NAME:_____ Date:_____ Teacher: _____

DAMAGE REPORT!
Repair Costing

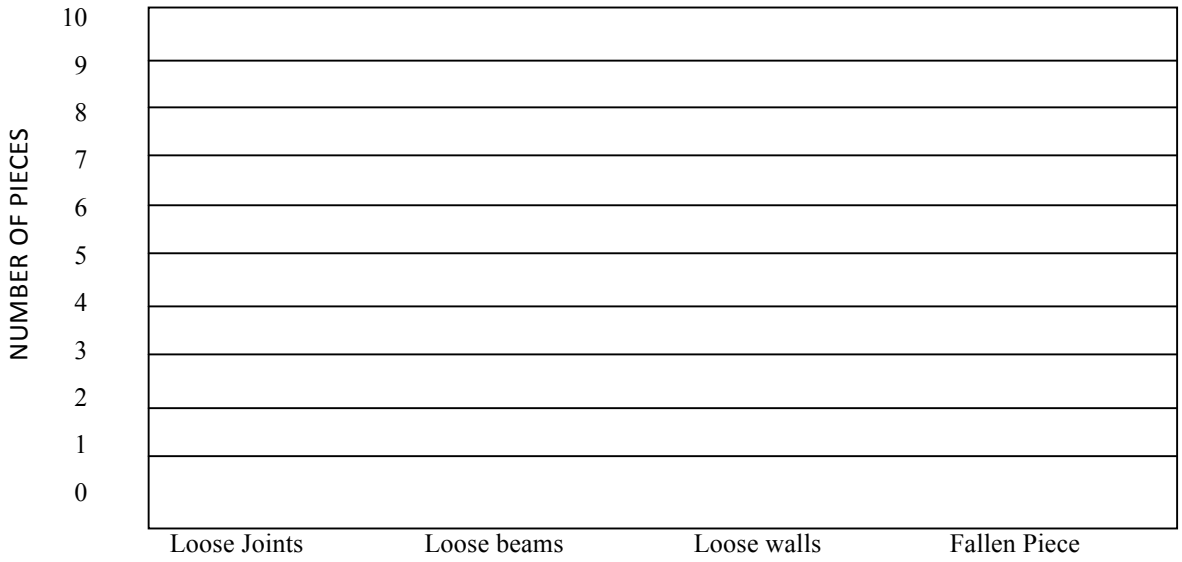
So you've made your building, calculated how much it costs to build, and shook it on the shake table! A building that undergoes an earthquake can be damaged, and it takes careful checking to be sure how much the building has to be repaired! Sometimes joints come loose, beams snap, and walls crack. Your job is to be an investigator and report how much your structure was damaged after it underwent an earthquake and find how much it will cost you to repair all the damages!

Shake your building on the earthquake shake table. After one quake, find:

Number of broken/loose joints (corner piece)	_____
Number of broken/loose beams, braces, or columns	_____
Number of broken/loose walls	_____
Number of pieces fallen off	_____
Total number of sites with damage	_____

To be a good investigator, you must be able to show your results in a full graphical presentation so others can understand them! Record your results from above in the bar chart below.

Building Damage Report



Describe what happened to your structure during the earthquake.

_____

_____

_____

NAME:_____ Date:_____ Teacher: _____

What would you do to make your building stronger?

_____

_____

_____

COST ANALYSIS

It's not enough to find out all the damages to your building, now we have to fix it! Use the chart below to find out how much it will cost to fix each broken part of your structure, then find the total cost to fix your building.

	Loose joints	Loose beams, braces, columns	Loose walls	Fallen pieces
Cost to repair	$2	$10	$20	$35

Example: If you had 3 loose beams, then it would cost $30 to fix because

3 beams X $10 per beam = $30

Loose joints	Loose Beams, braces, columns	Loose Walls	Fallen Pieces
$2	$10	$20	$35
x_____ #joints	x_____ #beams	x_____ #walls	x_____ #fallen
Cost to fix joints	Cost to fix beams, braces, columns	Cost to fix walls	Cost to fix fallen pieces

Now add each cost to find the total cost

Cost to fix joints:

Cost to fix beams, braces, columns:

Cost to fix walls:

Cost to fix fallen pieces: +_____

Total Cost to Repair Building:

Now that you've estimated the repair cost, compare this number to your construction cost calculation. Is there anything that you would change about your building if you knew that earthquakes occurred regularly at your building location?

_____

_____

_____

_____