The Story of Your Invention

Invention Log

What is an invention?

An invention is something new that enables us to solve a problem or do something better or easier.

The purpose of this Invention Log

All stories have an ending. In this case, the ending of what you are doing is your invention. But all stories also have a beginning and middle. The purpose of this Invention Log is to tell the entire story of your invention. In it, during every step you take in making your invention, you will record what you did, why you did it, and how you did it. This Invention Log is an important part of the invention process and is a complete and accurate record of the ideas, plans, and processes by which the invention was created. Invention Logs can be used by students to prove they came up with the idea and invention. Oftentimes, they are used as part of the patenting process.

How to use this Invention Log

The Invention Log is not a book report that is created after you are done. Rather, it is a diary that is continuously filled in as you work on your invention. Follow the steps of the invention process and fill out the various pages as you work on them. When you are done with a page, print your name and the date at the bottom. If you need extra space for any section, make copies of the Blank Page (Page 17) and use that for any purpose. Once you are done, put the pages in the order in which you did them and staple them to make a complete Invention Log. This log will also be used as part of the final presentation and needs to be filled in using complete sentences (except for things like a list of materials). Teams share one Invention Log and should attach signatures of all inventors.

The name of the invention: [redacted] / Electroll Shoes

The problem that it solves:

Helps reduce pollution, Car crashes, and traffic. and it helps people move farther and Faster.

INVENTION CONVENTION

Statement of Originality

I promise that the ideas in this Invention Log are my own. (If a team, all should complete.)

Inventor Name(s): Weiran (Alice) Jiang

Signature(s): Weiran Jiang

Date: _____

Grade: 7th Grade

School: Saline Middle School

Town: Pittsfeild Carter Township

INVENTION CONVENTION

Explaining the Problem and Identifying a Solution (Identifying and Understanding)

1. What problem are you trying to solve? The more specific you are in describing the problem, the better your solution will be. How did you come up with the problem?

more and more people around the world are starting to use electric transportation like heely's and hoverboards which helps you move faster and can reduce traffic, decreasing Pollution. Heely's and hoverboards however are unstable, which results in injuries.

2. What is the result you are trying to achieve? The more specific you are in describing the result you want, the better your solution will be.

I want to create a product that could make People move faster and farther, like skates, It can also be more stable and it also wouldn't need training. So cars will be less needed in Cities, which will reduce Car Crashes and pollution.

3. What are some possible solutions? Which one did you choose to pursue? How did you decide which solution to try? The more specific you are in describing the solution you will create, the better your invention will be. How did you come up with the solution?

my first Idea was to create moving Sidewalks (which are found in some airports), but it would be too big to create and complicated, so instead of creating a sidewalk I decided to create a shoe.

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4. Has this solution been done before? If it exists, how is your approach different and better? What research did you do to see if this invention had been done before? Who did you talk to? Where did you look? What website did you search? You should show 4 pieces of evidence of different types of research – talking with experts, searching the internet, interviewing friends and family as to how useful this would be, etc.

Where I looked to see if my idea is new:

A. www.google.com – heely's, and Bird Company.

B. www.amazon.com - found hoverboards

C. www.godaddy.com – my idea is good / new.

D. ~~www.ebay~~ www.walmart.com - skates

Document any similar inventions you found, describing how yours will be different:

Heelys are shoes with wheels but it's unstable and needs training unlike my invention. 1.25 million pairs in 2003 and helps people walk faster by shifting weight

roller skates can move very fast but need trains to use, it also needs to be on a smooth surface.

Hoverboards helps people move faster with less effort but it needs training and is unstable.

Teacher Signature - REQUIRED FOR ALL PARTICIPANTS

I approve of the solution/invention my student has chosen to pursue and agree that it not only meets the guidelines shown on the Restrictions and Requirements page, but that it is also safe.

