EDISON FAIRS
Educational Regional Inventor's Guide

For Students, Educators, & Interested Parties

DISCLAIMER

IMPORTANT: This disclaimer protects the Edison Fairs, NOT YOU!

Inventions will have public exposure. Theft of student ideas has not knowingly occurred since the beginning of this Inventors Program but that is no excuse to ignore the possibility. Edison Fairs cannot prevent this. Just like any person or business pursuing an original idea, you must assume the risk and decide if you wish to take steps to protect your idea as best you can. This workbook will introduce you to protection methods. Please consult with a USPTO public service representative or a patent attorney if you wish to take further precautions.

It is up to parents & legal guardians, and participating students in the Fair to understand this risk and hold harmless the Edison Fairs.

Edison Regional Inventors Fair

AI GUIDELINES

Honesty, integrity, and trustworthiness are cornerstones of the Edison Fairs

Best practices for student use of AI are a worthy goal of the Edison Fairs.

Background: Walt Disney is famous for saying **"If we can dream it, we can do it."** Artificial Intelligence puts a new spin on it, **"If you ask AI, it can do it."** Well, close enough to challenge STEAMIE today and tomorrow. Gaining experience in using AI efficiently and effectively is within the scope of the Edison Fairs.
The need to validate the accuracy of AI information is at the heart of this paradigm change.

AI has enormous potential to influence every aspect of our lives. It is an evolving invention with the potential for unlimited data base expansion influencing algorithmic responses to which inquiries/prompts can be generated in seconds. This applies to every aspect of the scientific method and invention process. AI has a diverse range of potential responses including 'hallucinations', the term used for erroneous information.

Acknowledging AI assistance is not so different than acknowledging help from parents, teachers, mentors, and friends. Using AI is optional. **AI is a privilege that comes with responsibilities no matter what your age! A *student is obligated to follow the guidelines.***

Deceptive or fraudulent uses of AI in violation of the guidelines will be grounds for rejection.
(e.g.) Presenting AI generated information as personally generated or without understanding.

The current use of AI (not limited to chatbots, large language models, deep learning, or generative AI programs) will be subject to the following requirements until revised. August 2023

TERMS

AI Assisted – AI used to revise spelling, grammar and presentation of the student's information.
AI Generated – Information generated based on human inputted instructions or prompts. AI programs predict new probabilities from known data at extraordinary speeds. Predictions are generated from scientific principles but must be empirically tested and confirmed before becoming evidence based facts.

A STUDENT IS RESPONSIBLE FOR:

1. **sharing the date(s), AI programs and key prompts (instructions).**

2. **proving AI generated information is evidence based by citing peer reviewed articles and validated references.**

3. **personally generated, not AI generated, results.** For Science and Inventors Fair, a student's personal findings and original thinking is critical in the application of the scientific method and/or invention process. AI should only play a supportive role.

4. **eliminating irrelevant prompts**. Vast quantities of information can be acquired by applying AI. Share only validated, relevant information helping to shape the student's personal insights or findings. If twenty prompts are used but only two are relevant, report only those two!

INTRODUCTION - ONE STEP AT A *TIME*

Become a Student Inventor with Great Ambitions

Harness the Power of Intellectual Property*!*

Try to grasp this reality. ***Everything that is not naturally occurring has been invented. EVERYTHING!*** If it is not natural, someone or some group of individuals invented it. If you understand invention, you gain a greater insight into anything and everything. Putting any or all parts of the invention process into practice will raise your expectations. **GREAT AMBITIONS are born of purpose! Inventing energizes your purpose*.***

This is the beginning of an exciting and potentially very rewarding journey. ***Everyone on this journey has the opportunity to empower themselves*** in their education, daily lives and lifetime careers, with the knowledge and skills gained through inventing.

You see, this journey heightens your awareness of ***just about everything you do*** if you pay attention, keep an open mind, and give yourself a chance to experience what inventing is all about. Observe any of your school or afterschool subjects including all extracurricular activities and ask yourself how invention influences it - in the past, at this moment, and for the future.

Just one example: Everything is affected by 'natural' *time*. Measuring *time*, now that can be invented! Time is natural but measuring time requires tools. Think about *time* in any of the subjects or activities you are engaged in. When you find some spare time, check out the history of the measuring and keeping of *time*. It is fascinating!

> *"It is important to recognize that the entire story of civilization is based on invention. Invention is historically one of the strongest driving forces in human affairs. If children can comprehend invention, they can better understand the past and the present and predict the future more reliably."*
>
> B. Edward Schlesingers, Jr.

Invention has served to fuel the social, agricultural, industrial, and technological revolutions. Intellectual Property (IP) fuels the American Dream of Prosperity and Success providing a process by which ANY person has the right to claim his or her *unique* invention as personal property for a defined period of time. IP Ownership means the difference of being paid or having to pay!

Like owning a car, YOU get to choose what to do with your IP.
Anyone else would need your permission.

