



STEM Education *Empowered*

In the rapidly-evolving innovation economy, educators are tasked with preparing students to thrive in a world filled with jobs that often do not yet even exist. An important response to that shifting set of targets is the push to build a stronger emphasis on STEM education. This is driven by the fact that we *do* know that there are *far* more STEM jobs available today than qualified people to fill them, and, even more importantly for today's students, that gap increases exponentially over time.

For students to find future success, they must build translatable skills that apply across a multitude of contexts. Effective communication, successful collaboration, critical analysis, and the ability to apply creativity in solving complex problems are skills that will be required in nearly every future career pathway. Thus, educators must provide students the opportunity to cultivate deep passion and expand their skills while offering broad exposure to a wide range of STEM fields.

In support of this advanced approach to education, Thrively has developed one single, comprehensive program that can guide schools in their work to empower all students to direct their own learning journeys, discover their unique talents for STEM, and develop the skills that will propel their success in any future career. From personalized skill development to STEM career exposure and authentic project-based learning, Thrively offers an array of tools to enable the full spectrum of STEM initiatives.



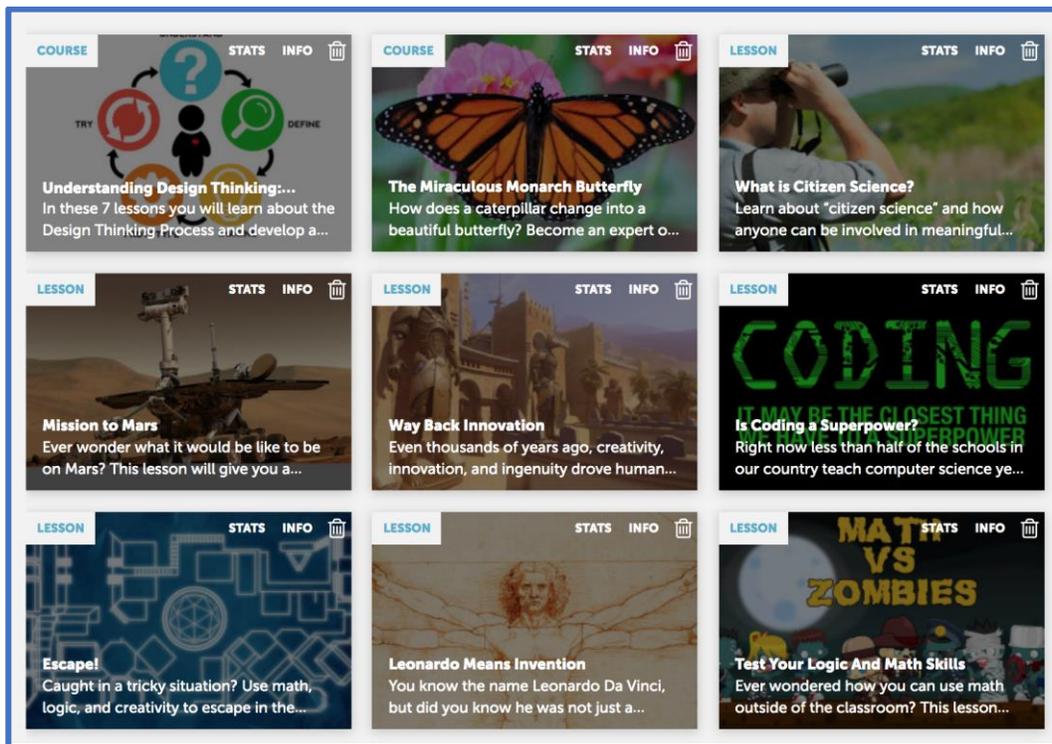
1. **21st Century Skill Development.** Life in the 21st Century requires unique set of non-academic skills such as flexible thinking, perseverance, and grit. Through exposure to literally thousands of STEM-focused Lessons and Sparks, students can build, reflect on, and practice the very skills that will ensure them future success in whatever path they may choose.
2. **Authentic Project-Based Learning.** Students engage in deeper learning when they are required to apply their understanding in authentic contexts. Thrively's unique project tool facilitates and captures the project-based learning experience in an easy-to-use format. For schools prepared to take this concept to the next level, Thrively offers applied learning projects created in conjunction with Industry Partners.
3. **STEM Career Pathways.** Exposure to the right information is crucial when directing students towards STEM careers, so Thrively has curated over 100 STEM Career Pathways and nearly 500 total Pathways with countless "Day in the Life" videos and embedded O*NET data. Careers to consider are personally recommended to students based on their strengths, interests, and aspirations.

