



Exploratory Tasks:

A Resource for Middle School Career Exploration

Table of Contents

Teacher's Guide	3
Agriculture, Food & Natural Resources	5
Architecture & Construction	7
Arts, AV Technology & Communication	9
Business Management & Administration	11
Education & Training	13
Finance	15
Government & Public Administration	17
Health Science	19
Hospitality & Tourism	21
Human Services	23
Information Technology	25
Law, Public Safety & Security	27
Manufacturing	29
Marketing	31
Science, Technology, Engineering & Math	33
Transportation	35
Resources	37
Career Cluster Survey	39
KY Program of Studies & National Career Clusters Comparison	43
Exploratory Product List	44
Glossary	46



Exploratory Tasks:

Where will your journey take you?

TEACHER'S GUIDE

Research has identified middle school as a time when students can benefit the most from career exploration, engaging them at a time when they are at a higher risk for disengaging from learning due to challenges in forming identity, coping with puberty and navigating new environments. It capitalizes on their developing abilities to think abstractly, and their preferences for teamwork and active learning through relevant real-life scenarios.

Career Exploration in Middle School: Setting Students on the Path to Success



PURPOSE

The goal of these tasks is to connect academic content and skills to relevant real-world career exploration activities. Providing a wide variety of experiences for students to discover personal interests, skills and aptitudes will support their ability to make better informed decisions regarding future academic and career goals.

These **OPTIONAL** tasks are designed to provide ideas for independent or collaborative research that:

- allow for student choice based on career interests
- provide an opportunity for students to explore tasks related to a career interest
- connect to local and/or global issues
- generate ideas for problem-based learning projects
- reinforce the role of science, math, reading, writing, geography, history and technology
- support the develop of an Individual Learning Pan (ILP)

DESIGN CONSIDERATIONS

These tasks are designed using the **National Career Clusters Framework** which includes **16 Career Clusters**. Each cluster is divided into **Career Pathways** that helps students discover their interests and passions and empowers them to choose the right educational pathway.

For each pathway, there is an **Exploratory Task** related to knowledge or skills that are foundational for related careers. Most pathways will include an additional **Extension** activity for students to explore if time allows.

PLANNING CONSIDERATIONS

These tasks can be used alone or in conjunction with a school's current career exploration program. Questions to consider include:

- How do we ensure all students have opportunities to engage in career exploration?
- Will teachers integrate these where they connect to their content or will we set aside dedicated instructional time, e.g., enrichment periods, short-term rotations, etc.?
- How do we involve secondary educators and community partners?

INSTRUCTIONAL USE

STANDARDS

These tasks align to the Kentucky Academic Standards for Career Studies. Depending on the pathway and product, you'll find connections to standards in other content areas.

OBJECTIVE

Your objective will determine how these are used, e.g. to connecting content standards to real-world tasks or as a means of career exploration. If your objective is to connecting content standards to real-world tasks, all students will work on the same task. However, if career exploration is your objective, students may be working on different tasks. Prior to use, students should have taken the [Career Clusters Interest Survey](#) to identify their top three career clusters.

TIME

Instructional time for most tasks will be 1-3 class periods.

MATERIALS

These tasks were designed to require minimal supplies, e.g., paper, pencil, access to a computer, etc.

RESEARCH SUPPORT

Many of these tasks require students to research unfamiliar topics. To support them in this process, the topics are in ***bold italics*** for students to use as they research.

MODIFICATIONS

These tasks may be modified, e.g., product or audience, to meet the instructional needs of your students. Research is student driven, but you may provide links or materials at your discretion.

ASSESSMENT

Students will have little background knowledge of these real-world topics and errors and misconceptions are expected. Because of that, assessment should focus on Essential Skills, e.g., practicing problem solving real-world problems, prioritizing goals to complete a task, engaging in collaborative discussions, etc.

LIMITATIONS and BOUNDARIES

- These tasks are not standards, rather opportunities for students to engage in career related activities to guide Individual Learning Plan (ILP) development.
- These tasks do not constitute a course, but may be used to supplement middle school career exploration courses.
- As written, the tasks require no tools and/or equipment with potential safety concerns. Instead students use research and technology to explore the task.
- ***Any modification(s) requiring use of hand/power tools require instruction by a certified CTE instructor and is outside the boundaries of these tasks.***

TEACHER CERTIFICATION

Because students are using research and technology to explore the career, no additional certification is needed, other than what is required for the course in which the tasks are integrated.



Exploratory Tasks:

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AGRICULTURE, FOOD & NATURAL RESOURCES

Have you ever considered where all the food you eat comes from? How does food get from the farm to your table? Careers in this cluster ensure an abundant supply of food. Maybe you enjoy spending time outdoors. Other professionals in this cluster work to protect forests and waterways.



AGRIBUSINESS SYSTEMS PATHWAY

These professionals support the production, processing, marketing, distribution, financing and development of agriculture products and services.

EXPLORATORY TASK: Develop a **business plan** to start a small business, e.g., lawn care, dog walking, selling firewood, etc. Consider these questions:

- Who would be potential customers?
- How would you determine pricing?
- What would materials cost to provide the service or product?

EXTENSION: How would you advertise your business? Create an advertisement for your product or service.

ANIMAL SYSTEMS PATHWAY

People with careers in this pathway work to promote the health of food, service and companion animals.

EXPLORATORY TASK: Create an **animal care guide** for a new caregiver.

- What is a healthy/safe environment?
- What type of food is recommended?
- What are the medical needs?

EXTENSION: How do you choose the right pet? Create a checklist for potential new pet owners of things to consider before getting a pet.

ENVIRONMENTAL SERVICE & SYSTEMS PATHWAY

Keeping the land, water and air safe is the job of environmental experts. They monitor waste-water systems, conduct research and analyze data to monitor and evaluate effects on public health.

EXPLORATORY TASK: What can be recycled? Many schools and communities have recycling programs but people often put things in recycling bins that don't belong there. Create an infographic describing what, where and how things can be recycled in your school or community

EXTENSION: How are recycled materials used? Research **products made from recycled materials**, e.g., plastic, aluminum. Create a visual map tracing a recyclable item from the trash to a transformed item.

What is a Career Cluster?

Career Clusters are a way to organize career options. There are **16 Career Clusters** in the National Career Cluster Framework. They are further divided into specific pathways that can lead you to a successful future.

What are Career Pathways?

Each of the 16 Career Clusters are divided into approximately 80 Career Pathways. The pathways are further divided into specific careers that share similar skills.

A Career Pathway offers a range of entry options, from entry level positions that require a high school diploma or industry certificate to those that require a professional degree.

FOOD PRODUCTS & PROCESS SYSTEMS PATHWAY

People who work in this pathway create, monitor and evaluate food sources and production to meet consumer need and ensure public safety.

EXPLORATORY TASK: Where does your food come from? Choose a common food item and create a map of its' journey from source(s) to your table. Be sure to consider all the ingredients.

EXTENSION: Choose a vegetable or meat product. Compare pros and cons of various methods of preservation or packaging. Create a visual to share your findings.

NATURAL RESOURCES SYSTEMS PATHWAY

Specialists in this pathway work to maintain forests and the natural environment.

EXPLORATION TASK: What plants can be found on your school campus? Create a *landscape map* to identify the trees and shrubs.

EXTENSION: Does the landscaping at your home or school need a makeover? Design a *landscape plan* detailing work plan, e.g., mulch, plants, etc. As you plan, remember to consider the plant needs, e.g., amount of sun, type of soil, etc.

PLANT SYSTEMS PATHWAY

Feeding a growing population is the goal of those who work in this pathway. To do this, they study the growth of plants and the effect on the environment.

EXPLORATION TASK: Start a plant from a seed. Monitor its growth each day and create a visual record, using either drawings or photographs.

EXTENSION: Start 2 or 3 of the same type of plant from seeds. Place each in a location with different amounts of light. Compare and record the growth of each.

POWER, STRUCTURAL & TECHNICAL SYSTEMS PATHWAY

People who work in this pathway use, repair and design agricultural machinery and equipment through knowledge of engineering, hydraulics, pneumatics, electronics, power, structures, and controls.

EXPLORATION TASK: What do these specialists do and what type of equipment do they use? Create a presentation describing a piece(s) of equipment used in agriculture, food or natural resources. Consider:

- What the equipment is used for?
- What training or regulations are there for operating the equipment?
- What are the safety guidelines?

EXTENSION: Maintenance is important to ensure long life for the equipment. Create a maintenance plan by researching *maintenance recommendations* for a specific machine or piece of equipment.

How can I use Career Pathways?

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What is an Industry Certificate?

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Discover More

Choose a career in one of the pathways to discover:

- Demand for this career
- Location of jobs
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Exploratory Tasks:

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ARCHITECTURE & CONSTRUCTION

Look at all the structures around you...an endless variety of homes, buildings, roads, furniture, etc. Each were created by skilled professionals who designed, planned, managed and worked to bring an idea to life. The tools, equipment and structures themselves require unique skills to maintain safe operations. These professionals work in a variety of settings, such as offices, outdoors, factories and small businesses.



DESIGN & PRE-CONSTRUCTION PATHWAY

Specialists in this pathway turn a concept into a set of plans that guide other construction professionals as they continue the building process. These plans, or blueprints, include not only the layout for the structure, but also include plans for wiring, plumbing, etc.

EXPLORATORY TASK: Create a *floorplan for a tiny house*, one with less than 400 square feet. Find a sample online to use as a model. How do they use symbols to communicate? Use graph paper to create a sketch of your idea. Include a key to the scale, i.e., $\frac{1}{4}$ inch = 1 inch. Consider:

- What is the best use of space?
- How do you communicate the location of doors, appliances, etc.?
- What type of materials would you use?
- What is the total square footage?

EXTENSION: In architecture, elevation refers to a particular view of the outside of a structure. Research *architecture elevations* for examples to create and create an elevation drawing of your tiny house. Be sure to label the elevation of your drawing, e.g., right front, left side, etc.

CONSTRUCTION PATHWAY

Employees in construction literally build our future! These are the people who build homes, buildings and schools. Others in this pathway build highways, bridges, tunnels and power plants.

EXPLORATORY TASK: Construction specialists work in a variety of trades. Create a visual map of the following trade specialties. Go on a scavenger hunt in your home or school to locate examples of:

- Carpentry
- Masonry (structures built with brick and mortar)
- Electricity
- Plumbing
- Welding (metalwork)
- Heating and cooling

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EXTENSION: What are the tools of the trades? Choose one of the areas from your scavenger hunt. Create a flip book illustrating and describing commonly used tools.

