

Scoring Form – Nuclear Waste Cleanup Robot Torque Test

GROUP NAME: _____

TEAM NAME: _____

TEAM SPOKESPERSON: _____

NWCR Torque Test (10% of composite score)

NWCR DRIVER: _____

NWCR ASSISTANT: _____

EMERGENCY MECHANIC: _____

NWCR Lifted _____ grams (Circle appropriate grams category below)					
	grams or below +2 points	grams +4 points	grams +6 points	grams +8 points	grams & above +10 points
Total Points for NWCR Torque (grams lifted)					/10 pts.

NWCR Inspection (Please check box when confirmed) Not applicable for this contest

-
-
-
-
-

Other Comments Regarding NWCR Construction:

Scoring Form – Incline Test

GROUP NAME: _____

TEAM NAME: _____

TEAM SPOKESPERSON: _____

Incline Test (15% of composite score)

NWCR DRIVER: _____

NWCR ASSISTANT: _____

EMERGENCY MECHANIC: _____

Climbed minimum: 1st Line					Yes +2 pts.	No +0 pts.
Points if Robot passed more than 1st Line						
	2nd Line +2 pts.	3rd Line +2 pts.	4th Line +2 pts.	5th Line +2 pts.		
In order to receive the points, the front tire needs to be completely past the line. If the team passes over Lines 1-3 on their first attempt, they will receive 2 extra points. If they cross all 5 Lines in their first attempt, they will receive 5 extra points.						
Circle maximum incline completed on first attempt	Lines 3 and/or 4 +2 pts.	Line 5 +5 pts.				
Total points for Incline Test (add all circled points above)					/15 pts.	

Catastrophic Breakdown

A team is allowed ONE major catastrophic breakdown. A team is allowed 2 attempts to reach the 5th line (top of the incline)

- Major Catastrophic Breakdown declared.
- ___ 1st ___ 2nd

Scoring Form – Poster Presentation**GROUP NAME:** _____**TEAM NAME:** _____**TEAM SPOKESPERSON:** _____**POSTER PRESENTATION (15% of composite score)**

Poster Presentation – Team should use poster and lab notebook as a guide.

(A) Nuclear Waste Cleanup Robot Design (process/design justification)	Possible Points	Points Awarded
1 Steps in the design process (what was done and the order it was done)	0 - 2 pt.	
2 Major turning points in design process (good and bad)	0 - 2 pt.	
3 Reason for choosing final NWCR design	0 - 1 pt.	
4 Strengths of NWCR	0 - 1 pt.	
5 Weaknesses of NWCR	0 - 1 pt.	
(B) Additional Teamwork and NWCR Design Information		
1 Explanation of Pie Charts (both the group and individual pie charts)	0 - 2 pt.	
2 Ideas for improving their NWCR if time, budget, allowable items, etc. constraints were not present	0 - 1 pt.	
3 Material presented in an organized, thorough and convincing manner through quality of delivery, visual aids and team participation (please add comments below)	0 - 5 pt.	
Total points for Poster Presentation (add sections A and B)	Total	/15 pts.

*Half points are allowable in this event. Please write your score for each item in the right-hand column, total the verbal score, and then total the overall event score when complete.

Please feel free to write additional comments below as necessary

Scoring Form – Poster Display**GROUP NAME:** _____**TEAM NAME:** _____**TEAM SPOKESPERSON:** _____

POSTER DISPLAY (10% of composite score)		
Poster Display – Team should summarize and illustrate the contents of the lab notebook.		
(A) Display provides evidence of the entire design process	Possible points	Points Awarded
1. Identifies the problem(s) – purpose of designing the NWCR	0 – 1 pt.	
2. States the goal(s) of the engineering team – (what NWCR should be able to do)	0 – 1 pt.	
3. Presents brainstorming of ideas	0 – 2 pt.	
4. Shows selection and construction of the design	0 – 1 pt.	
5. Shows testing and revising of NWCR design	0 – 1 pt.	
(B) Display reflects cooperation and teamwork		
1. Display is organized, arranged in a logical order, and contains descriptions such as picture captions, narratives, etc. to illustrate the overall project design process	0 – 2 pt.	
2. Pie chart for the whole team that shows the work divided between team members and indicates what individual members did	0 – 2 pt.	
Total points for Poster Display (add sections A and B)	Total	/10 pts.

*Half points are allowable in this event. Please write your score for each item in the right-hand column, and total your score when complete.

Please feel free to write additional comments below as necessary

Scoring Form – Nuclear Waste Cleanup Robot Retrieval

GROUP NAME: _____

TEAM NAME: _____

TEAM SPOKESPERSON: _____

NWCR Retrieval TEST (15% of composite score)

NWCR DRIVER: _____

NWCR ASSISTANT: _____

EMERGENCY MECHANIC: _____

Time Limit - 3 minute maximum/per attempt. Team will have 2 attempts.

