

# Section One: STEM Careers and You

STEM Careers and You is designed to introduce the students to each other, to their instructors and to the possibilities that exist for them as they consider their postsecondary education options in a STEM major. Most students, early in their high school careers, are unfamiliar with the range of opportunities that are available to them in STEM professions. Students with disabilities may have even less exposure than their peers to the fields of science, technology, engineering and mathematics, based on school tracking procedures, expectations or other limiting conditions. The activities in this section are designed to accomplish the following: 1) introduce students with disabilities to the possibilities that exist within the STEM fields; 2) help students to clarify and articulate their own interests, strengths and skills; 3) assist with identifying students' individual learning styles; 4) help students understand how to prepare and position themselves now for entry into college in a STEM-related field; and 5) get students excited and motivated to plan for their positive futures!

**Section One: STEM Careers and You** is composed of six content areas:

1. Welcome, Students!
2. Overview of Workshops
3. Introduction to STEM Careers
4. Interests, Strengths and Skills
5. Learning Styles
6. Homework

# Welcome, Students!

Welcome to STEM Careers and You! The experience of walking into a new classroom with new students and teachers can be daunting. This activity begins with individual introductions and icebreakers designed to encourage interaction and build comfort with peers and instructors. Sharing “housekeeping” information (e.g., the location of restrooms and what time the group will break for lunch) and developing group ground rules offer some reassuring structure and clear expectations for group process. The stage is then set to proceed with the video, *STEM and Students with Disabilities*, to promote curiosity and excitement about the opportunities available for students in STEM fields.



Photo courtesy of the University of Maine.

# Getting to Know You

**Time:** 20 Minutes

## **Purpose:**

To introduce instructors and students to each other, engage in an icebreaker, discuss housekeeping issues and jointly develop an initial set of ground rules.

## **Key Concepts:**

- ⇒ Ground rules

## **Preparation:**

- ⇒ Prepare chart paper, white board, or projected document so that you can record responses to ground rules brainstorm.

## **Leading the Activity:**

- ⇒ Instructor welcomes the students and then introduces himself or herself. Ask students to say their names, where they are from, and one thing that strongly interests them.
- ⇒ Discuss housekeeping issues.
- ⇒ Explain that the class will explore some of the differences between high school and college later. One of the big differences is that in college, everyone takes greater responsibility for his or her own education. The instructor may explain, for example, that in college, students generally do not need to ask permission to use the restroom and that expectation holds true for this class as well.
- ⇒ Use one or more icebreaker activities from the “**Icebreaker/Energizer**” collection. Choose which format to use based on your sense of the students’ needs and preferences during enrollment. The goal of the activity is to begin to make the students feel comfortable and to get to know each other.
- ⇒ Tell students that you would like them to develop an initial set of ground rules. Ask them to think about what will help them learn most effectively. Explain that you, as the instructor(s), will also participate in developing these rules.

Examples of possible ground rules:

- No surfing the web when doing activities.
  - Listen when others are talking.
  - Respect each other.
- ⇒ Record the list of ground rules on chart paper and explain to the students that they can be changed or revised at a later time.

## **How are you addressing Universal Design for Learning Principles in this activity? Are you:**

- Presenting the information flexibly in multiple ways?
- Providing multiple and flexible means for expression?
- Providing multiple and flexible ways to engage the learner?

# Icebreaker/Energizer

## “If”

This is a simple icebreaker to get young people talking and listening to others in the group. Keep it moving and don't play for too long.

- ⇒ Ask the group to sit in a circle.
- ⇒ Write the 'If' questions on cards and place them (question down) in the middle of the circle or pass around a “hat” with the questions on cards inside.
- ⇒ The first person takes a card, reads it aloud and gives his or her answer, comment or explanation.
- ⇒ The card is returned to the bottom of the pile or in the hat before the next person takes his or her card.