MAINTENANCE & OPERATIONS PATHWAY

Employees with these careers keep our future growing as they assemble, install, repair and perform preventive maintenance on equipment and machines. They detect, diagnose and correct minor problems on machinery, keep buildings and structures in good repair and maintain the smooth operation of refineries, power plants, chemical plants and mills.

EXPLORATORY TASK: Do things ever need repaired at your home? Keeping things running smoothly requires regular maintenance. Research **home maintenance** to discover what is recommended. Create a home maintenance checklist. Use it to do a walk-through inspection of your home with an adult.

EXTENSION: Have you seen your parents replace an appliance? If so, you've probably heard them talk about how expensive they are. Preventative maintenance can help keep appliances running longer, too. Use the internet to find **recommended appliance maintenance** tips. Create an infographic to share your findings.

MORE TO EXPLORE

With more than 80 job titles in this cluster, there is a lot more to explore. Below are a few questions to guide your quest.

DESIGN & PRE-CONSTRUCTION PATHWAY

- What are the **different types of architects** and what do they do?
- What are the **different types of blueprints** and how do they differ?
- What is the meaning of the **blueprint symbols**?

CONSTRUCTION PATHWAY

- What are the construction organizations in your community? How many specialties can you find, e.g., carpentry, electrical, plumbing, building?
- What is the difference between **alternating (AC) and direct (DC) currents**?
- What are the **tools used in construction**? How are they used?
- What is a **plumbing layout**?
- How many **different masonry types/uses/patterns**, e.g., brick, block or stone can you find in your school or neighborhood?

MAINTENANCE & OPERATIONS PATHWAY

- What information is found on a **maintenance schedule**?
- What are **Safety Data Sheets (SDS)** and how are they used?
- What is **troubleshooting**? How is it used in this pathway?

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ARTS, A/V TECHNOLOGY & COMMUNICATIONS

Do you like to share or help others share a message in creative ways? If so, you may want to consider a career in the Arts, A/V Technology & Communications cluster. These professionals are experts at creating, performing and/or sharing multimedia content.

A/V TECHNOLOGY & FILM CAREER PATHWAY

Individuals with careers in this pathway manufacture, sell, install and repair audiovisual equipment. Others work with businesses such as conventions centers and stadiums to operate sound and video.

EXPLORATORY TASK: Your school is gearing up for a Wellness Week and plans to air student created **public service announcements** (PSAs). Your team plans to enter. Create 3-5-minute video encouraging students to take charge of their mental, emotional, social or physical health.

EXTENSION: With permission, work with an adult to choose a platform or location to share your video. Determine equipment needed to ensure a quality presentation, e.g., sound, projection, etc.

PRINTING TECHNOLOGY PATHWAY

Printing specialists prepare material for printing and operate and maintain printing presses. This pathway is undergoing many changes as technology transforms the way text and pictures are processed for printing and how equipment is operated and monitored.

EXPLORATORY TASK: Write and illustrate a story to create a book for kindergarten students. Consider:

- Type of paper
- Hand or computer-generated text and illustrations
- Method of binding, e.g., staples, ties, glue, etc.

EXTENSION: Read your story to students to evaluate the effectiveness of your choices to engage and/or inform the student(s).

VISUAL ARTS PATHWAY

Visual artists use a variety of methods and materials to communicate ideas, thoughts or feelings. They are classified into two groups, fine artists who create art for self-expression, and illustrators or graphic designers who use their skills for commercial clients such as advertising and design firms.



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EXPLORATORY TASK: Your school is planning activities for the National School Bullying Prevention Week and has invited students to create an original work of art to spread awareness. Choose an artistic medium, e.g., watercolor, charcoal, paint, clay, etc., to create your personal expression.

EXTENSION: Create a *museum label* for your creation that includes your name, title of the piece, medium and inspiration for the work.

PERFORMING ARTS PATHWAY

This pathway includes a variety of professionals such as agents, actors, costume designers, musicians and lighting and stage crews. Each add unique contributions to a successful production.

EXPLORATORY TASK: Your school is inviting students to participate in a performing arts program. To audition, create a 3-5-minute audition video. If you work with a group, roles may include costume design or sound, lighting, or other technical roles.

EXTENSION: Create an original script, musical score or other performance art to share with others.

JOURNALISM & BROADCASTING PATHWAY

Professionals in this pathway gather information, prepare stories and create broadcasts. News analysts, reporters, sound technicians and engineers work to keep us informed about local, state, national and international events.

EXPLORATORY TASK: Your school invites students to write articles for the school newsletter. Write an article about an upcoming event or topic of interest for students.

EXTENSION: Use the article you've written to create a video production to share with others.

TELECOMMUNICATIONS PATHWAY

Telecommunication specialists set up and maintain devices and equipment that carry communication signals such as telephone lines and internet routers.

EXPLORATORY TASK: Your grandparents want to upgrade the wireless network in their home but are not familiar with the equipment and the associated terminology. Research the basics of *installing a home wireless network*. Use the information to create a graphic or video tutorial for your grandparents.

EXTENSION: What do your grandparents need to know to ensure the security of their wireless network? Research *how to secure a Wi-Fi network* and create a checklist for them to follow.

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BUSINESS MANAGEMENT & ADMINISTRATION

Are you a planner or organizer? If so, you may want to consider a career in business. A business can be defined as an organization where people work together to produce, sell or provide a service to the public. These individuals may run their own business or support others who do. You'll find these professionals supporting all career clusters.



GENERAL MANAGEMENT PATHWAY

People with careers in this pathway plan, organize, direct, and evaluate all or part of a business organization including finances, employees and material resources.

EXPLORATORY TASK: Have you ever wanted to start your own business? What needs or wants do you see around you? Develop a **business plan** for a product or service to meet those needs. Include these in your plan:

- How to produce the product or provide the service
- Required materials, including **wholesale costs**
- **Retail cost** of the product or service
- How to deliver to customer

EXTENSION: Determine the potential success of your idea. Create a survey to determine:

- Would this be useful to you?
- How much would you pay for the product or service?
- What would make this better?

Use the information to write a **research summary**. Include graphics as needed.

BUSINESS INFORMATION MANAGEMENT PATHWAY

Business Information Management is an umbrella term for careers that use information technology to support or run a business.

EXPLORATORY TASK: How does technology support business? Identify a business or service idea. Use technology to create one of these products:

- A website promoting your business
- A spreadsheet to track income and expenses
- A timeline outlining startup from beginning to first sell

EXTENSION: Company logos are everywhere. Research **how to make an effective logo**. Use the information to create a marketing logo for a business idea.

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HUMAN RESOURCES MANAGEMENT PATHWAY

Human Resources specialists work to hire, train, evaluate and maintain the safety and well-being of employees.

EXPLORATORY TASK: Identify a business or service idea, e.g., babysitting, lawn mowing, homemade cookie sales, etc. What would your employees need to know or be able to do? Create a **training manual** to use with your new workers. Consider:

- Expectations of the job
- Explanation of tasks, e.g., procedures, follow-up, reporting
- Safety considerations

EXTENSION: Maintaining a safe and healthy workforce is critical to the success of a business. Research **how to create a safe and healthy workforce** to create a Healthy at Work poster to encourage well-being among employees.

OPERATIONS MANAGEMENT PATHWAY

Individuals in this pathway work to ensure a business has the necessary resources at the right time. They are experts in planning, organizing, coordinating and controlling the supplies needed to produce/provide a business's goods and/or services.

EXPLORATORY TASK: Identify a business or service idea. What supplies are needed each week? Create a diagram of a **supply chain** that shows:

- How items are obtained, including amount and cost of each item
- Where items are stored until needed
- How items are moved to the point of use
- Where completed products (if produced) are stored until sold
- How products are made available to customer, i.e., physical or virtual store.

EXTENSION: Consider an item you might purchase. What are the quality features that are important? Create an infographic that highlights qualities of the product or service to encourage others to try the product.

ADMINISTRATIVE SUPPORT PATHWAY

Administrative support specialists assist business operations through a variety of administrative and clerical duties. They manage information and communication, coordinate schedules and track projects completion.

EXPLORATORY TASK: You received a letter from a customer stating that the product she ordered was damaged. Write a letter in response explaining how your company values their business and will replace the product.

EXTENSION: You've received numerous phone calls concerning a defective product. Write an email to the Operations Manager alerting him of the problem.

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Exploratory Tasks:

Where will your journey take you?

Do you like to share your knowledge with others? Do you like to work with people? If so, you may want to explore this career cluster. These professionals provide and manage the education and training of individuals from preschool through adulthood. Other specialists in this cluster provide services that are essential to education and training systems.

ADMINISTRATION & ADMINISTRATIVE SUPPORT PATHWAY

People with careers in this pathway provide direction, leadership and day-to-day management of educational activities in schools, daycare centers, colleges, businesses, correctional institutions, museums, job training, and community service organizations

EXPLORATORY TASK: One role of administrators is to evaluate and support teachers. They often do this by frequent walk-throughs to observe instruction in action. But what makes a great teacher? Create an **evaluation checklist or rubric** to use in a walk-through observation. How would you include these in your checklist or rubric?

- Content knowledge
- Content-related pedagogy (instructional practices and strategies)
- Relationship with students
- Use of assessment and resources

EXTENSION: What instructional strategy helps you learn best? Create a short professional learning video to share with teachers describing how to best use the strategy.

PROFESSIONAL SUPPORT SERVICES PATHWAY

Professional support services represent a variety of highly specialized occupations that are critical to education. Counselors, psychologists, social workers and speech-language pathologists all work to meet the individualized needs of students.

EXPLORATORY TASK: Your school counselor is worried that social media is causing anxiety, depression and bullying among students at your school. She is encouraging students to submit ideas to draw awareness to this issue. Create a short (5-15 minute) counseling lesson or a resource to share with students. Consider these questions:

- What is the impact of social media?
- How much time on social media is too much?
- How can you use social media responsibly?

EDUCATION & TRAINING



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EXTENSION: Create a visual graphic or video to share with others as a reminder of how to use social media responsibly.

TEACHING/TRAINING PATHWAY

Teachers and training specialists are experts in their subject. They must have the ability to communicate, motivate learners and understand the educational and emotional needs of their students. Teachers also must be able to offer different teaching/training methods to meet the diverse needs of individual learners.