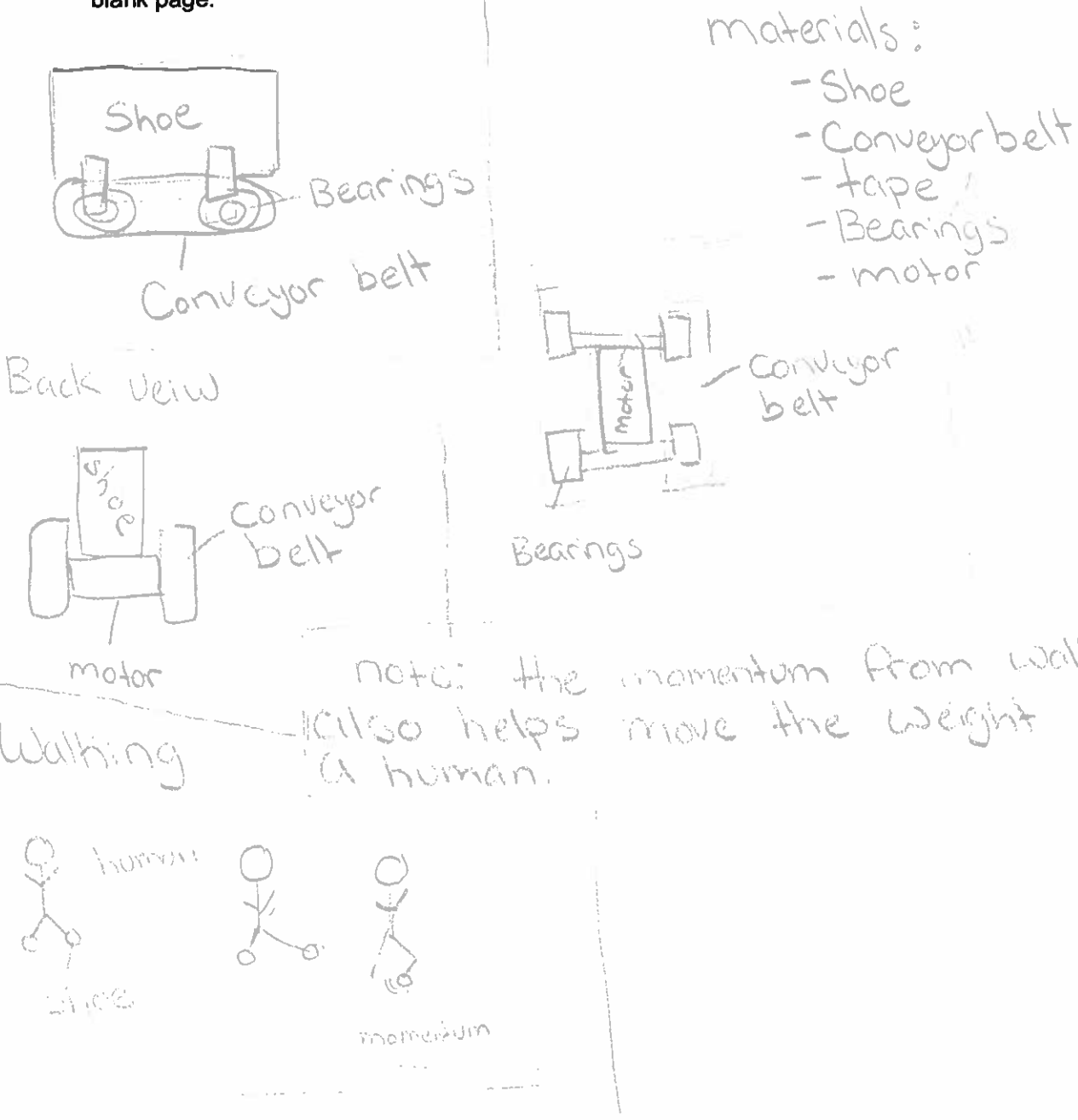
Teacher's Name (Printed) Shiri Klinek

Teacher's Signature Shiri Date

I approve of the solution/invention my student has chosen to pursue and agree that it not only meets the guidelines shown on the Restrictions and Requirements page, but that it is also safe.