You can collect a fee each and every time someone else uses it.
(Royalty)
You can lease it for a fee for others to use for a period of time.
(License)
You can sell it, turning over ALL the rights of ownership.
(Sale of Ownership)
Anyone using it without your permission would be stealing from you.
(Infringement)
You can even build a business around it to fuel, maintain or innovate upon it.
(Profit)

> *"We actually live, today, in our dreams of yesterday; and living in those dreams, we dream again."*
> Charles A. Lindbergh, the pioneer aviator, author and environmentalist, *The Spirit of St. Louis*

The most powerful scientific instrument (invention) available to you in your lifetime is the English language. Be sure you learn to use it well. The stories of Jules Verne were as important to our arrival on the moon in their own way as the equations of Newton. Rachel Carson wanted to be a poet (her work was turned down by editors, too) long before her eloquent prose in Silent Spring alerted our nation to the danger of pesticides. Our eagle and hawk populations of today owe their lives not just to her careful scientific research but also to her craft and care with the English language. M.E. Morgan, Earth Shine Institute

Part One – The Logbook

STEP ONE: LOGBOOK OPTIONS

There isn't just one Logbook

Many guidebooks are offered to students across the nation. Although each one has its own flavor, all have similar formats. A list of the Henry Ford National Invention Convention affiliates is on the website below. The Henry Ford Invention Convention Worldwide is the same organization and is expanding to a growing list of countries!

https://inhub.thehenryford.org/icw/competitions/globals For Spanish & Chinese: scroll to bottom.

Connecticut Invention Convention Spanish logbook free download.

Most affiliates utilize the HF NIC Logbook. You may still find a few using one with their own twist.

Edison Fairs has modified its own log with contributions from the Henry Ford ICW Guidelines.

EDUCATORS take note: A limited number of free HF 'inHub' inventing lesson plans are available.

Understanding How to Use Any Logbook

With contributions from the Henry Ford ICW Guidelines

A Logbook is a journal of invention discovery, progress, and failure. It resembles a *diary*, being chronologically filled in as you work on your invention. Follow the instructions and fill out the various pages as you work on them. When you are done with a day's entries, record your name or initials, the date and any witnesses or persons assisting you, especially for important entries.

All sections should be filled in using complete sentences, not single words or short phrases, except for things like a list of materials. Expect to add pages if needed to complete your entries in the **Inventor's Guide Logbook**. Once you are done, put the pages in their proper order. Submit this as your Logbook entry or take a few simple steps to turn it into a more **personalized Logbook**.

How you record information in your Logbook had long been the key to claiming you were the first person or party to invent a unique product or method. Since ***the inception of the U.S. Patent System*** in the 1790's, the United States practiced **First to Invent** privileges for ownership of patent rights.

Did you catch that? ***The Patent System is an invention****. It is not a 'system' found in nature.* It is invented and revised! Just like governments, financial instruments and societies! Inventions are the Tools of Progress.

STEP TWO: THE BIG CHANGE
First to File verses First to Invent

Until 2013, the person filing for a patent with the best evidence/proof of being First to *Invent* would be granted patent rights. **Bound notebooks** served as the best logbooks. Evidence of chronological order and being *first to invent* could be clearly established. Inserting pages was unacceptable.

After 2013, evidence of First to *Invent* became more challenging with computerization along with U.S. industries desire for globalization of patent practices. A momentous change occurred in the Patent System.

In 2013 First to File Legislation was signed into law!
First to File means **it is no longer a requirement to have proof** of times, dates and witnesses in the birth of a new invention.
How does this affect you? Read the DISCLAIMER again! (see first page)

The person or party that is **First to File** gains the advantage. *Even still, it is considered good practice to keep accurate, timely, and verifiable records just in case issues arise in your favor or patent filing laws change!*

"*Ideas are a person's greatest asset*" E. Joseph Cossman

STEP THREE: IT'S UP TO YOU
Inventor's Guide or *Personalized* Logbook

Imagine after you complete the *Inventor's Guide* Logbook, all the instructions (guidelines and questions) disappear! Vanish! Caput! Only the information YOU entered remains! What is left is YOUR *Personalized* Logbook. With a few tweaks you can enhance it even more and make it YOUR very own Invention Story!

Is this required? No, it is optional. *Then why do it?* Three big reasons:

- You can now adjust how you organize your entries as a result of ***First to File*** patent regulations. (*First to Invent* did not permit this.)
- The *Personalize*d Logbook is composed of just YOUR entries. (No 'instructions')
- It will be easier for everyone including judges to review!

You're almost done. Polish up your Logbook with good grammar and proper spelling. Do not leave out physical drawings, digital images or original sketches on napkins or scraps of paper (or their photos). Sign and date them!

Upon completion write a **Summary Abstract**, a brief yet very informative overview revealing the essence of your inventing efforts, ideally in 150 words or less. This will appear as the introduction for the final Logbook submitted.

In Conclusion

The logbook should document the journey and not be just a report. It should include all aspects of the invention process and invention impact.

"It's so important to believe in yourself. Believe that you can do it, under any circumstances. Because if you believe you can, then you really will. That belief keeps you searching for the answers, and then pretty soon you get it." Wally "Famous" Amos

STEP FOUR: HOW TO PERSONALIZE ANY LOGBOOK

One option is to use the **Judges Rubric Categories** in sequential order. You can even make a "***Table of Contents"***. Alternatively, you can think outside the box and personalize the headings for each chapter. See example below.