EXPLORATORY TASK: What is your favorite subject? Share your knowledge by creating a 15-20-minute lesson plan for elementary students. Include these in your plan:

- Grade level and subject
- Learning target or what students will learn from the lesson
- Essential question or strategy to engage students in the lesson
- Lesson activities, e.g., modeling, guided or independent practice
- Resources or materials
- Assessment or how you will know if students met the learning target

EXTENSION: Practice your presentation skills by presenting the lesson to a small group of peers or work with an adult to arrange a tutoring session with an individual or small group of students.

MORE TO EXPLORE

- You are working at a summer camp run by the local parks and recreation. The camp will host 15 children in each of 3 different age groups, preschool, kindergarten and primary. To ensure a safe and fun experience by all, you need to create a daily schedule. Camp hours are 8am-4pm. Be sure to include these activities in your schedule:
 - Morning meeting outlining the day's activities
 - Meals – breakfast, lunch, morning and evening snack
 - Pool or outside play
 - Creative play – arts & crafts, Lego's, blocks, dress-up, etc.
 - Academic connection – reading, writing, math activity
- Speech-language pathologists work with students to identify and pronounce specific sounds. Research **identifying and pronouncing beginning sounds of words** and create an activity or game to help students practice these skills.
- Teachers don't always teach general education, e.g., reading, math, or science, and they don't always work in schools. Think about a piano teacher, a soccer coach or a karate teacher. Consider a skill that you have. Create a 10-15 minute lesson to teach another student.
- Create a "5 Things to Know About _____" infographic. Choose a topic to fill in the blank. Research the topic to identify important information to share.

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Are you a problem-solver or an organizer? Do you like to work with numbers? If so, consider a career in finance. These professionals assist individuals and businesses in financial planning, banking, insurance and investing. Although identified as a separate cluster, you'll find finance professionals working to support all sectors of business and industry.

SECURITIES & INVESTMENTS PATHWAY

Securities and investment professionals help individuals and businesses invest their money in products such as stocks and bonds that will earn money over time. They work in brokerage firms, investment banks and stock exchanges.

EXPLORATORY TASK: People use checking accounts, savings accounts and certificates of deposit (CD) to both save and earn money. Your soccer team has an extra \$500.00 to be used next year and wants to know where to put the money? Research the following to prepare a **financial report** to help members decide.

- Definition of **interest**
- **Checking accounts, savings accounts, certificates of deposits (CD)**
- Interest rate for each product
- Restrictions on withdrawing money from each
- Amount of money in each account after one year

EXTENSION: What are **stocks and bonds**? Create a graphic that includes the definition and pros and cons of each type of investment.

BUSINESS FINANCE PATHWAY

Finance professionals manage policies and strategies for budgets, purchases, investments and taxes. Their expertise is critical for the financial well-being of a business.

EXPLORATORY TASK: How do you start a business? You've volunteered to manage the volleyball concession stand for the first home game. You expect an attendance of 200. You have \$250.00 to purchase supplies. Research wholesale product sites, e.g., Sam's, Costco, to create a **purchasing plan** for supplies. Include:

- List and quantity of item
- Purchase price per unit of each item
- Selling price for each item
- Other supplies, e.g., napkins, cups, etc.

EXTENSION: Create a **profit analysis** by calculating the amount of money your team will make if you sell all items.

FINANCE



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ACCOUNTING PATHWAY

Accounting professionals work with individual clients and businesses to record, summarize and analyze financial information necessary for management and decision-making.

EXPLORATORY TASK: Where did all my money go? Employees are often confused when their paycheck is less than they expected. All this information is found on their pay stub. Create a graphic to share with new employees that explains:

- **Gross versus net income**
- Taxes withheld, e.g., state and/or local
- Federal Insurance Contributions Act (FICA)
- Deductions for health insurance, retirement plans, etc.

EXTENSION: The 2019 tax rates for employers are 6.2% for Social Security and 1.45% for Medicare. Your employees earned \$850.00 for a 2-week pay period. How much would be withheld for Social Security and Medicare?

INSURANCE PATHWAY

Insurance professionals provide services to individuals and businesses that protect them from financial loss. They analyze the needs of their clients to identify risks in order to recommend suitable plans or policies.

EXPLORATORY TASK: What does insurance pay for? An insurance professional helps clients identify their insurance needs, e.g., life, home, auto, renters. Create a brochure that explains the **types of insurance** available.

EXTENSION: What type of insurance do people need? Research **how insurance needs are determined**. Use the information to prepare an **insurance recommendation** for each of the following clients.

- Single 25-year-old who rents an apartment and owns a motorcycle
- Married 32-year-old with 2 children who owns her home and car
- Widowed 76-year-old living in an apartment and does not drive

BANKING SERVICES PATHWAY

These professionals work in banks and other institutions to provide services such as checking accounts, credit cards and bill payment. They accept deposits, lend money and provide short-term investments, e.g., saving accounts, certificates of deposit (CD).

EXPLORATORY TASK: What's the **difference between a credit and debit card**? Why should you use one or the other? Create an infographic that explains and compares the pros and cons of each.

EXTENSION: The use of electronic banking has led to an increase of identity theft. How can individuals protect their personal information? Create a presentation that outlines **steps students can take to protect their identity**.

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Discover More

Choose a career in one of the pathways to discover:

- Demand for this career
- Location of jobs
- Starting wage
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Exploratory Tasks: *Where will your journey take you?*

GOVERNMENT & PUBLIC ADMINISTRATION

Have you ever wondered who keeps the government running? Who makes policies to keep us safe? Who manages money to run the government, provide education, fix our roads and assist those in need? All of these are the responsibility of professionals in the Government and Public Administration career cluster.

GOVERNANCE PATHWAY

People with careers in this pathway are responsible for making and carrying out public policies. Elected officials and their staff research, debate and vote on a variety of policies related to criminal justice, economics, education, etc.

EXPLORATORY TASK: A student council shares ideas, interests and concerns with teachers and school principals. Officers are elected by the student body. What office are you best suited for, e.g., president, treasurer, secretary, etc.? Research the **duties of student council offices**. Use the information to create a 30-60 second campaign advertisement or poster explaining why students should vote for you.

NATIONAL SECURITY PATHWAY

The military provides training and work experience for multiple specialists that are responsible for keeping our country safe. These individuals work in a wide variety of occupations such as running a hospital, maintaining a helicopter, operating a nuclear reactor and programming computers.

EXPLORATORY TASK: How do we keep top-secret messages private? To do that, cryptologists create and solve coded messages. Ciphers are the instructions for converting a message into a set of symbols, e.g., A=1, B=2, etc. Research **how to create cipher**. Use the information to create a hidden message for others to solve.

FOREIGN SERVICE PATHWAY

People who work in this pathway serve in embassies, consulates and other diplomatic missions around the world. They analyze political and economic events and work to ensure the safety of American citizens abroad.

EXPLORATORY TASK: Cultural diplomacy can be described as actions based on the exchange of diverse ideas, values, traditions and other aspects of culture or identity. Culture can include clothing, food, traditions, ceremonies, spiritual practices and beliefs, language, family structure and communication styles.



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Create a public service announcement (PSA) to inform, promote and celebrate **cultural diversity** in your classroom and local community.

PLANNING PATHWAY

Professionals in this pathway develop plans to help communities make decisions about how to use their land and resources to build homes, shopping centers, hospitals, recreational centers, etc.

EXPLORATORY TASK: How could you improve your community? Draw a map of your community and identify businesses, residential areas, public services, e.g., medical, courthouse, police/fire, schools, parks, etc. Identify the top three areas for building and/or improvement. Create a **community improvement plan** describing the improvements needed for each.

REVENUE & TAXATION PATHWAY

Individuals in this pathway make sure that businesses and individuals pay their fair share of taxes. They review tax returns, conduct audits and collect overdue taxes.

EXPLORATORY TASK: *How many different taxes do adults pay?* How much are they required to pay? Create an infographic that explains types of taxes and/or state/local tax rates.

REGULATION PATHWAY

Specialists in this pathway usually have expert knowledge about an industry, the environment or technology and the related laws and rules of each. They use this expertise to oversee regulations to protect our health, safety and the environment.

EXPLORATORY TASK: How do government agencies keep us safe? Create an explanatory poster of **government regulatory agencies**, e.g., Occupational Safety and Health Administration (OSHA), Federal Drug Administration (FDA), Federal Deposit Insurance Corporation (FDIC), etc.

PUBLIC MANAGEMENT & ADMINISTRATION PATHWAY

These professionals manage public services such as transportation and utility systems and oversee the use of resources that include finances and facilities.

EXPLORATORY TASK: Who manages public resources in your community? Create an **organizational chart** of your **community leaders**, e.g., mayor, magistrate, sheriff, etc. Include a description of the duties or responsibilities of each.

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HEALTH SCIENCE

Do you find health and wellness topics interesting? Are you intrigued by how the body works or what causes diseases? If so, you may find that a career in health sciences is for you. These professionals work in hospitals, clinics, labs and homes to provide a variety of services to maintain and improve the health of their clients.

THERAPEUTIC PATHWAY

Professionals in this pathway treat injuries and illnesses. They work directly with individuals to provide care, treatment, counseling and health education information to improve the quality of life for their patients.

EXPLORATORY TASK: What do **vital signs** measure? What does it reveal about your health? Create a health information pamphlet for patients that explains each of the vital signs. Be sure to include:

- How and why each vital sign is measured
- Normal range of each
- Variations by age group, e.g., children, adults, elderly

EXTENSION: Work with an adult to learn and practice taking one or more of the vital signs.

DIAGNOSTIC SERVICES PATHWAY

Diagnostic services is an umbrella term for careers that use a variety of tools and equipment to perform tests to help detect, diagnose and treat disease and injury.

EXPLORATORY TASK: What structures do doctors see when looking at an X-ray? Find and print both a **labeled skeleton** and an **X-ray image** from the internet. Use the labeled skeleton to identify and label bones on the X-ray.

EXTENSION: What do doctors see when looking at an MRI? Google and print both an **MRI midsagittal brain** and a **labeled midsagittal brain**. Use the labeled brain image to identify structures on the MRI image of the brain.

HEALTH INFORMATICS PATHWAY

This pathway includes professionals who manage health care agencies as well as specialists who are responsible for managing patient data, financial information and computer applications related to health care.



