IPSWICH

CREATIVITY, CRITICAL THINKING AND MORE.



JULY 2018

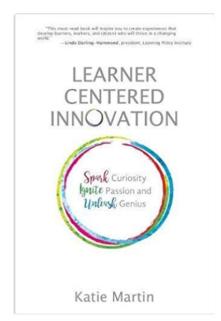
Course Overview

The course **Innovative Practices** was created to introduce and reinforce the integration and best practices of digital tools and resources available to educators ranging from the Elementary to High School level. We asked participants to explore how they can leverage technology in a way that allows students to demonstrate creativity and critical thinking to amplify the student learning experience.

The modules in this course showcased how technology tools can create a variety of opportunities for students to create a product, validate and grow their ideas, and share it with others. Each module included access to books, articles, project examples, products and more to deepen understanding of these tools. These modules included:



- Podcasting
- Blended Learning
- Global Connections
- Google Geography
 Tools
- Breakout Rooms
- Google Apps: Hyperdocs



Our educators know that technology is not the only answer or end product we are looking for, it is the shift in our teaching that considers how the technology can enhance and improve student learning that showcases critical thinking and creativity that is essential. That is why we chose the book *Learner Centered Innovation* by Katie Martin as the course text. Released in 2018 the book is broken up into three parts: "The

Innovation Ecosystem," "Learning to Improve" and "Share Your Learning." It offered a current perspective of the essential role teachers play in creating powerful learning experiences and how teachers can work together to continue to grow their teaching practice.

Participants came together for a kick-off meeting in June to learn more and get started with the course. Everyone reconnected online during the month of July to network through collaboration, feedback, and reflection. They shared their curriculum with colleagues and course instructors as their unit developed and will implement their unit during the upcoming school year. We will then come back together to participate in a presentation style share at a meeting this spring.

In Ipswich Public Schools, we know that the most valuable professional development for educators is when their learning is a process, rather than an event. This course allowed participants to validate what they are already doing, learn something new, and create experiences for students while collaborating and getting feedback from their colleagues. This network of educators worked continuously to learn, share, and discuss the implementation of meaningful learning experiences that will have a powerful impact on student learning this year.

Course Teachers



Amy Gregory

Amy Gregory is a Grade Five Teacher for the Ipswich Public Schools. She has taught in Ipswich for 18 years and has served on numerous committees including the Technology Committee, STEAM Team, and School Council. She holds a B.S. in Elementary Education from the University of Hartford and a Masters in Education from the University of New England. In addition to the classroom, she has received her license in Instructional Technology and is a Google Certified Educator. Amy has a passion for the evolving role technology plays in education and the creative problem solving process of innovation. She lives in Ipswich with her husband Andy, children Jillian and Sam and dog Ollie.

Course Teachers

Tracy Wagner

Tracy Wagner is the Director of Teaching and Learning for Ipswich Public Schools. She has served as a teacher, administrator and educational leader



for the past twenty plus years, including at Harvard University, Boston Public Schools and the Madison Metropolitan School District in Madison, Wisconsin. In Ipswich Public Schools, Tracy is proud to support and guide faculty in standards-based curriculum development, assessment, instructional techniques and pedagogy as she builds learner-centered professional development for the district. Originally a farm girl from northern Wisconsin, Tracy now holds a Masters in Education from the Harvard Graduate School of Education and a B.A. in English and teaching certification from the University of Wisconsin-Madison. Tracy is especially interested in STEAM education, literacy development, trans-disciplinary learning and strategies to support students and educators in practicing creativity and critical thinking. She lives in Medford, Massachusetts with her partner Kris, son Grant and a whole lot of gears, gadgets and D.C. superhero accessories.

Elementary School Teachers



Dee-Dee Bates

Where Are We? (Geography)

Name and Title: Kindergarten Social Studies Unit - Where Are We?

School(s) and Grade Level (s): Doyon - Kindergarten

Essential Questions:

What is a map? What is a globe? How are maps and globes different?
How are physical characteristics shown on a map?
Can you think of a situation in which you might need to use a map?
How do maps, globes, and photographs show different things about a place?

Featured Technology Tools: Google Earth, Google Maps, Google Street View, Google Tour Builder, Podcasting

The Doyon Kindergarten team worked on a unit that examines geography in the context of home, school, and town. We integrated technology into our unit to improve learning outcomes and also engage the students in their learning. This is a very "hands-on" unit.

