Understanding the Skills used in a Career of my choice
Grades 7-12

Objective: Students will identify the skills used in a career of the student's choice with the aim of helping to develop the skills and knowledge that are valued by employers. This project is a guide to identifying how skills are used in a specific career field and their connections to academic content.

Standards Met:

Career Readiness Targets; Grades 7-8 Exploration **T3** and **T6**, Grades 9-12 Preparation **T2** and **T3**

Computer Science Standards: Algorithms and Programming, Impacts of Computing

CCSS ELA: College and career readiness anchor standards for Reading and Writing. **R.1, R.2, R.7, W.1, W.2, W.3-W.10**

CCSS Mathematics: Optional, relative content area selected by the student and teacher lead.

NGSS: Optional, relative content area selected by the student and teacher lead.

MITECS: Empowered Learner, Knowledge Constructor, Digital Citizen, Computational Thinker

Time Required: 5 hours, Optional 10-20 additional hours of project work, Optional external activities

Materials Required:

If students have not chosen a career interest prior to the start of this project they can complete the "my next move" activity on the onetonline.org website. Student without internet access can chose from one of the career sheets provided in this packet.

Materials available in online or printable format from the Kent ISD Career Readiness google drive.

- Student Worksheet: Understanding the Skills used in a Career of My Choice
- Student Guide: Understanding the Skills used in a Career of My Choice
- Computer with Internet access **or** Career Sheets provided in this packet
- Adobe PDF reader, if using a computer
- O*Net guide document provided in this packet (if using the internet)
- Pencil and 2-3 extra sheets of paper.

Optional materials: (available through the ISD)

- Digtial Citizen Guide
- Online research guide

ENGAGE

Essential Question(s): What are the skills I need for my career interests?

We will look at software applications and identify which tasks they claim to improve. Most careers in industry today utilize software applications like Microsoft Word or Excel as tools for productive work. We will be looking for software applications that are built specifically for the industry of your interest.

EXPLORE

Activities in this project build career awareness by identifying tools used by practicing professionals. We will be focusing on the benefits offered by the use of software applications to perform job tasks for a specific career.

1. **Selection**
    a. Identify your career interest using O*netonline guide: Career Self-Assessment Made Easy: Finding a Career That Fits In class or Online discussion or Career selection from an EDP, Xello, Naviance, or Mavin. Or use one of the provided career sheets
2. **Understand**
    a. Explore the list of job functions and tools for this career provided in O*netonline or an EDP like Mavin, Xello, or from the career sheet.

    b. Choose one of the software applications listed in the technical tools section
3. **Explore**
    a. Visit the software application's website or read the software description in the career sheet.
    b. What benefit, or main function, does the software claim to provide?

EXPLAIN

Key points: The benefits of software applications are often referred to as "value-add". Software applications add value by increasing the productivity or understanding of a task required by the practitioner. Successful software companies conduct needs analysis of users and identify which tasks to improve that will offer the greatest value to their clients.

Connecting Questions:

4. **Define**
    a. What tasks does the application perform?
    b. What is the Input, data or general information, the user would enter into the software?
    c. What is the output does the software create for the user?
    d. Describe how you think the information the user entered created the output?
    e. What math or science is being used to create the output
5. **Ideate**
    a. How would you use the output?
    b. What output do you think is the most valuable?
    c. Is there other information that you think would be valuable and how would it be used?
    d. What improvements can you imagine?

ELABORATE

Understanding the tools used by practitioners in the field will give you a better idea of the tasks and responsibilities of your chosen career and provide a path for you to develop skills that make you more valuable to employers.

Final Activity/Assessment: Students can demonstrate mastery of concepts by:

6. **Prototype**
    a. Identify your clients.
    b. What value will you offer your clients?
    c. How will you create value?
    d. Test your concept. Share your prototype/ideas with someone, or many as possible.
7. **Refine**
    a. Reflect on the results and make the necessary changes

8. **Solution (Assessment options)**
    a. Create a future (fictitious) resume that lists the skills and knowledge you have related to this career. Include jobs and education you may have in the future building your experiences.
    b. Participate in a teacher lead interview for a job in this career field
    c. Provide an improved algorithm or process for tasks related to this career
    d. Create an artifact (physical model, software code, or virtual) representing an improved product produced in this role.
    e. A summary reporting how this project affected your career preparation? (written or other media format)
    f. A marketing Campaign for a new software application for this career.
    g. A written interpretation of the value of software application research includes a financial analysis of its benefits.

EVALUATE

Diving Deeper/Differentiation: Additional options for students to demonstrate mastery include:

1. Attend a career readiness event. A list of events can be found on the Kent ISD Career Readiness website.
2. Further exploration of the Math concepts related to this and other industries
3. Further exploration of the Science concepts related to this and other industries
4. Create software using Algorithms recognized or improved in this process
5. Market analysis of the industry including demographics and geography.
6. Market analysis of competing software in this industry.