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: Rainwater gutter filter

The problem that it solves:

The problem is that pollutents are getting into waterbodies without getting filtered. It is harming the enviroment.

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): Hemanth Tavane

Signature(s): Hemanth TS

Date: 1/12/20

Grade: 6th

School: Clague Middle School

Town: Ann Arbor

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?

The problem is pollutents like, physical diprease, copper, asbestos dust, smoke, soot and organic chemical are getting into rainwater which is leading into rivers, lakes, ponds by the gutter which does not filter before it goes to the lake which is polluting the water bodies and harming the ecosystem like the flint river. which can cause great health problems like in the flint water crises.

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.

The result I'm trying to achieve is to prevent the physical pollutents and and and filter out all the liquid pollutents but just enough so it is safe to put back in the lake but not good enough to drink.

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?

Some possible soulotion is to make it inexpansive, can be resized to fit, and trap all/most pollutents in rainwater without stoping the water. I chose to pursue is inexpansive, traps all/most pollutent in the water and doesn't stop the rainflow

INVENTION CONVENTION

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. Internat

   B. Mentors

   C. Parents

   D. Friends

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

Stormdrain Cover, Stormdrain catcher, Water fiters(asbestos, membrane, organic filter, oil, sedment filters)

because, my invention combincs all of them exept for the cover and it will be easy to fit in the gutter.

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.