Thrively's powerful platform enables the full range of STEM initiatives via a holistic, fully-integrated approach. Educators are supported with *all* of the tools they need to inspire students in STEM and empower them with the skills they need for the future. We are eager to work with passionate educators throughout the nation's schools in order to collaboratively build the education of the future, now.

Thrively's Comprehensive Program

1) Rich STEM Content

Thrively joins forward-thinking educators in the belief that we must provide all students with the skills needed to succeed in the innovation economy. Our rich library of online lessons and courses address design thinking, real-world skills, presentation skills, entrepreneurship, leadership, and much more. Playlists of lessons can be easily assembled from the Thrively library and then pushed to individual classes, grade levels, or entire schools.



Sample STEM Lessons

Lessons provide the opportunity for students to explore, build, and deepen skills. Individual Lessons generally last 20-30 minutes and are designed to easily fit into a single class period. Within Lessons, students are presented with engaging multi-media content (short videos, infographics, interactive websites, etc.) followed by journal prompts for reflection. Students apply their learning in a personal context and practice applying new skills and ideas.

Lesson : The Reality of Virtual Reality

Exercise 2: VR as a tool

Industries might be using VR to help them in their work, but it's also being used as a tool for helping solve problems that exist for humans in need.



Your Notes Imagine the possibilities of VR in helping people with injuries and disorders that the medical community has struggled to fix, and brainstorm some of those possibilities.

I think VR could help people to experience things that could not be possible without this technology. A friend of mine was in a really bad car accident and found out that she would never walk again. She missed playing soccer so much, but with VR, maybe she could still have that feeling.

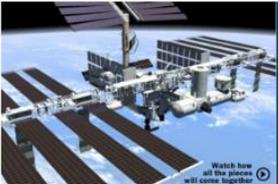
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STEM Lesson Detail Page

Thrively's Sparks are a carefully curated collection of engaging on-line resources which offer another opportunity for students to broaden their skills while being exposed to a wide range of STEM content. Students can explore over 3,000 Sparks in STEM and Coding topics alone, many of which open up to additional resources for ever more learning and discovery.



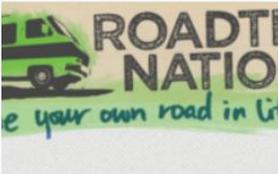
Wildlife Filmmaker
The National Geographic
Wildlife Filmmaker allows ki...



Building the International...
Learn about the Space
Station, why it's being built,...



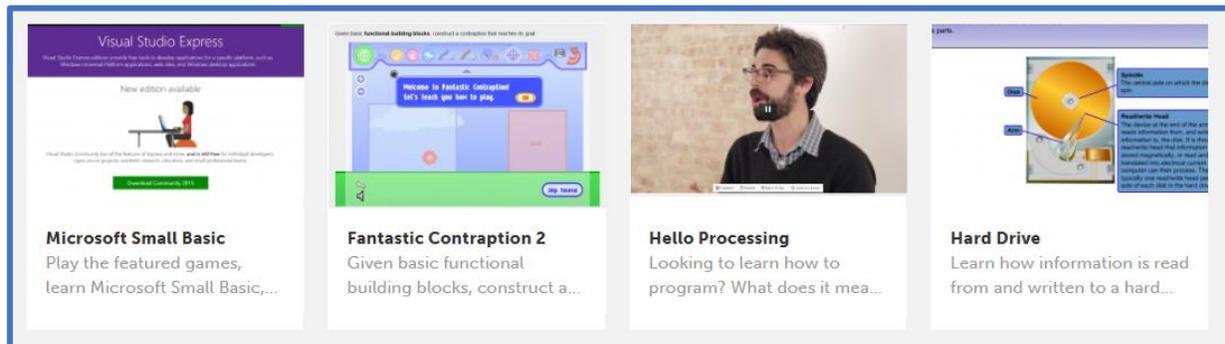
Microsoft Virtual Academy...
Microsoft's library of FREE
online courses that teach yo...



