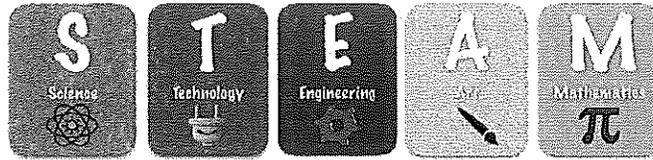


TUSD Elementary School STEAM Fair



2nd/3rd Grade - Model (prototype) of an Invention

(Focus: Science & Engineering)

Project Specifications

Wonderings: What do I want to invent and make a model of? What problem does this model of invention solve? Why is it important?

Requirements: Create an invention/model with an explanation of what it is, how it works, and what problem it solves.

Scientific Thinking/Model Design

Why did you create your model of an invention?

- Identify a purposeful question or problem which could be investigated
- Research the topic using 3 or more sources
- create a model that solves a problem

Research Plan (Scientific Process)

What is the description and procedure for building your model of the invention?

- Write the detailed procedure of building the model of an invention.
- Write a detailed description of how the model of an invention works.

Scientist's Data and Results Log

What were the obstacles faced during your creation?

- Include detailed notes about the building procedure, including obstacles you faced.
- Correctly measured and displayed data
- Explain why this was the best way to construct the model.

Visual/Digital Display

How will you share your model of an invention?

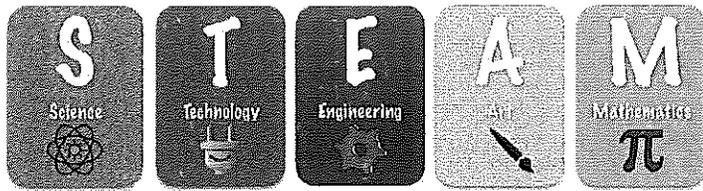
- The model of an invention may only occupy a space the size of a student's desktop (24" long and 15" deep). Anything larger must be approved by the teacher.
- Models of inventions may be mounted on a display board, cardboard/tagboard, or any reasonable manner that fulfills the size display requirements.
- Students must produce their own model of an invention and display that is organized and clearly communicates purpose.

Oral Presentation

How will you verbally explain your project?

- Must be 1-2 minutes and explain the purpose of the project and what was discovered.
- Presentations can be via video, but the student has to be the one explaining the model of an invention in the video, and student must be prepared to answer questions during the presentation.

*Please see scoring rubric on the back for even more details.



Score _____/15

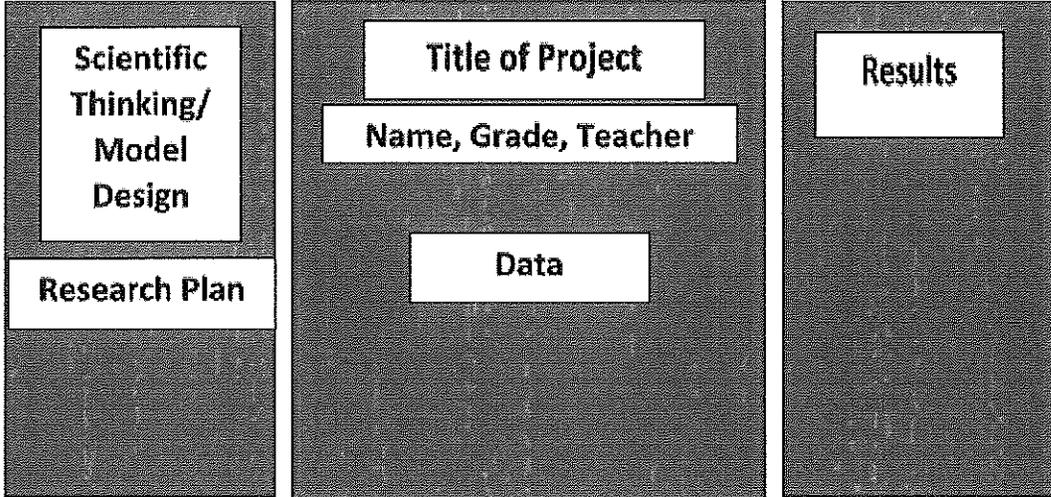
Room _____

Teacher _____

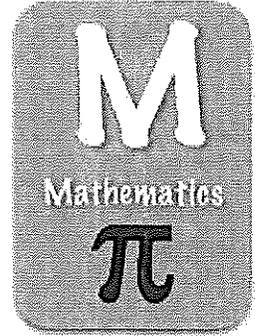
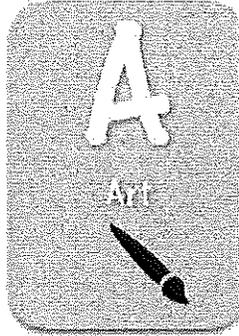
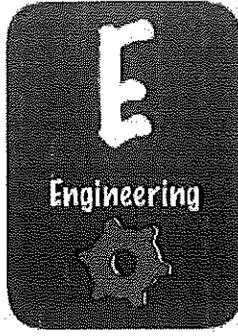
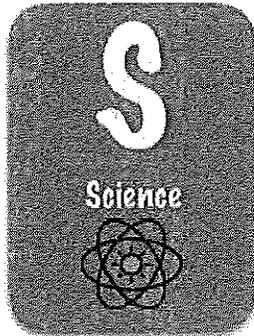
Name _____ Grade _____ Project Title _____

