

Strategies and Tips

Supporting Students in the Career Planning Process

With an abundance of career opportunities available within STEM (Science Technology Engineering and Mathematics) and even more opportunities that use STEM-skills, figuring out and then narrowing down the options can be a daunting task for many students. While students may not be ready to commit to one career or career trajectory in high school, starting the process of career planning can be helpful in setting the stage for their future personal and professional pursuits.

Career planning processes can be categorized into four stages based on the individual development planning (IDP) framework.

- **Self-assessment/self-awareness**
- **Career Exploration**
- Decision Making
- Goal setting

While each of the stages are key to career planning, **self-assessment** and **career exploration** will be the focus of this resource document.

Self-assessment/self-awareness

Encourage students to reflect on their values, thinking about what is important to them, personally and professionally. The [ACS IDP](#) tool identifies values such as opportunity for promotion, volunteerism, autonomy, balance, leadership, stability, public contact, leadership, and challenge as examples of values that students might think about in the context of career planning. Students should also think about their skills, their interests, what they enjoy doing, and what they might like to do during the process of assessing themselves. Students may also have a sense of their desire in the short- or long-term to pursue additional formal education or not – this may also be a consideration in the context of self-assessment.

Your school's guidance counselor may have access to assessment tools that students can use to formally evaluate their values, skills, and interests.

Career Exploration

Career exploration is another critical component of the career planning process. As students are aware of their values, skills, and interests, they can use this information to begin to identify careers that align.

As students navigate career options, encourage them to note information such as required skills, training, and education. Career exploration activities can vary significantly from informal to formal, from student-directed to teacher-directed. Some ideas appear below.

Online exploration: Career exploration resources such as those provided by the American Chemical Society through its web site [Careers in the Chemical Sciences](#) can be tremendously helpful in exposing students to the diversity of careers available within the chemistry enterprise as well as the varying career pathways for pursuing these. [CareerOneStop](#) also has a comprehensive occupation profiles section outlining a variety of opportunities for work within the chemistry enterprise and in other fields. Encourage students to take time to explore these resources and others in their process of career exploration.

Get Experience: Once students have identified potential careers of interest, hands-on experience can be helpful to furthering the process of exploration. Job-shadowing, internships (paid and unpaid), co-ops, and research experiences can give students a better understanding of the work involved in a given career. Local two-year and four-year colleges, universities, and companies are a fantastic resource for possible experiential learning opportunities. Nationally, the [ACS Project SEED](#) program provides students with diverse identities and socioeconomic backgrounds with research opportunities with qualified mentors in both academia and industry.

Career Stories: Stories can be a powerful tool for connecting students with possible careers, introducing students to the wide variety of pathways to and positions within the chemical enterprise. The [Career Ladder Collection](#) offered by Chemical & Engineering News and the [Profiles Section of Careers in the Chemical Sciences](#) provide insights into how the chemists featured “got to where they are now”. These features can be read – by individual students or as a class – and then discussed. Students may also benefit from hearing directly from individuals working within the chemical enterprise, an opportunity afforded by the relative ease of virtual presentations. [ACS Local Sections](#) can serve as robust resource for potential speakers.

Project-based learning: Project-based learning is a powerful tool that can be leveraged to bring career exploration into the chemistry classroom. This approach to learning allows students to understand the context for the chemistry they are learning and, simultaneously, connect this information to possible career opportunities. You may already have project-based learning experiences woven into your curriculum – there may be opportunities to highlight careers in chemistry during those lessons. [Careers in the Chemical Sciences](#) can serve as rich resource for career connections.

Beyond Self-Assessment & Career Exploration

As students move through self-assessment/self-awareness and career exploration activities, they may need some additional support in the decision-making and goal-setting stages based on the careers (yes, careers!) they may have identified as possibilities. School guidance counselors and in-school resources may help with academic planning and career preparation activities. Additionally, online resources such as [CareerOneStop](#) can be valuable as students advance in their career planning processes.