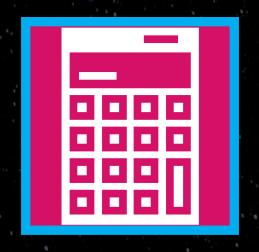


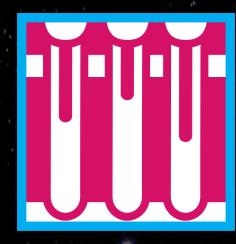


HOLISTIC HUMAN-CENTERED INTERDISCIPLINARY SUBJECT

# INTERDISCIPLINARY LEARNING



Math



Science



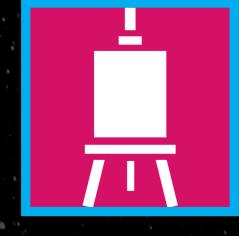
Language



Social Studies



Interdisciplinary



The Arts

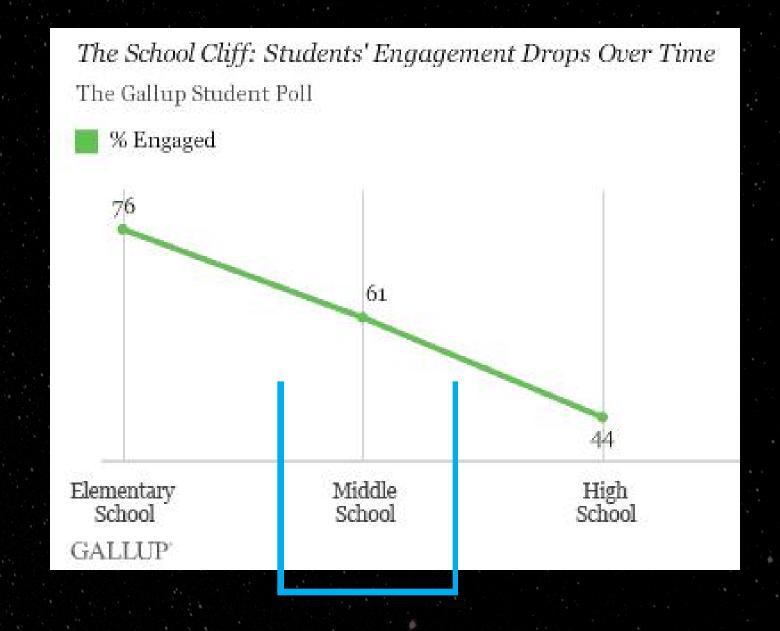


Physical Education



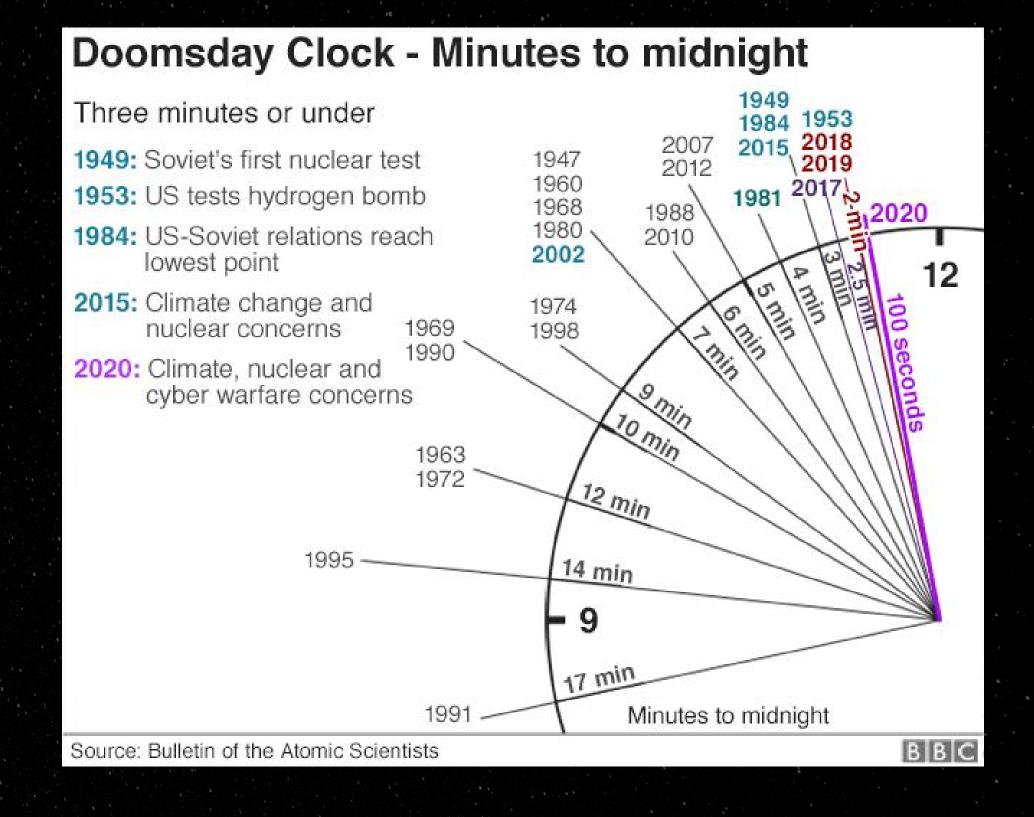
# AN INTERDISCIPLINARY CURRICULUM EQUIPS STUDENTS WITH A TOOLKIT FOR THINKING ABOUT THE COMPLEX PROBLEMS OF THE WORLD AND OF THEMSELVES AS LEARNERS.

# SCHOOL ENGAGEMENT DROPS OVER TIME...



The IDS is designed for 6th to 8th grade (11-14 years old) but can easily be adapted for younger/higher grades

# AND THE WORLD NEEDS CREATIVE, ENGAGED LEARNERS



## IN TODAY'S PRESENTATION...

INTRODUCTION

What is the purpose of the human-centered IDS?

• USING THE INTERDISCIPLINARY SUBJECT How can one use the IDS?

NEXT STEPS

What can we do to sustain the IDS?

### 1. INTRODUCTION

# INCOME IN THE INTERIOR OF THE

The need for a new interdisciplinary subject.



# LAYOUT



### PEDAGOGICAL GUIDE

Understand the goals, objectives, and use of the IDS.



### ACTION LESSONS

Engage with lessons that inspire wonder and community action.



### EXTENSION ACTIVITIES

Expand the conversation with activities into other courses, through engaging media, and additional hands-on projects.



### EMBRACE NEW PRACTICES

Learn about innovative teaching practices and put them into practice.



### IMPACT GUIDE

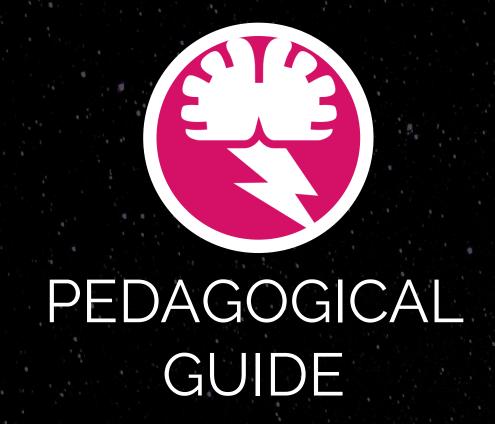
Set yourself up for success with an introduction to experiential, project-based learning.