Creating and Improving the Design (Ideating and Designing)

5. Draw a model (a sketch or drawing) of the invention you are thinking about building. Label all the important parts and features. Explain how the invention will work. If you need more space, use another blank page.



6. What problems or issues might you encounter with this design? Is this design compatible with the principle of sustainability? Who did you talk to about this design (another student, parent, teacher, etc.)? What were their comments about your design?

Problems:
-might not carry weight or move
eco-friendly, can reduce gas emissions made by cars, which will reduce pollution.
mentors
Steve: (Auto mechanic engineer) how to make my design more stable Dr. Ahmed (mechanical engineer) How it would carry weight

7. How can you fix those problems or address those issues?
- a stronger motor

8. Repeat steps 5 to 7 until you have a design that you think will work. You may have to make multiple copies of a blank page until you have a good design.

INVENTION CONVENTION

Building the Invention or Prototype (Designing, Building, Testing)

9. What parts, materials, and tools will you need to make the invention and how much will they cost?

Trial 1: a toy excavator 15$, Shoe, and strap

10. Where will you get those parts and materials?

I got the toy excavator from once apon a child the strap and shoe I got at home.

11. What additional skills or abilities will you need to make the invention?

I skrewed the excavator apart and left only the bottom half (the conveyor belts.)

12. Who can help you build the invention?

Steve and Dr. Ahmed

13. Get the parts and materials and build the invention (with help).

14. Test and evaluate the invention. What did you do to test the invention?

I was going to see if the prototype could move my weight (couldn't fit in the shoe and wasn't even electric) so I just tried adding weight to the shoe and if it stayed stable

15. Identify any problems with the invention. What will you change to make it better?

Wasn't electric and couldn't move the shoe was too small and I couldn't fit my feet in. Next time I'll use a bigger shoe and a electric toy excavator

16. Repeat steps 5 to 15 until the invention works as planned. You may have to copy and make multiple copies of this blank page until you have an invention that works the way you want.

Naming the Invention (Communicating)

17. Naming your invention is important.

- What words describe your invention?

moving shoe Stable
Speed
Conveyor belt
faster, farther

- Think in terms of words that will help you name your invention.

Speed
faster/farther
moving
shoe

- What is the function of your invention?

to help people walk faster and farther

- Think in terms of marketing it. How will it solve the problem? How will it help others?

it will be more stable than Heely's and Hoverboard, and it won't need training.

- How is your invention different from others that may already be on the market? If it is similar, what did you do to make it better? How is it different?

more stable, and doesn't need training unlike hover board, heely's, ect.

- Who is your target audience? Who would use your invention?

People who live in crowded cities, so they won't need to be stuck in traffic.

Some creative attention-getting techniques you can use are:

- Alliteration (using the same first letters or sounds): "Kit Kat"
- Rhyming: "Light Bright"
- Alternative spelling: "Sno Bal"
- Using numbers in the name: "Super Clean 3000"
- Describing the function of the invention: "Hydro-Blast"

- Based on this analysis, what are some good names for your invention?

electroll shoes

- Which name do you like best and why?

INVENTION CONVENTION

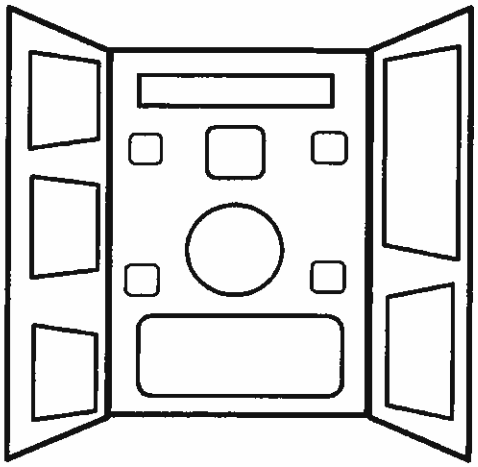
Planning and Creating the Invention Display Board (Communicating)

18. Create your display board. This is an example of what a Display Board might look like, but you can make it look however you want. This is your invention and your display, so use your creativity to tell the story of your invention the way you want.

