Innovator Insights Senior - Facilitators Guide

Overview

Innovator Insights is a series of videos featuring high school students from Nebraska asking questions of innovators. The goal of having students watch and interact with the videos is to help children become aware of different types of innovation, connect content to career and technical education, to explore entrepreneurship and mentorship. Each video in this series is accompanied by a viewing guide with questions, key vocabulary, innovation type and connections to career fields. Use the definitions below to help guide students to identify key concepts and traits as they watch the videos.

In addition to the video guides, each video has accompanying resources. The resources are divided by sections and contain a lesson plan, a design challenge and graphic organizers and worksheets to help facilitate the lesson. The different components of each section are listed below.

Collection Component	Description
Innovator Insights Video	Short segments of innovators being asked questions by high school students.
Viewing Guide	Contains questions, key vocabulary, innovation type and connections to career fields. Use to help engage before, during and after watching the video.
Design Challenge	Extend the opportunities to engage with innovation and design. Each challenge is part of the design process and encourages active participation. The design challenges build on each other and end with the students developing their own business plan and
Resources	Graphic organizers and worksheets designed to help support the design process. Each design challenge has specific resources to support the process and are referenced in the challenge.
Lesson Plan	The lesson plans are a combination of all of the resources and also contain reference to state standards.

The collection is divided into three main sections. Within each section, there are different steps in the design process. There is no specific order to those sections, and allows the instructor to choose how to navigate each component in the design process. The three main sections are:

Understanding and Identifying a Problems and Opportunities

> In this section of the unit, the students will identify a problem by observing the world around them and conducting an interview with someone in their class/school. After conducting the interview, students will create a problem statement for the problem they have identified.

Creative Problem Solving

> In the creative problem solving component of the lesson, students will attempt to address the problem or area for improvement by storyboarding a potential solution, and creating a prototype of their innovation. Students will also create a potential name for their business as well as create business cards that can share with others.

Testing and Sharing an Idea

> In the testing and sharing portion of the unit, students will put their innovations to the test and get feedback from others in order to make their innovation better. The final product can be shared in a variety of ways but the students will end the unit by creating a shark tank (Minnow Pond) like pitch. Students will also create a potential name for their business as well as create business cards that can share with others.

Outcomes of The Design Process

Outlined in the table below are the components for each section of this unit and innovator insights videos recommended for each.

Lesson	Design Challenge	Insight Video	Resources
Introduce	Mentor Affinity List	● Grain Weevil	Innovator Insights Notes Page Journal Entry Worksheet Affinity List Document or Electronic Resource
Understanding and Defining a Problem			
Empathize	Rapid Response Interview	● Shemate	Interview Prep Sheet Interview Notes worksheet
Define	SMART Innovation Goal	● Retail Aware	Debugging Graphic Organizer SMART Goal Graphic Organizer Step by Step Graphic Organizer
Ideation and Creative Problem Solving			
Ideate	Idea Board	● Whiteclay ● Mushroom Science	Brainstorming Graphic Organizer Synthesizing Ideas Graphic Organizer
Prototype	Storyboard/Prototype/ Proof of Concept	● Virtual Incision	Storyboarding Graphic Organizer Observe the Prototype in Action Observation Log
Testing and Sharing an Idea			
Test	Test an Idea and Collect That Data	● Opendorse	Data sheet or electronic spreadsheet Observe the Prototype in Action Observation Log
Share	Sales Pitch/Business Plan	● American Outlaws	Business Plan Framework Document Observe the Prototype in Action Observation Log

Design Challenges

Design challenges accompany the video to provide an opportunity to engage with innovation more fully. Each challenge builds on the one before but can be used independently.

Introduction to Innovation

Design Challenge 1: Build an Innovator Affinity List

> In this design challenge, students will begin to develop an affinity list of innovators/mentors based initially off of the innovator insights video and they will identify and classify these innovations based on career field, type of innovation, and impact or disruption the innovation is/will potentially have. As students progress through the unit, they will add other potential contacts/mentors to their list based on their own ideas and aspirations.

Understanding and Identifying Problems and Opportunities

> In this section of the unit, the students will identify a problem by observing the world around them and conducting an interview with someone in their class/school, family or community. After conducting the interview, students will create a problem statement for the problem they have identified. They will also create an innovation goal using a SMART goal framework to help make the goal more manageable and achievable.

Design Challenge 2: Conduct an Interview and Create a Rapid Response

> In order to help others solve problems, it is important to see the world from their perspective. In this design challenge, you will conduct an empathy interview. Use this as an opportunity to gain the perspective of others and help see opportunities for innovation.