Elementary School Teachers

Elyssa Brand

Name and Title: Elyssa Brand (also written by the Doyon and Winthrop 5th Grade Teams)

School and Grade Level: Doyon School/Grade 5

Essential Questions: How do matter and energy link organisms to each other and their environments?

How does the energy flow from one organism to the next in a food chain or web?

Featured Technology Tools:

- -Interactive Activities Using Google Slides
- -Hyperdocs
- -Reflection/Exit Tickets Using Google Forms
- -Creation of E-Books using Tarheel Reader
- -Podcasts
- -Google Tour Builder

Energy Cycle: Plants and Animals with Differentiation

Description of Unit:

This unit seeks to help students understand that animals, plants and matter within an ecosystem are connected. Energy is transferred from one living thing to the next through food chains and webs. Students explore these concepts through explorations of vernal pools and composting. Access and entry points that address the standards are delineated in order to provide access to all students.



Elementary School Teachers

Cheryl Hill

Where Are We?

Paul F Doyon Memorial School -

Kindergarten

Essential Questions:

- What is a map? What is a globe?
- How are maps and globes different?
- How are physical characteristics shown on a map?
- Can you think of a situation in which you might need to use a map?
- How can a real place be illustrated on a small piece of paper?

Featured Technology Tools:

- Skype
- Google Hangout
- ePals
- Google Earth
- Street View 360°
- Tour Builder
- Podcasts

Where Are We?

Kindergarten students will be working on a year long study of Ipswich. Students will create a timeline with the help of the Ipswich Council on Aging. We will compare our community to other communities (with the help of our ePals). Using Google Earth, 360°Street View and Story Spheres we will create a map of our community including landmarks and community helpers.

Innovative Practices

Elementary School Teachers

Toni Mannette, Kimberly Meaney, & Katie Norris

Early European Exploration and Conquest, Social Studies, Fourth Grade

Essential Questions:

- Why do people explore?
- What is the impact of exploration?

Featured Technology Tools:

- Padlet
- Age of Exploration HyperDoc

Research HyperDocs:

- HyperDoc lacques Cartier
- HyperDoc Ferdinand Magellan
- HyperDoc Vasco Nuñ es de Balboa
- HyperDoc Juan Ponce De Leon
- HyperDoc Amerigo Vespucci
- FlipGrid Reflection: Morning Girl, Dorris, Michael - read aloud, small guided reading or a class guided reading
- Interactive Timeline Map: European Conquest in the Americas
- Google Maps
- Google Earth
- iPad iMovie Trailer

Students will understand and evaluate the reasons for European voyages and explorations of the Americas using Advanced Google Apps. Through Hyperdocs, students will make connections and think critically about the reasons for the voyages. Using Padlet, students will creatively represent their research and thinking.





Early European
exploration
and conquest



Elementary School Teachers



Susan Merrill

Maps Broaden
One's Horizons

Name and Title: Susan Merrill, Teacher

School(s) and Grade Level (s): Paul F. Doyon, First Grade

Essential Questions:

- 1. What can maps teach us about our world?
- 2. Why is it important to know how to use a map?
- 3. Why are some cities called capitals?

Featured Technology Tools: Empatico, Pear Deck, Padlet, Google Earth

In this unit, <u>Maps Broaden One's Horizon</u> students will gain a better understanding of our world by learning how to use a variety of physical maps. Through various lessons they will travel around the earth, visiting continents, states, cities and towns to learn about people and the land.

Elementary School Teachers

Andrea Welch

Unity and Diversity in the US Grade 1



Name and Title: Andrea Welch History and Social Science Unit: Unity and Diversity in the United States

School(s) and Grade Level (s): Paul F. Doyon Memorial School Grade 1

Essential Questions:

- How are U.S. citizens unified and diverse?
- How is your family the same or different from other families?
- What does it mean to feel proud?
- How can a symbol communicate an idea?

Featured Technology Tools: FlipGrid (and GridPals), Podcasts, Hyperdocs, Skype, Dolnk, Empatico, Readworks, Google Expeditions and Virtual Reality Viewers

In this unit, students will learn how people of the United States are unified yet diverse because of their backgrounds, beliefs, and customs. They will learn that there are many kinds of families who may have different structures and traditions but who love and care for each other. Finally, they will learn how some people show their pride in belonging in the United States with national symbols, songs, and mottos.