Logbook Table of Contents

(add page numbers)

Introduction: Summary Abstract

INVENTION PROCESS *Chapter One*

- Identifying & Understanding (e.g. How I Identified . . .)
- Ideating
- Originality (e.g. My Search for . . .)
- Designing, Building, Testing, Revising

INVENTION IMPACT *Chapter Two*

- Marketability
- Value Proposition
- Social Value

INVENTION COMMUNICATION *Chapter Three Invention communications are visual and auditory. The Logbook will contain the information from which you create the Presentation (Live or Virtual), Prototype, and Display.*

Entrepreneurial *Chapter Four*

STEM Research *Chapter Five*

SUMMARY/ ABSTRACT

A concise statement of less than150 words communicating what the invention is without getting into very specific or technical details. The general public should be able to understand the basic aspects of the invention and its function. (Write this last.)

INVENTION PROCESS

"If it is to be, it is up to me!"

Identifying & **Understanding** Problems remain problems if no one is willing to solve them. Whether great or small, solving a problem is a personal decision. What problems are of greatest personal interest? What techniques can you employ to recognize problems having a far reaching impact on others? To really understand a problem requires research to help reveal solutions which may or may not yet exist. With this knowledge, choose which problem motivates you to invent a unique solution?

STEM is very relevant for **Identifying and Understanding** the pursuit of an idea.
Include a **Science & Engineering Fair** '***STEM' Summary Abstract*** in this section.
Present the more in depth research as an attachment at the end of the Logbook.
The emphasis of this Logbook is detailing the invention process.

Any invention project involving STEM research must meet all Rules and Regulations of the Thomas Alva Edison Kiwanis Regional Science & Engineering Fair in addition to those of the Inventors Fair.

"I believe it is very important to have the desire to succeed - - hard work, honesty, and integrity. If you possess these traits, there is no reason why you cannot succeed in whatever you choose to do. . . . Stay in school and get as much education as possible. Education is so very important in our ever-changing world."

***R. David Thomas**, Senior Chairman of the Board, **Wendy's International**, Inc. 10/12/01*

Ideating (Identifying the Solution) Time to brainstorm. Use your imagination to generate what you believe to be an original solution. Make a list of the ideal properties needed for the best outcome. Once your mind is turned on to thinking about solutions, EUREKA thoughts can pop up subconsciously at any time, even while dreaming! Make sure to record them right away! Yes, an idea can slip from your mind! You need to capture it!

'A mind once stretched by a new idea never regains its original dimension.' Oliver Wendell Holmes, Jr.

Originality You need to prove you have a unique idea. There is a risk of repeating something that has already been invented. Before valuable time is lost, it is important to know what solutions other people have already come up with that would prevent you from claiming your idea as *new or novel.* Think of this as a *Quest . . . a Journey into the Realm of Intellectual Property Research*.

Once you find a similar invention, check for a patent. Use its references to expand your own patent search. Learn more descriptive words (or clues) to expand the search. This is no different than playing a game and finding clues to reach a destination. Here, the goal is to prove originality!

*"Capital isn't so important in business. Experience isn't so important. You can get both of those things. **What is important is ideas**. If you have ideas, you have the main asset you need, and there isn't any limit to what you can do with your business and your life. They are any man's greatest asset - ideas."* Harvey Firestone, friend to Thomas Edison

Designing, Building, **Testing** & **Iterating** The simpler the better. How do you envision your invention to look as well as function? Is it ergonomically designed for efficiency and comfort? Will it have an effect on how people interact with one another?

List the choice of materials you could construct your invention out of and how each affects durability, efficiency, value and its impact on the environment. Think about why it is often necessary to choose the most cost effective materials and not the very best. (Hint: affordability)

Record each step in testing and reengineering to get to your current prototype. Are you pleased with the results? Do you have plans to improve upon the current design? How?

Successful inventors learn what doesn't work more times than what does work.
An inventor must be willing to try at the risk of failing in order to find what works.

"The only time you have to succeed is the last time you try."
Philip H. Knight, *NIKE* CEO recalls his College Professor

INVENTION IMPACT

Marketability The ability of your product or service to be sold. There it is again: *affordability*. Does it have broad or narrow consumer appeal? What is the likelihood of being able to offer a valuable product/service with consistency?

Market potential assesses the scope and likelihood of an invention gaining users. How large and/or viable is the potential market? What research did you do to find this information? Based on who would benefit from your product most, what market would be the best to focus on?

Value Proposition List the distinguishing benefits of your product or service from the competition. Is it more durable and longer lasting? Does it perform more functions? Does it perform each function better? Is it easier to use with ergonomic design benefits? Is it more cost effective? Can it be stored away better? Does it meet and exceed expectations?

Social Value How does your invention address pressing social issues? What are the potential environmental, societal, customary norms or established methods to be impacted by this invention? To what extent does the invention improve environmental or social conditions? Have you given thought to what could go wrong or have an unintended impact?

INVENTION COMMUNICATIONS

In each of the following areas you will be communicating significant aspects of each topic of your invention process and impact. You have gathered all the information and will now share it by spoken and unspoken means including one or more demonstrations.

Logbook The logbook provides all the building blocks of informative communications preferably in the order in which they occurred. Be safe - verify entries with dates and signatures. For an in-depth review, see www.edisonfairs.org Inventors Fair- Students - **Education Guide**.

