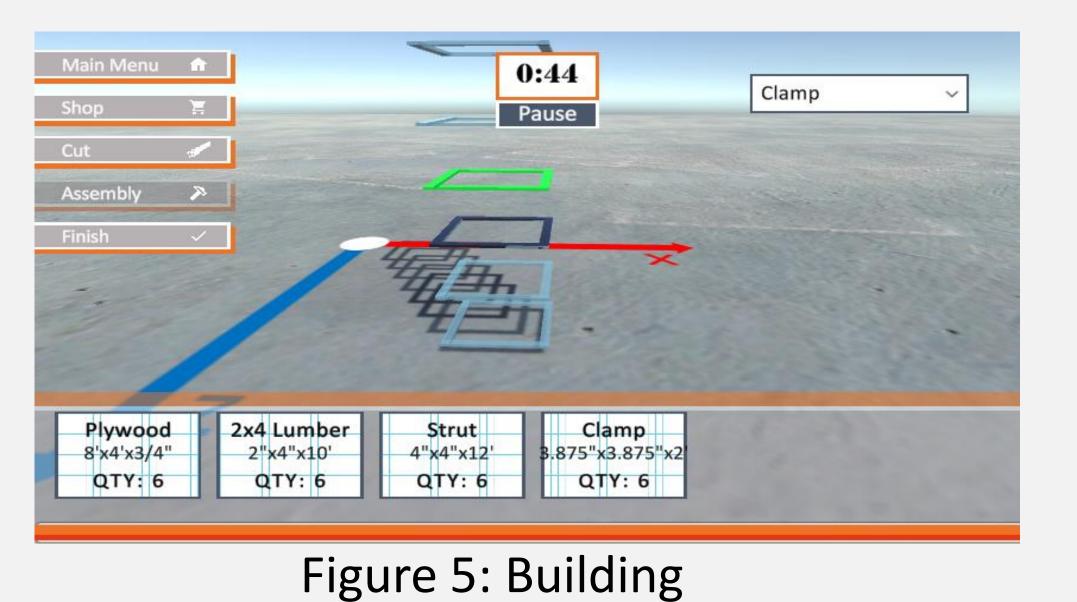


Figure 2: Slab Formwork Model

| TY | Length    | Width  | QTY |
|----|-----------|--------|-----|
| ,  | 8~        |        |     |
|    |           |        |     |
| ΤΥ | Length    |        | QTY |
|    | 9 ~       |        | 0 ~ |
|    | 9 ~       |        | 0 ~ |
|    | 19 ~ 000  |        | 0 ~ |
|    | <b></b>   |        |     |
|    | Cut Mater | rials! |     |
|    |           |        |     |