### Sample “If” questions:

1. If you could watch your favorite TV show now, what would it be?
2. If you could have any kind of pet, what would you have?
3. If you could eat your favorite food now, what would it be?
4. If you could learn any skill, what would it be?
5. If you were sent to live on a space station for three months and only allowed to bring three personal items with you, what would they be?
6. If you could buy a car right now, what would you buy?
7. If you could do your dream job 10 years from now, what would it be?
8. If you could talk to anyone in the world, who would it be?
9. If you could wish for one thing to come true this year, what would it be?
10. If you could choose to spend more time in your favorite class, what would it be?
11. If you could live in any period of history, when would it be?
12. If you could pick a flavor of ice cream to eat, what would it be?
13. If you could go anywhere in the world, where would you go?
14. If you could pick your favorite meal, what would it be?
15. If I gave you \$10,000, what would you spend it on?

Source: Adapted from *40 Icebreakers for Small Groups* (PDF) by Grahame Knox, available online at [http://insight.typepad.co.uk/40\\_icebreakers\\_for\\_small\\_groups.pdf](http://insight.typepad.co.uk/40_icebreakers_for_small_groups.pdf)

# Icebreaker/Energizer

## Would you rather..?

Questions may range from silly trivia to more serious content. This is a good way to find out some interesting things about your students.

### Directions:

- ⇒ Place a line of tape down the center of the room. Ask the group to straddle the tape.
- ⇒ The “Leader” asks a few of the questions from the list below or others of his or her choosing.
- ⇒ When asked ‘Would you rather?’ they have to move to the left or right as indicated by the leader (i.e., move left for the first choice or right for the second).

### Sample questions:

#### Would you rather...

1. Visit the doctor or the dentist?
2. Eat broccoli or carrots?
3. Watch TV or listen to music?
4. Own a lizard or a snake?
5. Have a beach holiday or a mountain holiday?
6. Be an apple or a banana?
7. Be invisible or be able to read minds?
8. Go without television or fast food for the rest of your life?
9. Always be cold or always be hot?
10. Be stranded on a deserted island alone or with someone you don't like?
11. See the future or change the past?
12. Be three inches taller or three inches shorter?

Source: Adapted from *40 Icebreakers for Small Groups (PDF)* by Grahame Knox, available online at [http://insight.typepad.co.uk/40\\_icebreakers\\_for\\_small\\_groups.pdf](http://insight.typepad.co.uk/40_icebreakers_for_small_groups.pdf)

## Icebreaker/Energizer

### Find Your Kind

The **Find Your Kind** icebreaker is a good way to help introduce students to each other while allowing you to find out more about each of them.

#### Directions:

- ⇒ Give students the “Find Your Kind” template (found on the next page).
- ⇒ Have them circulate around the room and complete the search by finding someone to answer each question. Encourage them to ask as many different people as possible.
- ⇒ Come back and ask them to share what they learned about their group.

Source: Adapted from About.com Secondary Education, *Find Your Kind Icebreaker* by Melissa Kelly.  
Retrieved online from <http://712educators.about.com/od/icebreakers/a/Find-Your-Kind.htm>



## Find Your Kind

Where were you born?

Answer:

Name:

If someone wanted to give you an unusual pet and promised to provide for its upkeep, what kind would you select?

Answer:

Name:

If you could change one rule that you must follow at home, what would it be?

Answer:

Name:

What do you like doing in your free time when you're not at school?

Answer:

Name:

What is your favorite candy bar?

Answer:

Name:

Source: Adapted from About.com Secondary Education, *Find Your Kind Icebreaker* by Melissa Kelly.  
Retrieved online from <http://712educators.about.com/od/icebreakers/a/Find-Your-Kind.htm>

## Icebreaker/Energizer Name Tag Matchmaker

Each group member will need something to write with and a 5" x 7" card for a name tag.

### Directions:

Give them the following directions:

1. Put your name in the center of your card.
  2. In the **upper left corner**, write two things that you like to do.
  3. In the **upper right corner**, write your two favorite singers or music groups.
  4. In the **lower left corner**, write your two favorite movies.
  5. In the **lower right corner**, write two adjectives that describe you.
- ⇒ When everyone finishes, have them mingle with the group for a few minutes.
  - ⇒ Without talking, they are to read the upper left and upper right corners of the other group members' cards (what they like to do and their favorite singers or music groups).
  - ⇒ When time is up, they are to find one or two people who are most like them and visit for a few minutes.
  - ⇒ When time is up, they are to mingle again reading the lower left and lower right corners of the other group members' cards.
  - ⇒ Again, they find one or two people who are most like them and visit for a few minutes.
  - ⇒ To make sure everyone visits with several people, you could implement a rule that no two people can be in the same group more than once.