Elementary School Teachers



Melissa D'Andrea

Geography, Environment and Resources: Country Research

Name and Title: Melissa D'Andrea Second Grade Teacher

School(s) and Grade Level (s): Winthrop Elementary School, 2nd Grade

Essential Questions:

How do people adapt to or change their environment? How does geography help us understand why countries exist? How do the resources of an area affect its industries and jobs? Featured Technology Tools:

Google street view Google Cardboard Culturegrams Epic books Epals FlipGrid Global Trek

This unit introduces students to a global world where they will research, learn and connect to people all over the world. They will learn about the continents, countries and cultures of the people who inhabit the world.

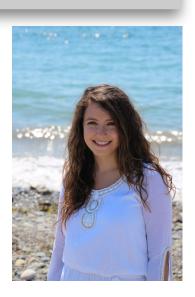
Innovative Practices

Elementary School Teachers

Lauren Gouzie & Courtney Segee



European
Explorers and
Natives of the
Northeast



European Explorers and the Natives of the Northeast- Winthrop Grade 3

Essential Questions:

- Why do people explore?
- How does exploration broaden our world?
- How can we use technology to explore the past?
- How has New England changed from the 17th century to now?

Technology Tools:

- Hyperdoc
- Google Earth
- Google Expedition
- Text Sets
- Padlet

This unit allows students to experience the expeditions of the European explorers who first traveled to North America and interacted with natives. Students will use a variety of technology tools to experience a long journey, research an explorer, collaborate and present information to peers, and create a summative document.

Elementary School Teachers



Lina Lopez-Ryan

Native Americans of MA

Name and Title: Lina Lopez Ryan

School(s) and Grade Level (s): Winthrop School, Grade 3

Essential Questions:

How do we study history?

How do people from our past influence our lives today?

How does where you live affect how you live?

What was life like in the 1600s in the place we now call Massachusetts?

Featured Technology Tools: Padlet, Google Earth, Google Slides

2-3 sentence narrative describing your unit:

This unit will introduce third graders to the geography and Native Peoples of Massachusetts. By the end of this unit, students will be able to describe how Native Peoples lived in Massachusetts before the Europeans arrived, by researching informational texts and online resources.

Elementary School Teachers



Kathleen O'Reilly

<u>Informational</u> <u>Writing Unit</u>

Name and Title: Kathleen O'Reilly

Informational Writing

School(s) and Grade Level (s):Winthrop School, Grade 5

Essential Questions: *How do I convey ideas or concepts clearly in writing?*

How can I communicate clearly so that others can learn? Featured Technology Tools: Google Classroom Flipgrid, hyperdocs, podcasting

Throughout this unit, students will use embedded technology tools to plan and produce a written/oral informational writing piece. Students will understand the purpose of writing for a specific audience, the structure of nonfiction writing, and ways to share their written pieces using a variety of media.

Elementary School Teachers

Winthrop School, Grade Three

Essential Questions:

In what ways do magnets interact with other materials?

How do magnets interact with other magnets?

Why are magnets important to us?

Featured Technology Tools:

- Mystery Science subscription
- Chromebooks
- A Google Classroom set up for current year's students
- Iron nails, Paperclips, Washers, Rulers, Cups, Disc Magnets, Large magnets
- Collection of various materials that magnet will and will not attract for sorting
- Hyperdoc that links to Youtube, an article, and data collection worksheets

In this unit, students will explore the power of magnets and learn about their uses in our everyday lives. Logging onto their Google Classroom, students will access a hyperdoc that will have them reading an article, watching a video, creating a magnet, testing magnetic and nonmagnetic materials, keeping data, writing, and interacting with a partner. A culminating activity has students using a magnet to solve an everyday problem.

Meg Smith



Magnets

Elementary School Teachers

Laurel Wolfrum



<u>Early U.S.</u> <u>Government</u> Name and Title: Laurel Wolfrum, classroom teacher

School(s) and Grade Level (s): Winthrop, 5th grade

Essential Questions:

- What causes conflict?
- How are governments created, structured, maintained, and changed over time?
- What impact can citizens have on their government?
- How does the U.S. Constitution reflect the people and times it came from?

Featured Technology Tools: Forms, BreakoutEDU

After studying colonization and the American Revolution, our focus shifts to how the new states created and re-created their new government based on their needs and values. Students will learn how the colonists set out to establish an effective and democratic government.

