

NAME: _____



GRADE: _____ LOCATION: _____

GENERAL REQUIREMENTS EVALUATION			
PRESENTATION DISPLAY		DESCRIPTIVE DOCUMENT	
Attractive, easy to read, and layout is in an appropriate logical order.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Organization is clear and complete without extraneous information.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Visual aids promote understanding.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Spelling and grammar are correct.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Labelled illustration shows two points of view or perspectives.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Visual aids promote understanding.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
INVENTION CATEGORY EVALUATION			
DISPLAY AND DOCUMENTATION		OTHER CONSIDERATIONS SPECIFIC TO CATEGORY	
The invention, its use, and the benefits associated are clearly described.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	The invention addresses a real-world problem or need.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Target audience or users of invention are identified and have a valid need.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	The invention offers functionality that solves a problem or need efficiently and/or effectively.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Research into competing/similar products is presented and complete.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	The invention is practical in terms of size, cost, materials, etc. for the problem/need being solved.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Materials required to build the invention are described and specified.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	The invention uses unique or innovative methodologies in solving the problem or need.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Original design, development, and analysis process are explained and/or documented, including descriptions of any problems encountered and their solutions.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Further steps beyond creation of invention have been initiated or taken (e.g. patents, market research, public presentation, etc.)	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Construction process are clearly defined by drawings and/or descriptive text.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Student demonstrates understanding of the project and is able to communicate clearly about it.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
PROTOTYPE OR 'MOCK-UP'			
Prototype is relevant and complete enough to show the important aspects of the invention.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Parts and components of prototype are described and their function is identified.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Prototype is well designed and constructed.	ND 1 -- 2 -- 3 -- 4 -- 5 NA		

ND: Not Demonstrated; 1: Beginning; 2: Developing; 3: Average; 4: Accomplished; 5: Advanced; NA: Not Applicable

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NAME: _____

Science Poster/Infographic
 Legacy Christian Academy STEM Expo
 2017 Judging Evaluation Form



GRADE: _____ LOCATION: _____

SCIENCE POSTER/INFOGRAPHIC CATEGORY EVALUATION			
PRESENTATION DISPLAY		PRESENTATION CONTENT	
Presentation meets the design specifications (22"x28" self-standing poster board).	Yes (3) No (0)	Presentation demonstrates a good understanding of the content.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Presentation is attractive and aesthetically pleasing.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Presentation accurately communicates its information.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Presentation uses color choice and/or color scheme to engage and keep the viewer's attention.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Presentation information is clear and succinctly communicated.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Presentation is organized and leads the viewer logically through their presentation.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Words and graphics "tell a story" and lead its reader on a journey of understanding.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Words and graphics elicits an emotional response.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Student demonstrates understanding of the project and is able to communicate clearly about it.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Presentation is clean and well laid out in its design.	ND 1 -- 2 -- 3 -- 4 -- 5 NA		
Presentation is creative and imaginative in its communication of information.	ND 1 -- 2 -- 3 -- 4 -- 5 NA		

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Visual aids promote understanding.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Spelling and grammar are correct.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Shows project in appropriate detail so that audience can understand.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Visual aids promote understanding.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
SCIENTIFIC INQUIRY CATEGORY EVALUATION			
DISPLAY AND DOCUMENTATION		OTHER CONSIDERATIONS SPECIFIC TO THE CATEGORY	
Describes how/why inquiry was formed and the hypothesis was developed.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Understanding of how the inquiry relates to broader scientific principles and real world application is demonstrated.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Investigation procedure is clearly explained.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	The idea for investigation is original or innovative.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Materials are listed completely with units of measure. Data is summarized using correctly labeled graphs, data tables, etc.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	The procedure, materials, trial length, etc. are innovative or creative in approach.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Results/Summary of data is clearly stated and addresses ALL variables.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Offers advancement of understanding of scientific principles and/or the world around us.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
		Student demonstrates understanding of the project and is able to communicate clearly about it.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
GENERAL PROCESS AND SCIENTIFIC METHOD			
The purpose or problem clearly explains what is going to be experimented.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Qualitative (observations) and quantitative (recorded data) observations are used and recorded.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Appropriate and complete research was conducted.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Record of experiment includes observations, appropriate use of terms and measurements, analysis, and reflections.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Hypothesis and experiment design show a relationship between independent and dependent variables (e.g. shows what observations will be made, defines the # of trials, lists the variables and controls).	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Conclusion relates to the problem statement and incorporates results, whether the data supports the hypothesis, lists possible sources of error, and unresolved questions.	ND 1 -- 2 -- 3 -- 4 -- 5 NA

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Procedure is sequential, replicable, provides a control and variable, and was repeated for validity.

