



### The Official Inventor's Journal

An inventor needs to be very careful about taking notes and keeping them in a bound book. You will need to prove that you thought up your invention, and you will need to have a “witness” sign your journal each day that you work on your invention and make entries. Anyone who can make a signature next to your name can be your witness.

It is also important to keep this journal and any others you use “bound” together exactly the way they were when new. That means no pages will be taken out or ripped out. In that way, people will be able to see what you thought up and when you came up with your invention. This way someone else won't get the credit for your idea.

Here is your ***BKFK Inventive Thinking Toolkit Student Guide***. Enjoy all the fun activities in this book as you get ready to invent!

### ***Rules for Authentic Journal Keeping***

- Use this guide or get a bound notebook. Try not to use a spiral one whose pages tear out.
- Use ink and don't erase or white out anything. If something is wrong, just put a line through it.
- Make notes every day. Write down all the brilliant thoughts you have....one of your ideas may turn into an invention.
- Keep an eye out for problems. Watch when people struggle, and think about how something you could invent could help them!
- Record all your ideas for inventions.
- Make sketches and drawings so your idea can be seen.
- List all parts needed to make your invention. Make notes about where they come from and the cost of these materials.
- Explain how you make your model. You may only be able to draw a picture to explain your invention. Some models are difficult to build.
- Find an “inventor coach” if you can. This person will help you think about different ways to solve the problem. He or she may be able to help you build the invention.
- After you write in the book, sign and date your entry. Make sure you have someone witness your entry and sign next to your name.

This story will show you how important the rules for journal keeping are: *Who invented the telephone?* If you said Alexander Graham Bell, you would be right. He filed a patent application in 1875. But another man named Daniel Drawbaugh said he invented the telephone. Alexander Graham Bell had excellent records, but Daniel Drawbaugh did not have written proof. The Supreme Court awarded the patent for the telephone to Alexander Graham Bell.

By now you should realize that anyone's good invention can become a reality. Something a kid can think of can end up being patented and produced! Following the rules will let you keep the credit for your own invention!



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Name \_\_\_\_\_

Date \_\_\_\_\_

**Materials Needed**

- Discovery 1 Scavenger Hunt* (this page)
- You will need to use the library, an encyclopedia, or the Internet to complete *Discovery 1*

***Who Invents?***

A lot of students just like you come up with some really great ideas. *Do you think like an inventor?* Put your thinking cap on and go on a **Scavenger Hunt** to learn more about who invents, and how inventors bring their ideas to the world! Read the **Scavenger** questions below, decide where you will look for the answer, then complete the questions below or on another sheet of paper. Be sure to write down where you found each answer.

***Ready, Steady...Go!***

1. Who was the **first woman** to receive a patent?

.....

2. What image is the **most reproduced** in the world?

.....

3. What did **Luis Alvarez** invent?

.....

4. Who invented **Google**?

.....

5. What did **Lonnie G. Johnson** invent?

.....

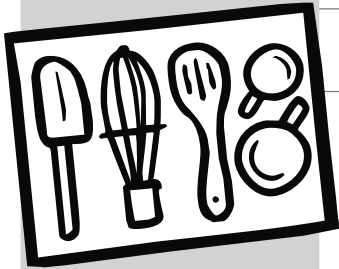
6. Who invented the **Personal Computer (PC)**?

.....

Witnessed by \_\_\_\_\_

Date \_\_\_\_\_





Name \_\_\_\_\_

Date \_\_\_\_\_

**Materials Needed**

- Discovery 2 Everyday Genius* (this page)
  - A variety of kitchen gadgets to examine
  - A pencil to complete the chart at right
  - A camera (make sure you print out or develop your photos)
- OR
- Crayons, colored pencils, or markers for drawing, and paper (*instead of a camera*)

**Looking at Real Inventions**

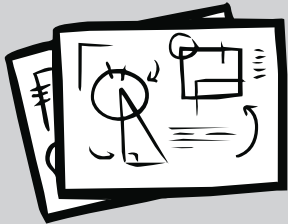
*What inventions can you find in the kitchen?* Find three kitchen objects that are interesting—like tongs or a peppermill—and fill out this sheet. Take a photo or draw a picture of your favorite object, then bring your picture and the chart below to class. *How many different objects did your class find? Are there any objects that were chosen by more than one person?* Display your pictures as a class, and discuss how these objects can lead to new invention ideas.

Do you know what your object is called? <i>Write it in this column.</i>	What does your item do?	What else could it do?	How could you change this to do something else?
1.			
2.			
3.			