Roadtrip Nation
Explore interviews with
experts in many fields!

STEM Sparks

Teachers can assign Sparks for students to explore a new topic, learn skills within a specific discipline, or gain exposure to content as a preview of new units of instruction. Alternatively, students can be given the opportunity to discover Sparks on their own, supporting the development of individual passion and intrinsic motivation for learning.

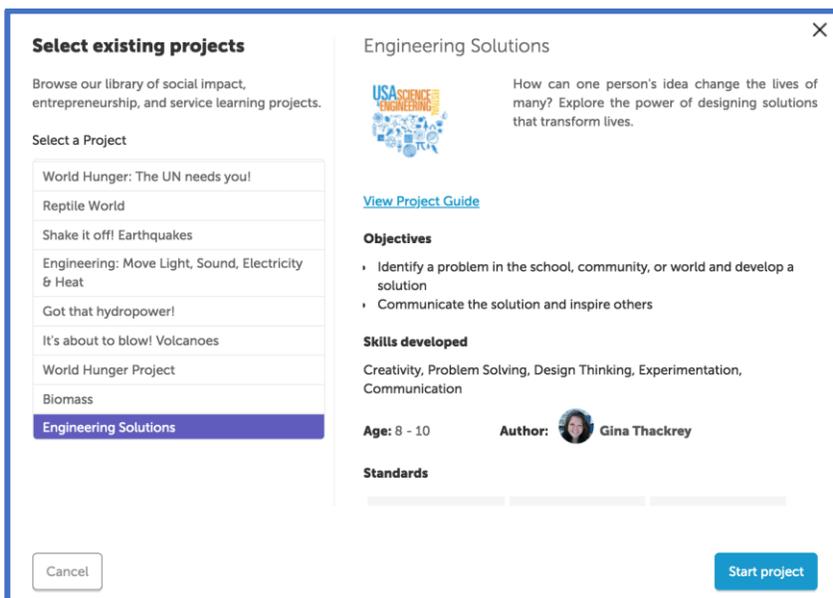


Coding Sparks

2) Authentic Project-Based Learning

Project-based learning engages students to apply their knowledge and understanding of complex questions, topics, and problems and to develop innovative solutions for authentic issues utilizing the tools, technologies, and techniques employed in the real world.

In support of deeper learning, Thrively has developed a full library of projects that help to structure and implement project-based learning in STEM topics.



Project Library

Thrively's Project Tool supports a rich, collaborative environment as students are led through discovery, content and skill building, critical analysis, and innovation. To aid in the facilitation of projects, each Activity comes with extensive directions, rubrics, and resources (documents, website links, videos, slideshows, etc.).

The screenshot displays the Thrively Projects interface. At the top, there are navigation options: "Browse Existing Projects" and "Create New Project". The main header for the current project is "POWER UP! HEALTH BENEFITS OF GAMING". Below this, there is a feed of posts from users:

- ASHLEY CARTER @ 09:22 AM**: A text post stating, "Zhenghua says that video games saved his life because he was so depressed. He was stuck in the hospital for two years. I can't imagine living in a hospital for two years thinking you are going to die. This was a good example of how video games can inspire people and keep them connected to friends."
- SEAN EDWARD @ 09:29 AM**: A video post showing a document titled "Video Game Solution" with a table:

Health Condition	Asthma
How does this condition affect people?	When the weather is bad, allergies are up. Kids with asthma cannot go outside to play. Sometimes, their asthma keeps them from running around with friends.
Video game characters that are like the person with the condition	Sam - a girl with asthma Only the Green-grain Sam wishes and allows her to gain "Breath" points. Pollution - the evil villain - spreads pollen and wipes out Sam's Breath points.
- JAMES COLLINS @ 10:30 AM**: A video post showing a Scratch code editor with a game scene featuring a shark and a fish.

At the bottom of the feed, there is a "Post your ideas, images, audio, or video" input field and a "Post" button.

