Name: _____ Name: _____

Name: _____ Name: _____

Cargo Transport Project Checklist

This checklist will be turned in everyday to show your group's progress on the assignment.
Please use a pencil to update.

Objective

Design and construct a transport system using provided materials that can safely and efficiently deliver ping pong balls across a 15ft valley.

Constraints

- Must travel across a 15-foot gap between the starting point and the destination (same elevation)
- Must be able to self-power i.e no pushing, throwing
- Safely: without the balls falling off into the valley, without stopping midway
- Efficiently: balls (6 minimum) can be loaded and unloaded quickly

Individual Brainstorming	**Team Brainstorming**
Free association and one other strategy ☐ I have NOT YET started ☐ I have written down my free association solutions ☐ I have written down solutions from ONE of these additional strategies ☐ Random Stimulation ☐ SCAMPER ☐ Others' Points of View ☐ Cross Fertilization	Progress ☐ We have NOT YET started ☐ We have shared our different individual solutions ☐ We have chosen our favorite solution ☐ We have applied Solution Pivot to that solution (and drawn out a solution pivot tree diagram) ☐ We have reviewed our Solution Pivot with a teacher
Design Sketch	**Building and Testing**
Sketch a design based on your individual and team brainstorming ☐ We have NOT YET started ☐ We have started drawing and labeling our design ☐ We have finished drawing and labeling our design	Progress ☐ We have NOT YET started ☐ We have started building ☐ We have tested once ☐ We have tested twice

Cost Analysis

Materials	Quantity	Cost	Your Transport Cost
Ping Pong Balls	6 minimum	Free	
Balloon	1	Free	
Paper cups	2	Free	
Straws	1	Free	
Tape	24 inches	$1/inch	
Cardboard (5”x7”)	1	$10	
Popsicle sticks	10	$3/each	
Paper clips	4	$1/each	
Binder clips	2	$2/each	
Propellor	1	$5/each	
Rubber bands	5	$1/each	
Plastic Bag	1	$5	
String	24 inches	$1/inch	
Additional material(s)	2	$____	
TOTAL COST	**Add up values**		

Performance Score

Best Performance	Possible Points	Your Score	Documentation
Each ball transported 15 feet	100 points		☐ Evolution of Prototype (minimum number of photos) ☐ Photo #1 ☐ Photo #2 ☐ Final Photo ☐ Video of best performance
Each dropped ball	-200 points		
Total points for team	**Add up values**		

Performance Index (PI)

_____ / _____ = _____

Total points for team TOTAL COST Performance Index