

Intellectual Property: Patents

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SUBJECT(S): Entrepreneurship

GRADE LEVEL(S): 9, 10, 11, 12

≡ OVERVIEW:

In this lesson, students will be introduced to patents and patent laws. The lesson will start with a brief lecture on patents. Then students will identify what types of patents some of the most famous U.S. inventions may have been awarded. Finally, to highlight some of the issues with patents, students will listen to the Knowledge@Wharton podcast: “Battle over Blackberry: Is the U.S. Patent System Out of Whack?” and discuss some of the key ideas in it with a partner.

≡ NBEA STANDARD(S):

- Entrepreneurship, VIII. Legal

≡ RELATED ARTICLES:

- [“What Is Design Thinking?”](#)
- [“Three Students Take Their ‘Smart Straw’ to Market and Raise Awareness about Sexual Assault”](#)
- [“The Value of Intellectual Property”](#)
- [“The Mission for this Teen’s Drone: Locate and Destroy Landmines”](#)
- [“Snap Caps, Sharks and Sparks: Maddie Bradshaw, Teen Millionaire”](#)
- [“Is Disney’s Paid Streaming Service a Happy Move?”](#)
- [“Innovation in the Classroom: Inspiring Creativity”](#)
- [“Former Olympian Benjamin Lewis Is Revolutionizing Animal Testing”](#)

- “Designer Christian Louboutin Goes to Court to Protect His Precious Red Soles”
- “Career Spotlight: Scientist Charu Chaudhry on Life in a Big Biopharmaceutical Lab”
- “Career Insight: Jack Abraham on Changing the World through Technological Innovation”
- “5 Truths About the Sharing Economy”

Common Core Standard(s): Key Ideas and details, vocabulary acquisition and use, technology and digital media.

Objectives/Purposes: In this lesson students will receive an introduction to patents and patent laws.

Knowledge@Wharton Article:

“Battle over Blackberry: Is the U.S. Patent System Out of Whack?” (podcast)

Other Resources/Materials:

Slideshow of famous patented inventions

Activity:

1. (10 mins) Begin this lesson by explaining the concept of a patent.

Patents

A patent for an invention is the grant of a property right to an inventor, which is issued by the appropriate public office (in U.S. it is USPTO). The rights conferred by a patent grant include the right to exclude others from making, using, offering for sale or selling the invention or importing the invention.

- There are three types of patents you may be granted:
 - **Utility patents** may be granted to anyone who invents or discovers any new and useful process, machine, article of manufacture, or composition of matter, or any new and useful improvement thereof.
 - **Design patents** may be granted to anyone who invents a new, original, and ornamental design for an article of manufacture.

- **Plant patents** may be granted to anyone who invents or discovers and asexually reproduces any distinct and new variety of plant.

2. (10 mins) Show a PowerPoint slideshow that highlights famous patented inventions in your country. For each patented invention shown, have students guess what type of patent the product was awarded (utility, design, plant). Some examples you may want to include in your PowerPoint are:

- Statue of Liberty, Augusta Barthodi, 1885
- Telegraph, Alexander Graham Bell, 1876
- Electric Lamp, Thomas Edison
- Gas Motor Engine, James Otto, 1887
- Monopoly, Lizze J. Maggie, 1904
- Razor, King C. Gillette, 1904
- Divers Suit, Harry Houdini
- Traffic Signal, Garret A. Morgan, 1922
- Television System, Philo Farnsworth
- Refrigeration, Albert Einstein
- Pseudo Random Point Sampling (Techniques in Computer Graphics),

Pixar Animation Studios

- Safety Pin, Walter Hunt, 1849
- Radio, Marconi Guglielmo
- Slinky, Richard T. James
- Lego, Godtfred Kirk Christiansen, 1961
- Barbie, John W. Ryan, 1961
- Etch-a-sketch, A. Grandjeon, 1962
- GI Joe, Samuel F. Speers, Hubert P. OConner, 1966

3. (25 mins) Have students listen to the podcast: “Battle over Blackberry: Is the U.S. Patent System Out of Whack?” Then have them write down the answers to the following questions on a sheet of paper:

- What is a patent troll?

- A patent troll is a slang term for a company, or individual, that acquires vague or overly broad patents, and then waits for an invention to emerge that may infringe on these patents. From there, a lawsuit is launched. The game is to demand dollars in proportion to the strength of a potential lawsuit.
- In what ways is a patent troll one of the main problems with the current patent system?
 - The patent troll issue is one of the main problems with the current system. “Regardless of the merits of the NTP-RIM case, we are all now very aware of the power of a patent even in the hands of someone who never intended to do anything with it except wait for someone to make it operational and then sue.”
- Explain this quote: “One person’s troll is another person’s freedom fighter.”
- Why is it complicated to fix problems like patent trolls?
 - Beyond the obvious needs of the patent office for more examiners, more specialized skills and greater access to public knowledge, fixing problems like patent trolls and murky lawsuits gets increasingly more complicated. “Some bad patents are being granted, and some companies are taking advantage of legal uncertainty to essentially impose a tax on innovation by threatening patent litigation. Yet not all companies that seek to enforce patents — even those that acquire the patents from the original inventors — are ‘patent trolls.’ Patents mean different things in different industries. For example, pharmaceutical and semiconductor companies use patents in radically different ways, even though both depend on them.”
- Why were patents originally developed?
 - “Patents were originally developed to make information more broadly available and to spur development.”
- Do patents hinder innovation?
 - It takes many years or even decades to develop, test and bring to market medicinal drugs, which can then be easily cloned by other companies. Patent protection gives pharmaceutical companies the incentive to develop new drugs, which is a good thing.

- Why is the USPTO (US Patent and Trademark Office) office being overwhelmed?
 - It is “is being completely overwhelmed” as companies and individuals file for more and more patents.

Tying It All Together: Have students discuss their answers to the questions with a partner. Then discuss student’s answers and any reflections as a class.

Practice Outside of the Classroom: Would any of your entrepreneurial ventures require a patent? Has someone else already patented your idea? To find out, head over to [USPTO.gov](https://www.uspto.gov).

What Worked and What I Would Do Differently: The article may seem content-heavy, but I found that because it pertained to law, most students were very engaged throughout the duration of the lesson. Other than that, you may want to condense the information on patents with the Power Point presentation of famous patents.

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