Retrieval Mission Completed within 3 minutes	YES +5 pts.	NO +0 pts.
Each team will have 2 attempts but may not be on the course for more than 6 minutes total.		
<i>Individual Tasks within the Total Mission</i>	Push Button +2 pts.	Enter +2 pts.
	Retrieve Cube +4 pts.	Exit +2 pts.
Total Points for NWCR Retrieval Mission (add all points)		TOTAL /15 pts.

Catastrophic Breakdown

Teams are allowed an unlimited amount of breakdowns. The limiting factor will be the above time restraints.

- Major Catastrophic Breakdown declared.
- Re-attempt of course completed.

Scoring Form – "Blind Driving" Test

GROUP NAME: _____

TEAM NAME: _____

TEAM SPOKESPERSON: _____

"BLIND DRIVING" TEAMWORK TEST (10% of composite score)

ROVER DRIVER: _____

ROVER ASSISTANT: _____

EMERGENCY MECHANIC: _____

Obstacles (circle each obstacle after it is successfully completed)

	Obstacle #1 +2 pts.	Obstacle #2 +2 pts.	Obstacle #3 +2 pts.	Obstacle #4 +2 pts.	Obstacle #5 +2 pts.
Penalty for trap or tip over - advance NWCR to next obstacle without awarding points for obstacle that was being attempted					
Course Time (5 minutes max.)				min. _____	sec. _____
Total Points for Blind Driving (add all circled points above)					Total /10 pts.

Catastrophic Breakdown

Do not record minor catastrophic breakdowns – teams are allowed an unlimited amount of minor breakdowns. A team is allowed ONE major catastrophic breakdown..

- Major Catastrophic Breakdown declared.
- Re-attempt of course completed.

Scoring Form – Meltdown "Speed" Challenge

GROUP NAME: _____

TEAM NAME: _____

TEAM SPOKESPERSON: _____

NWCR Speed Challenge (15% of composite score)

NWCR DRIVER: _____

NWCR ASSISTANT: _____

EMERGENCY MECHANIC: _____

Course completed within 5 minutes				Yes +5 pts.	No +0 pts. (Go to *)
Course Time (5 minutes max.) Will be added to 10 points for all sections completed (below).				min. _____	sec. _____
Circle appropriate course time range	0 - 0:59 +5 pts.	1:00 - 1:59 +4 pts.	2:00 - 2:59 +3 pts.	3:00 - 3:59 +2 pts.	4:00 - 4:59 +1 pts.

*** Course NOT completed in 5 minutes - points determined by distance from finish line**

Distance from Finish Line (in feet)	Past 1st Corner +2 pt.	Past 2nd Corner +2 pt.	Past 3rd Corner +2 pt.	Complete Rock Area +2 pt.	Make Tower Flash +2 pt.

Total Points for NWCR Speed Challenge	/15 points

Catastrophic Breakdown

Teams are allowed an unlimited amount of adjustments within the 5 minute timeframe.

 Re-attempt of course completed.

Scoring Form – Lab Notebook

GROUP NAME: _____

TEAM NAME: _____

TEAM SPOKESPERSON: _____

LAB NOTEBOOK & BUDGET (20% of composite score)		
	Possible points	Points Awarded
1. Lab notebook includes information about the Team, the signed commitment to responsibilities, the checklist of activities, and evidence of some Team-Building Activities.	0 – 3 pt.	
2. Lab notebook includes a timeline and three itemized budgets, as well as a summary of the Nuclear Waste Cleanup research and how it affected design choices	0 – 5 pt.	
3. Pie charts of what individuals did themselves (% display, % design, % leadership, etc.) are present. There should be a pie chart for EACH member of the team.	0 – 3 pt.	
4. Lab notebook day-to-day entries reflect the engineering design process (identifies problem(s); states goals; demonstrates brainstorming; details design selection / construction; details for NWCR testing / revising)	0 – 5 pt.	
5. Lab notebook day-to-day entries are handwritten and maintained throughout the team's work on it , notebook is organized, chronological and legible, and entries are labeled appropriately (date – team members – activity(s)/design process step(s))	0 – 4 pt.	
Total Points for the Lab Notebook / Budget	Total	/20 pts.

*Half points are allowable in this event. Please write your score for each item in the right-hand column, then total the overall event score when complete.

- Team did not spend more than \$75 on additional LEGO® parts.
If more than \$75 was spent, team is disqualified from the competition.
- Team did not spend more than \$30 for construction of display.
If more than \$30 was spent, team receives 0 points for the Poster Presentation & Display.

Please feel free to write additional comments below as necessary