Tower Challenge Overview

Overview:
This is an activity to teach soft skills such as cooperation and communication. The students will be split into four teams and will be tasked with building the tallest climbable structure as possible within the time limit. They will be rated on the size and height of their structures, how well they worked together, and the aesthetic of their structures.

Set Up:
Split the class into four teams and have them sit at computer desks grouped by team. Ensure there is an equal distribution of girls (no all male teams). Launch MCEdu and disallow student digging and building until the challenge begins. Once the teams are established and seated explain that this exercise is about teamwork and communication. Go over the objectives and rules with the students.

Objective:
As a team, build the tallest "scalable" tower as possible! At the dawn of the second day all team members must be at the top of the tower with room for at least one more person. The structure must be climbable by the teacher.

Rules:
See student handout.

Students are provided with:
Torches, Pickaxes, Shovels, Axes, chests to hold materials, and a crafting table by the base of their tower. Everything else must be dug and crafted by the students.

After time is up:
When the second day dawns digging and building must cease. Be sure to disallow digging and building in MinecraftEdu. Allow the students to walk around and look at all of the structures that were built. The height of the structures is counted and the award for tallest structure is given. The teacher then gives out accolades for the team that worked the best together. The students then vote of the best looking structure.
Tower Challenge

Objective:
As a team, build the tallest *climbable* tower as possible! At the dawn of the second day all team members must be at the top of the tower with room for at least one more person. No matter what your tower looks like, it must have room at the top to hold the entire team plus the teacher. The teacher must be able to climb to the top of the tower for the tower to count.

Rules:
Teams have 20 minutes (a Minecraft night and a day) to build the tallest structure that they can. The team members must work together to build the towers. The towers must be climbable by the teacher! If a team’s tower is not climbable the height of the tower is counted as the max height that the teacher can climb to. All students must be at the top of the tower. Basically just make sure everyone can get to the top of the tower and does so before time runs out.

Be aware that that it is not possible to build above the clouds. If your tower reaches the clouds use the remainder of your time making the tower safe and cool looking.

Do not try to cross into another team’s territory. There is an invisible force field acting as a fence between the teams territories, you won’t be able to cross over.

Remember that there are crafting tables and chests provided for you. You don’t have to use them but they may help. You may craft any item you wish, but ladders will probably be the most helpful.

Build your tower atop the colored blocks at the base of the mountain. The base of the tower must rest on the colored blocks.
Crafting

Planks:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Input » Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood</td>
<td>![Wooden Planks Diagram]</td>
</tr>
</tbody>
</table>

Sticks:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Input » Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wooden Planks</td>
<td>![Sticks Diagram]</td>
</tr>
</tbody>
</table>

Ladders:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Input » Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sticks</td>
<td>![Ladder Diagram]</td>
</tr>
</tbody>
</table>

Steps:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Input » Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wooden Planks, Cobblestone, Bricks, Stone Brick or Nether Brick</td>
<td>![Steps Diagram]</td>
</tr>
</tbody>
</table>

Controls

© 2012 CMU ETC - MinecraftEdu Lesson Testing - March 2012
W: Move forward
S: Move backward
A: Move left
D: Move right
Space bar: Jump
E: Open inventory screen
1-9: Select item from inventory bar at bottom of screen
Mouse: Look around
Left click: Hold to dig
Right click: Place item (whatever item you have selected), open a chest, open the crafting table