### **PROJECTS**

Inspire with student-led and generated projects based on previous content.

### 2. USING THE INTERDISCIPLINARY SUBJECT



An introduction and guiding handbook for understanding and implementing the IDS.



The materials themselves that educators can use as a framework for the IDS standards.



An overview for the second half of the course which is project-driven and student-led.

# PEDAGOGICAL GUIDE

- How to use the IDS
- Implementable as a standalone course, in homeroom/advisory, as extension for existing class



# MODULAR

From Empathy to Action	From	Em	oathu	10	Action
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therefore, knowledge of cultural differences and of appropriate rules of behavior in various social situations, especially unfamiliar ones; awareness of prejudice and discrimination, ability to adapt to the wishes or needs of others, and considering the consequences of differences between people and various cultural backgrounds for important social processes, such as exclusion or inclusion.

### Purpose

We can all think of moments where we "stood out" from the crowd in ways that made us feel uncomfortable or out of place. This could be for relatively trivial reasons within our control such as our choice of fashion not "fitting in" with the setting, but also in ways that are more substantial and out of our control such as a language barrier preventing us from accessing an essential service.

In this lesson, we will make visible the norms and decisions that define how we conduct ourselves in physical and interpersonal spaces, emphasize the importance of empathy and understanding in dealing with difference - particularly in areas we personally take for granted - and develop ways to make our communities and spaces more accessible and inclusive of people from a range of backgrounds and abilities.

### Introduction

Brainstorm or define what it means to be "outstanding" versus what it means to "stand out"? Which term has a more positive connotation? Negative? Why is that?

Outstanding	Stand Out

Can you think of a time where you were "outstanding" compared to when you felt like you "stood out"? Were those feelings positive or negative? Why is that?

Outstanding	Stand Out

If your experience is a negative one, what could have been different in the scenario to make that experience positive? Is that change within you, the environment, or the way you were treated by others?

### **Consider This**

This activity will help us understand how we take for granted our behavior in certain social situations and emphasize how our differences impact our experience of these "common" scenarios. What we take for granted could be a confusing or embarrassing situation, or even an impassable barrier, for others!

- 1. Close your eyes and imagine your daily routine: the morning rituals that may take you out of your residence and into the world, the ways you navigate the world outside your home, your daily interactions at school and work, with friends and family, etc.
- 2. Generate a list of common scenarios you face in your daily life where you interact with other people and public spaces:

3. Choose ONE of these scenarios to write a detailed description of exactly how you engage in that activity from start to finish. Imagine you were writing a script for a robot to follow who had never experienced these human situations before. Your script will be the model someone else will use to act out the scenario!

# EXTENDABLE

### Take It Further



Community Connection Community Connection Nearly 430 million people worldwide Designing for disability is a vitally have disabling hearing loss, making important element of our society. In speech and the spoken word difficult schools, learning disabilities can often to access for about 5% of the global lead to many difficulties, including failure population. There are numerous signor discipline. Consider, what would language alphabets, research which one your community look like if it centered disabled people? What would you need is used primarily in your community to account for? What would change? and learn to communicate the basics to improve your ability to interact with Create a plan that highlights these deaf and hard of hearing individuals. changes and propose them to your local Alternatively, you can start a signgovernance.

### \*\*

Take Action Many people who have difficulty seeing or reading information use screen readers to browse the Internet. However, many websites are not designed properly for these screen readers to function. Learn about accessible web design. Perform an audit of your school's (or community's) website(s) and offer suggestions to increase accessibility.

### Media

### Things People With Disabilities Wish You Knew (YouTube)

language club to encourage others to pick up the language!

A brief video featuring disabled people speaking in their own words about their a more respectful and receptive global experiences and how they want to be treated in public.

### Extend

### Language Arts

Does listening to an audiobook count as "reading"? As one of the fastest growing forms of entertainment in the world, many argue that audiobooks are "cheating", and that it isn't the same as reading a book. Have a class discussion about audiobooks. Is it reading? If we say it isn't reading, what about those who have difficulty reading books for a showcase these ideas through that lens. variety of reasons?

### Social Studies

Use the following online tool, Exploring Your Cultural Iceberg, to get an understanding of your own visible and hidden cultural characteristics. How would you describe your cultural identity? Revisit this lesson through the lens of cultural identity. For example, how might these scenarios be different between people from different cultures based on how we perceive visible and hidden cultural characteristics?

### 5 ways to embrace cultural differences while traveling (Article)

A brief article outlining five ways to be traveler.

### Mathematics

Although many are familiar with dyslexia, less know about dyscalculia: a learning disability that hampers mathematical thinking. Roughly 10% of elementary school students are believed to have dyscalculia. Consider other ways that mathematics can be taught than simple arithmetic, and For example: rhythm, music, games, hands-on activities, building.

### Art

Using Nick Sousanis' Blind Accessible Comics as a resource, redesign/ remix existing art pieces to improve accessibility to art and culture for a range of impairments and disabilities.

### What is Neurodiversity? (YouTube)

What is Neurodiversity? What do the terms "neurotypical" and "neurodivergent" mean? How does the Neurodiversity movement fit into the broader disability rights movement?

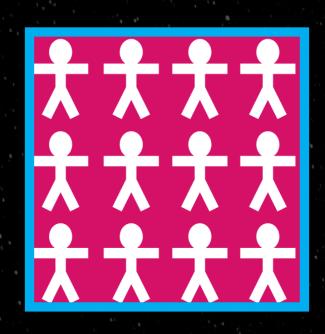
### Science

Learn about inclusive design in digital spaces and revisit this lesson to rewrite scripts with digital spaces in mind. For example, how does a visually impaired person navigate their social media feed or use their mobile phone? How can we help make digital spaces more inclusive of people from different backgrounds and abilities?

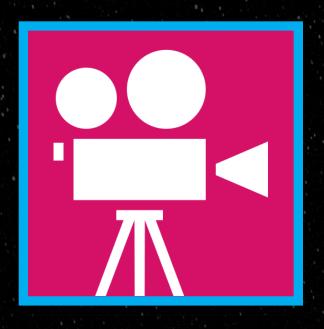
### Physical Education

Perform an audit of your physical spaces (appearance, entrances, fixtures, safety, etc.) using some of the guidelines of universal design in physical spaces. Is the environment appealing, welcoming, and accessible to those with a variety of cultural backgrounds, ages, abilities, and other characteristics? Create an action plan to address areas of improvement.