Witnessed by \_\_\_\_\_

Date \_\_\_\_\_



**Materials Needed**

- Discovery 3 Eureka in the Bathtub!* (this page)
- A pencil
- A list of people to interview

Name \_\_\_\_\_

Date \_\_\_\_\_

***How Inventions Happen***

You are embarking on a solution-seeking mission! You will be interviewing as many people as you can about the everyday problems they face and the tools that help solve them. Make a list of people to interview. Ask ahead when you might spend some time with each of them, and if they can give you 10 minutes to talk during a time when they are not busy. Before the interview, read the ***Interview Questions*** below to get an idea of what you will ask. During the interview, take notes on this page and fill in the chart as you go. After the interview, make sure you thank each person for his or her time and comments.

***Interview Questions***

Before each interview, go over the questions you will ask. Here are some ideas:

- What problem would you like to see solved?
- Is there something that you do at work or at home that you find difficult or frustrating?
- Would a new product or tool help you? If so, what would it be?
- Are there tools or products that don't work as well as you would like them to work?
- If you could invent something to make your life easier, what would you invent?

Person you interviewed

-----

Problem he or she has

-----

What device or tool could possibly help this person

-----

Your notes and ideas about this

-----

Your research to find out if it already exists

-----

Witnessed by \_\_\_\_\_

Date \_\_\_\_\_



**Materials Needed**

- Discovery 4  
A Tornado of Ideas  
(this page)*
- A pencil

Name \_\_\_\_\_

Date \_\_\_\_\_

***Using Brainstorming***

Use this page when you are ready to start working on one idea to solve a problem you found. This page will start the process of inventing. Write out your problem here: \_\_\_\_\_

Solutions <i>Write it in this column.</i>	Reasons this is a <b>good idea</b>	Reasons this is a <b>bad idea</b>
1.		
2.		
3.		
4.		
5.		



Witnessed by \_\_\_\_\_

Date \_\_\_\_\_



Discovery **5** *Are You a Solution Seeker?*

Name \_\_\_\_\_

Date \_\_\_\_\_

**Materials Needed**

- Discovery 5  
Are You a Solution  
Seeker?*  
(this page)
- A pencil

***Inventing Through Problem Solving***

By now, you have learned that many people are interested in solutions that allow them to live better lives. *What kinds of solutions are important to you? Is there a special challenge that you're working on solving?* Read the questions in the chart below, then write your thoughts in your Invention Journal.

My idea:

Problem I have identified to solve:

Things I will need to know in order to solve this problem:

Who will I need to talk to? Who can help me with this invention?

If I wanted to build a model of my invention, how would I try to do it?

What materials will I need to make my model?

What equipment will I need to use to make my model?

What steps will I have to take to invent my model?

What problems could come up?

Who can I go to for help?

Witnessed by \_\_\_\_\_

Date \_\_\_\_\_





Name \_\_\_\_\_

Date \_\_\_\_\_

**Materials Needed**

- Discovery 6 Patently Perfect* (this page)
- A pencil
- Internet access (at home, at the library, or in the computer lab)

**Patent Search Tips**

When you arrive at the search page you will see that on the left, you can enter two different search words. On the right, there are pull-down menus that show what part of the patent text you would like to search. Unless you are searching for a very specific term, select "Title" from both pull-down menus. Type in your search words, then click "search." Example: If you are inventing a raincoat to be worn by dogs, in Term 1 you might type "dogs," and in Term 2 you might type "coat." To find different kinds of results, change the settings.

***Going Through the Trademark Process***

Before you get too far along on your invention, it makes good sense to make sure that no one has come up with the same invention before. To do this, you will need to visit the U.S. Patent Office online and search their patent database. The URL is: **www.uspto.gov/patft/index.html**. Once you have found the site, click on "Quick Search."

***What Is Your Invention About?***

*What words would you use to describe your invention?* Using the answers to these two questions, generate 10 keywords that relate to your inventive idea:

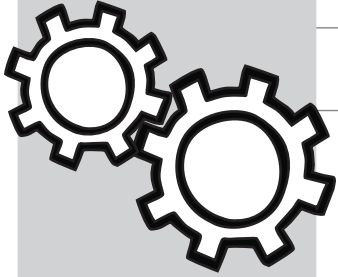
1. _____	6. _____
2. _____	7. _____
3. _____	8. _____
4. _____	9. _____
5. _____	10. _____

Next, type these keywords into the search fields on the U.S. Patent web site. Try different combinations of keywords, two at a time. *What patents do you find? Do any of them look like your invention?* List the names of similar inventions below:

Witnessed by \_\_\_\_\_

Date \_\_\_\_\_





Name \_\_\_\_\_

Date \_\_\_\_\_

**Materials Needed**

- Discovery 7 To Market, to Market (this page)
- A pencil



**Turning an Invention into a Product**

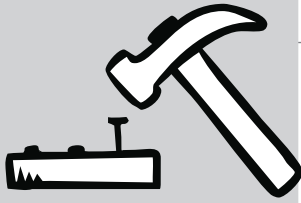
There are lots of fun ways to find a name for your invention. What does your invention do? What are some of your invention's parts? Name it after yourself, or name it with initials. Read the naming ideas below, then try it yourself!