Middle/High School Teachers

Diane Tarr

Name and Title: The Unexplainable Disappearance of Mars Patel- Podcast Unit

School(s) and Grade Level (s): Ipswich High School, SAIL English (grades 9-11)

Essential Questions:

What characteristics make a story entertaining?

What makes characters in a story strong and interesting?

How does a conflict or problem influence whether a story is vivid and interesting?



*Podcasts

Youtube

Audacity

Soundtrap

Google Docs

This is a unit for the SAIL (Students Achieving Independent Living) English class to work on listening, comprehension and writing skills. Students will listen to a podcast while following along with the transcript (hopefully!). At the end of the unit students will create a podcast of their own reflections and predictions based on Season 1 of a serial podcast.



The Unexplainable
Disappearance of
Mars Patel Podcast

Middle/High School Teachers



Heather Chang

Podcasting in the Library Media
Center

Essential Questions

- How can I create a logical and organized podcast?
- How do I know my information is reliable?
- How do public speakers conduct effective presentations?
- What elements of a podcast make it engaging and interesting for listeners?
- How can a podcast influence those who listen to it?

Featured Technology Tools:

Chromebooks, Mics, podcasting software like Audacity or can use Imovie to import audio into and share as audio file.

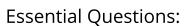
About this unit:

Podcasts are a fun and creative media format that allows students and staff to share knowledge and research in an engaging and interesting way. The Podcasting Center unit in the library will allow classroom teachers and students individually, flexibility to work with library media specialist to make podcasts on any classroom topic that students or teachers want. The media specialist will be available for any or all parts of creating a podcast that students or teachers would like. Stages of creating a podcast that the media specialist can work with the podcaster(s) include any or all of these steps: initial research techniques and identifying good information sources, how to create bibliographies, creating outlines, effective public speaking and overcoming nervous ticks to recording and saving files into audio formats that can be shared online.

Kevin Murphy

Name: Kevin Murphy Title: Social Studies/Humanities

School: Middle School Grade Level: 6th



-How do we continually evolve as educators to meet the learners' needs?

Featured Technology Tools:

- -Podcasts
- -Google Expedition
- -Google Hangouts

I developed a PD proposal to develop a fully integrated humanities curriculum. The goal is it use the book "Learning Centered Innovation", by Katie Martin, to guide the 6th grade humanities team through this process. This document is live and we will be adding to it throughout the year.



Innovative PD Proposal



Joanne Ryan Walsh

<u>Exploration and use of positive and negative</u> <u>integers - Joanne Ryan Grade 7 Math</u>

Name and Title: Joanne Ryan-Walsh- 7th grade math teacher School and Grade Level: Ipswich Middle School grade 7

Classes taught: General 7th grade math & Grade 7 accelerated math Essential Questions:

Featured Technology Tools: Edulastics, Google forms, Google Hyperdoc, IMovie, green screen by doink, Kahoot, Linkedin, Twitter, Facebook

This year technology tools will be used as an important way to provide more voice and choice for my students. The integer unit will include students creating videos using IMovie and green screen by doink. Edulastics will be used as a diagnostic tool, data collection, and prescriptive practice. I also see the application of google forms, and hyperdocs as a great format for student reflections, and feedback, where the results would be viewed not only by me but all members of the class.



Jake Patterson

Introduce Yourself to Humanities

Name and Title: Jake Patterson, Teacher

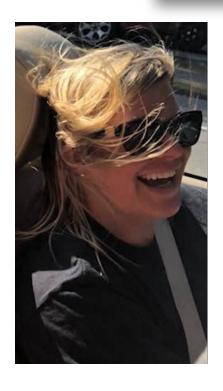
School(s) and Grade Level (s): Middle School, 7

Essential Questions: Who are we as a learning community?

Featured Technology Tools: Flipgrid, Google Slides, Google Docs

2-3 sentence narrative describing your unit:

Introduce yourself to humanities is a unit that is designed to take place at the beginning of the year. The unit creates an opportunity early in the year for students to show who they are and learn about others in their learning community. The better you know your students, the easier it is to differentiate. The better students know each other, the more they will be able to collaborate.



Diana Somers

7th Grade **Probability Unit**

Name and Title: Diana Somers/ Special Education Teacher School(s) and Grade Level (s): Ipswich Middle School/ 7th grade **Essential Questions:**

- Why is data collected and analyzed? How do people use data to influence others? How can predictions be made based on data?