On the right side of the interface, there are statistics: "17 Activities", "1 Team", and "3 Artifacts". Below these are activity cards:

- Designing Solutions (edit)**: "Designing solutions is a complex process of empathy, brainstorming, creating, and revising."
 - Task**: "How does design thinking help companies create better solutions? Post your thoughts to the Collaboration Feed."
- Design For A Medical Condition Or Illness (edit)**: "Design a video game that can help people with a specific medical condition. You can help blind people, people in hospitals, or people in comas. Or, you can focus on any other medical condition. Complete this packet to record your ideas."
 - Task**: "Upload a copy, screenshots, or photos of your ideas package to the Collaboration Feed."
- It's All In The Details (edit)**: "Once you have decided on a video game solution, record the details of the game here."
 - Task**: "Upload a copy, screenshots, or photos of your details to the Collaboration Feed."

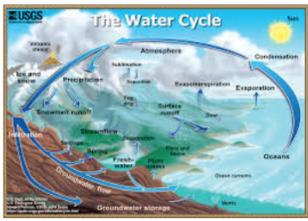
Video Game Design Project

For those schools ready to take STEM and project-based learning to the next level, Thrively also works with local business communities around developing real-world case studies for the students to solve via the Project Tool. This is an incredibly powerful mode of education, as students can connect with local businesses and develop work skills via projects that have real-world application and meaning.

Thrively Projects Browse Existing Projects Create New Project

SWEETWATER AUTHORITY 📄 ⓘ ⚙️

CHRISTIAN GRIFFIN @ 03:01 PM ↩️ 🗑️



JAMES COLLINS @ 03:02 PM ↩️ 🗑️

That is a good pic. I also found this website.

JAMES COLLINS @ 03:02 PM ↩️ 🗑️

https://www.americanrivers.org/rivers/discover-your-river/drinking-water/?gclid=EAlalQobChMI5pTm45ej4AIVCKrsCh3HGgyLEAAYASAAEgJ7U_D_BwE



Where Does My Drinking...

Our water does not just magically appear from the tap. It is a long process, and rivers play an essential rol...

<https://www.americanrivers.org/>

+ Post your ideas, images, audio, or video Post ▾

15 Activities **1 Team** **4 Artifacts**

Activities +

Discover Define Ideate Create ◀ ▶

- Mission, Vision, And Goals** (edit)

Scroll down through the story map to view Sweetwater Authority's Mission Statement, Vision Statement, and the seven goal areas of their Strategic Plan.

Task

What is important to Sweetwater Authority? Post your thoughts to the Collaboration Feed. Then, respond to two other posts.
- Need To Know Basis** (edit)

What does the community served by Sweetwater Authority need to know? Explore the Sweetwater Authority's Our Water section of their website.

Task

As you explore, post important facts into the Collaboration Feed.
- Protecting The Watershed** (edit)

What is a watershed? Think about how pollution travels through our local water system.

Task

How does pollution affect water quality? What are some ways to reduce human impact on the watershed?

Water Utility Project

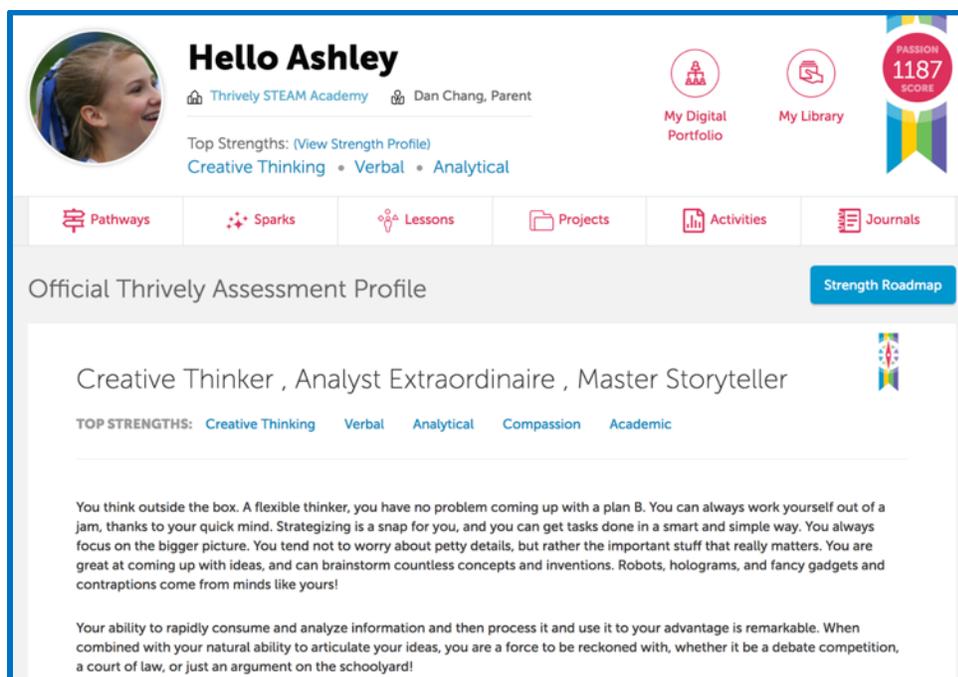
For example, in collaboration with an industry partner in Southern California, Thrively created a project that allows students to tour the inside of a local water treatment facility and water testing laboratory in order to explore the work done at a public utility provider.

