

STEM Rubric

Name: _____

Activity: _____

Date: _____

Overall Score:

Innovation (16 Points)	-5- Super Fantastic! <i>(extra credit)</i>	-4- Excellent	-3- Satisfactory	-2- Approaching	-1- Needs Improvement
Novelty	So unique it won't be trendy for 2 more years.	Entirely new & different.	Major changes from the example build.	Moderate changes to example build.	Only minor changes to example build.
Design Revisions	So many prototypes that the prototypes have prototypes.	Many unique solutions tested, exploring very different ways to solve the problem.	Many attempts to refine a few solutions, with significant changes from original design.	Many attempts to refine the example build, or a few attempts towards a single unique solution.	Few attempts to refine the example build.
Success Through Failure	Probably ended up in a YouTube fail comp but kept trying anyway.	Took large design risks, made mistakes, persevered, and learned from them.	Took large design risks, made mistakes, persevered, and learned from them.	Took small risks or did not persevere when larger risks were taken.	No risky designs attempted.

Comments: _____

Performance (4 Points)	-5- Super Fantastic! <i>(extra credit)</i>	-4- Excellent	-3- Satisfactory	-2- Approaching	-1- Needs Improvement
Design Performance	Works so well it should be employee of the month.	Design performed better than the most others.	Design performed on par with most others.	Design performed somewhat behind most others.	Design performed much worse than others.

Comments: _____

STEM Rubric

(continued)

Math & Science (8 Points)	-5- Super Fantastic! (extra credit)	-4- Excellent	-3- Satisfactory	-2- Approaching	-1- Needs Improvement
Data-Driven	They crunched the numbers so hard they're now a fine powder.	Isolated and tested a few variables, using data to improve the design.	Isolated and tested several variables.	Used data to evaluate design, but rarely isolated a variable.	Design changes were done without regard for data.
Science Based	Learned so much science that they schooled the teacher.	Research was carried out to learn and apply scientific theories to the design, clearly improving the design's performance.	Scientific theories guided the design and clearly improved the design's performance.	Scientific theories used to guide design but did not improve performance.	Science did not guide design.

Comments: _____

Construction (8 Points)	-5- Super Fantastic! (extra credit)	-4- Excellent	-3- Satisfactory	-2- Approaching	-1- Needs Improvement
Craftsmanship	Looks so good it should be in a Home Depot commercial.	"Final" design is neatly crafted and uses all components purposefully.	"Final" design is neat and uses most components purposefully.	"Final" design is somewhat sloppy OR shows little care in choosing or placing components.	"Final" design is sloppy AND shows little care in choosing or placing components.
Precision	It's so reliable that it made Old Faithful jealous.	"Final" design performs reliably and consistently, no matter who is operating it.	"Final" design performs reliably and consistently.	"Final" design has sporadic problems or inconsistencies.	"Final" design does not work reliably.

Comments: _____

Teacher Notes:

You can use this rubric to assess any TeacherGeek activity.

Here's how to compute grades for your choice of a **4-Point Scale** or **100-Point Scale**:

4-Point Scale: add the points earned and divide by 8 (to take the average)

100-Point Scale: add up the points earned, and convert using a table below

100-Point Scale Conversion Tables:

Easy Grading

Points	Percent
8	70
9	71.25
10	72.5
11	73.75
12	75
13	76.25
14	77.5
15	78.75
16	80
17	81.25
18	82.5
19	83.75
20	85
21	86.25
22	87.5
23	88.75
24	90
25	91.25
26	92.5
27	93.75
28	95
29	96.25
30	97.5
31	98.75
32	100
33	101.25
34	102.5
35	103.75
36	105
37	106.25
38	107.5
39	108.75
40	110

Challenging Grading

Points	Percent
8	60
9	61.67
10	63.33
11	65
12	66.67
13	68.33
14	70
15	71.67
16	73.33
17	75
18	76.67
19	78.33
20	80
21	81.67
22	83.33
23	85
24	86.67
25	88.33
26	90
27	91.67
28	93.33
29	95
30	96.67
31	98.33
32	100.00
33	101.67
34	103.33
35	105
36	106.67
37	108.33
38	110
39	111.67
40	113.33

8 is the minimum points for kids that complete the project

Scores greater than 100 are possible if you award scores of 5 (extra credit)