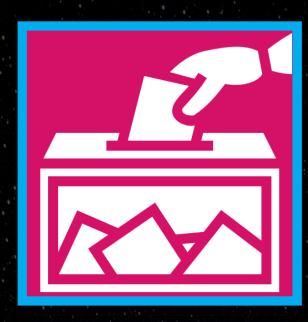
## PROGRESSIVE



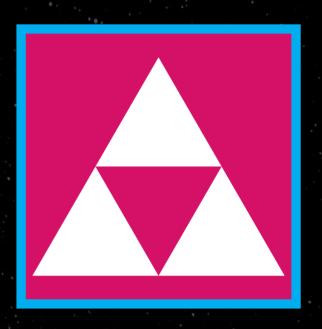
Universal Design for Learning (UDL)



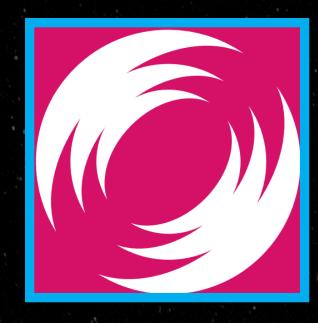
Experiential Learning & PBL



Critical Pedagogy & Democratic Classrooms



Crossdisciplinary Planning





Multimodal Literacy Self-Determination Theory Reflective Thinking &

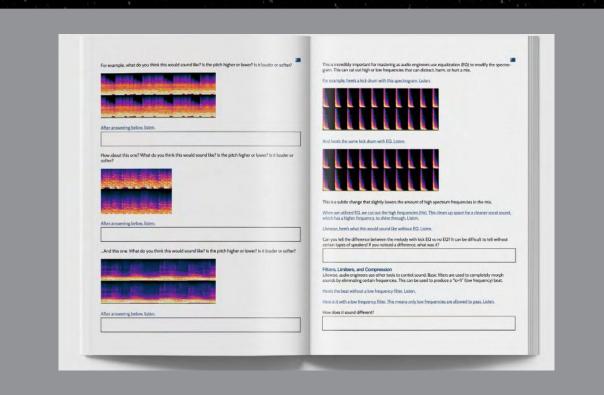


Feedback

### Action lesson examples!

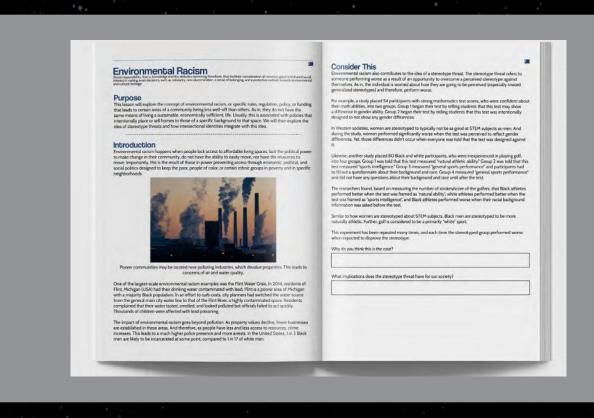
### SOUND DESIGN

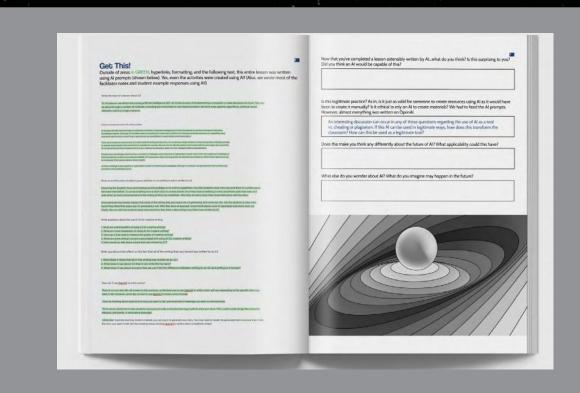
Learn how music producers mix and master audio, determining what makes something sound "good." Then, analyze a variety of audio sources to mix audio yourself.



### ENVIRONMENTAL RACISM

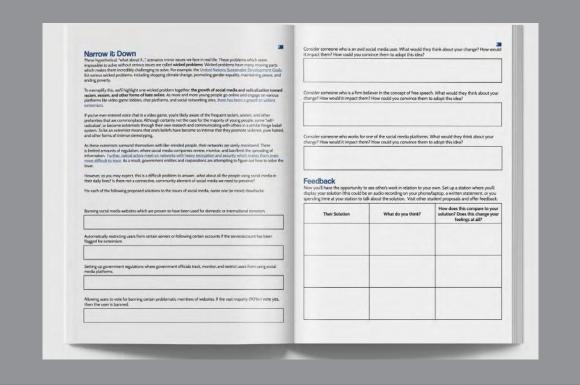
Policies exist that intentionally place or sell homes in undesirable spaces to marginalized people. Consider why these policies exist and what actions we can take to build a just, sustainable future.





### ARTIFICIAL INTELLIGENCE

Explore the impact of AI on writing, art, and other content creation by determining what writing is "real" or "generated", with opportunities to use the software yourself. What are the implications for AI?



### EXTREME SOCIAL MEDIA

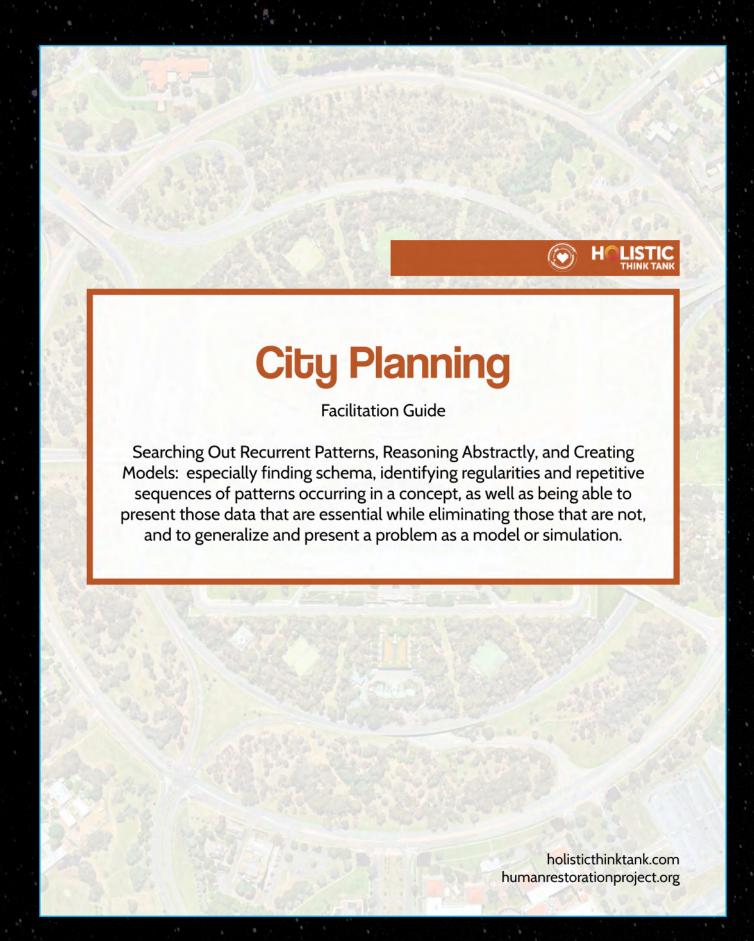
Examine how "wicked problems" are difficult, yet worthy to solve through the lens of social media use and the growth of extremism. At what point does social media need regulation? How can we regulate social media while creating spaces for community?

THE IMPACT OF FAST FASHION SYSTEMS-BASED THINKING CITY PLANNING MAKING CHOICES BASED ON THE COMMON GOOD THE SCIENCE OF LIVING FOREVER WHY DO WE KNOW WHAT WE KNOW? SELF-REGULATED LEARNING BREAKING ACROSS SOCIAL MEDIA ANALYZING SOURCES WAYS TO DEAL WITH CONFLICTS STANDING UP FOR WHO YOU ARE INTRODUCTION TO WORLD RELIGIONS WHAT DO WE VALUE?

