Name_____ Period _____ Date _____

Building Security

Lesson 2: Building Structure Protection
The building itself can be fortified to be safer. The structure of the building can be modified to change the aesthetics and safety of the building. For example, a regular glass window is appealing and costs little, but it is also very unsafe. More secure windows have a higher security rating but are more expensive and are less appealing. You will have to decide on the compromise of building materials in terms of safety, appeal, and cost. Can you design a safe building?

Doing the Science
1.   Start the Building Security Simulation by clicking on the "Sim" tab.
2.   Click on "Building Structure" on the left, underneath "Building Security".
3.   Read about the security, appeal, and cost ratings for each of the building security materials by clicking on each item from the drop down menu.
4.   Using the information provided, decide what building structure material you want to use and click on the name from the drop down menu to select the item.
5.   Click on the walls of the building to place the item on the building. (If concrete pillars are selected, click around the building on the grass and concrete.)
6.   Choose different security materials from the drop down menu and place as many you like on the ground.
7.   Clicking on "Info" then clicking on an item will display the security, appeal and cost rating.
8.   Clicking on "Delete" then clicking on an item will delete the item from the scene.
9.   Once satisfied with the placement of the building security materials, count the number of each building security material and record into Table 1 below.
10.   Click on the "Start" button to have the Report Window rate your security, cost, and intrusiveness.
11.   Record the number of stars for the security, cost, and intrusiveness into the table.
12.   Click on "Restart" to clear the materials, or add more materials to the ground.
13.   Repeat steps 2-13 for four more trials in an attempt to increase security, decrease cost, and decrease intrusiveness.

Table 1.

	Trial 1	**Trial 2**	**Trial 3**	**Trial 4**	**Trial 5**
Double Doors					
Concrete Pillars					
Single Door					
Window					
Bullet Proof Window					
Blast Proof Window					
Security					
Cost					
Intrusiveness					

Do You Understand?
1.   Were any of the building structure materials effective at providing security to the building?