ND 1 -- 2 -- 3 -- 4 -- 5 NA

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Shows project in appropriate detail so that audience can understand.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Visual aids promote understanding.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
REVERSE ENGINEERING CATEGORY EVALUATION			
DISPLAY AND DOCUMENTATION		OTHER CONSIDERATIONS SPECIFIC TO CATEGORY	
The overall unit and its operation are explained adequately.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Product selected has the appropriate complexity and allows for disassembly to adequate levels.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
All disassembled components have been labeled and described accurately.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Disassembly of this product will help the audience understand an unfamiliar operational concept.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Function of each part is identified correctly.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Cause and effect between and within sub-assemblies are correctly identified.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Laid out parts alongside of the assembled unit is clear and promotes understanding of location and purpose.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Project shows that the student grasps the purpose of the components and sub-assemblies, and how they work together.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
The material of composition is identified for each component.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Additional steps beyond disassembly are discussed and/or taken (e.g. suggestions for design improvement, unit rebuilt and functional, etc.)	ND 1 -- 2 -- 3 -- 4 -- 5 NA
		Student demonstrates understanding of the project and is able to communicate clearly about it.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
DESCRIPTIVE DOCUMENT			
The deconstruction sequence description is complete and accurate.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Images or illustrations of components and how they fit together are presented and appropriate.	ND 1 -- 2 -- 3 -- 4 -- 5 NA

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Tools used are listed and their use is defined within the sequential listing.	ND 1 -- 2 -- 3 -- 4 -- 5 NA		
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Rube Goldberg
Legacy Christian Academy STEM Expo
2017 Judging Evaluation Form



GENERAL REQUIREMENTS EVALUATION			
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Visual aids promote understanding.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Spelling and grammar are correct.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Shows project in appropriate detail so that audience can understand.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Visual aids promote understanding.	ND 1 -- 2 -- 3 -- 4 -- 5 NA

RUBE GOLDBERG CATEGORY EVALUATION			
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DISPLAY AND DOCUMENTATION		SEQUENCE OF OPERATION	
Diagram (illustration) is complete and shows operation from initial step to conclusion.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Numerous types of simple machines are used.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Diagram of operation is understandable.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Several types of physical forces are used.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Sequential steps of progression are clearly, alphabetically labeled.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Duration of sequential events (time) is taken into account as part of the sequence.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Labeling of simple machines, cause and effect, indication of type of force, as well as direction of force, is accurate and complete.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Complexity of steps and quantity of steps are considered in development.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
		Multiple converging, simultaneous, recurring, or reusable paths are provided.	ND 1 -- 2 -- 3 -- 4 -- 5 NA

OTHER CONSIDERATIONS SPECIFIC TO THIS CATEGORY			
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Initialization of sequence is simple and straightforward.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Minimum of 10 cause and effect relationships included in sequence.	Yes (3) -- No (0)
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Device has a clearly identified task.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	If construction or video is presented, device runs fully to completion with little to no outside intervention.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Thought was given to reset time and effort required to restart the sequence.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Device's construction or purpose has a specific theme.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
Space used is appropriate and follows guidelines. (W: 36" x L: 30")	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Student demonstrates understanding of the project and is able to communicate clearly about it.	ND 1 -- 2 -- 3 -- 4 -- 5 NA

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Some part of the operational methodology, materials used, and/or design process is innovative or creative in approach.	ND 1 -- 2 -- 3 -- 4 -- 5 NA	Student demonstrates understanding of the project and is able to communicate clearly about it.	ND 1 -- 2 -- 3 -- 4 -- 5 NA
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