RECOGNIZING BIAS AND PRIVILEGE UNDERSTANDING BODY LANGUAGE AESTHETIC COMPETENCIES SOUND ANALYSIS THE ROOTS OF MATHEMATICS CREATIVITY THE IMPACT OF LOCAL AND GLOBAL HUNGER FROM EMPATHY TO ACTION GLOBAL CULTURAL LITERACY SOFT SKILLS DEMOCRATIC ACTION CHILDISM ENVIRONMENTAL RACISM PROFESSIONAL PLANNING

FINANCIAL DECISION-MAKING HOPE TAKING MITIGATED RISKS HOW "GRITTY" ARE YOU? PITCH YOUR INVENTION! VERBALIZING ONE'S THOUGHTS LANGUAGE DISCRIMINATION REVERBERATING IMPACT WICKED PROBLEMS HOW TO REMAIN LIFE-ORIENTED HUMANE THINKING FEATS OF STRENGTH ARTIFICIAL INTELLIGENCE WHAT MAKES "YOU", YOU?

# ACTION LESSON



### **Standards**

Holistic Interdisciplinary Subject

Searching Out Recurrent Patterns, Reasoning Abstractly, and Creating Models:

-> especially finding schema, identifying regularities and repetitive sequences of patterns occurring in a concept, as well as being able to present those data that are essential while eliminating those that are not, and to generalize and present a problem as a model or simulation.

SDG 3, 6, 11

### Format

This lesson is designed for individual, small group, and/or full class discussions to occur over 2-3 50-minute sessions.

### Materials

- Maps (embedded within lesson)
- Articles (embedded within lesson)
- Video clips (embedded within lesson)
- Printable map and playing pieces
  Writing utensils (sharpees, colored pencils, etc.)
- Tape/glue (if maps will be preserved)

### **City Planning**

Searching Out Recurrent Patterns, Reasoning Abstractly, and Creating Models: especially finding schema, identifying regularities and repetitive sequences of patterns occurring in a concept, as well as being able to present those data that are essential while eliminating those that are not, and to generalize and present a problem as a model or simulation.

### **Purpose**

Today, the majority of the world's population lives in a city and that number is set to increase rapidly over the next few decades. As more and more people move to densely populated areas, city designers work to ensure that the city is run efficiently. If it isn't planned properly, cities quickly become overcrowded, uninhabitable, or undesirable to live in. In this lesson, we will look at all of the elements of city design, eventually brainstorming our own in order to understand why cities are designed the way they are, and how city designers consider concepts like where to build residential areas and stores.

### Introduction

Consider where you live. What is necessary for your community to thrive? For example, roads or markets. What else goes into the design of a place where many people live together, such as a village, town, or city? Consider having students brainstorm and crowdsource this information using discussion, writing, and/or art. Let's look at a few examples of city design. Check out these maps:

Roads, markets, utilities (power, water, trash), city services (police, fire, hospitals, schools), green spaces, community areas/cultural areas/faith areas, zoning (residential, commercial, industrial, airports, seaports)

- Chicago, United States
- Tokyo, Japan
- Brasília, Brazil

What stands out about the design of these cities? What do you notice? What do you wonder?

Tokyo has many curved paths and winding roads, with seemingly less plan (despite the modern architecture). This is due to the geography, but also the that Tokyo is a much older city than Chicago or Brasilia. Tokyo has modern through public transit and other systems – with cars not used much by the populous (see the below video).  Brasilia is a modern city planned to house government buildings. Similarly		Chicago is built almost entirely on a grid (notice how there are no diagonal or curved roads!)
		Tokyo has many curved paths and winding roads, with seemingly less planning (despite the modern architecture). This is due to the geography, but also the fact that Tokyo is a much older city than Chicago or Brasilia. Tokyo has modernized through public transit and other systems – with cars not used much by the populous (see the below video).
		Brasilia is a modern city planned to house government buildings. Similarly to Chicago, it has a (curved) grid with a line of government buildings through the center.

Check out this video which highlights how Tokyo designs its cities or this video which documents all the details of city planning. If you were designing a city, what would you think is important to take into account?

Access to public transportation, availability of needs (e.g. grocery stores, corner stores), ensuring everyone can easily move from place to place, designing with security in mind.

### **Consider This**

Infrastructure refers to the essential things a population needs. For example, power, water, and roads. In addition, it refers to all of the modern amenities that make cities desirable to live in: good schools, libraries, parks, public transportation, Internet speed, commercial area access, highway access, etc. Think about your community. What are its desirable space? What would you improve?

This answer will differ for each community, but examples may include restaurants, parks, and other gathering spaces.

In most areas of the world, traffic design is vitally important. If roads, highways, driveways, and public transportation are poorly designed, frequent back-ups can occur which delay commutes and deliveries. Watch this excerpt from Road diets from Vox.

What is a "road diet"? What does it have to do with city planning?

It's converting larger lane roads (e.g. 4 lanes) to single lane roads with turn lanes and bike paths. It changes the flow of traffic.

How does a "road diet" differ from a traditional 4-lane American road?

Turn lanes and bike paths, preventing crashes.

Would a "road diet" work in your community? Why or why not? If you live in an area that doesn't have roads like this, consider what changing traffic patterns may look like. For example, what if bike lanes were integrated in your existing community? What about public transit?

Similarly, <u>check out this video on green spaces from Greenlife Matters</u>. As you watch this clip, consider the following:

What are the benefits of green space?

Better air and water quality, areas for recreation, makes people happier

Similarly in city planning – why would green space be important?		
	let's think about "third places." See this video on the concept from the city of Charlottesville in the States.	
Vhat i	s a third place?	
	A space beyond work and the home to be at, such as libraries, coffee shops, or recreation centers	
۸/by	rould third places he important?	
viiy w	ould third places be important?	
Vhat t	hird places are there in your community?	
n city		
	planning, why would we even care about third places?	
	planning, why would we even care about third places?	
,	planning, why would we even care about third places?	



### Narrow it Down

In this activity, you will create your own city layout using the provided buildings and zones. Then, you'll ensure that the city is planned to the best of your ability by answering the following reflection questions.

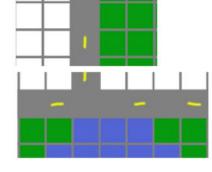
At this point, distribute the gridded maps and cut out map pieces. Students can have as many pieces as they'd like and do not need to use any/all of the pieces. (However, they should be able to explain why they're not including certain pieces!) As an added step, it may be interesting to have students draw the land first (trees, grass, water), then add city elements so students can plan to preserve the environment.

Provided to you are...

Roads: These can be drawn using any writing utensil. You can make your roads however you'd like, showcasing multiple lanes per grid tile or across multiple tiles.

Green Space & Parks: These can be drawn or labeled on the map however you'd like.

Water: Similarly, you can label and place water wherever you'd like on the map, such as a lake, river, creek, or ocean.



Residential: These groups of homes represent people.

Commercial: These groups of businesses contain shops and restaurants.

Industrial: These groups of industries contain factories and warehouses.