Source: Adapted from *Kim's Korner for Teacher Talk* website, *Name Tag Match Maker*. Retrieved from <http://www.kimskorner4teachertalk.com/classmanagement/icebreakers.html#Name>



## Icebreaker/Energizer Birthday Timeline

### Directions:

Give each member of your group a pencil and paper:

- ⇒ Ask them to write down the month and day of their birth.
- ⇒ After they have done this, tell them to put away the paper and not let anyone see it.
- ⇒ Then, you will ask students to line themselves up in perfect order of birth (mark the order from January to December to indicate the direction of the line). **However, they must follow two rules as they line up:** they can't talk to each other and they can't show anyone what they wrote.
- ⇒ After several quiet minutes of scurrying around, they will be in order.
- ⇒ Instruct students to check with the person on their right and left to see whether they are in the correct place.
- ⇒ Then it's time to check the human birthday timeline.
- ⇒ Starting with the first person in the line, have each student say his or her birthday and display the paper with the month and date written on it.

How did the students do? Did they do it correctly?

Source: Adapted from Education World website, *Icebreakers Vol. 8*, Birthday Timeline submitted by Michael M. Yell, Hudson (Wisconsin) Middle School. Retrieved from [http://www.educationworld.com/a\\_lesson/lesson/lesson273.shtml](http://www.educationworld.com/a_lesson/lesson/lesson273.shtml)

# College, You Can Do It!

**Time:** 30 minutes

**Purpose:**

To introduce students to others with disabilities who have attended college. To begin to help them think about what the experience of college may be like.

**Key Concepts:**

College and students with disabilities

**Preparation:**

1. Access the [University of Washington DO-IT Video Collection](http://www.washington.edu/doit/Video/)  
DO-IT Project, University of Washington. (2008-2014). *Video collection*. Available online at <http://www.washington.edu/doit/Video/>
2. Scroll down to the 7th video, *STEM and People with Disabilities* (2011). Runtime: 14:59 minutes. Click on the link to view.

**Tip:** if viewed using the YouTube link, you can view it in “full screen” mode.

**Leading the Activity:**

Show the video and gather questions and feedback from students.

**Student Participation:**

Students watch the video and provide their input and questions about the video.

**Documents/Materials Needed:**

Computer, Internet access, projector, and screen.

**How are you addressing Universal Design for Learning Principles in this activity? Are you:**

- Presenting the information flexibly in multiple ways?
- Providing multiple and flexible means for expression?
- Providing multiple and flexible ways to engage the learner?

### Overview of Workshops

This activity is intended to help answer the students' questions: What? Why? and How? Students often arrive at this first workshop with a vague idea of what this is all about, so this activity provides them with a sense of what we hope to accomplish and introduces the tools that will be available to them as they engage in the process.

1. **What are we doing here?** Learning about postsecondary educational opportunities and STEM careers.
2. **Why?** It takes a great deal of exploration, goal development and advance planning to get into college and to succeed in a chosen field.
3. **How?** We start with a few planning tools that will help students prioritize what needs to be done. They each receive a flash drive and a binder to capture the development of their personal portfolios and document their interests and competencies.
4. **The “take home” message to students with disabilities:** Attending a college or university to study in a STEM field is an exciting and accessible opportunity for each and every one of them!



Photo courtesy of the University of Maine.



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# Overview

**Time:** 30 minutes

## Purpose:

To introduce students to the topics that will be covered during the workshops.