Presentation **Live, Recorded (Video) or both. This is YOUR invention story. Make it your goal not to rush, to speak clearly and confidently. Communicate the steps you went through and the challenges you encountered. People really want to hear about it!**

Helpful Hints:

- Make a list of special topics to speak about for each step. Without rushing, time yourself reading your entire script out loud. If longer than six minutes, prioritize the information until your reach your goal. Once you accomplish this, practice reading less with fewer and fewer cue cards. You might even try looking into a mirror as you speak.
- If it helps relax and motivate you, create a jingle or commercial to share key benefits.
- ***Make the most of your display board and prototype to draw attention away from you. Use them as props for people to focus on while you inspire and excite them!***
- Introduce yourself and show your prototype to raise the viewer's curiosity. Proceed with your presentation, and provide a second more thorough demo! (Seeing the prototype is great. Watching or imagining it performing is exciting.)

Display Your *'Invention Story'* Board

For a Live Event, The standard size is a 36" x 48" Corrugated Tri-Fold Display Board.
The height may be 36" up to 72" tall, must be stable and not easily toppled over.
Safety is paramount. Physical display boards can use mounted prints of your *digital display*.
A commercially printed board can be expensive and is not expected at the school or regional fair level. This is more commonly seen at the national level of competition.

For Virtual Competition, complete the Digital Display Board in your digital folder.
(A digital display is very useful in designing a physical display board.)

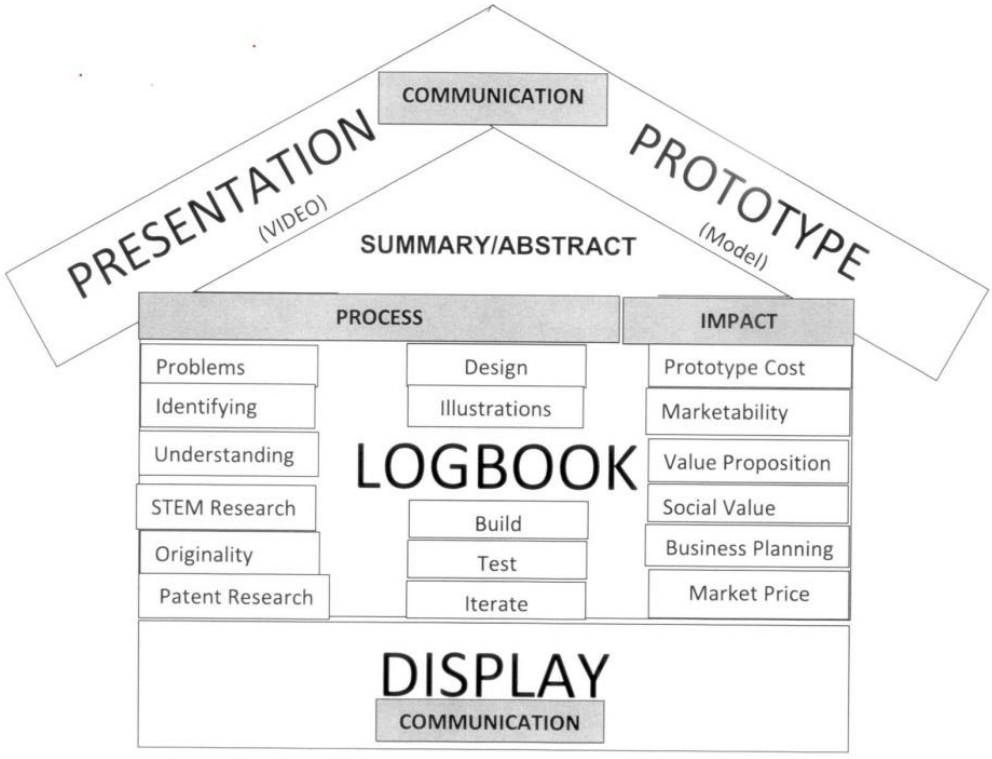
Prototype

To be successful, an invention must meet or exceed expectations. It may take testing and refining of more than one prototype to get it right. Computer-generated models or detailed drawings may be used to demonstrate 'proof of concept' and save expenses. **Record ALL your steps** in the Inventor's Guide Logbook. Remember, ***SAFETY*** *comes first at all times!* Appropriate adult supervision is essential. No live animals shall be put at risk.

"It's creativity and a different way of learning. The inventions make students use math, science, creative thinking, financial and marketing planning and other skills. It incorporates every skill a teacher could possibly want, in a free-form way."

Marsha Malamut's teacher's perspective of the Edison Young Inventors Program

A Blue Print for Building Your House of Invention



From the Inventors School of Hard Knocks

Discussing these points will expand your understanding. These Gems are worth saving!

- **Speed to market is an important strategy**
  - **First to market can generate strong name or trademark recognition and loyalty for repeat sales.**
  - **Technology is advancing at a greater rate than ever. By delaying the introduction of a new idea, you could miss your window of opportunity!**

- **Patents are more suited for products with a 'long life' potential in the marketplace.**

- **Licensing a product is possible without a patent. Learn about licensing pros and cons.** **(see page 13)**

- **Patent law may be revised at any time. Verify and clarify patent information.**

- **A patent attorney's first responsibility is to evaluate whether or not your invention is original, not whether it is potentially profitable! It is not the job of patent counsel to tell you if you have a great idea or not! You are the one that has to review the market to figure that out.**

- **Patent attorneys are bound by a code of ethics to perform their services to protect your best interests relating to originality and intellectual property.**

- ***"Your idea is great"*! Invention Scams** encourage you to ***'take the bait'*** by telling you what you want to hear. This is a **RED FLAG**. Proceed with great caution before paying for any service!