If preferred, there are much more in-depth and involved methods to do this activity (specifically SimCity and Pocket City), albeit these are paid alternatives. And individual pieces: These are specific tiles for important buildings. You may use none, some, or all of these pieces:

School

Fire Station

Police Station

Hospital

Government Building

Trash Service / Dump

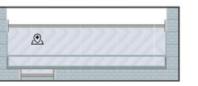
Library

And anything custom: Feel free to draw and label any additional buildings or concepts in your city.







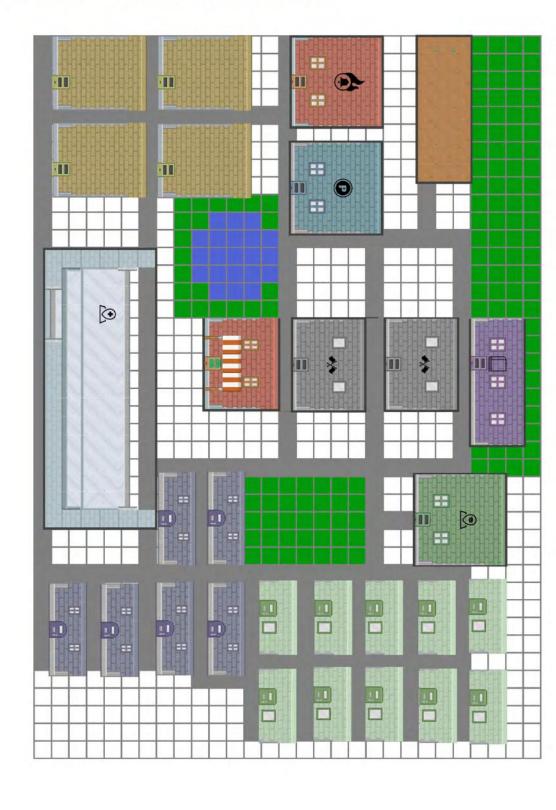








Here's an example of what a map could look like. In this example, the roads are simply serving as an indicator – students can create this map in any way they like...including more elaborate road networks, larger or smaller areas/buildings, custom buildings, and more.



low does your city	y manage traffic? Is it safe to drive in? Is it easy to commute? Is it walkable?
2004 S	
What green and th	nird spaces exist? Will people want to live here?
What about access	s to food and services? Can people live here?
	Caracter and Park Production
How close are peo	ple to various amenities and services? Are they too close? Consider noise and other
	ple to various amenities and services? Are they too close? Consider noise and other
	ple to various amenities and services? Are they too close? Consider noise and other
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factors.  Do you think it wo	uld be affordable to live in this city? Why or why not?
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factors.  Do you think it wo	uld be affordable to live in this city? Why or why not?
factors.  Do you think it wo	uld be affordable to live in this city? Why or why not?

### 10 Reflect How would you rate your understanding of this concept? Place an "X" in the corresponding box below. How has your understanding of this concept changed as a result of this lesson? Which individual or community actions do you think would be achievable? Why? What are some important factors to consider when city planning? Why would it matter to know this as a

### Take It Further



### Community Connection

Perform additional research about green spaces, third spaces, and other forms of city planning. Dive into a and see what types of spaces are available. What changes could be made? Prepare a full blueprint or model and present it to local



### **Take Action**

When considering city planning, it's worthwhile to imagine our communities in the past or in the initiatives, create a model of your community in the past or future. Document how it differs from today and why that matters..



### **Take Action**

Having access to quality green spaces ensures that community members have healthier, more deep analysis of your community future. Either by conducting historical desirable places to live. Make a map research or by looking at upcoming of your community that highlights all of the areas that could be renovated, demolished, or rezoned for green space. Consider the impact on the community (including the areas that you're changing), and whether or not these green spaces are worthwhile. Present this to local stakeholders.

### Media

### Cities: Skylines

(Video Game) One of the most in-depth city builders available, allowing students to build, zone, and consider every element of city design.

### Happy City: Transforming **Our Lives Through Urban**

### Design (Book)

"After decades of unchecked sprawl, more people than ever are moving back to the city. Dense urban living has been prescribed as a panacea for the environmental and resource crises of our time. But is it better or worse for our happiness? Are subways, sidewalks and tower dwelling an improvement on the car-dependence of sprawl?"

### The 99% Invisible City

### (Book)

"99% Invisible is a big-ideas podcast and website about small-seeming things, revealing stories baked into the buildings we inhabit, the streets we drive on, and sidewalks we traverse. The show celebrates design and architecture in all of its functional glory and accidental absurdity, with tales of exceptional designers as well as frequently overlooked everyday designs."

### Extend

### Language Arts

Consider using excerpts from one of the Media books listed above, highlighting how city design reflects (or doesn't reflect) the design of your local community. Have students lead a discussion about whether or not changing your city's design is worthwhile.

### Social Studies

Consider what other factors, especially culturally, which impact people's lives. For example, this article demonstrates that countries run by women had healthier responses to the COVID-19

pandemic. What other factors influence the city and maintenance of cities, cultures, and society?

### **Mathematics**

### Read and discuss Life in the City Is Essentially One Giant Math Problem from the Smithsonian. Consider: what math problems must we solve in order

to successfully design a city? Have students brainstorm these problems, then consider what their expressions and solutions may look like.

What will the city of the future look like? Beyond infrastructure and strictly logistics, aesthetics are also incredibly important to a flourishing city. Study different forms of architecture historically and around the world. Then, have students brainstorm their own unique, intriguing, or outright wacky versions of new, modern

