California Invention Convention

A “How To” For Being a Judge

CA Invention Convention Thanks you for being a judge

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Why Use Inventing?

The Educational value of inventing is NOT the product, but the process!

Inventing is a realistic practice for success in the real-world

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The End Result

A **Working or Non-Working Invention/Prototype** (age appropriate “working” with age appropriate materials - if non-working, student must be able to describe how it would work)

Display Board (showing the invention process and the invention in use)

Invention Log (What was done and how it was done)

Judging Circle (Interview and discussion of the invention and the inventing process)

HOWEVER……

This year everything is different!

When the schools unexpectedly closed due to the virus, many students, thinking they were returning after a couple of weeks, left their inventions, display boards, and invention logs in the classrooms. When it was time to create their videos, they had NOTHING available to demonstrate their ideas except a drawing, so….

We are only scoring students on their explanation of the problem, the inventions they created to solve their problems, and the process they used to create the invention, test it, rebuild it, and test it again.

What is an Invention?

It could be a brand new device or

an improvement on a current device

or

a new way to do the same thing.

The first pencil is an invention

Adding an eraser is an invention

Doing the same thing in a different way is an invention

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Is anything new, an invention?

The goal of the CAIC program is to enhance the student's Problem-Solving Skills.

–Drawing a picture

–Writing a story

are creative things to do, but they do not solve a problem with a physical solution and

thus **are not CAIC program inventions**

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Criteria for Scoring Apps

- Apps will not need to be operational if students understand the technology and function of what they are trying to build and how it exists.
- Students need to be involved in the prototype process, they may (if age appropriate) have help

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How much can the invention cost?

- The “rule” is $50 per invention
- The Reality:

–An invention that is used on a car,

does NOT include the cost of the car.

–The invention should be “material neutral”

•Cardboard is as good as machined titanium

–Build, rather than buy

•The student’s input is more important

than the money input

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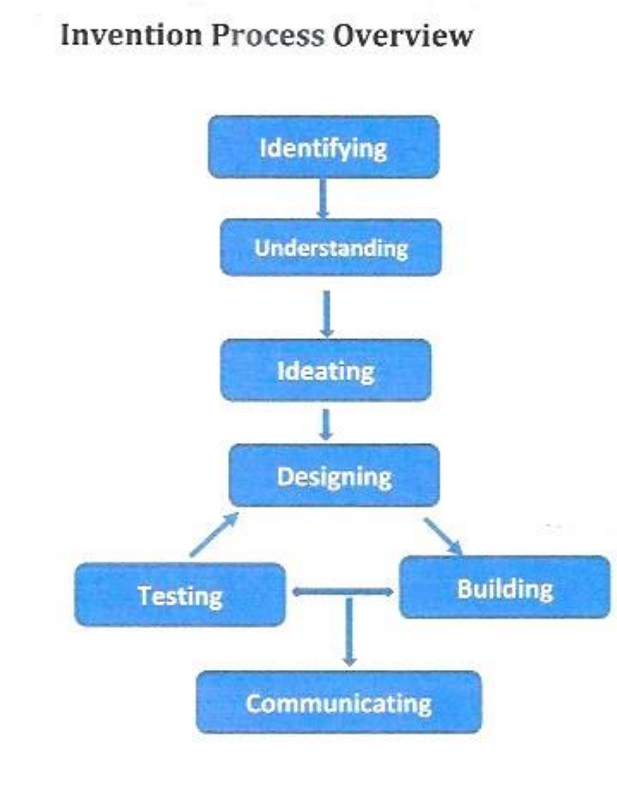
Did the Student Build It?

- It is OK to get help and advice
- Parents can (and are encouraged to) help build

  –But “doing” is not “helping”

A part probably not designed and made by a 3rd grader

Process: Design & Engineering



- Did the child use this invention?
- What did the child learn in the process of building & using this invention?
- How is this different from others out there?
- What changes were made to improve the original design?

