

EGG DROP COMPETITION

Performance Task Rubric



/30

Students' Names: _____

Egg Structure Name: _____

Marking Rubric: All Report/Media Types

Introduction, Design Strategy & Performance: A thorough introduction to the task, discussion about design strategy and discussion of performance. You must clearly state what the task is, how it connects to our unit of study, how the design implements Newton's laws, acceleration, crumple zones, terminal velocity, etc. Thorough discussion of performance (worked, didn't work, etc.) and possible to changes.

Research NASA's strategy for "crash landing" the Mars Rovers on the red planet. Watch the video clip on the Web site. Thoroughly contrast and compare it to the performance task you were given. A Venn diagram is a good way to do this. Discuss in terms of resources, timelines, materials, objective, specific features of each apparatus, etc. This section has the biggest weight for the final mark.

	Level 1	Level 2	Level 3	Level 4	Total
Introduction, Design Strategy & Performance (Thinking/Inquiry/Communication)	Not completed or unsatisfactory	Satisfactory	Well done	Thorough discussion of the design strategy is given. Uses correct physics terms, physics concepts and laws to explain clearly why the design was followed and executed. Performance is commented upon and a reflection given about possible design changes or reasons for success or failure	10
Calculations (Application)	Not completed or unsatisfactory	Satisfactory	Well done	Completed and all correct. Units are given, diagrams included and therefore statements provided.	8
Research (Thinking/Inquiry)	Not completed, or very poorly researched	Satisfactory	Well done	Very well researched and reported. Great depth and understanding.	10
References	Not completed.	Completed, but poorly done.	NA	Complete and correct.	2

“Budget” Analysis:

Exchanges:

Adjustment

0

Deductions:

Adjustment

Bonuses:

Adjustment

Performance

Adjustment

Materials Reference Chart

Your original “budget” is: 15 straws, 1 m of masking tape, 1 egg, 2 index cards

Trading (“Budget Negotiations”) Rubric:

1 cue card = 30 cm of tape = 3 straws

Deductions (“Blowing the budget”):

Cracking the egg during construction	= -2
1 extra straw	= -0.5
1 extra cue card	= -2
10 cm of tape	= -0.5

Bonuses (“coming in under budget”):

1 cue card	= +0.30
10 cm of tape	= +0.10
1 straw	= +0.10

Performance (“Did your design work?”):

Dropped without a structure	= -infinity points
Exploded	= -3
Broke	= -2
Small Crack	= -1
Worked Perfectly	= +2

Exchanges (“Negotiating”) – use reference chart:

_____	for _____
_____	for _____
_____	for _____
_____	for _____

Deductions (“Blowing the budget”) – extra materials given:

_____	cost _____
_____	cost _____
_____	cost _____

Construction Bonuses (“coming in under budget”) – left over materials:

_____	rebate _____
_____	rebate _____
_____	rebate _____

Performance (“Did the design work?”)

Worked Perfectly

☐

Small Crack

☐

Broke

☐

Exploded

☐