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EXPLORATORY TASK: Where is the plantar region...or the buccal region? To read medical records, one must understand the terminology. Create a poster using medical terms to label body regions. Use a large sheet of paper to draw the outline of a body. Do a google search to find **medical terms for body regions**. Label the image with the correct medical term.

EXTENSION: Medical terminology uses Greek and Latin word roots, prefixes and suffixes to create precise language. Research the **word roots for body regions** listed on your poster. Notice similarities between the medical term and word root as you add them to the poster.

SUPPORT SERVICES PATHWAY

Support service specialists work to maintain health care facilities, provide services for patients and manage supplies and equipment. This pathway offers career opportunities from the entry level to management positions.

EXPLORATORY TASK: Where do germs live? How are they spread? Create an infographic to show how **germs are spread**. Share with your class.

EXTENSION: Preventing the spread of infection requires a link to be broken in the **Chain of Infection**. Research this term to learn how to slow the spread of infection. Create a presentation to share with your class to help them understand how to stay safe.

BIOTECHNOLOGY RESEARCH & DEVELOPMENT PATHWAY

Professionals in this pathway conduct bioscience (any of the life sciences) research as it applies to human health. They study diseases to discover new treatments, invent medical devices to use directly with patients or to improve the accuracy of diagnostic tests.

EXPLORATORY TASK: Health care is constantly changing as more is discovered about diseases. Search the **history of medicine timeline**. Create a Top Ten List that you consider the most significant discoveries. Include a one or two sentence description of each. Example:

- 1955 – Approval of Jonas Salk’s Polio Vaccine - Polio is a disease that caused paralysis and death in large numbers of people throughout history.

EXTENSION: Why are vaccines are used today? Research **recommended vaccines**. Choose one to explore deeper. Write an **investigative report** that describes the disease, including:

- Signs and symptoms
- How it is transmitted
- Rate of infection or how many people were infected
- Prognosis or outcome after infection

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Exploratory Tasks:

Where will your journey take you?

HOSPITALITY & TOURISM

Hotels...restaurants...conventions centers. Do you wonder how these places operate? Who manages and coordinates events, employees, resources and finances? If these questions grab your interest, explore these pathways focused on hospitality and tourism.

RESTAURANTS & FOOD/BEVERAGE SERVICES PATHWAY

People with careers in this pathway perform a variety of tasks to operate and oversee restaurants and food services. From preparing foods to managing finances, these specialists work to provide a quality customer experience.

EXPLORATORY TASK: Your class is planning a dinner to honor 15 local veterans. Your team is charged with creating the menu. You have a \$200.00 budget to buy food for the veterans and your classmates. Consider these as you plan:

- Where and when the event will be held
- Type of meal, e.g., buffet, meal served at a table, hot/cold
- Source of food, e.g., catered, potluck, take-out

EXTENSION: Your team has been asked to manage the event. You have a budget of \$200.00. Create an event plan for the event that includes:

- Agenda, including speakers, performers, etc.
- Seating layout
- Decorations
- Invitations

LODGING PATHWAY

Specialists in this pathway perform tasks related to the operation of lodging facilities and the care of guests who use them. This may be through direct interaction with the guests or by providing services necessary for the operation of the facility.

EXPLORATORY TASK: Your grandparents want to open a bed & breakfast from their 6-bedroom home. They have asked you to help determine the possibility of their success. Investigate the following to create a research summary that includes:

- Potential guests, tourists, business travelers, families
- Local attractions, e.g., shopping, colleges, parks, festivals, business
- Services you might provide for your guests, e.g., meals, laundry
- A comparison of local hotel or bed and breakfast rates/services

EXTENSION: Create an advertising brochure for the local chamber of commerce to highlight the new bed and breakfast. Include special services, local activities or other points of interest.



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TRAVEL & TOURISM PATHWAY

Travel and tourism consultants provide a range of services to promote and support a traveler's experience. These may include developing a heritage center for visitors, creating guidebooks, overseeing a huge urban convention center or planning trips and events.

EXPLORATORY TASK: Local businesses prosper from visitors. What can you do to encourage tourism? Create a travel brochure to place at the local visitors' center or chamber of commerce. Consider these for our brochure:

- Brief overview and/or history of the area
- Simple map with locations of major attractions
- Areas of interests, e.g., historic sites, parks, lakes, etc.
- Local commerce, e.g., hotels, shops, restaurants, services, etc.

EXTENSION: Choose one of the local attractions. Create a short video advertisement to generate interest in the site. Work with an adult to share with your local chamber of commerce.

RECREATION, AMUSEMENTS & ATTRACTIONS PATHWAY

Employees in this pathway deliver a range of services across a variety of settings such as recreation centers, historic or cultural centers, museums and theme parks. Many provide direct services to customers while others manage events and facilities.

EXPLORATORY TASK: A local hotel would like to create a playroom for children (ages 3 - 8) of their guests. The dimensions of the playroom are 30' x 30' and you have a budget of \$2500.00 for furnishings and supplies. Develop a planning proposal that includes:

- Layout, including arrangement of furnishings
- List of activities, including equipment and supplies
- Financial report of the cost of equipment, supplies and furnishings

EXTENSION: How do you ensure the safety of the children? How would you communicate this to those using the playroom? Research **preschool safety guidelines**. Create a safety brochure to be shared with children and parents.

MORE TO EXPLORE

- **Proper food handling** is critical to public safety. As a restaurant manager, it is your responsibility to ensure employees follow these guidelines. Create a Food Safety Guide to share with new employees.
- You work as a personal trainer at the local recreation center. Create a **fitness plan or routine** for a client.
- Your local historical center is planning a **Living History** night and are seeking volunteers to portray individuals important to the history of your town. Research an important local individual. Create a **historical monologue** to share their story.

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Exploratory Tasks:

Where will your journey take you?

HUMAN SERVICES

Do you like working with people? Are you concerned about their health and welfare? If so, you may want to consider a career in human services. These professionals work to meet a wide range of family and individual needs in areas such as personal care, counseling and mental health, and family, community and consumer services.



EARLY CHILDHOOD DEVELOPMENT & SERVICES PATHWAY

People with careers in this pathway nurture and teach children. They provide services in childcare centers, nursery schools, preschools, public schools, private households, family childcare homes, and before- and after-school programs.

EXPLORATORY TASK: Research *developmental characteristics of 3-4-year old children*. Use that information to create a 10-minute lesson plan for preschool students. Include these in your plan:

- Learning target or what students will learn from the lesson
- Essential question or strategy to engage students in the lesson
- Lesson activities, e.g., modeling, guided or independent practice
- Resources or materials

EXTENSION: Practice your presentation skills by presenting the lesson to a small group of peers or work with an adult to arrange a tutoring session with an individual or small group of students.

COUNSELING & MENTAL HEALTH SERVICES PATHWAY

Counseling and mental health professionals help people manage personal, family and mental health issues. They also provide guidance related to education and career decisions. These services may be provided in hospitals, clinics, schools or private settings.

EXPLORATORY TASK: Vaping use by middle school students has been increasing. Research the *health effects of e-cigarettes* to create a Fact or Fiction pamphlet to share with others. Choose 5-10 statements about e-cigarettes for the reader to decide if it is fact or fiction. Follow up each statement with an explanation. Example:

Fact or Fiction: Vaping is easier to hide from adults.

Fact. The vaping devices don't give off as much smoke as traditional cigarettes and may be easier to hide.

EXTENSION: Use the information you gathered to create a google survey to discover what others know about vaping. Be sure to follow the survey with the facts, either online or by sharing your pamphlet.

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FAMILY & COMMUNITY SERVICES PATHWAY

Individuals with careers in this pathway help the homeless and those confined to their home due to illness. They counsel and care for emotionally disturbed individuals and those with physical and mental disabilities. Others help the needy obtain financial assistance and seek contributions for various social services organizations.

EXPLORATORY TASK: What are the needs in your community? What can you do to help? Create a **community service project plan** to meet that need. In your plan, include:

- Identified need and project goal
- Timeline
- Required permissions and resources

EXTENSION: Put your plan into action. Share the results by writing an article for the local newspaper to inspire others to get involved.

PERSONAL CARE SERVICES PATHWAY

Specialists in this pathway assist individuals with personal care, hair, skin and makeup needs, massage therapy and fitness training. Also included are funeral directors and attendants who provide services for grieving families.

EXPLORATORY TASK: People rely on cosmetologists for advice on hair styles or color. Create a pamphlet to address common client issues such as:

- Hairstyles and/or color
- Skin care
- Make-up tips

EXTENSION: Funeral directors work with individuals who have suffered the loss of a loved one. People also grieve the loss of a marriage, job or friendship. Create a Support Guide that describes **healthy ways to manage grief**.

CONSUMER SERVICES PATHWAY

Specialists in consumer services assist individuals with decisions and problems relating to finance, real estate, insurance and consumer goods.

EXPLORATORY TASK: The guidance counselor at your school is retiring after 30 years of service. The principal has asked you to serve on a planning committee to honor your counselor. Your task is to gather suggestions and costs for a retirement gift. Compile these into a comparison report for the planning committee.

EXTENSION: How do you honor an individual's service? The principal wants to honor your counselor during a 30-minute student assembly and has asked the planning committee to plan an agenda for the program. Consider:

- Guest speakers, honored guests
- Music/pictures/videos

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Exploratory Tasks:

Where will your journey take you?

Are you an analytical problem solver? Do you have a creative or inventive spirit? If so, you may want to consider a career in information technology. These specialists work across all areas of business and industry to provide the technology support needed to communicate with others.

NETWORK SYSTEMS PATHWAY

Specialist in this pathway design, install, maintain and manage network systems, such as those that allow multiple doctors to view the same patient X-rays in real-time to determine diagnosis and the best course of treatment. These experts are critical to the success of almost every 21st century organization.

EXPLORATORY TASK: What is meant by the term *computer network*?

Understanding this term is critical to understanding this pathway. Create an informational poster that describes a computer network. Be sure to include the:

- Purpose
- Components and their function
- Uses

EXTENSION: How is a network used in your school? Use the information from the Exploratory Task to create a video or photographic tour of these components in your school.

INFORMATION SUPPORT & SERVICES PATHWAY

Professionals in this pathway provide technical assistance and manage information systems for a wide variety of organizations including, businesses, industries, schools, medical facilities, etc. Their work enables employees to share information between locations and provide quality service to customers.