Featured Technology Tools: -google forms to be used in a flip classroom

Students learn about experimental and theoretical probability, difference between independent and dependent events and determine the likelihood that they will occur, and create and interpret tree diagrams. The summative project is students will create a carnival game based on chance and share their games.



Emily Allman

Too Many Cooks: How do different ideas coexist?

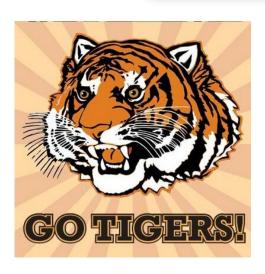
Name and Title: "Too Many Cooks" by Emily Allman

School(s) and Grade Level (s): Algebra 1H at Ipswich High School

Essential Questions: How do different ideas coexist?

Featured Technology Tools: desmos, hyperdocs, edulastics, pearson realize, flipgrid, padlet, google forms, google slides

Description: The adage, "Too many cooks spoil the broth" implies that differing ideas cannot exist together in harmony. We know from experience however, that even contrasting theories can find ways to coexist. Maybe they find common ground, or agree to disagree, or take turns, or come together into a new combined idea. Mathematical ideas also have varying ways of coexisting and are not all that different from a couple of cooks in the kitchen. This unit is about combining mathematical ideas through compound inequalities, systems of equations and inequalities, piecewise functions, and function operations.



Suzanne Bediz

Cooking Across
Cultures (Ind. Living)

Name and Title: Suzanne Bediz // Cooking Across Cultures School(s) and Grade Level (s): IHS Independent Living course // 9-12 Essential Questions:

- How can food connect us globally?
- Food is a universal need. How do cultural expectations change what foods we eat?
- Are there similarities in recipes from different cultures?

Featured Technology Tools: Use of Blended Learning model using a HyperDoc (embedded links to promote individualization), potential for connection with other students

Narrative describing your unit: Food is a universal need. Each culture or country has its own way of meeting this need through their recipes and nutritional recommendations. Through research and cooking, students will identify similarities in the food they eat and identify the nutritional value of a recipe.

Kenny Downing & Justine May



<u>Sophomore</u> <u>Course Planning</u>



Kenny Downing, Academic Support Teacher and Justine May, Guidance Department Head

High School: Grade 10

Essential Questions: What courses can I take that interest me and meet graduation requirements?

How can I find out what courses I need for a certain career and/or college major?

What classes do I want to take?

Featured Technology Tools: HyperDoc and Career Videos

This Sophomore Seminar will assist our students to genuinely begin thinking about their adult future. We hope that this process gives them a clearer idea of what they may want to pursue (or not pursue) after their High School education.

Through the use of this HyperDoc, our students will utilize various videos, tutorials and interactive activities to plan out and personalize their course selections at their own pace.

<u>A Moment in</u> <u>MultiMedia Time</u>

Name and Title: Jared Harvey - A Moment in MultiMedia Time

School(s) and Grade Level (s): Ipswich High School 11th Grade "Global Survey"

Essential Questions: Students will understand that "the assassins write the textbooks" and that with time and the ability to reach out to appropriate experts from that region, the truth can be other than what we perceive. How can the perception of a historical event change over time and with the help of modern technologies (Skype, Nearpod, Google Voyager, Hangout)?

Featured Technology Tools:

Utilize emerging technologies such as Google,

Earth/Voyager/Expedition/hangout, Nearpod, and Flipgrid.

Jared Harvey



Students will become experts on 1 or 2 historical events that changed the course of history and analyse that event to understand how what actually happened, what were the prevailing ideas of the time, and how that image has changed over time.

Jessie Harvey Global Connections: Ipswich High School Grades 9-12

Essential Questions:

How do we learn about other cultures through personal connections internationally?

How can we explore similarities and differences in our culture and others around the globe?

What impact does the knowledge we gain have on our learning experience?

Featured Technology Tools:

FlipGrid#penpals or epals

NewsELA

Google Expeditions

Google Hangouts

Learners will explore connecting internationally with peers through pen pals or video chats. Using virtual reality they will expand their knowledge of important global historic sites and cultures. Learner will practice skills to process cultural similarities and differences in order to foster curiosity and interest in our global community.

Jessie Harvey



Connecting
Students Globally



Brendan Hughes

Brendan Hughes - Math Teacher High School - Grades 10/11

Essential Questions:

What are exponential functions and how can they be applied to real-world scenarios?

What are logarithms and how can they be applied to real-world scenarios?