## Key Concepts:

- ⇒ Components of the project
- ⇒ Follow-up person-centered planning
- ⇒ Experiential learning opportunities
- ⇒ Portfolio development
- ⇒ Topics in each session
- ⇒ Critical steps to postsecondary education and STEM careers

## Preparation:

- ⇒ Download and review the presentation titled, [Increasing Access & Success in the STEM Disciplines \(PDF\)](#), to familiarize yourself with the information.  
University of Maine Center for Community Inclusion and Disability Studies. (2014). *Increasing Access & Success in the STEM Disciplines* (PDF). Available online from <https://ccids.umaine.edu/resource/intro-to-stem-curriculum/>
- ⇒ Download and review, [Critical Steps to Postsecondary Education and STEM Careers Checklist \(PDF\)](#). Make this available for student portfolios as either a hard copy or electronic copy on a flash drive.  
University of Maine Center for Community Inclusion and Disability Studies. (2014). *Critical steps to postsecondary education and STEM careers* (PDF). Available online from <https://ccids.umaine.edu/resource/critical-steps-to-postsecondary-education-and-stem-careers-checklist-pdf/>
- ⇒ Download and review, [Student Portfolio Items \(PDF\)](#). Make this available for student portfolios as either a hard copy or electronic copy on a flash drive.  
University of Maine Center for Community Inclusion and Disability Studies. (2014). *Student portfolio items* (PDF). Available online from <https://ccids.umaine.edu/resource/student-portfolio-items-pdf/>

## Leading the Activity:

Introduce students to the topics that will be covered using the presentation: *Increasing Access and Success in the STEM disciplines*. Use the notes associated with each slide to provide additional information and guide the discussion. Begin to describe and discuss how the *Critical Steps* information will be used throughout the workshops. Discuss the portfolio in more detail:

- ⇒ Layout of the portfolio.
- ⇒ How documents will be given to students.
- ⇒ How flash drives will be updated.

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- ⇒ How the portfolio is important to their participation in the project.
- ⇒ The importance of sharing the documents in their portfolio and on their flash drive with their parents or guardians.

### **Student Participation:**

Students will participate by asking questions about the sessions and by reviewing their portfolios with the instructor(s).

### **How are you addressing Universal Design for Learning Principles in this activity? Are you:**

- Presenting the information flexibly in multiple ways?
- Providing multiple and flexible means for expression?
- Providing multiple and flexible ways to engage the learner?

## Presentation Notes Pages



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# Increasing Access & Success in the STEM Disciplines

Slide 1

**Notes:** This presentation offers an overview of the things that students in the project will experience. This includes the workshops sessions, opportunities to visit STEM programs or projects, information about the person-centered planning process and the potential for mentorship and/or internship opportunities.



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## Components

- Series of Sessions to Explore Transition Needs
- Follow-Up Student-Centered Planning Meetings
- Visiting STEM Programs
- Identifying Mentorship and Internship Possibilities

Slide 2

The information in this model is typically provided in four components:

1. Workshops cover a range of topics designed to prepare high school students for postsecondary education and careers in the STEM fields. This is geared for the needs of students with disabilities who may not have considered college as a viable option, or need some assistance in finding the supports needed to make it happen.
2. Student-Centered Planning Meetings are facilitated by class instructors and happen in the individual student's home or at a site chosen by the family. These are offered to assist the student in organizing, prioritizing and moving forward with his/her educational goals.
3. Visiting STEM Programs – students visit university STEM programs.
4. Mentorship and internship possibilities are often identified through the Person-Centered Planning process.



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## Initial Topics

- Overview of the Project and Workshops
- Internship Discussion
- Videos of Students and Professors
- Exploring STEM Careers
- Portfolio Development
- Your Strengths, Interests and Skills
- Goal Setting and Self-Determination
- The Importance of Planning

Slide 3

The topics listed here are usually covered in the first sessions (Section 1). The instruction focuses on three key elements:

- Personal development of a student portfolio that will contribute to the student's college application efforts;
- Exploration of career opportunities in the STEM field; and
- Building interest, excitement and motivation for the students' efforts.





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## Some Topics We Will Cover in Later Sessions

- Exploring Differences Between HS and College
- Supports You are Receiving in High School
- Getting Accommodations in College
- Succeeding in College
- How Assistive Technology Can Help

Slide 4

Other topics that will be explored in other sessions include the following:

- Exploring differences between high school and college: Students explore some of the differences between high school and college, including the need for college students to take some responsibility for obtaining accommodations.
- Supports you are receiving in high school: Students explore the kinds of supports they receive in high school through IDEA and how they differ from those that may be available in college.
- Getting accommodations in college: Students learn about the differences between accommodations and modifications; the individual student's decision to disclose his/her disability; and how accommodations are arranged in college.
- Succeeding in college: Students will view videos or interact directly with students and professors to understand expectations and address challenges.
- How assistive technology can help: Students explore various kinds of assistive technology and discuss how these can help the student as well as how to access these supports.