- **The REAL TEST of originality & patent strength will be ruled by a judge not the Patent Office. This happens when you defend your patent from infringement!!!**

- **A patent CLAIM is indisputably the most important part of a patent specification. It defines the boundary of the patent. One word can impact the strength of a claim. Do not take this casually. Words matter!**

- Thomas Edison's goal was to fill a need. This way the product is pulled on to the market rather than trying spend more to push the product onto the market.

You have already been informed that patents are more important for products with the potential for a long life in the marketplace.

- The life of a provisional (temporary) patent is 1 year.
  - The application is filed but not reviewed unless an issue arises concerning *First to File*.
  - No claims are required.
- The life of a non provisional utility patent is 20 years
  - The clock starts upon filing a provisional or non provisional application.
  - Patent claim(s) are required.
  - A review of all claims is conducted with a patent search to determine originality of each.
  - Each individual claim is either approved or declined. At least one must be approved.
  - If approved, maintenance fees are periodically required to prevent loss of ownership.
- Permission of the patent holder is required to use intellectual property to avoid infringement.

To Start or Not to Start Business, That is the Question!

The ENTREPRENEURIAL section offers you basic insight.
No score is given. It is optional. Awareness of the various choices can be helpful.

Entrepreneurs don't plan to fail, they fail to plan.

Sources of Funding: Financial institutions, venture capital, angel funding, friends, family, relatives, crowd sourcing . . .

Business Plans from simple (a little as one page) to complex. Plans can differ depending on the type of business. Start simple. Stay focused yet flexible to market conditions.
Any business plan is a work in progress. It is always evolving!

Key components of a business plan:

- **Executive Summary**: Briefly define the business, problem(s) being addressed and solutions, the client/customer being pursued, and financial review
- **Company Summary** or Overview
- **Organization and Management:** Leadership and skilled workforce
- **Services/Products**
- **Market Analysis**: Identify the **Best Market**(s) and the **Competition**
- **Marketing Strategy and Tactics**
- **Financial Plan; Funding** (startups need 3yrs)**; Revenue Projections**
- **Timeline** and the **Metrics to Measure Success** to help reach goals

ENTREPRENEURIAL RESOURCES

- Small Business Administration sba.gov Starting a Business & Business Plans
- Small Business Innovation Research www.SBIR.gov source of funding
- Service Corps of Retired Executives www.SCORE.org free consultations
- Junior Achievement of Southwest Florida: financial literacy, entrepreneurship

REGIONAL ENTREPRENEURIAL DEGREE PROGRAMS

- FGCU Daveler & Kauanui School of Entrepreneurship https://www.fgcu.edu/school-of-entrepreneurship
- FGCU Lutgert College of Business https://www.fgcu.edu/cob
- FSW School of Business and Technology https://www.fsw.edu/sobt
- Hodges University https://www.hodges.edu/prog-bachelors-degrees.html

"At every phase of your career, the most important thing you bring to the job is personal leadership. It is more important than any process or any management theory. People follow people who care about what they're doing. You've got to show people that you have passion. You've got to be prepared to open up and say, "I believe this."

Mark D. Harris, VP Executive Chairperson, IBM

Marketing Strategies:

The 7 Ps: product, price, place, promotion, packaging, positioning, and people.
The 4C's: consumer wants/needs; cost to satisfy; convenience to buy; communication

Distribution Channels: wholesalers, retailers, franchisor, direct-to-consumer

Distribution Strategies: delivering products, goods or services to customers and end-users

- Intensive – as many locations as possible
- Exclusive – limited to specific locations
- Selective - select locations

Pricing strategies:

Value-based, cost plus, competition-based, and dynamic pricing

World Wide Web sales: Using Communicating Channels

Search engine optimization

- Social media marketing
- Email marketing
- Pay per Click marketing
- Content marketing – providing solutions to questions

"Luck" results when "preparation" meets "opportunity"!

ENTREPRENEUR

Thomas Edison was reported to have said he would not invent anything he couldn't sell.

ALTRUIST & ENTREPRENEUR

Tim Berners-Lee believed the impact of his invention, the world wide web, would be best shared with all for the greater good and not for personal gain.

Manufacturing Costs - A Brief Overview

There is a lot to learn about manufacturing, making special production molds and even 3D printing, using the most cost effective methods and materials for the product and deciding on the right packaging. ***The retail cost of a product averages about four times the manufacturer's production cost. Internet sales can impact costs.*** *Why? Consider all the things necessary to get your product to the final user: packaging, advertising, sales people, insurance, transportation, storage, and having money tied up in inventory!*

A **PRICING GUIDE** is shared below to expand the picture. You are NOT expected to submit this with your invention entry. Keep in mind there are people that specialize in providing services in each and every area. *You could even become one of them!*

A) **MATERIAL COST PER PIECE** Production Cost

1) Material cost per unit $ _____
2) Number of units produced x _____ $ _____

B) **R & D, PROTOTYPE, & TOOLING COST**

1) R & D (CG Expense) $ _____
2) Prototype Expense $ _____
3) Cost of mold(s) $ _____ $ _____

(Other factors: Life of mold, Amortized mold Cost per Unit)

C) **PACKAGING**

1) Unit package cost
2) Point of Purchase Display
3) Bulk Packaging (Cartons/Cases) $ _____

D) **PRODUCT LIABILITY**

Annual Policy / Number of Units $ _____

E) **SALES PROJECTIONS**

Market factors
Annual sales 1st year
2nd year
3rd year

F) **OTHER FACTORS**

1) Slush Fund
2) Intellectual Property Maintenance
3) Advertising Budget
4) Transportation/Shipping

"Do it right the first time." Careful observation of every element of the process - "...locates problems and leads to innovations that solve them." "The total cost to produce and dispose of a defective item exceeds the cost to produce a good one." " .. quality control is everyone's job."
The Chip by T.R. Reid 2001 Random House

What is Licensing *(The Other Business Plan)*

Notes shared by Stephen Key, www.Inventright.com

(Disclaimer: This has both free and fee based services. It has proven to be a valued service to many inventors. However, should you decide to pay for services, you do so at your own risk.)