Which is more important the Display or the Invention?

- The Invention Process is most important!
- Display helps explain and sell the idea to others

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Judging Criteria

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Judging Rubric

Gonzalez, Gabriella

Project Id: CalC-AGA-016 **Title: Furr Mama Simulator**

Category: Agriculture, Pets and Animal Care **Teacher: Musetter, Becca**

01 - Identifying and Understanding

a - Is the problem clearly understood and defined?	1 - 10: ___
b - Does the solution answer the problem?	1 - 10: ___
c - Was the research underlying the invention complete and appropriate for this age group?	1 - 10: ___

02 - Engineering Cycle

a - Designing & Building: How did the student design the solution and why did she/he choose the materials used to build the design?	1 - 10: ___
b - Testing & Refining - How did the student refine the design through testing? What did the student learn through testing?	1 - 10: ___

03 - Invention Effectiveness

a - How practical is the invention?	1 - 10: ___
b - Is the invention original? Or if not original, did the inventor come up with creative ways to improve / change it to make it unique -- i.e. how did s/he innovate?	1 - 10: ___
c - Does the student clearly understand the benefits of the solution and how others might use it?	1 - 10: ___

04 - Communication

a.- How clearly did the student state the problem and solution - through presentation to the judges, Invention Log, display board and showing the invention?	1 - 10: ___
b - How well does the Invention Log document a journey? It is not a report done after the fact, but an ongoing journal. Does it look complete?	1 - 10: ___

This is ***to help guide you*** **as you listen to the student videos.**

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Identifying and Understanding

- Did the student clearly state the problem
- How challenging?
- Does problem match solution?
- New to student is OK!

–It does NOT matter what YOU know

- Does this improve an existing product?

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Engineering Cycle

- Did Student try different solutions?
- What changes did student make in materials as well as design?
- What was reaction by users?
- How can the prototype be improved to work better?

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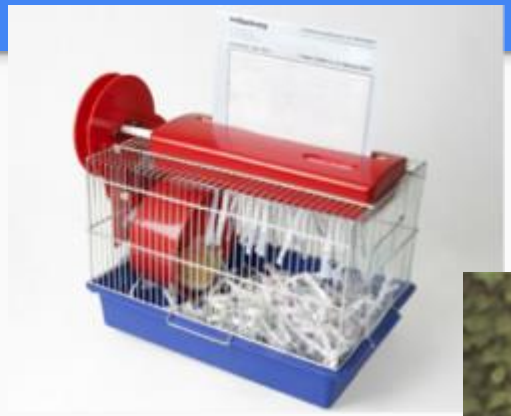
Invention Effectiveness



- Does the solution improve or simplify or does it make it more complicated?
- Advantages over existing methods or products?
- Safe? Easy to use? Affordable?

And You Can Also Consider…..

- Who benefits?
- Solves actual problem for a specialized group?
- Or can application be expanded to others?
- Improvement because it
  - –Works better?
  - –Cleaner?
  - –Faster??
  - –Safer?
  - –Less expensive?

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Did the student have any Problems?

Make any changes?

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What tools did they use to build their invention?

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What did they learn from building this invention?

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This year, students who were in teams may not have been able to be together to create the video. We told them that due to social distancing, it was okay for only one student to create the Video. In addition,

This year, although we usually state that the 4-6 minutes video was to be unedited, we are permitting edits.

Although some of these videos might not be very polished, every student worked hard, many through a myriad of challenges, to bring these to us, and we are so pleased and proud of each, and every one of them, for persevering!

And Speaking of Their Futures:

We will be sending the winning inventions of 40 of our students, on, to compete at The Henry Ford National Invention Convention to be held June 1. This, too, will be a virtual event!

National Invention Convention And Entrepreneurship Exposition™

California Invention Convention®

We at the California Invention Convention, and all our student/inventors, thank you, so much, for all you help and support this year!