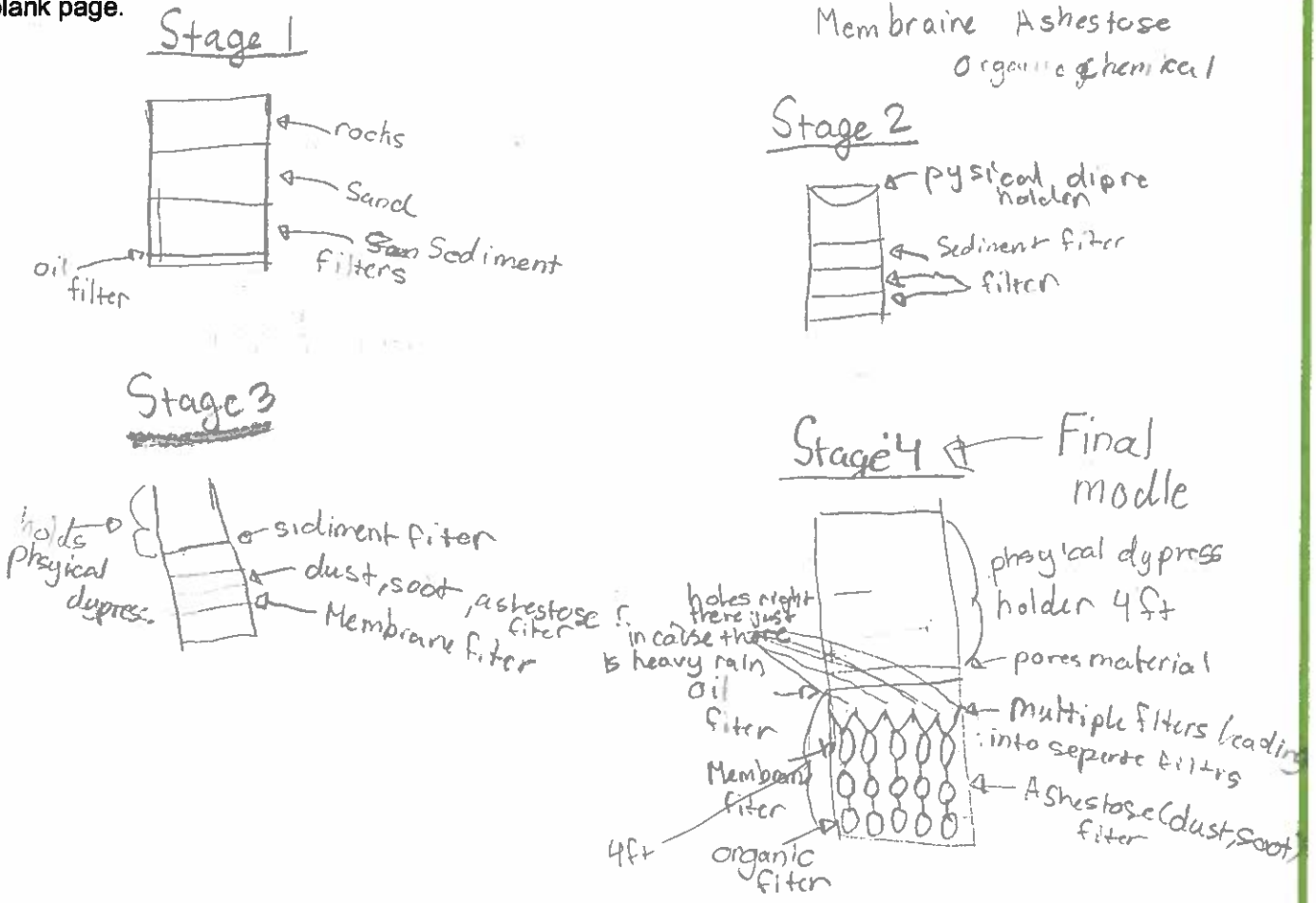
Teacher's Name (Printed) Shiz

Teacher's Signature Shiz Date 12/20/19

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?

Stage 1

Some issues were that the would drain quick and that it would stop the flow of water. I asked my mentors and parents and they said that. And they said it was eco friendly turolly. but it did clear the water fast unof. It doesn't clear all of the pollutions

Stage 2

I didn't think of any issues. I spoke to my mentores and they said it will take high maintence and have to have more filters to clean the water more

Stage 3

I didn't see a problem. My mentors and parents said that I forgot about organic filters and make the dypress holder bigger.

Stage 4

I talked to my mentors and they said it was eco

7. How can you fix those problems or address those issues?

Stage 1

Change the type of filter.

Stage 2

I have to find a replacment for the depress holder and specify the types of filter I will have to use.

Stage 3

I need to add a organic filter and make the height bigger depending on how deep is the invention allowd to be.

Stage 4

I had no problems

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?

exacto knife, tape, plastic water bottles, cardboard, hot glue, aluminum foil

10. Where will you get those parts and materials?

Walmart

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

learn to use exacto knife and how to make cardboard water proof.

12. Who can help you build the invention?

My mentores and parents

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 pored water down the invention to see if it filtered the sediment in the water

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

The water at first would splash everywhere so I added a cardboard to direct the water down.

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.

INVENTION CONVENTION

Naming the Invention (Communicating)

17. Naming your invention is important.

- What words describe your invention?

filter, water cleaner, cheap, new

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

water filter, cleaner of water

- What is the function of your invention?

to clean the dirty particals in water including physical dypress.

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

It will go into a gutter and then rain water will go throw multiple filters and at the end the water will be clean enof to go into the enviroment without harming it. It will help the enviroment which is the main reason it wes made but if the water isn't cotaminated we don't accidently have a water crises like flint.

- 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?

Some products outthere are just singular filters without conection. And some items for keeping physical dypress need constant maintenence,

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

My target audience is mainly adults which are conserned about the enviroment. People who would use it would be acitics coucel so they attority to put it into the gutter.

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?

O.S.M.A.OC Filter, gutter filter, AMO filters, MOA filters MAO filters, MAO gutter filter

- Which name do you like best and why?

I like the MAO gutter filter because, it is the initels for the main filter in order from top to bottom in the filter. And it is catchy.

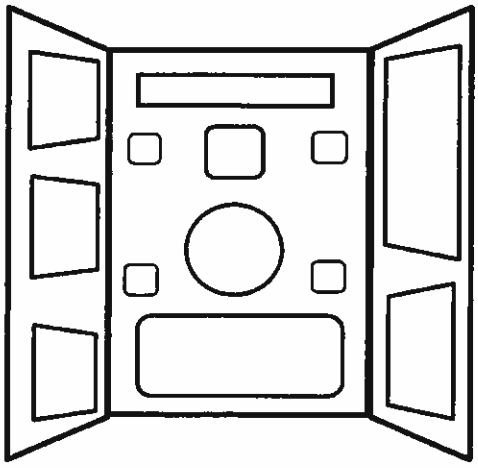
Planning and Creating the Invention Display Board (Communicating)

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
- How the invention is used
- 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

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?

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

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

- Where did you get the materials for the invention?

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

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

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

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

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.

When it goes into the filter first it has to go throw a physical debris container which is 4ft long and varies on how much the wight is so the storage will be varing depending on the gutter it's self. Then it goes throw a pores material which will go to a oil filter then funnels will lead into seperate filters systems. The amount will varg depending on the size of the gutter it's self. Which then will lead into the pipes which will lead to pipes which will lead to the river. You will need to check every 1 or 2 months during the rainy months or even more depending on the amount of rain. In the winter you will need to coven it with the just gutter entrance so the cold snow plate damage the filter.