"So, you may be wondering, what exactly *is* licensing? In essence, you can think of it as the ***renting* of an idea**. In exchange for coming up with a product idea, a company pays you for the right to make and sell it. Sounds awesome, right? You get to do the fun part: Being inventive. **The company who rents — or *licenses* — it from you does all of the heavy lifting, including figuring out how to manufacture, distribute, and market it. You get paid each time a consumer buys the product**, an amount that is referred to as a ***royalty***. You only get paid a small percentage of what each product ends up retailing for, **maybe just 3-5%.** But then again, you haven't done the entrepreneurial work. It's the company that licensed the idea from you — your *licensee* — that has shouldered the risk and responsibility of getting things done. Of course, we recommend that inventors help their licensees see things through, especially if the company is interested in working with you."

The following information was presented by Steven Key to affiliates of the HF ICW on 9.14.2022.

Licensing enables Open Innovation to a wider group of people

- Speed to market is very crucial today.
- Selling first and selling fast.
- Find a great company for your product, one with a wide distribution capability
- Least expensive approach

inventRight® 10 Step System – Summary

1. Study the marketplace
2. Invent for the marketplace
3. Select a relatively simple idea
4. Create an inexpensive rough prototype out of household materials or home 3D printers
5. Use a one liner to capture the essential benefit(s) of the idea
6. Create a product and sell sheet (one page)
7. Least expensive IPP – file a Provisional (Temporary) Patent Application
8. Connect with companies via Linked-in
9. Understand fairness in licensing agreements (licensor and licensee both benefit)
10. Repeat over and over – It's a numbers game!

Rules of Engagement – Shared by a Global Entrepreneur

"Nobody has the exclusive right to ingenuity"

- Business can take place anywhere!
- Identify areas you can compete in.
- Don't expect people in the field to readily accept an "improvement" if it only serves to reduce time and therefore their paycheck!
- Research your idea before confronting important people!
    - Do your own search. Find prior art and gaps in it. Learn to search intellectual property.
    - Remember the PTO 'works for you". Patent examiners won't write the patent but will help write CLAIMS!
- Your idea must go twice as fast for ½ the cost!
- If reasonable, wait until the patent issues to help move agreements better. Keep moving forward. Speed to market still counts, especially for shorter life products.
- PATENT STRENGTH is tested only when challenged (by infringement) and it's costly.
- Molds – Concept: build two 4 cavity molds instead of one 8 cavity mold to avoid total shutdown
- Target your market – vital.
- Find a home or find another avenue. Get in the back door if necessary. Changes the rules! Do something that makes your product more valuable than other similar products and provide proof of value.
  eg: Make it OSHA compliant AND required – like *life jackets*.
- Understand and implement Product Liability
- If the addition of your invention to an existing product holding a warranty affects that warranty, BE CAREFUL of liability of the 'enhanced' product!
- First inventions help create a track record, opening future doors and financial resources.
- Never start at the bottom. Always seek the CEO's.
- Gain a basic knowledge of business: manufacturing,marketing, sales, finance.
- Some retailers insist on product "dating" – at 3 to 6 mo return of unsold product. Doing business means knowing what to expect.
- Fairness both ways! Common sense approach.
- Transition levels are a major cost to business growth. At each plateau there is an increase cost to gear up and increase organizational costs.
- Business, business, business. Concentrate on business but protect the basics!

(continued next page)

Do you risk enough to succeed?

1) Take your dream seriously.
2) Take it in little steps and build upon it.
3) Don't say don't. Talk to people, just guard disclosure.
4) Make your own rules! Look around the wall and find cracks.
5) Learn from mistakes.

Customize your business plans and show your true knowledge and understanding!
Computer generated plans can be over used.

SALES AGREEMENT

- Define geographic area
- Sales Policy
- Orders and Collections
- Damaged goods
- Payment
- Compliance with the law
- Independent Contractor
- Amendments
- Supplies
- Term
- Notice

TERMINATION Clauses: When Contracts do not live up to expectations.

1) Nonpayment of company monies
2) Misrepresentation of product
3) Time limits
4) Lack of performance
5) No product modification without prior notification of any product change.
6) Before final termination – ABITRATION CLAUSE – use arbitration of differences to catch misunderstandings

NOTES:

Wonderful Hands-on Opportunities in Our Backyard!