EXPLORATORY TASK: What can go wrong with computers, computer components and networks? Research *common computer issues*, e.g., unable to connect to the Internet, computer viruses, slow performance, etc., and how to correct them. Create a troubleshooting guide to share with others.

EXTENSION: Preventing computer or network crashes is critical in today's world. What can you do to prevent these from happening? **Research how to keep your computer and network running efficiently.** Create an infographic explaining the "Top 10 Ways to Keep Your Computer Running Efficiently."

INFORMATION TECHNOLOGY



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WEB & DIGITAL COMMUNICATIONS PATHWAY

Web & digital communication experts create, design and produce interactive multimedia products and services. Organizations of all types and sizes use digital media (the World Wide Web, CD-ROM, DVD) to communicate with existing and potential customers, to track transactions and to collaborate with colleagues.

EXPLORATORY TASK: Creating effective, user-friendly website is critical to the success of business, industry, education, etc. Does the purpose or function of a website determine its' design? Create a flipbook that describes *different types of websites*, including:

- Purpose or function
- Characteristics
- Design features or considerations
- Examples

EXTENSION: Use one of the types of websites from the Exploratory Task to create a *mock-up* or paper draft of a website. Consider:

- What is the purpose of the website?
- Who will be the primary audience?
- What design features would capture the user's attention or make the site easier to use?

PROGRAMMING & SOFTWARE DEVELOPMENT PATHWAY

Individuals in this pathway design, develop, implement and maintain computer systems and software. They are experts in computer operating systems, programming languages and software development. They work with cutting-edge technologies to develop tomorrow's products for use by businesses and consumers.

EXPLORATORY TASK: Can you write in binary? Binary is the language spoken by computers that consists of the numerals 0 and 1 and is read by a computer as on or off. This electrical on/off code allows computers to store and transmit messages. But how is this translated into everyday language? That's where the binary alphabet becomes useful.

- Find and print a *binary alphabet chart* on the Internet. Use it to encode, or convert, a message into binary code.
- Share the message and chart with a peer for them to decode or convert into English.

EXTENSION: How do we make sure that all computers speak the same language? That's exactly why the American Standard Code for Information Interchange, or ASCII was created. It ensures that documents and files can be shared across different computing devices.

- Search the Internet for an *ASCII code to binary chart*. Use it to encode, or convert, a message into ASCII code.
- Share the message and chart with a peer for them to decode or convert into English.

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LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY

Do you have a passion for keeping the people of your community safe from harm, crime or natural disasters? Do you remain steady under pressure? If so, you may want to consider a career in the Law, Public Safety, Corrections & Security pathway. These specialists provide a wide range of services and work in a variety of settings to protect the public 24 hours a day, 7 days a week.

CORRECTIONS SERVICES PATHWAY

Specialists in this pathway are responsible for overseeing individuals who have been arrested and are awaiting trial or serving time in a jail, reformatory, or penitentiary. Many in this field are involved with the treatment, education and reintegration of offenders.

EXPLORATORY TASK: How do you keep your cool in tense situations? Correction specialists must know how to manage angry outbursts from others. These skills are also important in everyday circumstances. Research or talk to a counselor to learn *how to deal with or defuse anger*. Use the information to write a news article to share with others.

EXTENSION: Individuals in the criminal justice system often suffer from drug and alcohol abuse. Treating this disease is often a long and difficult process for the individual and their family. Create a brochure to inform them about these conditions. Be sure to include:

- Signs and symptoms of condition
- Treatment options
- Local support groups for the individual and family, e.g., Alcohol Anonymous (AA), Al-Anon, etc.

EMERGENCY & FIRE MANAGEMENT PATHWAY

Firefighters and emergency services workers help protect the public by responding rapidly to a variety of emergencies. They are frequently the first emergency personnel at the scene of a traffic accident or medical emergency and may be called to put out a fire, treat injuries or other vital functions.

EXPLORATORY TASK: What are the most common causes of fires? What should you do if there is a fire in your home? Create an infographic that explains *home fire prevention and safety*. Share the information with others.

EXTENSION: What do you do if someone is choking...or bleeding? Create a first-aid flip book to inform others. Be sure to include:

- Signs and symptoms of condition
- Recommended treatment
- Personal precautions for providing care
- When to seek professional help



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LAW ENFORCEMENT SERVICES PATHWAY

People depend on law enforcement officers and detectives to protect their lives and property. Duties range from controlling traffic to preventing and investigating crimes as they work to maintain order and enforce laws and ordinances.

EXPLORATORY TASK: Fingerprints left by criminals can be used as evidence to solve a crime. Research **how fingerprints are classified**. Create a graphic that shows each type. Use an inkpad and index cards to fingerprint volunteers. Can you find examples of each type?

EXTENSION: In the United States, the Miranda warning is a type of notification that is given by police to criminal suspects to advise them of their rights. Create a short presentation that describes the **uses and reasons for the Miranda warning**. End your presentation by reciting the Miranda warning.

LEGAL SERVICES PATHWAY

The legal system affects nearly every aspect of our society, from buying a home to crossing the street. Workers in this pathway follow to a strict code of ethics and work to ensure laws and regulations are obeyed.

EXPLORATORY TASK: What rights do you have as a citizen of Kentucky? **Section 1 of the Constitution of the Commonwealth of Kentucky** outlines seven inherent and inalienable rights. Find a copy of these on the Internet to create a mini poster illustrating these rights to share with others.

EXTENSION: Law professionals work in **different fields of laws**. See how many you can find. Create a presentation illustrating and describing these specialty areas. Can you find professionals in your community who represent these different areas?

SECURITY & PROTECTIVE SERVICES PATHWAY

Security personnel often work in public buildings such as museums, government buildings, factories, etc. They monitor people and vehicles entering and leaving the premises and work to protect information, products, computer codes and defense secrets.

EXPLORATORY TASK: What can you do to keep your home safe? Research **home security tips and guidelines** to create a home security pamphlet to share with others.

EXTENSION: What about your personal safety? How can keep yourself and others safe? Research to learn more about **personal security tips**. Create an informational poster or video to share with others.

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Discover More

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- Demand for this career
- Location of jobs
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Exploratory Tasks:

Where will your journey take you?

MANUFACTURING

Look at all the things around you...think about where it all came from? Everything you see began as an idea in someone's mind, usually to meet the needs or wants of an individual or group. Manufacturing systems produce products in quantity. The process includes designing products, gathering resources and using tools to separate, form, and combine materials.

PRODUCTION PATHWAY

People with careers in production work on the shop floor making parts or assembling them. They work with machines, making or assembling parts, performing welding jobs or printing materials.

EXPLORATORY TASK: Choose a common object, e.g., bicycle, football, violin, etc. Search the internet to find how it was made. Use the information to create a **production flowchart** describing the item was made and assembled.

EXTENSION: What types materials are used to produce manufactured goods? Research **common raw materials**. Create a flipbook of common materials with examples of products made from each.

PRODUCTION PROCESS DEVELOPMENT PATHWAY

These individuals are responsible for product design and work to ensure products meet customer expectations.

EXPLORATORY TASK: Look at the things around you. Do you have an idea of how to make an existing product better? Is there a new product that would meet a need? Use graph paper to create a sketch of your idea. Include a key to the scale, i.e., $\frac{1}{4}$ inch = 1 inch. Consider these questions:

- What type of materials could be used?
- Why would you choose one material instead of another?

EXTENSION: Create a **prototype**, or model, of your idea. Seek feedback from others:

- Would this be useful to you?
- What would make this better?

MAINTENANCE, INSTALLATION & REPAIR PATHWAY

These specialists perform preventive maintenance procedures on machines tools and equipment. They also troubleshoot and repair electrical, electronic and mechanical systems.

EXPLORATORY TASK: Completing work efficiently and within budget guidelines is critical to the success of any company. Business owners use a variety of documents to communicate, record and trace work projects.



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Research **quotes, work orders, purchase orders and invoices** to learn how these are used. Create an infographic explaining their use. Include a sample of each.

EXTENSION: What does a customer need to know to keep their new washer running efficiently? Research **how to maintain your washer**. Create a washer maintenance leaflet for new owners.

QUALITY ASSURANCE PATHWAY

Quality Assurance professionals work to prevent mistakes and defects in manufactured products and avoid problems when delivering products or services to customers

EXPLORATORY TASK: Use the **United States Consumer Product Safety Commission** website to find an item that has been recalled. Consider:

- What type of product was it?
- Why was it recalled and what was the consumer advised to do?
- How many products (units) were sold?

EXTENSION: Randomly select 20 products. Are there common problems? Create a graphic analyzing the quality assurance issues that you find.

LOGISTICS & INVENTORY CONTROL PATHWAY

Materials and parts required for a manufactured product must be purchased, stored and then moved from the warehouse to the production line. Finished products must be packaged and prepared for delivery. Coordinating this process is the responsibility of logistics and inventory experts.

EXPLORATORY TASK: Explore the production of a bicycle or other common object. Make a list of all the parts needed. Consider:

- Where these materials or parts would be stored?
- How would these materials or parts be transported to the production area at just the right time?

EXTENSION: Your bicycle company needs to produce 10 bicycles a day. Consider:

- How many of each part would be needed each week?
- How would materials or parts be stored and moved to the assembly area?
- Create a diagram or model to show your plan.

HEALTH, SAFETY & ENVIRONMENTAL ASSURANCE PATHWAY

People with careers in this pathway work to ensure the safety of employees and the environment.

EXPLORATORY TASK: Search the web for a **classroom safety checklist**. Use it to do a safety inspection of your classroom. Share your findings with your class.

EXTENSION: Create a **home safety checklist**. Explain to your peers how to conduct their own home safety inspection.

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Exploratory Tasks:

Where will your journey take you?

MARKETING

Are you creative...analytical...or have great communication skills? If so, you may want to consider a career in marketing. These professionals research the demand for a product and identify the most effective method of advertising. They are vital for every industry as they help companies sell products and/or promote a positive image.

MARKETING MANAGEMENT PATHWAY

People with careers in this pathway manage advertising, promotions, marketing, sales and public relations.

EXPLORATORY TASK: Consider a group or club in your school. Develop a **marketing plan** to increase student membership. Include these in your plan:

- How to increase positive perception of the group
- Benefits of joining the group
- Upcoming plans and activities
- Delivery method, e.g., flyer, social media, broadcast, etc.

