

Lesson 1 - What is Innovation?

approximately 45 minutes

Lesson Plan

Step	Approach	Activity	Duration
A	Overarching Question of the Day	Teacher posts the overarching question of the day for consideration: "What is innovation?" Students define innovation in their own words using <i>Activity Sheet #1, column one – What do I know?</i>	5 Minutes
B	Context-Setting Activity	Watch the overview video on innovation from OnInnovation website at: http://www.oninnovation.com/about/about-oninnovation.aspx	5 Minutes
C	Small Group Activity	Assemble students into cooperative groups of no more than four. Their task is to define innovation in one of the following ways: <ul style="list-style-type: none"> • A sentence • List of five to ten words • Pictorial representation • Other way of their choosing 	10 Minutes
D	Report Out	Do a "gallery walk" to allow students to see other groups' work.	5 Minutes
E	Explore More Individual Activity	Look at the list of innovators featured on the overview video. Use <i>Activity Sheet #2</i> to record what you think or learned that they do. How do the featured innovators describe innovation? Jot down what you remember from watching or listening, use <i>Resource Sheet #1</i> to confirm or modify your observations	10 Minutes
F	Review	Create class definition by combining various definitions of innovation. Use middle column of <i>Activity Sheet #1 – What did I learn?</i>	5 Minutes
G	Inquiry	Use last column of <i>Activity Sheet #1 – What more do I want to know?</i> Build your innovation vocabulary by using <i>Resource Sheet #2 – Master Glossary for Innovation.</i>	5 Minutes

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Activity Sheet 1
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What do I know
about innovation?

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What did I learn about
innovation?

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What more do I want to know
about innovation?

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Activity Sheet 2
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What did these innovators say in the overview video?
In the end, check your answers with **Resource Sheet #1**

Innovator	What are they known for?	What did they say?
 Toshiko Mori		
 Elon Musk		
 William McDonough		
 Mitchell Baker		

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Activity Sheet 2
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What did these innovators say in the overview video?
In the end, check your answers with **Resource Sheet #1**

Innovator	What are they known for?	What did they say?
 Steve Wozniak		
 Don Chadwick		
 Pierre Omidyar		
 Lyn St. James		

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Overview Video Inspiring Innovation - Innovator Quotes

Resource Sheet 1
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Innovator	What does the innovator do?	Inspiring quotes from the innovator
Toshiko Mori	Architect	"Innovation is the combination of creativity and imagination."
Elon Musk	Founder: PayPal, Tesla Motors and SolarCity	"I would just question, question things. Maybe it's built in - to question things. It would infuriate my parents that I would not just believe them when they said something."
William McDonough	Architect and Designer	"It has been said that you don't glide from success to success. You lurch from failure to failure."
Mitchell Baker	Chairperson: Mozilla Foundation	"It is easy to stifle innovation, first of all. So, the first thing you have to do is not stifle imagination."
Steve Wozniak	Co-Founder: Apple Computer	"I told my dad that dream. And he said, 'Well, these little minicomputers would cost as much as a house.' That's what he said. I said, 'Well, I'll live in an apartment.' "
Don Chadwick	Product Designer	"First of all, you have to be curious. You have to have the tenacity to stay with something you believe in."
Pierre Omidyar	Founder: eBay, Omidyar Network	"You need to be passionate about what you work on and don't take no for an answer when people out there are giving you advice and saying, 'No, this will never work.' "
Lyn St. James	Auto Racing Record Breaker; Businesswoman	"I wanted to demonstrate my skills and to test my skills and challenge my skills, and sometimes you have to go outside your comfort zone to do that."
Pierre Omidyar	Founder: eBay, Omidyar Network	"There's something about an entrepreneur that is somewhat sort of antiestablishment, somewhat disrespectful of the previous generation."

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Overview Video Inspiring Innovation - Innovator Quotes

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Innovator	What does the innovator do?	Inspiring quotes from the innovator
Toshiko Mori	Architect	"That's what sustains young architects who work for me - that they make a difference in the world. It is always about humanity."
Stan Ovshinsky	Inventor and Businessman	"I think about things very deeply, and I analyze what I believe the problems of the planet will be, and then I build new industries as solutions to what those problems are."
William McDonough	Architect and Designer	"We give people a lot of responsibility and encourage them to create new things, and anything they can bring to the enterprise that improves us is delightfully entertained."
Steve Wozniak	Founder: Apple Computer	"What you do for work should be fun. So I made the Apple II a very fun machine."
Elon Musk	Founder: PayPal, Tesla Motors and SolarCity	"I think it is possible for ordinary people to choose to be extraordinary."