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## Other Topics

- Developing a checklist of things you are looking for in a college or university.
- Self-Determination – setting your own goals and developing a plan for achieving them.
- STEM program tours
- Internship and mentorship

Slide 5

Additional topics discussed at upcoming sessions:

- Developing a checklist of things you are looking for in a college or university: Students are provided with exploratory templates and offered various websites to explore on their own.
- Self-Determination – Setting your own goals and developing a plan for achieving them. As students transition to college and adulthood, there is a shifting of goal-setting, decision-making and responsibility away from parents/guardians and toward the students themselves. This topic prepares the student to take on these challenges and to use the person-centered planning process to increase self-determination skills.
- STEM program tours: Students love this opportunity to actually visit STEM programs and interact directly with professors and current students.
- Internship and Mentorship: Opportunities for these are discussed during sessions, as well as during the student-centered planning meetings. The instructors share information on those topics with parents/guardians and students throughout the process as those opportunities arise. Instructors also share examples of earlier students who have enjoyed these experiences.



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## Critical Steps

- Find the document “Critical Steps to Postsecondary Education in STEM Careers” (in your binder or on your flash drive).
- What do you think are the most important steps that are listed?
- What steps have you completed so far?
- Critical Steps and Your Portfolio

Slide 6

“Critical steps” are tasks that need to be addressed in a timely fashion during a student’s high school career. For example: a student may need to sign up for courses that will be required when she or he applies to college to study for a STEM career.

- Ask students to locate the copy of the document, *Critical Steps to Postsecondary Education and STEM Careers*, (this will be referred to as the *Critical Steps Checklist* from this point forward) either in their portfolio binder or on their flash drive and to review the document.
- Engage students in a discussion of the document by asking them the following two questions from the slide:
  - What do you think are the most important steps listed in this document?
  - What have you completed so far?
- Critical Steps and Your Portfolio: Explain that the *Critical Steps to Postsecondary Education and STEM Careers* document (i.e., *Critical Steps Checklist*) can be maintained as part of each student’s overall portfolio for college preparation. (Additional information on the portfolio will be addressed later on.)



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## The Project is Designed to Help You Get from Here...

- Your life at home as a child in a family.
- In high school.
- Following a path set by others...

Slide 7

Explain that the overall goal of the project is to help students to transition from where they are now (noted on slide above) through a guided process of exploration, self-determination and goal-setting to.... (see next slide).



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## To Where You Want to Be!

- Your Dreams.
- Your Goals.
- Your FUTURE!

Slide 8

To where they want to be, using the project to help them get into a college or university of their choice, in a major (hopefully STEM) of their choice, and to succeed in a satisfying career.

## Critical Steps to Postsecondary Education and STEM Careers Checklist

Name: \_\_\_\_\_ Date: \_\_\_\_\_

- ☐ Development of a personal guide or checklist to use in reviewing potential postsecondary institutions. (This may include specific policies related to accommodations; whether the types of accommodations you may need are typically provided; the accessibility of various instructional technologies; the experience of other students with disabilities similar to yours; the availability of assistive technologies; the availability of support for participation in the social life of the campus; etc.).
- ☐ Identification of possible STEM careers that you would like to pursue.
- ☐ Identification of specific college programs or majors that you could enter and that would help you achieve your career goals.
- ☐ Identification of potential colleges or universities.
- ☐ Finding out what coursework you need in high school in order to pursue various STEM majors.
- ☐ Reviewing potential colleges and universities online using your personal guide/checklist.
- ☐ Investigating disability support services at each school you are considering.
- ☐ Identification of testing that is required for admission to various colleges or universities (e.g. SATs, ACTs).
- ☐ Requesting accommodations for required testing.
- ☐ Completion of required testing.

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- ☐ Applications to colleges or universities.