- Name it for what it does.  
**HINT:** Play with the words until you find a catchy way to put them together.  
Examples: hairbrush, toaster oven, earmuffs.
- Name it for its parts.  
**HINT:** Play with the words until you find a way to put them together to make a two- or three-word name. Examples: windshield wipers, liquid soap.
- Name it after yourself.  
Examples: Ford (for Henry Ford), Braille (for Louis Braille), Levi's® (for Levi Strauss).
- Name it with fun or repeating sounds.  
Examples: hula hoop, Lotto, Kleenex®, XEROX®, Mattel®.
- Name it with initials.  
**HINT:** Try out some initials—yours or ones that use the words you have written about the invention. Examples: IBM, IKEA, GE.

**Logo Making**

Now that you have a name, let's make a logo for your invention or your invention company. Spend some time looking at the logos around you. Try some logos here:

[bkfk.com](http://bkfk.com)



**Materials Needed**

- Discovery 8 Yes, But Will It Work?* (this page)
- A pencil
- Optional* Internet access (at home, at the library, or in the computer lab)

Name \_\_\_\_\_

Date \_\_\_\_\_

**Testing Your Invention**

*How will you know if your invention will be successful? You have to test it. How will you test it? By asking questions. Read the questions below, and write your answers in your Invention Journal. After you have finished writing, discuss with your classmates, your teacher, or your coach where you think your invention is successful and where it could be improved.*

What is the problem I am solving?

---

Where did I get my idea? Is it really original?

---

What other inventions or products are like it?

---

What does my invention do?

---

What name did I come up with?

---

Will my invention work?

---

How do I know?

---

Is it practical?

---

Can it be made easily?

---

How expensive will it be to make? (*Go to the How To Invent section at [www.bkfk.com](http://www.bkfk.com) web site.*)

---

Will it break easily?

---

Will people use my invention? How do I know?

---

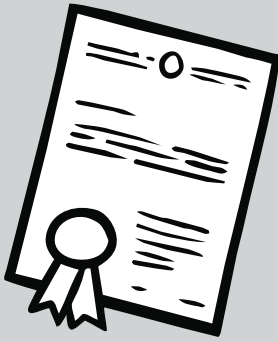
Who else has thought of the same idea?

---

Witnessed by \_\_\_\_\_

Date \_\_\_\_\_





Name \_\_\_\_\_

Date \_\_\_\_\_

**Materials Needed**

- Discovery 9  
A Chance to Change  
the World  
(this page)*
- Graphite pencil,  
colored pencils,  
pens, or markers for  
drawing
- Ruler/protractor
- Eraser
- Optional  
Tracing paper*

***Building Your Invention***

*What will your invention look like? Is it large or small? What are its measurements? Does it have sharp angles or is it bumpy or wavy? Is it soft or hard? Does it have something that makes it work, such as a motor or gears? Will it be used by kids, grown-ups, or animals? Is it made of metal, wood, plastic, fabric, or some other material? Think about these questions, then use the space below to draw four different views of your invention: (1) from the top, (2) from the bottom, (3) from the left side, and (4) from the right side.*

<i>1. view from top</i>	<i>2. view from bottom</i>
<i>3. view from left side</i>	<i>4. view from right side</i>



Witnessed by \_\_\_\_\_

Date \_\_\_\_\_



## Inventive Thinking Game Score Card

Name \_\_\_\_\_

Date \_\_\_\_\_

Use this scorecard to play the Inventive Thinking Game on the poster.  
Have fun and good luck!

<i>Square</i>		<i>Check/or initial on completion</i>	<i>Points (optional)</i>
1	Watch DVD		
2	Scavenger Hunt		
3	What was the first toy advertised on TV?		
4	Women Inventors Activity		
5	What famous drink was invented by John Pemberton in 1886?		
6	Rules for Journal Writing		
7	Brainstorming		
8	When was the first U.S. patent issued and to whom?		
9	Scamper		
10	What was Play-doh invented to do?		
11	Everyday Genius		
12	Who Invented Scotchgard™?		
13	Eureka in the Bathtub		
14	Who invented the xerographic process? When?		
15	Tornado of Ideas		
16	Who invented a window cleaning device in 1903 later known as windshield wipers?		
17	Are you a Solution Seeker?		
18	Inventor Guest Speaker		
19	What is a design patent?		
20	Patently Perfect		
21	Research patents <a href="http://www.uspto.gov">www.uspto.gov</a>		
22	What is a trademark?		
23	To Market, To Market		
24	What is a utility patent?		
25	Yes, But Will It Work?		
26	What is a copyright?		
27	A Chance to Change the World		
28	Make a brochure or a web site		
29	Make a Table-Top Poster		
30	Attend and participate in classroom or schoolwide Invention Convention		