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Master Glossary for Innovation

Resource Sheet 2
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Term	Definition
Adaptive	Able to adjust oneself to different conditions or able to make suitable to requirements or conditions
Antiestablishment	Opposed to or working against the existing power structure or mores, as of society or government
Artistic	Conforming to the standard of art; satisfying aesthetic requirements
Challenging	Arousing competitive interest, thought or action to cause provocation
Collaboration	Working jointly with others or together, especially in an intellectual endeavor
Competitive	Inclined, desiring or suited to compete
Concept oriented	Inclined toward something conceived in the mind
Connectivity	The quality, state or capability of being connected; ability to communicate with a computer
Copyright	A type of protection given for original works of authorship such as literary, dramatic, musical, artistic and other intellectual works
Creative	The quality of having the ability or power to create
Creative barriers	Things that prevent or inhibit the ability or power to create
Creative processes	Steps or series of actions or operations leading to the power to create
Curiosity	The desire to know or having interests or passions leading to inquiry
Determination	A firm or fixed intention to achieve a desired end or action
Discipline	Orderly or prescribed conduct or pattern of behavior or system of rules governing activity
Discovery	The act or process of discovering or exploring
Egotistical	Having an exaggerated sense of self-importance or ability
Empathetic	Someone who is sensitive to or understands the needs or states of others
Empowering	Giving power or authority to; to enable or permit

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Term	Definition
Engineering	The application of science and mathematics by which the properties of matter and the sources of energy in nature are made useful to people
Entrepreneur	One who organizes, manages and assumes the risks of business or is enterprising
Experimentation	To carry out an experiment or try out new procedures, ideas or activities
Failure	An omission of occurrence or performance; failing to perform a duty or expectation
Feedback	The transmission of evaluative or corrective information about an action
Flat world	Concept that the world is an even playing ground for all
Hardworking	Someone who works diligently and often long hours
Imagination	The act or power of forming a mental image of something not present to the senses or never before wholly perceived in reality
Individuality	Total character peculiar to and distinguishing one individual from another
Influence	The act or power of producing an effect without apparent exertion of force or direct exercise of command
Innovation	The introduction of something new or a new idea, method, device or method of doing something
Innovative	Characterized by, tending to, or introducing innovation or complete new methods of doing something
Inspiration	The act or power of moving the intellect or emotions
Intellectual property	Works created by the mind such as processes, tools, equipment, literary and artistic efforts, etc., that may be protected by copyrights, trademarks or patents
Invention	A product, device, contrivance or process originated after study and experiment
Motivation	The act or influence of causing a person to act
Opportunistic	Taking advantage of opportunities as they arise
Organization	An administrative and functional structure or the personnel of such a structure

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Term	Definition
Passion for excellence	Intense, driving or overwhelming feeling or conviction to be excellent or do a superior job
Patent	<p>Issued by the U.S. Patent and Trademark Office, a patent gives the inventor the right to exclude others from making, using, offering for sale or selling the invention in the United States. There are three types of patents:</p> <ul style="list-style-type: none"> • A plant patent is given to anyone who invents, discovers and asexually reproduces a new and distinct variety of plant • A utility patent is given to anyone who invents, discovers or improves a process, machine or thing • A design patent is given to anyone who invents a new design or look for a product
Persistence	The action or fact of persisting; going on resolutely or stubbornly in spite of opposition, importunity or warning
Positive minded	Having an optimistic view about one's self, life, living and other people
Preparation	The action or process of making something ready for use or service; getting ready for an occasion, test or duty
Process	A series of actions or operations conducting to an end; a continuous operation
Prototype	An original model on which something is patterned; a first full-scale functional form of a new type or design of a construction
Radical	Marked by a considerable departure from the usual or traditional
Radical thinking	Thoughts or thinking that tend toward making extreme changes in existing views, habits, actions or institutions
Risk taker	Someone who is not fearful of uncertainty and may even enjoy risky, speculative situations
Search for perfection	To strive toward an exemplification of supreme excellence
Sense of concept	Ability to think of an abstract or generic idea generalized from particular instances
Simplistic	Of or relating to, or characterized by, a simple concept
Solution	The act or process of solving a problem

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Master Glossary for Innovation

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Term	Definition
Solution oriented	Intellectually or functionally directed toward an action or process of solving a problem
Solution set	Group of possible means or methods of solving a problem
Structure	Something arranged in a definite pattern of organization
Success	The attainment of a favorable or desired outcome
Synthesis	The composition or combination of parts or elements so as to form a whole
Team player	Someone who willingly works or plays in cooperation with others
Trademark	A brand name; a word, symbol or name that is used to identify and differentiate the products or services of manufacturers or sellers
Unconventional	Being out of the ordinary; not bound by or in accordance with convention
Venture capital	Capital or money invested or available for investment in the ownership element of a new or fresh enterprise
Visionary	Having or marked by foresight and imagination