EXTENSION: Determine the success of your marketing plan. Create and share a pre and post survey to find out:

- Individual knowledge and perception of the group or club
- Individual possibility of joining the group or club

PROFESSIOANL SALES PATHWAY

Sales professionals work to manage clients and customers, find new sales leads and manage products or brands. They may sale to individuals or businesses.

EXPLORATORY TASK: Your swim team is selling t-shirts to raise money to attend the regional finals. There are 20 members on the team. The fee for each member is \$50.00. Your cost is \$5.00 per shirt. Create a **sales plan** to determine how:

- Much to charge per shirt
- Many shirts each member will need to sale at that price
- Many shirts to order from the company

EXTENSION: Create a spreadsheet to track sales. Include number of shirts given to each student, money collected, etc.

MERCHANDISING PATHWAY



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Merchandising specialists work to get products in the hands of customers. This includes forecasting what customers may want, planning, buying, setting displays, selling and providing customer service.

EXPLORATORY TASK: Your marketing class is planning to open a school store to sell school supplies and items of interest to students. Create a **merchandising plan** that includes:

- Products to sell in the store
- Number of each item
- **Wholesale** and **retail** price of each item

EXTENSION: Design a layout for a 20'x20' space that allows for an efficient traffic flow. Consider placement of products for both promotion and theft prevention.

MARKETING COMMUNICATIONS PATHWAY

Marketing professionals plan and coordinate strategies to sale products and services. They run advertising campaigns and work to ensure a positive public opinion of a product or business.

EXPLORATORY TASK: The school wants to create a nature trail for students. The school is selling paving stones that are engraved with the donor's name. As part of the student committee, you are to create a **marketing plan** to promote the sale that includes:

- Timeline of marketing campaign
- Method of communication, e.g., flyers, social media, etc.
- Relevant information to communicate to interested parties

EXTENSION: Create a video announcement for the school webpage.

MARKETING RESEARCH PATHWAY

Specialists in this pathway collect and analyze information to design new products and predict future sales.

EXPLORATORY TASK: The school's PTA is planning to sell t-shirts to raise money for Chromebooks. To increase sales, they have asked your team to research what students want. Create a survey to gather information. Consider:

- Color and style, e.g., long/short sleeve, collar/no collar
- Graphic design, e.g., on front, back, sleeve
- Price point, e.g., 8-10 dollars, 10-12 dollars
- Demographics, e.g., parent, student, grade level

EXTENSION: Create a research summary or visual to highlight your findings. Consider how tables or graphs can enhance your presentation.

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Exploratory Tasks:

Where will your journey take you?

SCIENCE, TECHNOLOGY, ENGINEERING & MATH

Do you like to create things? Are you a problem-solver? If so, a career in the science, technology, engineering & math cluster may be for you. These professionals have a deep understanding of one or more branches of science, e.g., life, physical, earth or space. Math serves as a tool to analyze data, model and make predictions about real-world phenomena. This knowledge is combined with the principles of engineering and technology to create new products and/or improve existing ones that satisfy human wants and needs.

NOTE: Because STEM concepts impact all career clusters, the following are not organized by pathways.

ENGINEERING & TECHNOLOGY CONCEPTS

Engineering can be defined as the process of creating and building structures, products and systems such as roads, cars, machines, computers, etc. Technology can be defined as the tools and machines used to solve real-world problems.

EXPLORATORY TASK: Research the history of a technical item from its beginning to its current state, e.g., camera, telephone, microwave, video game, computer, etc. Are there changes that might make the item even better? Create a timeline that shows the major changes and improvements.

ENGINEERING DESIGN & DEVELOPMENT

The engineering design process is a series of steps that engineers use to solve a problem. There are many versions of this process, but all serve to help engineers find a workable solution.

EXPLORATORY TASK: Search the internet for *engineering design process*. Find 2 different descriptions or images of the process. Create a Venn diagram to identify the similarities and differences. Discuss why an engineer might use one instead of the other.

EXTENSION: Creating the perfect product or solution usually takes more than one try. Engineers test and analyze their product to uncover flaws and make improvements. Try that with your own design of a paper airplane. How far can you make it fly? Experiment with different styles and types of paper. Keep a written record of the design changes and distances.

EXTENSION: Engineers often work backwards to find flaws in design and make improvements. This process is called *reverse engineering*. Try it yourself with an old retractable ink pen.

- Before you begin, create a sketch of the pen.



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- As you take the pen apart, sketch each part. What would you name each part? Create a name, e.g., top outside cover, etc.
- What is the purpose of each part? Beside each sketch, add a short description of what you think is its purpose.
- Put the pen back together. Does it still work? Why or why not?

PRODUCING & USING TECHNOLOGY

Although listed as a separate career cluster, engineers work to solve problems and create products used across all the clusters.

TRANSPORTATION TECHNOLOGY

The automobiles of today look very different than those of years ago. Were the changes made simply for style or were there benefits for drivers? What innovations do you see in the future? Search **automobile history** to uncover major changes and improvements. Create a timeline to document your findings.

EXTENSION: Can you build a **balloon powered car**? Find examples on the internet. Use common objects, e.g., empty water bottles, paper towel rolls, etc., to create your own car. How far can it go? What changes can make it go farther?

CONSTRUCTION TECHNOLOGY

Why are there so many different styles of bridges? Search **bridge designs** to find an answer. Use the information to create an infographic that shows the different types of bridges and the benefits and limitations of each.

EXTENSION: Create your own bridge between two stacks of books. Use objects such as paper, toothpicks, pipe cleaners, etc. What type of design can hold the most weight?

MANUFACTURING TECHNOLOGY

According to the International Federation of Robotics, there are more than 3 million robots used in manufacturing worldwide. Where are they? What do they do? Search **robots in manufacturing** to discover jobs robots can do and where they may be found. Use the information to create a visual presentation to share with others.

EXTENSION: What is the **difference between a robot and an android**? Is it their appearance, how they are used or where they are found? Research and create a graphic to share your findings.

BIOMEDICAL TECHNOLOGY

Thanks to biomedical technology, human beings now live long lives with diseases that were once fatal. Type 1 diabetes is one such disease. Research the **history of type 1 diabetes** and write an investigative report to share your findings.

EXTENSION: Is a cure for type 1 diabetes in the near future? Search the **future treatment of diabetes** to discover the possibilities. Add the information to your investigative report.

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Exploratory Tasks:

Where will your journey take you?

TRANSPORTATION, DISTRIBUTION & LOGISTICS

Do planes, trains or automobiles capture your attention? Are you an expert at planning or managing information? If so, you may want to consider a career in one of the many transportation, distribution & logistics pathways. These specialists focus on the movement of people, materials and goods in a variety of supporting occupations.



TRANSPORTATION OPERATIONS PATHWAY

Specialists in this pathway are always on the move! These are the people that drive or pilot the vehicles that transport people and freight safely, securely, and on time.

EXPLORATORY TASK: What is the best way to transport cargo? Compare the **5 modes of transportation, railways, roadways, airways, waterways and pipelines**. Create a comparison graphic to show the benefits, limitations, costs, etc.

LOGISTICS, PLANNING & MANAGEMENT PATHWAY

Moving products from their source to the consumer often requires several modes of transportation across thousands of miles. These specialists create plans to ensure that cargo arrives at the right location, on time, and in the safest, most economical manner.

EXPLORATORY TASK: *How do you ship a dog to Hawaii?* Your brother Bob recently moved to Hawaii and wants you to ship his German shepherd to live with him there. Use the Internet to find the cost, amount of time and requirements such as vaccinations and quarantines. Write an email to let him know what you have learned.

WAREHOUSING & DISTRIBUTION CENTER PATHWAY

These specialists work in distribution facilities including ports, terminals and warehouses. All cargo must be tracked, sorted, labeled and loaded accurately and safely. Timing is important, since loads must stay on a schedule in order to meet customer needs.

EXPLORATORY TASK: *Transportation and storage of hazardous materials* is highly regulated by federal agencies. Research information to create a hazardous materials handbook to inform employees about the dangers of these materials. Be sure to include the classes of materials, their descriptions and identifying symbols.

FACILITY & MOBILE EQUIPMENT MAINTENANCE PATHWAY

All transportation requires equipment that must function as intended and whenever needed. Specialists in this pathway work to maintain, repair and service vehicles and transportation facilities.

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EXPLORATORY TASK: How do you keep a vehicle running smoothly? Research the *recommended maintenance for cars and trucks*. Create maintenance guide that explains:

- What needs to be checked or replaced and when
- Function of each part
- Reason for checking or replacing

TRANSPORTATION SYSTEMS PATHWAY

Careers in the Transportation Systems/Infrastructure Planning, Management and Regulation pathway deal with the design and operation of our public transportation systems – road, air, sea and rail. Maintaining these systems is critical to keeping society moving.

EXPLORATORY TASK: How do people get to work? Some areas have public transportation to meet those needs, but many others do not. A

Transportation Needs Analysis can identify customer needs in order to plan future projects. Create a survey to determine how most people in your area get to work, e.g., their personal vehicle, share a ride, take a bus, walk, etc.

Additional information may include:

- Does reliable transportation keep them from working?
- What services are needed, e.g., bus/van, rideshare, etc.
- In areas with public transportation, are there areas for improvement, e.g., routes, schedules, fees, condition of vehicles, etc.

Use the information to write a transportation needs analysis report.

HEALTH, SAFETY & ENVIRONMENTAL PATHWAY

Professionals in this pathway assess and manage risks associated with safety and environmental issues. The people employed in this pathway research, plan and carry out activities to make our environment safer and cleaner.

EXPLORATORY TASK: *Are electric cars better for the environment?* Write an investigative report to identify the pros and cons of electric cars.

SALES & SERVICE PATHWAY

Individuals in this pathway work to market, sell or rent vehicles.

Transportation businesses move passengers and freight to meet customer needs and demands. Others make reservations and travel plans, sell tickets and attend to customer needs.

EXPLORATORY TASK: Customer satisfaction is key to the success of any business. One bad customer review can cost a business a great deal of money. To prevent this, service managers frequently hold training sessions to update the skills of their employees. Research *common customer service* issues. Use the information to create a training manual to share with co-workers.

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Career Cluster Interest Survey

Name _____

Date _____

Directions: Circle the items in each box that best describe you. You may make as many or as few circles in each box as you choose. Add up the number of circles in each box. Look to see which three boxes have the highest numbers. Find the corresponding Career Clusters on the pages immediately following this survey to see which Career Clusters you may want to explore.