- Edison Ford Winter Estates LEGOS Robotics and Youth Camps
- IMAG (Imaginarium) – Hands-on displays and a Makers Lab

Great Resources (All links verified in August 2022)

- Henry Ford National Invention Convention – has multiple language Logbook Info
- https://inhuspto.gov/kids (general) and www.uspto.gov/teens (Patent searching)
- https://cainventionconvention.org see Student and Educator links
- The National Inventors Hall of Fame www.invent.org
- For outside the box opportunities, search *Disney Imagineering* for youth programs, high school and college competitions
- Professionals in the Industry (check out linkedin.com for possible people to interview)
- Small Business Administration sba.gov Starting a Business & Business Plans
- Small Business Innovation Research www.SBIR.gov source of funding
- Service Corps of Retired Executives www.SCORE.org free consultations
- Junior Achievement of Southwest Florida: financial literacy, entrepreneurship
- ub.thehenryford.org/invention/convention Lesson Plans for Teachers
- National Association of Manufacturers | NAM nam.org
- Singularity University su.org
- Lemelson Foundation Invent Teams https://lemelson.mit.edu/inventeams
- Patent attorneys often provide a free initial consultation. Alternatively you may visit www.PatentPathway.com. **Caution**, the free information is excellent but there is a reasonable fee for professional services upon request.
- Inspiration – www.ImagineSolutionsConference.com
- Small Business Development Center https://fsbdcswfl.org at FGCU

- National Science Teachers Association www.NSTA.org
- The Business Model Canvas – comprehensive www.businessmodelgeneration.com

Educational & STEM Inspirational videos resources:

- www.boeingfutureu.com - great for aeronautical interests
- www.thepocketlab.com/vidoe/scic9/openscied
- www.biomimicry.org - absolutely fascinating
- www.Boeingfutureu.com : vast library of experiential videos & future career choices.
- www.DiscoveryEducation.com : no need to log in to check this resource out
- www.Universeandmore.com : Challenged by Physics? For Gamers especially
- www.NextGenScience.org Wish these were available years ago! www.DreamWorks : Learn how Math makes Animation flow!

Discover what a 'Shrek'le measurement is.

SAMPLE SCORE SHEET

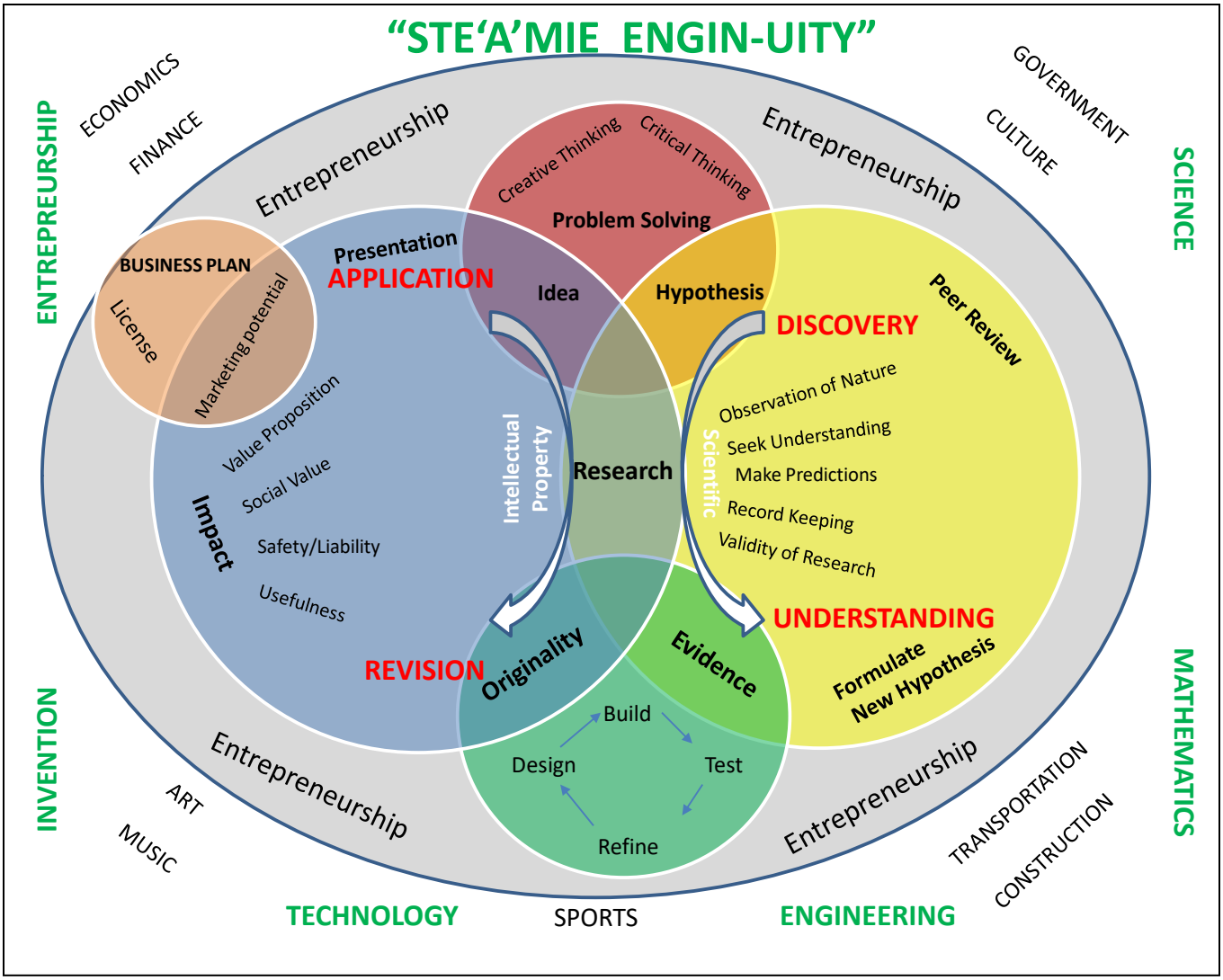
CATEGORY	*SUBCATEGORY*	*POINTS*	*Points Awarded*	*Category Point Total*
INVENTION PROCESS (50)	**Identifying & Understanding** (Problem recognition skills)	**10**		
	Ideating (Creative solutions, Brainstorming)	**10**		
	Originality (Evidence of uniqueness, IPP verification)	**10**		
	Design, Building, Testing &Refining (Concept-methodology development start to finish; Safety)	**10**		
	Logbook (Validation of Evidence of all the above)	**10**		
INVENTION IMPACT (20) **(Usefulness)**	**Market Potential** (Level of solution/need: small scale - large scale)	**10**		
	Value Proposition [Ability to solve/fulfill the need(s); Social Value]	**10**		
INVENTION COMMUNICATIONS (30)	**Personal Presentation** **(Live or Video)**	**10**		
	Display	**10**		
	Prototype or Model	**10**		
		Sum Total Score:		