### Science

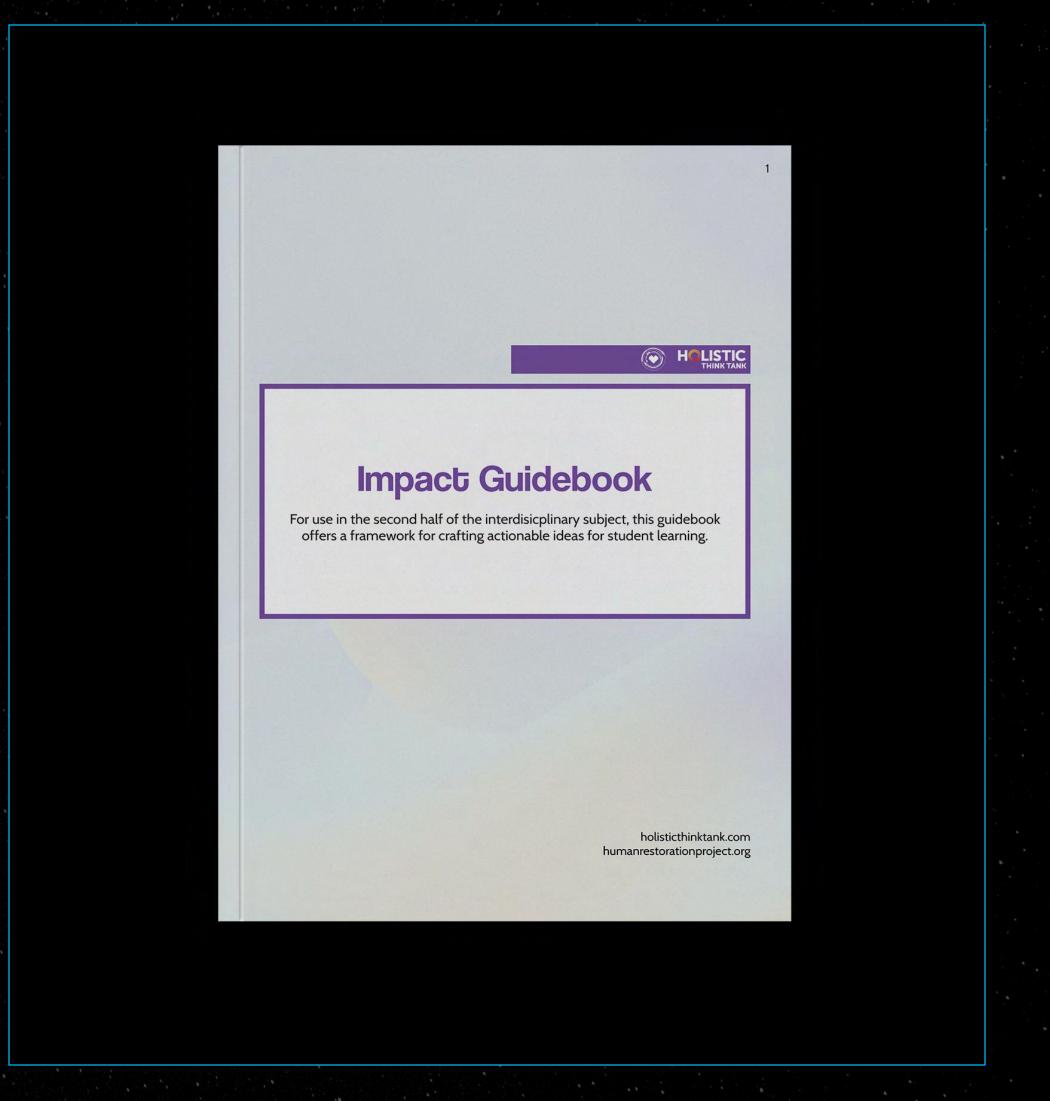
Arcology is a future-driven building initiative to create self-sustaining communities, usually in the form of large, multi-faceted skyscrapers. Check out this link which provides information about the practice. What stands out to students? Is this a viable practice? What would be the alternatives?

### Physical Education

Conduct a walking tour of your local community. As you explore the city, have students document the concepts in this lesson: third places, green spaces, infrastructure, and more. As you walk around and explore, talk about the highlights of the city, any history you're aware of, and connect with local residents.

# IMPACT GUIDE

- Second half of the course: creating student-led projects
- · How do we create meaningful, authentic learning?
- How do we help students along the way?
- How do we provide feedback?



### Foreword

Democracy and Education, and Edward Thorndike, who was deep into research surrounding the correlation of achievement, measurement, and motivation.

On the other hand was Thorndike. He preferred rational statistics and that people were motivated by rewards. Therefore, all learning should have an award to encourage completion, whether that be grades, ranking, or scores. He rested all faith in schooling to researchers, believing that they could develop great curricult anta could be administered to every student, who would then consume it. Paramount to Thorndike's research was incorporating testing that measured a student's current progress, compared it to others, and rewarded based on performance, with the hopes of raising a better generation of learned people when were before.

Obviously, any educator knows who won this sessue: curvant information for the many education and only has lent instell forward "tougher standards," shack to basiss," Every Student Succeeds, and "No Child Left Behind" - policies that embrace standardized testing, beating the "average", and a statistical

But at what cost? Schools have doubled down on cramming information for state tests, despite it hurting academic results and hompering a love of learning. Time and time again, studies showcase how standardized testing destroy motivation, knowledge-growth, and critical thinking (Natriello 1999, Amrein, & Berliner 2003, New York State Education Department 2004, Nichols, Glass & Berliner 2005, Moses & Nanna 2007, Wyn, Turnbull & Grimshaw 2014, Ritt 2016)

Instead of finding ways to embrace a student's love of learning, ignite their passion, and focus on social and emotional needs to navigate the world, we persistently drill, cram, and mask an outdated model of education that serves to create rule-obeyers. It's sad and unjust that our students are not able to easily identify their purpose or pursuits in life. Their motivation tends to be just as Thorndike promised - achieving an A, obtaining the 'next step' of education, pursuing a well-regarded college degree, and obtaining a low-to-mid-level starting position. Of course, this narrative is not true - As do not equate to success, college is not for early feeting the grant of the starting position.

society where we cannot predict what will occur. We cannot 'prepare students for the future' by teaching coding, robotics, a second language, every history fact, or Algebra II. That's not to say that these aren't interesting or inspiring topics rosome students nor that they have no relevance. However, our students need four foundations to achieve:

- A desire and love of learning that goes beyond the classroom.

  The capability to dissect, analyze, and critically form opinions to both understand and creatively
- incorporate information.

  3. The capability to deal with social and emotional situations for themselves and with others.

  4. A passion, purpose, and identity that connects them to the world around them, inspiring change,

All of these foundations are abstract: they are not objective, they cannot be tested easily, nor are they subject-based. Dewey proposed using experiential learning to grow and develop learners. Instead of cramming idificulous amounts of information up front, being assessed on it, then moving onto the next step, experiential learning involves doing - and learning as one does. There's no trivial assignments, irrelevant subject matter that's lost in a day, or inauthentic work. All learning is a reflection of someone doing something that matters.

With these traits, a student could go on to do anything. Although they may lack the content knowledge of a preparatory school peer, they have the wherewithal to surpass them in any given field they enter. Our students are bored, disillusioned, and apathetic toward the world around them, and schooling is a primary facet that drives this distast. The problem will only get worse - technology and rapid access to information continues to plague traditional educational values. We simply cannot add a technological tool to teach old-school content using a screen, we need to embrace doing real, meaningful work in our classrooms.

Project based learning (PBL) is working on a specific, authentic task by designing, developing, and creating a particular piece of work. Based on the philosophy of experiential and student-driven learning by John Dewey, PBL incorporates hands-on work which has proven effects on the retention of information. Students are more motivated on things that matter and PBL naturally lends itself to student differentiation, choice, accommodations, and developing practical knowledge. Once a project is in motion, you'll never want to return to purely stand-and-regurgitate teaching.

Why experiential education?

### If you've ever asked yourself...

- How can I engage my students in something that motters?
  How will I motivate my students to word to learn?
  How can I teach someone how to learn?
  Is it possible to meet standards without lecturing, worksheets, and other content-heavy instruction?
- Then the Impact portion of the interdisciplinary curriculum is for youl

This guidebook will lead you through each major component of project-based learning. Our goal is to make you comfortable enough to launch your first project, refine your existing work, or clarify any misconceptions you have about PBL included are overviews of each concept, a template for your own project, and between the project of th

### Structure of the Impact Process

After students have sampled a variety of lessons from the Action stage, they should have a selection of works in their learning portfolio. This will help you and the student identify subject-matter that is interesting

- 1. Complete action lessons in the first half of the course, collecting student responses in their learning
- portfolio.
  Understand the implications and purpose of the Impact process. (p. 4-8)
- Begin the Impact process by meeting and planning with students. (p. 9-15)
   Implement feedback and assess student learning. (p. 16-19)
   Recognize facilitation tips and troubleshoot misconceptions about experient

"Education is not preparation for life; education is life itself."

### John Dewey

The best tasks are those that are *authentic*.