Students learn all about the process of cleaning, storing, and delivering safe drinking water within a major metropolitan area. After reviewing the utility's strategic plan, students develop marketing materials for a new communication campaign that heightens public awareness. At the conclusion of the project, utility executives receive proposals and select quality pieces for actual implementation in the company's campaign.

3) STEM Career Exposure

We know that simple exposure to future career pathways is an essential part of getting students to focus their attention on key STEM fields. Only once students have a better understanding of all that is possible can they then work on preparing themselves for a career in STEM.

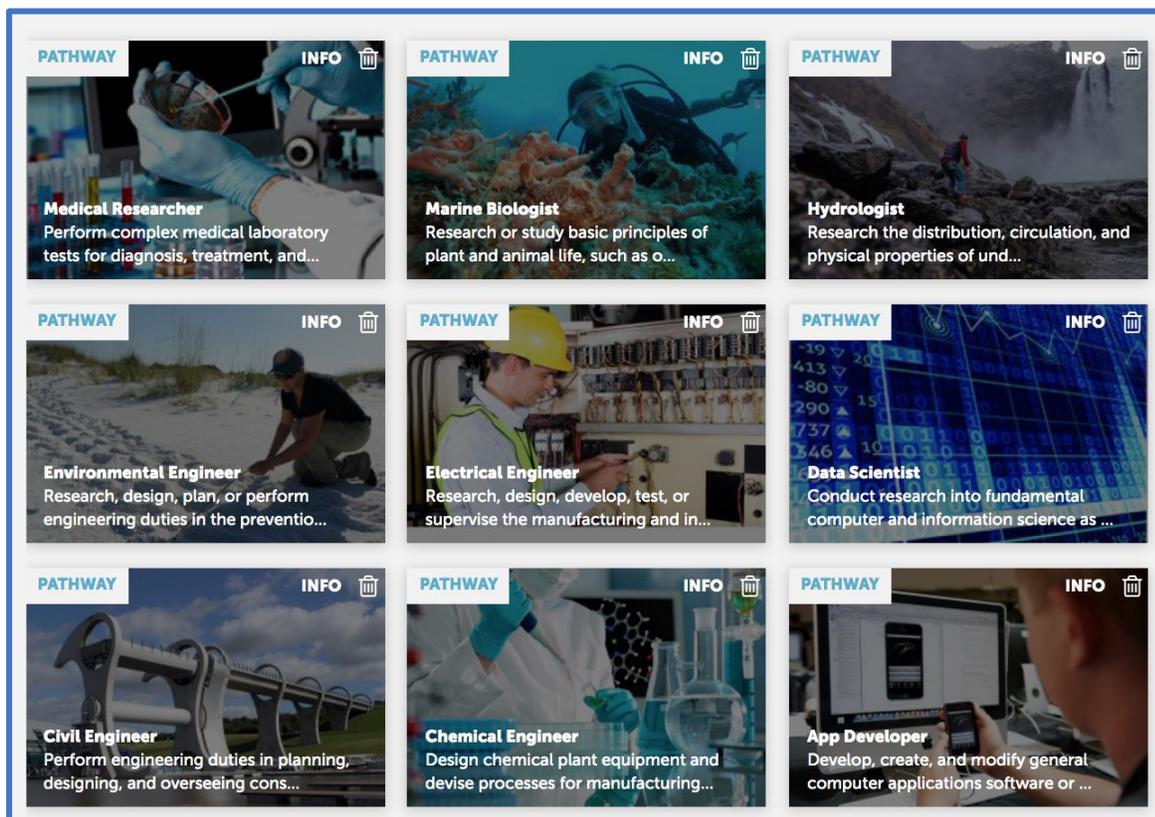
Thrively takes a unique approach to this type of career exposure, as we believe the critical first step is actually developing a rich understanding of each student's strengths. Thrively's industry-first Strengths Assessment, designed for adolescents by leading pediatric neuropsychologists, engages students around their strengths, interests, and aspirations. After a short, 30-minute Assessment, each student (and parent) is presented with a thorough Strengths Profile, which can guide the student's career education moving forward.



