



**Lesson 5: Combination of Materials Protection**

After testing all the different types of security separately (nature, building structure, security, and exterior decorations), a combination of them might provide the best protection, cost, and intrusiveness ratings. Test your building and decorating skills to create the most secure building possible.

**Doing the Science**

1. Start the Building Security Simulation by clicking on the “Sim” tab.
2. Click on “Nature”, “Building Structure”, “Security”, or “Exterior Decorations” on the left, underneath “Building Security”.
3. Read about the security, appeal, and cost ratings by clicking on each item from the drop down menu.
4. Using the information provided, decide what you want to use and click on the name from the drop down menu to select the item.
5. Click to place the item down on the ground. Clicking on the item on the ground may change the direction that the item faces.
6. Choose different materials from the drop down menu and place as many you like on the ground.
7. Click on “Menu” to choose a different type of security and follow steps 2-6 to place more materials on the ground.
8. If you wish to delete an object, click on “Delete” then click on the object.
9. Once satisfied with the placement of the security measures, count the number of different type of security and record into Table 1 below.
10. If you forgot what type of security the item is from, clicking on “Info” followed by an item will display the type of security along with the security, appeal and cost rating of the material.
11. Click on the “Start” button to have the Report Window rate your security, cost, and intrusiveness.
12. Record the number of stars for the security, cost, and intrusiveness into the table.
13. Click on “Restart” to clear the materials, or add more materials to the ground.
14. Repeat steps 2-13 for four more trials in an attempt to increase security, decrease cost, and decrease intrusiveness.

**Table 1.**

	<b>Trial 1</b>	<b>Trial 2</b>	<b>Trial 3</b>	<b>Trial 4</b>	<b>Trial 5</b>
<b>Nature</b>					
<b>Building Structure</b>					
<b>Security</b>					
<b>Exterior Decorations</b>					
<b>Security</b>					
<b>Cost</b>					
<b>Intrusiveness</b>					

**Do You Understand?**

1. Were you able to find a good balance of security, cost, and intrusiveness? Explain.
  
2. Name the strengths and weaknesses for each type of security.