In order to frame your mindset on designing a strong project, we need to think about real iss world. What do students care about?

ex. How will we feed the growing population of the world?
ex. How can our school promote a positive environment?
ex. What products could help us solve the issues of climate change?

### Building Soft Skills

Our society needs people prepared to find creative solutions to problems, work with a team, and selfimpose time-management - not robotic repeaters of information. This is not to say that content isn't important - rather, it is imperative that we don't emphasize content over learning how to learn. Project-based learning naturally involves students demonstrating soft skills to successfully complete projects. If PBL is set-up and managed correctly, students will motivate themselves to learn and work through struggles.

### Reinforcing Content

Projects will cover less content, but the content that is focused upon will be retained longer, as it is applicable. When someone discovers and experiences content, they will intrinsically inquire, care and apply their knowledge. As John Dewey explained: "Give the pupils something to do, not something to learn; and the doing is of such a nature as to demand thinking; learning naturally results."

It's not only about content - the entire design process teaches much more. Instead of having students regurgitate information, our goal through project-based learning to exemplify, demonstrate, and have students adapt the design process - which is a framework to complete tasks as well as learn how to learn. As educators, we need to ensure that learning is a life-long process and our students are ready to succeed in any endeavor they choose - not just traditional academic silos.

### (Some) works supporting experiential education

Project-Based Learning for the 21st Century: Skills for the Future. Bell, Stephanie. 2010.

Motivating Project-Based Learning: Sustaining the Doing, Supporting the Learning. Blumenfeld et al. 1991.

Transforming schools into communities of thinking and learning about serious matters, Brown, A. L. 1997.

The New Education, Davidson, Cathy. 2017.

The Evidence is Clear: Rigorous Project-Based Learning is an Effective Lever for Student Success, Lucas Education Research. 2021.

A Review of Research on Project-Based Learning.
Thomas, John. 2000.

# Design Thinking

### Utilize the Process

In designing thinking, we utilize five steps for working toward a solution. It's an iterative process that takes on a challenge with real world, authentic implications. In the following pages, we'll describe using the design thinking process to structure the Impact section of the IDS.

### Continue to Improve

you work though your project, you'll probably have some hiscups. It's up to you to reflect, improve, and remediate. And, note, not everything will be perfect this time (nor will it ever). We, as educators, learn through experiential learning just like students. We simply take what we now know, and apply it to future

### Empathize, Define, & Ideate

organizations connect to activities from the "Take It Further" activities

he more student, parental, communal, school (all staff, not just teachers), and worldly connection your project has, the more inherently authentic it will be. The community serves as not only a springboard for gamering interest, but as the experts for planning, developing, and providing feedback for your project. Notice experts are not limited to adults! Even if it's only a few students, focusing a project on their expertise will provide a huge motivational boost to the entire class.

Survey your students. Figure out their interests and what they're good at. Send out a parent letter asking for what they'd be willing to showcase to the school. Then, think about what and who exists in your local community. In the box below, write all of this information down.

### Narrow down the question.

The more ideas students think up - the easier this whole process will be! Now, we'll begin thinking about what to do with those questions. To do so, we may need to narrow down the question. For example, instead of "How will we feed the growing population of the world?", we might consider "What near-future inventions will feed the growing population of the world?"

These specific questions can help add context and relevancy to the challenge. Have students modify their questions. Consider the following.

- Current events

- Recently released novels (fiction and non-fiction)

- Events benegiers the versioned or in your students blace.

### Choose something to start!

ex. What future inventions will we feed the growing population of the world?

x. What products could help us solve the issues of climate change?

### Now, let's start fleshing out this project.

Have students, either with you, individually, in-pairs, or as a whole class, view the "Take It Further" activities located in the facilitation guide for each lesson. These activities can help students choose an idea or model potential projects. Have students write and propose a project that will take a set number of time over the coming weeks or months. Include:





Designing a project is mentally taxing! Don't be afraid to seek out additional resources. Be careful not to design a project and all of its steps. You're starting to venture towards just doing a class project. Our goal is for students to learn while doing the project - which involves them figuring out many things by themselves

### Here's how this project may look so far:

A group of students are all involved in their local theater club. Two of these students stated that they were very interested in the lessons regarding the environmental impacts of climate change, but aren't sure what kind of project they want to do with it.

You invite one of the local theater club members to help you plan what elements would go into a theater performance, and compile all these resources. You come to the guiding question: How can we put on a great performance that informs people about disastrous weather effects of climate change?

Now, this group of students all decide they want to work with each other: they all enjoy the idea of the task Our goal is for every student, either individually or in a group, to have a project concept to explo

connecting the Action stage to an Impact project. If students are struggling, encourage them to meet one-on-one with you and utilize the Take It Further suggestions and/or utilize peer and class feedback.

A well-chosen project will be inherently interesting to the majority of students. However, it doesn't hurt to increase their buy-in through an interesting experience. Perhaps contact one of your connections for a demonstration, take a field trip. Stype with an expert, have students present information, perform an experiment or more! These hooks can allow students who are struggling to come up with a project idea be inspired by something beyond the initial Action activities.

> "People who are curious learn more than people who are not, and people learn more when they are curious than when they are not."

> > Susan Engel

### Keeping the Project Interesting

A common misconception or experiential learning is that oil instructional time is used for working on a project. This is true - but that truth does not imply a teacher does nothing but watch students work the entirety of the project. Instead, you need to structure lessons, reflections, activities, field trips, speakers, peer reviews, mini-projects, and more. This is to "rekindle the flame" of the project. It's likely that students will burnout after the initial rollout of your project-it's up to you to keep them going with interesting things!