My top three clusters of interest are:

1. _____
2. _____
3. _____

BOX 1	Activities that describe what I like to do: <ul style="list-style-type: none"> • learn how things grow and stay alive • make the best use of the earth’s natural resources • hunt and/or fish • protect the environment • be outdoors in all kinds of weather • plan, budget and keep records • operate machines and keep them in good repair 	Personal qualities that describe me: <ul style="list-style-type: none"> • self-reliant • nature lover • physically active • planner • creative problem solver 	School subjects that interest me: <ul style="list-style-type: none"> • math • life sciences • earth sciences • chemistry • agriculture 	Total number circled in Box #1 <hr style="width: 50px; margin: 0 auto;"/>
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BOX 2	Activities that describe what I like to do: <ul style="list-style-type: none"> • read and follow blueprints and/or instructions • picture in my mind what a finished product looks like • work with my hands • perform work that requires precise results • solve technical problems • visit and learn from beautiful, historic or interesting buildings • follow logical, step-by-step procedures 	Personal qualities that describe me: <ul style="list-style-type: none"> • curious • good at following directions • pay attention to detail • good at visualizing • possibilities • patient and persistent 	School subjects that interest me: <ul style="list-style-type: none"> • math • drafting • physical sciences • construction trades • electrical trades / heat, air conditioning and refrigeration / technology education 	Total number circled in Box #2 <hr style="width: 50px; margin: 0 auto;"/>
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BOX 3	Activities that describe what I like to do: <ul style="list-style-type: none"> • use my imagination to communicate new information to others • perform in front of others • play a musical instrument • perform creative, artistic activities • use video and recording technology • design brochures and posters 	Personal qualities that describe me: <ul style="list-style-type: none"> • creative and imaginative • good communicator with good vocabulary • curious about new technology • relate to the feelings of others • determined and tenacious 	School subjects that interest me: <ul style="list-style-type: none"> • art/graphic design • music • speech and drama • journalism and literature • audiovisual technologies 	Total number circled in Box #3 <hr/>
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BOX 4	Activities that describe what I like to do: <ul style="list-style-type: none"> • perform routine, organized activities but can be flexible • work with numbers and detailed information • be the leader in a group • make business contact with people • work with computer programs • create reports and communicate ideas • plan my work and follow instructions without close supervision 	Personal qualities that describe me: <ul style="list-style-type: none"> • organized • practical and logical • patient • tactful • responsible 	School subjects that interest me: <ul style="list-style-type: none"> • computer applications / business and information technology • accounting • math • English • economics 	Total number circled in Box #4 <hr/>
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BOX 5	Activities that describe what I like to do: <ul style="list-style-type: none"> • communicate with different types of people • help others with their homework or to learn new things • go to school • direct and plan activities for others • handle several responsibilities at once • acquire new information • help people overcome their challenges 	Personal qualities that describe me: <ul style="list-style-type: none"> • friendly • decision maker • helpful • innovative and inquisitive • good listener 	School subjects that interest me: <ul style="list-style-type: none"> • language arts • social studies • math • science • psychology 	Total number circled in Box #5 <hr/>
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BOX 6	Activities that describe what I like to do: <ul style="list-style-type: none"> • work with numbers • work to meet a deadline • make predictions based on existing facts • have a framework of rules by which to operate • analyze financial information and interpret it to others • handle money with accuracy and reliability • take pride in the way I dress and look 	Personal qualities that describe me: <ul style="list-style-type: none"> • trustworthy • orderly • self-confident • logical • methodical or efficient 	School subjects that interest me: <ul style="list-style-type: none"> • accounting • math • economics • banking or financial services • business law 	Total number circled in Box #6 <hr/>
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BOX 7	Activities that describe what I like to do: <ul style="list-style-type: none"> • be involved in politics • negotiate, defend, and debate ideas and topics • plan activities and work cooperatively with others • work with details • perform a variety of duties that may change often • analyze information and interpret it to others • travel and see things that are new to me 	Personal qualities that describe me: <ul style="list-style-type: none"> • good communicator • competitive • service minded • well organized • problem solver 	School subjects that interest me: <ul style="list-style-type: none"> • government • language arts • history • math • foreign language 	Total number circled in Box #7 <hr/>
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BOX 8	Activities that describe what I like to do: <ul style="list-style-type: none"> • work under pressure • help sick people and animals • make decisions based on logic and information • participate in health and science classes • respond quickly and calmly in emergencies • work as a member of a team • follow guidelines precisely and meet strict standards of accuracy 	Personal qualities that describe me: <ul style="list-style-type: none"> • compassionate and caring • good at following directions • conscientious and careful • patient • good listener 	School subjects that interest me: <ul style="list-style-type: none"> • biological sciences • chemistry • math • health science classes • language arts 	Total number circled in Box #8 <hr/>
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BOX 9	Activities that describe what I like to do: <ul style="list-style-type: none"> • investigate new places and activities • work with all ages and types of people • organize activities in which other people enjoy themselves • have a flexible schedule • help people make up their minds • communicate easily, tactfully, and courteously • learn about other cultures 	Personal qualities that describe me: <ul style="list-style-type: none"> • tactful • self-motivated • works well with others • outgoing • slow to anger 	School subjects that interest me: <ul style="list-style-type: none"> • language arts or speech • foreign language • social sciences • marketing • food services 	Total number circled in Box #9 <hr/>
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BOX 10	Activities that describe what I like to do: <ul style="list-style-type: none"> • care about people, their needs, and their problems • participate in community services and/or volunteering • listen to other people's viewpoints • help people be at their best • work with people from preschool age to old age • think of new ways to do things • make friends with different kinds of people 	Personal qualities that describe me: <ul style="list-style-type: none"> • good communicator and/or listener • caring • non-materialistic • uses intuition and logic • non-judgmental 	School subjects that interest me: <ul style="list-style-type: none"> • language arts • psychology or sociology • family & consumer science • finance • foreign language 	Total number circled in Box #10 <hr/>
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BOX 11	Activities that describe what I like to do: <ul style="list-style-type: none"> work with computers reason clearly and logically to solve complex problems use machines, techniques, and processes read technical materials and diagrams and solve technical problems adapt to change play video games and figure out how they work concentrate for long periods without being distracted 	Personal qualities that describe me: <ul style="list-style-type: none"> logical or analytical sees details in the big picture persistent good concentration skills precise and accurate 	School subjects that interest me: <ul style="list-style-type: none"> math science computer technology communications graphic design 	Total number circled in Box #11 <hr/>
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BOX 12	Activities that describe what I like to do: <ul style="list-style-type: none"> work under pressure or in the face of danger make decisions based on my own observations interact with other people be in positions of authority respect rules and regulations debate and win arguments observe and analyze people's behavior 	Personal qualities that describe me: <ul style="list-style-type: none"> adventurous dependable community-minded decisive optimistic 	School subjects that interest me: <ul style="list-style-type: none"> language arts psychology or sociology government or history law enforcement first aid or first responder 	Total number circled in Box #12 <hr/>
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BOX 13	Activities that describe what I like to do: <ul style="list-style-type: none"> work with my hands and learn best that way put things together do routine, organized and accurate work perform activities that produce tangible results apply math to work out solutions use hand and power tools and operate equipment/machinery visualize objects in three dimensions from flat drawings 	Personal qualities that describe me: <ul style="list-style-type: none"> practical observant physically active step-by-step thinker coordinated 	School subjects that interest me: <ul style="list-style-type: none"> math and geometry chemistry trade and industry courses physics language arts 	Total number circled in Box #13 <hr/>
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BOX 14	Activities that describe what I like to do: <ul style="list-style-type: none"> shop and go to the mall be in charge make displays and promote ideas give presentations and enjoy public speaking persuade people to buy products or to participate in activities communicate my ideas to other people take advantage of opportunities to make extra money 	Personal qualities that describe me: <ul style="list-style-type: none"> enthusiastic competitive creative self-motivated persuasive 	School subjects that interest me: <ul style="list-style-type: none"> language arts math business education or marketing economics computer applications 	Total number circled in Box #14 <hr/>
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BOX 15	Activities that describe what I like to do: <ul style="list-style-type: none"> • interpret formulas • find the answers to questions • work in a laboratory • figure out how things work and investigate new things • explore new technology • experiment to find the best way to do something • pay attention to details and help things be precise 	Personal qualities that describe me: <ul style="list-style-type: none"> • detail oriented • inquisitive • objective • methodical • mechanically inclined 	School subjects that interest me: <ul style="list-style-type: none"> • math • science • drafting or computer aided drafting • electronics or computer networking • technical classes or technology education 	Total number circled in Box #15 <hr style="width: 50px; margin: 0 auto;"/>
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BOX 16	Activities that describe what I like to do: <ul style="list-style-type: none"> • travel • see well and have quick reflexes • solve mechanical problems • design efficient processes • anticipate needs and prepare to meet them • drive or ride • move things one place to another 	Personal qualities that describe me: <ul style="list-style-type: none"> • realistic • mechanical • coordinated • observant • planner 	School subjects that interest me: <ul style="list-style-type: none"> • math • trade and industry courses • physical sciences • economics • foreign language 	Total number circled in Box #16 <hr style="width: 50px; margin: 0 auto;"/>
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Disclaimer: Your interests may change over time. These survey results are intended to help you with informal career exploration. Consider more formal assessments and other resources or services to help you plan your career. This survey does not make any claims of statistical reliability.

<https://careertech.org/resource/career-clusters-student-interest-survey>

The Sixteen Career Clusters

1	Agriculture, Food & Natural Resources	The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.
2	Architecture & Construction	Careers in designing, planning, managing, building, and maintaining the built environment.
3	Arts, A/V Technology & Communications	Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.
4	Business, Management & Administration	Business Management and Administration careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration career opportunities are available in every sector of the economy.
5	Education & Training	Planning, managing, and providing education and training services, and related learning support services.
6	Finance	Planning, services for financial and investment planning, banking, insurance, and business financial management.
7	Government & Public Administration	Executing governmental functions to include governance, national security, foreign service, planning, revenue and taxation, regulation, and management and administration at the local, state, and federal levels.
8	Health Science	Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.
9	Hospitality & Tourism	Hospitality and Tourism encompasses the management, marketing and operations of restaurants and other foodservices, lodging, attractions, and recreation events and travel-related services.
10	Human Services	Preparing individuals for employment in career pathways that relate to families and human needs.
11	Information Technology	Building linkages in IT occupations framework for entry-level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia, and systems integration services.
12	Law, Public Safety, Corrections & Security	Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.
13	Manufacturing	Planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and manufacturing/process engineering.
14	Marketing, Sales & Service	Planning, managing, and performing marketing activities to reach organizational objectives.
15	Science, Technology, Engineering & Mathematics	Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering), including laboratory and testing services, and research and development services.
16	Transportation, Distribution & Logistics	Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment, and facility maintenance.