STEAM Fair - 2nd & 3rd Grade Scoring Rubric

	3 Master Scientist	2 Super Scientist	1 Scientist in Training	0 Not Evident
<p style="text-align: center;">Scientific Thinking / Model Design</p> <p>Why did you create your model of an invention?</p>	<p>Student identified:</p> <ul style="list-style-type: none"> - a purposeful question or problem which could be investigated. -researched the topic using 3 or more sources. -created an invention that solves a problem. -created a model of the invention they created. 	<p>Student attempted to:</p> <ul style="list-style-type: none"> -a purposeful question or problem which could be investigated: - researched the topic using 2 sources -model did not solve a problem 	<p>Several steps of creating the invention model are lacking:</p> <ul style="list-style-type: none"> -the question or problem was not meaningful to the student -the model is not structurally sound -the claim was not tested in a purposeful way -only 1 source was used to research the topic. 	<p>Student did not complete a project using the steps of creating a model.</p>
<p style="text-align: center;">Research Plan (Scientific Process)</p> <p>What is the description and procedure for building your model of the invention?</p>	<p>All written parts are complete.</p> <ul style="list-style-type: none"> -Detailed procedure of building the model of an invention -Detailed description of how the model of an invention works 	<p>All parts of the research plan are complete.</p> <ul style="list-style-type: none"> -Lacks a detailed procedure of building the model of an invention. -Lacks a detailed description of how the model of an invention works. 	<p>Some parts of the research plan may be incomplete or missing.</p> <ul style="list-style-type: none"> - Missing procedure and/or description 	<p>Research plan not complete.</p>
<p style="text-align: center;">Scientist's Data & Results Log</p> <p>What were the obstacles faced during your creation?</p>	<p>Includes detailed notes about the building procedure, including;</p> <ul style="list-style-type: none"> -obstacles he/she faced; -correctly measured and displayed data -highest quality work is evident -A clear reasoning about the best way to construct the model was made 	<p>Includes somewhat detailed notes;</p> <ul style="list-style-type: none"> -about creating and the building process; -writing is neat and organized -not enough data for building was collect -A clear reasoning about the best way to construct the model was made 	<p>Notes are minimal;</p> <ul style="list-style-type: none"> -about creating and the building process; -does not display quality work -little or no data was collected -Frequent errors in writing -The reasoning was unclear 	<p>Notes are missing or severely incomplete.</p>
<p style="text-align: center;">Visual / Digital Display</p> <p>How will you share your findings?</p>	<p>Visual / digitally produced display is:</p> <ul style="list-style-type: none"> - student produced - neat - informative and strongly supports research plan; -includes 3 or more photos, graphs, diagrams. -writing is neat, detailed and free of errors; -highest quality work is evident 	<p>Visual/digitally produced display is:</p> <ul style="list-style-type: none"> -student produced - neat - informative and supports the research plan - includes at least 2 photos, graphs or diagrams -writing is neat but may have some errors 	<p>Visual/digitally produced display:</p> <ul style="list-style-type: none"> -lacks student production -lacks information and does not support research plan - shows minimal quality - has writing that is not legible and/or filled with many errors 	<p>No visual/digitally produced display was submitted.</p>
<p style="text-align: center;">Oral Presentation</p> <p>How will you verbally explain the project?</p>	<p>-Student is able to explain how the invention model was built, how it works and what was learned without any prompting.</p>	<p>-Student is able to explain how the the invention model was built, how it works, observations and what was learned; but may need some teacher prompting</p>	<p>-Student has difficulty explaining the parts of the invention model and what was learned even with teacher prompting</p>	<p>-Student is unable to explain their invention model.</p>



Torrance Unified School District



STEAM Fair Proposal and Approval Form - DUE 3/15/19

Student Name (as it should appear on the certificate)

Grade _____

Title of Project (as it appears on the backboard)

Type of Project: (circle one)

Counting Collections

Inventions

Experiment

Summary (abstract):

Write a paragraph that explains the wondering you will investigate and describes in detail the method or procedures you will use in your investigation.

Materials Needed:

What kind of evidence will be collected: (pictures, numerical data, observations, trials)

How the project will be displayed (may check more than one option):

- Poster/Plaque/Display Board
- Pictures
- Video
- Live Demonstration
- Model/Invention
- Use of Chromebook/iPad/Other device
- Other (Please Specify: _____)

Student Approval: I will follow the guidelines as described in the STEAM Fair Rules and Regulations for my STEAM Fair Project.

Student Signature

Date

Parent/Guardian Approval: I have read and understand the guidelines described in the STEAM Fair Rules and Regulations and will monitor my child's project. I consent to my child participating in this research and completing a STEAM Fair project.

Parent/Guardian Signature

Date

Teacher Approval: I have read and approved this student's Summary (Abstract) and agree that it meets the guidelines as described in the STEAM Fair Rules and Regulations.

Teacher Signature

Date