ENTREPRENEURIAL RATING	**Special Category Award Considerations Only**	
Applied for IPP: Yes [ ] No [ ]	**Knowledge of Licensing Yes [ ] No [ ]**	**Business Planning**

The Edison Fairs Regional Inventors Rubric has been modified to conform to the Henry Ford Invention Convention Worldwide Rubric's Categories and subcategories. A slight difference remains in points awarded for each subcategory. Judging of logbooks and displays alternatively may take place virtually in advance of 'in person' judging. The digital zFairs scoring platform enables a choice of algorithms depending on the numbers of available judges per entry. Three algorithms may be reviewed with administrative oversight to advance the goal of fairness.

STE‘A’MIE ENGINUITY - The Engine of Progress

An Illustration of the Interrelationships of
Science, Engineering, Technology, Math, Invention, Entrepreneurism
(The *impact* of each circle is not drawn to scale)



If there is creativity of the mind,
There will be inventiveness in the person.

If there is inventiveness in the person,
There will be entrepreneurship in the workplace.

If there is entrepreneurship in the workplace,
There will be progress throughout the land.

If there is progress throughout the land,
There will be enrichment for all.

(adapted from a Chinese proverb by Gary H. Nelson 1996)

Revised August 2023

An official document of the Edison Fairs Regional Inventors Fair
Florida Gulf Coast Affiliate, Henry Ford National Invention Convention

Helpful Pointers for Holding a School Inventors Fair

The variables: Time Constraints, Judging Resources, Virtual vs Live, Scoring methods

1. Determine the scale of your school's involvement. Will one or more classes or grade levels participate?

2. Review and share the inventor fair information on our website (**www.edisonfairs.org**) to help raise awareness and sponsorships for student materials, awards, and volunteers.

3. Select an invention fair site based on the projected number of participants. With a little planning, classroom(s), cafeterias, gymnasiums or multipurpose rooms can serve well. Consider the time of day for set up and judging. Most school fairs have been conducted during the morning hours with set up completed the afternoon before the judging.

4. Arrange for student exhibits to be placed on tables or counters, preferably not floors. Floor level displays are hard on judges and should only be used when space is unavailable.

5. All exhibits shall be identified by school, grade and a number.

6. Individual school 'Certificates of Participation' are suggested to recognize each student's effort.

7. Judging options: With limitations on visitors to schools, consider student judging. Review the judging rubric with students. This is not a popularity contest and is more than just a 'great idea'. It's about completing the invention process successfully and thoroughly. Students can learn from each other.

8. Lower student participation may allow for every student to share in judging one another. Larger student participation numbers can utilize Judging Circles.

9. **Judging Circles** are formed consisting of 4-6 students each. Students take turns presenting their invention and having questions asked by their peers. The supervisor (teacher, colleagues, or judges) may ask questions before moving on to the next project as well as at the end of all presentations in the circle.

10. **Students** select the top one or two invention projects in each judging circle to advance to the next 'round' if this is necessary. The teacher advances the number of students allotted per grade/school to the Regional Fair.

11. The teacher has the discretion to advance students deemed qualified but overlooked.

12. If possible, keep one 'winners' spot open for the top score in each class. This allows for all classes to have at least one student represented in the overall grade level or school final results.

13. Place all class winners together in sequential order, from highest to lowest. Determine 1st, 2nd, and 3rd place winners overall. Keep in mind, it is not unusual to have to go back over the top scoring exhibits to break ties and select the final order of winners. (See zFairs.com No.15)

14. Online platforms enable VIRTUAL judging. Edison Fairs uses **zFairs.com**. An individual school fee for this additional capability should be expected. Students register and upload their inventors project files including a presentation video. The score sheet can be utilized for 'live' or virtual judging. Algorithms may be selected to create the Winners List.

15. Optionally, there is an opportunity to recognize special categories separate from winners 'worthy of special recognition' designation can be given extra notice.

16. Give recognition in your school to winners advancing to the Regional Fair Competition.

Questions? Contact Us! **inventors@edisonfairs.org**