KY Program of Studies & National Career Clusters Comparison

Kentucky's Program of Studies (POS) is determined by **high-demand** and **high-wage industry sectors**. The following chart compares the National Career Clusters to the Kentucky Program of Studies.

KENTUCKY PROGRAM OF STUDIES	NATIONAL CAREER CLUSTERS
Agricultural Education	<ul style="list-style-type: none"> • Agriculture, Food & Natural Resources
Business & Marketing Educaiton	<ul style="list-style-type: none"> • Business Management & Administration • Marketing
Construction Technology	<ul style="list-style-type: none"> • Architecture & Construction
Education & Training	<ul style="list-style-type: none"> • Education & Training • Family & Consumer Sciences
Engineering Technology	<ul style="list-style-type: none"> • Science, Technology, Engineering & Math
Family & Consumer Sciences	<ul style="list-style-type: none"> • Education & Training • Hospitality & Tourism • Human Services
Health Science	<ul style="list-style-type: none"> • Health Sciences
Information Technology	<ul style="list-style-type: none"> • Arts, AV Technology & Communication • Information Technology
JROTC	<ul style="list-style-type: none"> • Law, Public Safety & Security
Law & Public Safety	<ul style="list-style-type: none"> • Government & Public Administration • Law, Public Safety & Security
Manufacturing Technology	<ul style="list-style-type: none"> • Manufacturing
Media Arts	<ul style="list-style-type: none"> • Arts, AV Technology & Communication • Information Technology
Transportation Education	<ul style="list-style-type: none"> • Transportation, Logistics & Distribution

EXPLORATORY PRODUCT LIST

Below are suggestions for student products. It is not an exhaustive list, only suggestions if you choose to modify any of the Exploratory Tasks.

Abstract	Dramatic Lesson	Interview on Film, Radio or Podcast
Academic Report	Dramatic Reading	Investigative Report
Advertisement	Drawing	Invitation
Algorithm	E-Book	Kahoot!
Agenda	Editorial	Lab Report
Audio Recording	Email	Leaflet
Announcement	Estimate	Learning Log
Blog	Essay	Letter in Response to a Complaint
Blueprint	Experiment Design	Letter of Appreciation
Book Review	Explanatory Poster	Letter of Complaint
Booklet	Fact Sheet	Letter of Inquiry
Brochure	Fairy Tale	Letter to the Editor
Bulletin Board	Feasibility Report	Literary Interpretation
Business Plan	Fictional Journal	Magazine/Journal Article
Business Proposal	Field Guide	Maintenance Guide
Case Study	Film	Manifesto
Checklist	Flier	Marketing Plan
Children's Book	Flip Book	Mash-Up
Class Book	Flowchart	Materials List
Collage	Formal Debate	Mathematical Code
Comic Strip	Formal Letter	Meeting Agenda & Minutes
Commercial	Formal Proposal	Memo / Memorandum
Concept Map	Fund Raising Campaign	Memoir
Constitution/Set of Laws	GIF Animation	Minutes
Consumer Reports Article	Glossary	Mission Statement
Contract	Graph	Model
Cover Letter	Graphic	Monologue
Cultural Analysis	Graphic Organizer	Movie/Documentary Poster
Data <i>Analysis Report</i>	Graphic Narrative	Mural
Data Charts, Graphs, Summaries	Guidebook	Museum Exhibition
Debate	Handbook	Interpretive
Demonstration	Historical Report	Narrative Non-fiction
Diary/Journal	Incident Report	News Report
Diagram	Industry Report	Newsletter
Digitally-Documented	Infographic	Newspaper Article
Discussion	Infomercial	Note Cards
Diorama	Instruction Booklet or Manual	Novel
Doodle		

Oral Report	Safety Manual, Bulletin, Visual	Word Cloud
Organizational chart	Sales Letter	Word Wall
Original Newspaper (e.g. EL, Op Ed)	Schedule	YouTube Channel
Original Song / Jingle	Schematics	
Pamphlet	School Lesson	
Panel Discussion	School News Article	
Personal Essay	Scrapbook	
Petition	Sculpture	
Photo	Scientific Article	
Photojournalism Display	Scientific Collection	
Play	Scientific Research Report	
Podcast	Short Story	
Poem	Show & Tell	
Political Action Article	Sign or Display Captions	
Political Cartoon	Simulation	
Policy	Skit	
Pop Up Book	Social Media Branding	
Poster	Socratic Discussion	
Presentation	Song	
Press Release	Speech	
Prezi	Story Map	
Process Analysis	Survey	
Process Flowchart	Survey Analysis or Report	
Product Analysis	Syllabus	
Product Description or Specification	SWOT Analysis	
Product Guide	Technical Report	
Product Sales Pitch	Textbook	
Product Review	Theatrical Play	
Program	Time Capsule	
Progress Report	Timeline	
Project Plan	Top Ten List	
Proposal	Trading Cards	
Public Service Announcement (PSA)	Troubleshooting Guide	
Puppet Show	Tweet	
Radio Script	Two-Voice Poem	
Recommendation	Tutorial	
Reenactment	User Guide	
Reflection	Video Collage	
Refusal Letter	Video Game	
Results Analysis	Video Lesson	
Resume	Vlog	
Rules/Framework	Webpage / Website	
	Whiteboard Animation	
	Wiki	

GLOSSARY

apprenticeship	<p>“Apprentice” means a worker at least sixteen years of age, except where a higher minimum age standard is otherwise fixed by law, who is employed to learn an apprenticeable occupation, which:</p> <ol style="list-style-type: none">1. Is customarily learned in a practical way through a structured, systematic program of supervised training on the job;2. Is clearly identified and commonly recognized or accepted throughout an industry;3. Requires two thousand or more work hours of work experience to learn;4. Requires related instruction to supplement the on-the-job experience training;5. Involves manual, mechanical, and/or technical skills applicable in like occupations throughout an industry; and6. Is recognized by the registrant entity and/or the US Office of Apprenticeship as meeting the foregoing five criteria.
articulated credit	<p>Articulated Credit is awarded to a student for high school work after they enroll at a postsecondary institution providing a set of requirements are met.</p>
career cluster	<p>Career Clusters are a framework that serves as an organizing tool for Career Technical Education (CTE) programs, curriculum design and instruction. There are 16 Career Clusters that represent 79 Career Pathways to help learners navigate their way to greater success in college and career.</p>
career inventory	<p>A career inventory is a survey designed to identify interests, skills and aptitudes and match the user to potential career pathways.</p>
career pathway	<p>A Career Pathway is a roadmap leading to a chosen career and includes:</p> <ul style="list-style-type: none">• occupations within the pathway,• general and technical courses for both secondary and post-secondary,• dual and articulated credit opportunities,• related industry certificates, apprenticeships, associate’s and bachelor’s degrees,• entry and exit points for semi-, mid-, and high-level skilled careers to support life-long learning.
clinical rotations	<p>Clinical rotations are a form of work-based learning for students enrolled in a health care program. It allows students to develop skills related to their program of study.</p>
cooperative education	<p>Cooperative education is a paid educational program consisting of in-school instruction combined with program related on-the-job work experience in a business or industrial establishment. These are planned experiences supervised by the school and the employer to ensure that each phase contributes to the student's Individual Learning Plan (ILP) and Career Pathway.</p>
dual credit	<p>In Dual Credit, a student is enrolled in a course which allows him/her to earn high school credit and college credit simultaneously. This course may be taught on a college</p>

campus or on a high school campus, but it will be in conjunction with a college or university.

entrepreneurship	Entrepreneurship education allows students to develop a deeper understanding of economic principles and to apply classroom learning by organizing and operating a business enterprise. An entrepreneurship education program should involve students developing individual entrepreneurship projects in which they assume all risks in expectation of gaining a profit and/or further knowledge. An entrepreneurship program may be a component of a specific course within the curriculum or be a stand-alone course for credit. Entrepreneurship education may be offered in any Career and Technical Education program.
exploratory task	Exploratory tasks are classroom activities that allow students to experience skills, knowledge and aptitudes related to specific career pathways.
ILP	Individual Learning Plan is a planning tool for students in grades 6-12 designed to guide educational decisions based on the interests and plans of the individual.
industry certificate	Industry certifications are credentials recognized by business and industry that demonstrate mastery of necessary knowledge and/or skills.
internship	A student internship is a type of "Work Based Experience Learning Program" for high school students who have completed extensive school-based preparation relating to an identified area of career and academic interest in the Individual Learning Plan. Internships are usually one-time experiences which should lead to course credit and/or pay.
job shadow	Shadowing is learning through observation and is a way to form partnerships between employers and the local schools. Shadowing is an opportunity for a student to spend a limited amount of time with an individual in a chosen occupation in order to become familiar with the duties associated with that occupation, the physical setting of the occupation, and the compatibility of the occupation with his or her own career goals.
mentoring	Mentoring is a component of work-based learning in which a volunteer from the business/industrial community helps students become aware of career opportunities and work ethics in a one-to-one relationship that goes beyond the formal obligations of a teaching or supervisory role.
program of study	A program of studies for each career pathways is a coherent, unduplicated sequence of rigorous academic and career/technical courses including dual credit opportunities, leading to postsecondary degrees and industry recognized certifications and/or licensures.
school-based enterprise	A school-based enterprise (SBE) is a simulated or actual business conducted within a school. It is designed to replicate a specific business or segment of an industry and assist students in acquiring work experience related to their chosen career cluster.
service learning	Service Learning is a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility and strengthen communities.

stakeholder	An individual who engages in or is have a vested interest in career and technical education.
TRACK	Tech Ready Apprentices for Careers in Kentucky
work-based learning	Work-Based Learning (WBL) is an effective teaching approach used to engage students in real-life occupational experiences. It incorporates structured, work-based learning activities into the curriculum, allowing a student to apply knowledge and skills learned in class and connect these learning experiences in the workplace. Work-based learning provides students with the opportunity to engage and interact with employers, while learning to demonstrate essential employability and technical skills necessary for today's workforce.