Exponential Models
Through Google
Expeditions

Featured Technology Tools:

Nearpod

Google Expeditions

Google Cardboard

This unit explores properties of exponential and logarithmic functions.

Students summative project for this unit requires them to do some group research on a given country's history and its population growth, then relate the population growth to the models learned throughout the unit.

Ultimately, the class uses Google Cardboard and Expeditions to take a virtual field trip to the country.



Christine Hultgreen

How Do You Do You? A
Self-Care Initiative

Name and Title: Christine Hultgren, School Adjustment Counselor

School(s) and Grade Level (s): Ipswich High School, 9-12

Essential Questions:

What does stress look like to you?

Why would self-care be beneficial to teenagers?

What does your self-care practice look like?

How will taking care of yourself mentally/emotionally help you succeed in school/life?

Featured Technology Tools: Google Glasses, Podcasts

My unit would be a optional activity during high schooler's R-Block to introduce them to self-care. What it is, how it is beneficial, and how they can incorporate it into their own life using technology and also stepping away from technology.

Jennifer Kane

Name and Title: Jen Kane; *The Things They Carried* by Tim O'Brien

School(s) and Grade Level (s): Ipswich High School, Grade 10

Essential Questions:

- 1. How do people make choices, especially in the face of fear and indecision?
- 2. How can we stay strong and fight for what we feel is right when everything seems to be against us?
- 3. What is truth?



In this unit, students will read the novel, *The Things They Carried* by Tim O'Brien. They will use hyperdocs throughout the unit to write, reflect, and explore issues related to storytelling, decision-making, truth vs. fiction, and the Vietnam War era. With the help of Google Tourbuilder and Slides, they will write a personal narrative and present it to a group of peers.



The Things They
Carried by Tim
O'Brien

Mary Manos

Mary Manos - Math Teacher High School Grades 10 - 11

Essential Questions Functions and Systems Unit:

What are the ways that functions can be used to represent and solve problems involving quantities in real world applications?

When is it advantageous to use one way to model a function over another way (algebraically, numerically, verbally or graphically)?

How do transformations of parent functions affect the equation and/or the graph?



Featured Technology Tools:

Podcasts Break Out Challenge Hyperdocs Google Forms

<u>Unit 1 Functions</u> <u>and Systems</u>

Summary of Unit:

This unit is about functions, the core idea in the study of algebra. Functions are special relationships between two quantities and can be used to model real world applications. This unit is all about functions in general and subsequent units are about specific functions. The students must first learn how functions work and how we model functions in the four mathematical ways: algebraically, graphically, numerically and verbally. These models may then be used to make predictions about future trends. Students will also understand how certain parameter changes affect the function.



Claire Powers

First Gen College
Application Support

Name and Title: Claire Powers, School Counselor School(s) and Grade Level (s): Ipswich High School Essential Questions:

- As a first generation student, what should I understand about college admissions?
- What is the best way to present myself to college admissions to maximize my chances of acceptance?
 - What are the resources available to me in this process?
 - Where should I apply to college?

Featured Technology Tools:

- Google Hyperdocs
 - Google Forms
 - Google Explorer
 - Skvpe
 - Gridpals

This endeavor is a combination of a support group and a dedicated time for first generation students to work on college applications, with additional guidance and assistance from a school counselor. The general format will be an initial conversation and sharing of resources surrounding a topic of the week, followed by time for students to work on timelines, resumes, and applications. The group will meet every other week during R-block.

Jennifer Starrett

Name and Title:Jennifer Starrett-Freshman Career Exploration Podcast Project

School(s) and Grade Level (s):High School 9th Grade

Essential Questions:

- -How do I know what careers I might be interested in pursuing after high school?
- -How can I learn about career exploration?
- -How can I hear from people in certain careers about their job and how they got to where they are?
- -How can I work collaboratively with other students to create a podcast on careers that can be a part of their portfolio?

Featured Technology Tools:

- -Computers, laptops. Chromebooks, ipads, etc.
- -Podcast technology such as Audacity or Anchor 3.0
- -Time for kids to be able to work together, maybe during R block or advisory

Have students take a career assessment survey, research a few careers based on the survey results, interview people in those fields and create a podcast to then upload it for all all other freshman to watch.



Freshman
Career
Exploration
Podcast
Project

Special Thanks to:

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The IPS Leadership Team

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Mel Powsner, Director of the Performing Arts Center & Social Media