The screenshot displays a user profile for 'Hello Ashley' at Thrively STEAM Academy, with a parent named Dan Chang. The profile features a 'PASSION 1187 SCORE' badge and navigation options for 'My Digital Portfolio' and 'My Library'. A horizontal menu includes 'Pathways', 'Sparks', 'Lessons', 'Projects', 'Activities', and 'Journals'. The main section is titled 'Official Thrively Assessment Profile' and includes a 'Strength Roadmap' button. Ashley is identified as a 'Creative Thinker, Analyst Extraordinaire, Master Storyteller' with top strengths in Creative Thinking, Verbal, Analytical, Compassion, and Academic. A descriptive paragraph highlights her as a flexible thinker who strategizes effectively and focuses on the bigger picture. A second paragraph notes her remarkable ability to rapidly consume and analyze information to her advantage.

Thrively Strengths Profile

Building from the Strengths Profiles, students are able create a vision for their future by exploring career Pathways *directly aligned* to their strengths and interests. Students can browse careers that they self-identify as potential aspirations, or they can follow the recommendations made by Thrively's Pathways engine. Thrively's Career Pathways has thousands of day-in-the-life videos curated around 500 career Pathways from entry level to those requiring advanced training or degrees.



STEM Pathways

Exposing students to potential careers that align with their own strengths allows them to actively pursue their interests and focus on their passion. Perhaps most importantly, the Pathways tool connects the work they are doing in their classes with the career paths that require such skills (i.e. calculus and engineering).

Get on the Path Toward Becoming a Data Scientist

Conduct research into fundamental computer and information science as theorists, designers, or inventors. Develop solutions to problems in the field of computer hardware and software.



INTERESTS	MEDIAN SALARY	EDUCATION REQUIRED
I - Investigative R - Realistic C - Conventional A - Artistic	\$53.77 hourly, \$111,840 annual	Master's degree

[Add to Playlist](#) [Share This Career](#) [f](#) [t](#) [p](#) [e](#)

Learn More About the Life of a Data Scientist

These videos will help you understand what people who have these careers actually do



Gigs: A day in the life of a data scientist
RCR Wireless News (4 min)



What is a data scientist?
Juku (3 min)

Day in the Life Videos

Get on the Path Toward Becoming an Airline Pilot

Pilot and navigate the flight of fixed-wing, multi-engine aircraft, usually on scheduled air carrier routes, for the transport of passengers and cargo. Requires Federal Air Transport Pilot certificate and rating for specific aircraft...



INTERESTS	MEDIAN SALARY	EDUCATION REQUIRED
R - Realistic C - Conventional I - Investigative	\$127,820 annual	Bachelor's degree Post-secondary certificate

[Close](#)

Description Knowledge Skills Work Activities Work Style

Description

Pilot and navigate the flight of fixed-wing, multi-engine aircraft, usually on scheduled air carrier routes, for the transport of passengers and cargo. Requires Federal Air Transport Pilot certificate and rating for specific aircraft type used. Includes regional, National, and international airline pilots and flight instructors of airline pilots.

Knowledge

Transportation Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.	Geography Knowledge of principles and methods for describing the features of land, sea, and air masses, including their physical characteristics, locations, interrelationships, and distribution of plant, animal, and human life.	Mathematics Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
English Language Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.	Computers and Electronics Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.	Psychology Knowledge of human behavior and performance; individual differences in ability, personality, and interests; learning and motivation; psychological research methods; and the assessment and treatment of behavioral and affective disorders.
Mechanical Knowledge of machines and tools, including	Public Safety and Security Knowledge of relevant equipment, policies,	Physics Knowledge and prediction of physical

*O*NET Data Integrated*