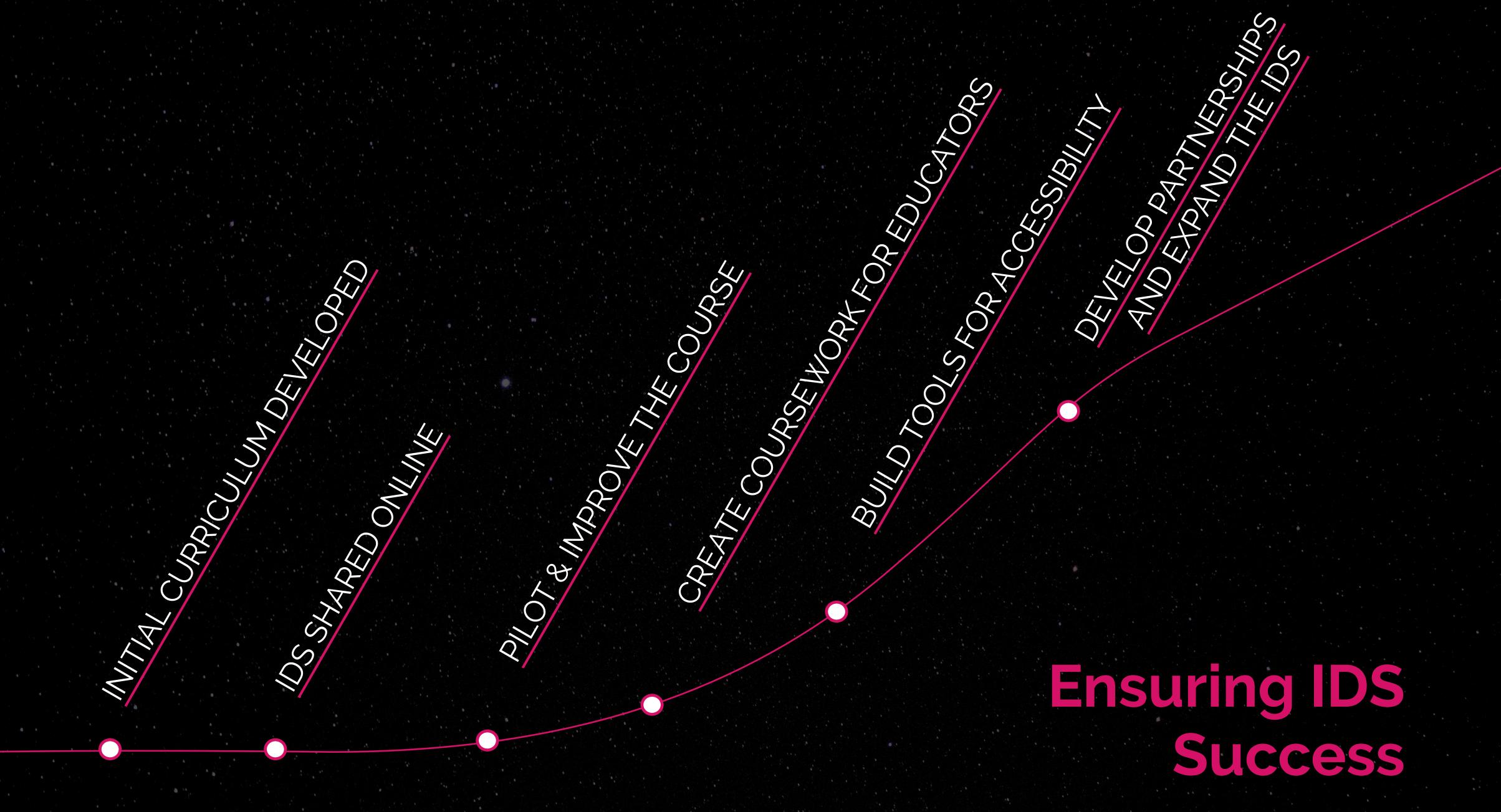
The key is that everything here relates to your project. Lessons, even if lecture-based, will have buy-in if they are authentic and in relation to your project. We're applying knowledge, not just drilling it!

Brainstorm each of the following. These all don't necessarily have to be scheduled - just pull them out when motivation runs dry. And it's perfectly fine if these activities don't relate to all student projects. You're creating a community of learning where students become involved in each other's success.

### IN SUMMARY....

- PEDAGOGICAL FRAMEWORK
- ACTION LESSONS (41) WITH EXTENSIONS
  - IMPACT FRAMEWORK
- STUDENT-LED PROJECTS TO CHANGE THEIR COMMUNITY

	DEVELOPING PARTNERSHIPS	STEPS	ENSURING TEACHERS HAVE SUPPORT
EXPANDING THE CURRICULUM		CREATING COURSEWORK	
	PILOTING AND IMPROVING		SHARING THE WORK FAR AND WIDE
BRINGING IN ADDITIONAL EXPERTS		MARKETING AND BRANDING	



# IDS PILOT

 Secure partnership with multiple schools to develop and implement feedback for lessons



# CREATE COURSEWORK

 Utilize existing protocols and partnerships to develop self-paced and group cohorts to teach the IDS, including attaching to graduate credit







### Course Syllabus:

### **Ungrading to Break Barriers Toward Learning**

Number of Credits: 3 credits (Licensure Renewal or Graduate Credit)

Course Instructors: Nick Covington & Chris McNutt (Human Restoration Project)

Modern grading systems are a relatively recent arrival in the history of education that, despite our best efforts to reform them, have continued to rank and sort, isolate, and demotivate students – especially those at the margins. What if we could cultivate a classroom culture that allowed learning to flourish in the absence of grades and let students create their own learning narrative through iteration, evidence-gathering, and reflection? By reframing assessment in these ways, educators can truly create an engaged student-centered learning experience for all. In this course, you will learn about the history of grades and grading, the research surrounding assessment, alternative proposals, and practical application in multiple school settings (even those that require a grade). In this course, participants will complete a gradeless portfolio to experience gradeless course design and to be better prepared to implement similar models in their own classroom contexts.

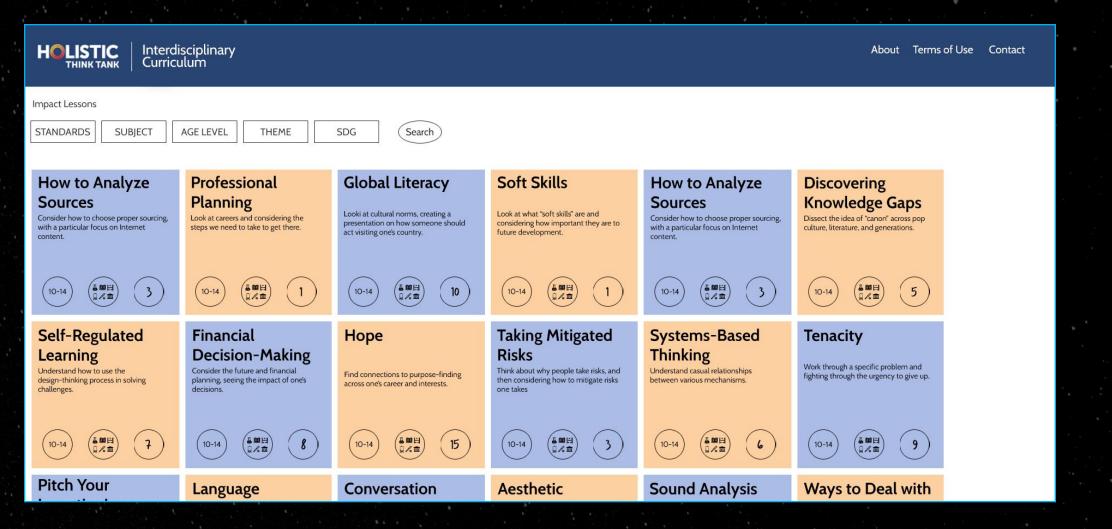
### Learning Objectives

Upon completion of this course, participants will be able to:

- Recognize the history and impact of grades and grading on learners.
- Utilize systems-based thinking toward equitable practice.
- Synthesize the hidden curriculum of education toward "creative noncompliance."
- Implement ungrading systems to support student well-being and engagement.

# CREATE ONLINE TOOLS

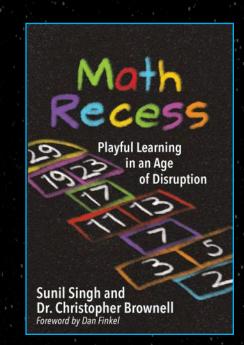
 Develop website database capabilities to host the IDS online as an ever-expanding framework for interdisciplinary learning





# DEVELOP PARTNERSHIPS & EXPAND

- Create partnerships with existing and new organizations within HRP's network
- Expand upon the IDS with new lessons, frameworks, and impact possibilities





































\*Digital Pedagogy Lab





Q&A + DISCUSSION