    Be sure you use:

    - Fonts that are readable (style, size, color)
    - Colors that look good together
    - Shapes that are the right size
    - Correct grammar and spelling
    - Proper punctuation

    Maximum size: With the wings folded in, the Display Board can only take 24" of table space. However, you are allowed to open up the wings during your Judging Circle presentation.



Your Display Board MUST contain the following information in one consolidated place on the poster:

- Student(s) Name(s)
- Project Name
- Student(s) Grade(s)
- Student(s) School
- School City, State
- Preferred Industry-Focused Award Category (e.g. Telecommunications)
- Patent Status (three options: None, Under Counsel, or Patent Pending)

Students should note "Patent Pending" on their posters for Patent Status **only** if a provisional or non-provisional patent application has been officially filed with the USPTO. If you are currently represented by an attorney or patent agent (pro bono or otherwise), then mark "Under Counsel." It is possible to be both "Under Counsel" and "Patent Pending", or just "Under Counsel", or just "Patent Pending" (if you did the filing yourself).

You might also want to add this information:

- Images showing you building or testing
- How the invention was made – talk
- How the invention is used – talk
- The biography of the inventor
- Text which supports and explains any pictures, drawings, charts, etc.
- What scientific principles were used in your invention? (e.g. buoyancy, heat transfer)
- What engineering disciplines were used in your invention? (e.g. electronics, optics)
- Testimonials from users, research results
- Any other information about the invention that will help explain it, what it does, or why it is good

INVENTION CONVENTION

Practicing What You Will Say About Your Invention (Communicating)

19. Be prepared to answer questions. Here are some questions that you might be asked in the Judging Circle by the judges or fellow students. To help you prepare, you might want to write down some of the important parts of your answers so that you have them when you practice giving your presentation.

- How did you come up with the idea for this invention?

I was with my friend in Pemsylvannia (Phillidolphia) and we were going to get some lunch. We couldn't walk all the way because it was too far but the traffic was horrible We were stuck in traffic for about 1 hour that have I'll 30 mins, which made me think "wouldn't it be cool to have moving sidewalks?" but it would be too big + other so I thought to create a Shoe instead.

- What people, situations, or conditions does this problem affect?

People who live in crowded Cities being able to move faster and farther, which would decrease traffic and pollution in cities, it would also help people exsercize.

- How did you think up your solution to the problem?

I first wanted to create a thing people would feel fine to use outside and was accessible like shoes. hoverboards were too heavy and unstable. I also wanted to create a stable transportation so people wouldn't get hurt.

- Where did you get the materials for the invention?

I had some old shoes at home and straps.

I bought a excavator from amazon

- Who helped you build the invention and what did they help you do?

Steve - help me make my prototype more stable

Dr. Ahmed - helped me with my design

- Are there other, better materials you could have used that would improve the invention?

Better conveyor belts that would be specifically made for shoes.

making the conveor belts move and actually be electric

- Who has used your invention and what did they think about it?

my little sister age 8 said:

"It looks weird, and it doesn't work."

(during lunch)

"I can't put my feet in the shoe" - me.

- What changes might you want to make to your invention?

make the shoe bigger
make it electric
have a moving conveyor belt

20. **Be proud of what you have done. You will use the problem-solving and communication skills you have gained here throughout your life and career. Congratulations on what you've done!**

Blank Page(s)

These blank pages are available for you to add anything to your Invention Log that will help explain what you did, how you did it, and what the results were. This could include drawings, calculations, descriptions, test results, etc. Multiple copies of this page can be inserted anywhere you want in the Invention Log.