Design Challenge 3: Define a problem and Create an Innovation Goal

> To solve a problem, one must first clearly define what the problem is and how innovation attempts to solve that problem. In this design challenge you will identify the problem you are solving and create a goal for your solution. The goal should be Specific, Measurable, Achievable, Relevant, and Time bound or SMART.

Creative Problem Solving

In the creative problem solving component of the unit, students will attempt to address the problem or area for improvement by storyboarding a potential solution, and creating a prototype of their innovation. This could also be developed and presented as proof of concept where a video or animation is created as a demonstration of what would be possible. For Example, that could be a 3D Computer Aided Design or a structure the student would like to explore building.

Design Challenge 4: Ideate a Solution

Brainstorming is an important part of the innovative process. In this design challenge students will brainstorm many solutions to a problem and tell the story of how that problem could be solved.

Design Challenge 5: Create a Prototype!

Put your design to action by creating a prototype. A prototype is an early version of something that is meant to get better. In this design challenge students will create a working prototype of your innovation.

Testing and Sharing Ideas

In the testing and sharing portion of the unit, students will put their innovations to the test and get feedback from others in order to make their innovation better. The final product can be shared in a variety of ways but the students will end the unit by creating a shark tank (Minnow Pond) like pitch. Students will also create a potential name for their business as well as create business cards that can share with others.

Design Challenge 6: Test an Idea and Collect that Data

In this design challenge, students will identify potential measurables to determine the impact and success of their prototype. Depending on the type of innovation, this could be measured in forms of a survey or clicks on a website. The measurable portion of the innovation should relate back to that portion of their SMART goal.

Design Challenge 7: Develop a Business Plan and Share Your Idea

It's time to begin to develop a business plan for the innovations and identify potential contacts from the affinity lists as potential mentors. In this challenge students will begin to fill out the framework for a business plan, identify potential mentors or industry contacts, and develop a presentation to be used as a sales pitch for stakeholders, potential investors, or consumers of the innovation.

Types of Innovation

Product Innovation: This is when someone comes up with a new thing that they make. It could be a toy, a tool, or something else you can touch and use. An example would be if someone creates a brand new kind of bicycle with special features, that's product innovation.

Service Innovation: Services are things people do for you, like fixing your bike or giving you a haircut. Service innovation happens when someone thinks of a new and better way to do those things. For example, if someone starts a mobile hair-cutting van that comes to your house, that's service innovation.

Process Innovation: This is about finding new ways to do things faster, easier, or better. Imagine if people figured out a new way to make cookies in a shorter time without changing how yummy they are. That's process innovation because they improved the way of making cookies.

Technology Innovation: Technology means fancy tools and gadgets that help us do things. When someone makes a new gadget, like a robot that can clean your room, that's technology innovation.

Business Model Innovation: Think of a business like a lemonade stand. Business model innovation is when someone comes up with a cool idea to run their business in a different way. For example, if they start letting customers order lemonade online and deliver it to their homes, that's business model innovation.

Marketing Innovation: Marketing is how companies tell people about their products or services. If a company starts using funny videos on the internet to show how good their toys are, that's marketing innovation.

Social Innovation: Social innovation is all about making the world a better place by coming up with new ideas that help people or the environment. For instance, if kids in your school start a club to clean up the playground and plant more trees, that's social innovation.

Remember, all these types of innovation are like using your imagination to come up with new and exciting things that can make life more interesting or solve problems! Keep in mind, because innovation can be so different, these might not be the only types of innovation. If you feel like an innovation is something different, do be afraid to classify it differently.

Career Fields

Agriculture, Food, and Natural Resources:

This is all about taking care of our environment, plants, and animals. People in this field grow food like fruits and veggies, raise animals like cows and chickens, and make sure nature stays healthy. They also help make sure we have enough food to eat.

Business, Marketing, and Management:

Think of this like running a lemonade stand! People in this field know how to sell things and make money. They decide how much things should cost, how to tell others about what they're selling, and how to make sure the business runs smoothly.

Communication and Information Systems:

Imagine using a walkie-talkie or a computer to talk with friends far away. People in this field help us use phones, computers, and other gadgets to talk and share information. They make sure everything works properly so we can stay connected.

Health Sciences:

Health science strives to help people stay healthy and feel better when they're sick. Doctors, nurses, and other health professionals work in this field. They take care of us when we're not feeling well and teach us how to stay strong.

Human Sciences and Education:

Like being a teacher or a helper. People in this field work in schools and teach students many things like reading, math, and science. They also help kids learn about being kind and getting along with others.

Skilled and Technical Sciences:

Think of this as being a super handy person! People in this field know how to build, fix, and create things. They might fix cars, build houses, or even design cool video games. They use their hands and their brains to make stuff.