Institution:	Date Submitted:
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- ☐ School Visits:

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- ☐ Discussions with project staff, family members or others about the pros and cons of disclosure and to whom you might disclose your disability.
- ☐ Determining what documentation of disability will be needed for potential schools.
- ☐ Determining how you will obtain documentation that you may need at potential schools.
- ☐ Finding out what the academic requirements will be for various STEM majors at potential schools.
- ☐ Applying for financial aid.
- ☐ Responding to colleges or universities in a timely way.
- ☐ Participate in mentorship.
- ☐ Participate in internship.
- ☐ Complete postsecondary transition portfolio (hard copy or electronic).

## Student Portfolio Items

Why create a student portfolio? A portfolio can demonstrate accomplishments and competencies and assist the admissions recruiter at your college interview.

- ☐ Include samples of your work: reports, models, or pictures of projects you have completed; papers you have written, evidence of your participation on teams (academic, sports, art/music, etc.) or school activities, and descriptions of volunteer work.
- ☐ Personal inventories:
  - ☐ Students' *Critical Steps Checklist*
  - ☐ Learning style
  - ☐ Strengths
  - ☐ Interest inventory results
  - ☐ Aspirations inventory
  - ☐ Assistive technology inventory
- ☐ Letters of recommendation (teachers, school counselors, employers, administrators, coaches)
- ☐ State and/or district assessment results
- ☐ Summary of Performance (SoP) from IEP, Measurable Postsecondary Goals (MPSG), and age appropriate transition assessments
- ☐ PSAT, ACT/SAT scores
- ☐ Accommodations that will be needed
- ☐ Current documentation and description of disability
- ☐ Appendix items may include additional materials such as the following:
  - ☐ Calendar of your timeline/To-Do List for applying for colleges
  - ☐ Information on laws that apply in college vs. high school
  - ☐ Contacts
  - ☐ *College Comparison* document

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❑ [Opening Doors to Post Secondary Education and Training \(32 page PDF\)](#)

Wisconsin Department of Public Instruction. (2012). *Opening doors to post secondary education and training* (32 page PDF). Available online at <https://dpi.wi.gov/sites/default/files/imce/sped/pdf/tranopndrs.pdf>

❑ [A Student's Guide to the IEP \(12 page PDF\)](#)

National Information Center for Children and Youth with Disabilities (NICHCY). (2002). *A student's guide to the IEP* 2nd edition (PDF). Available online at <https://ccids.umaine.edu/resource/studentguideiep-pdf/>

❑ [Students with Disabilities Preparing for Postsecondary Education: Know Your Rights and Responsibilities](#)

U.S. Department of Education, Office for Civil Rights. (2011). *Students with disabilities preparing for postsecondary education: Know your rights and responsibilities*. Retrieved from <http://www2.ed.gov/about/offices/list/ocr/transition.html>

# Introduction to STEM Careers

What is it really like for a student with a disability to attend college and study in a STEM major? We share a number of videos showing students with various disabilities talking about their challenges and their accomplishments in their college careers. Students with Asperger Syndrome, mobility issues, learning disabilities, and visual impairment, among others; talk about succeeding in college life.



Photos courtesy of the University of Maine and CCIDS



# STEM and People with Disabilities

**Time:** 15 minutes

## **Purpose:**

To introduce students to other students with disabilities who are successfully pursuing STEM majors and careers.

## **Key Concepts:**

Disability and STEM careers

## **Preparation:**

Access the University of Washington DO-IT Video Collection

DO-IT Project, University of Washington. (2008-2014). *Video collection*. Available online at <http://www.washington.edu/doit/Video/>

Scroll down to the DO-IT Scholar Profile videos and click on the titles to view any or all of the videos. **Tip:** if viewed using the YouTube link, you can watch them in “full screen” mode.

- ⇒ DO-IT Scholar Profile: Nathan (2009), runtime: 1:24 minutes.
- ⇒ DO-IT Scholar Profile: Maria (2009), runtime 1:11 minutes.
- ⇒ DO-IT Scholar Profile: Mack (2009), runtime 1:16 minutes.
- ⇒ DO-IT Scholar Profile: Heidi (2009), runtime 1:07 minutes.
- ⇒ DO-IT Scholar Profile: Alexandra (2009), runtime 1:15 minutes.

## **Leading the Activity:**

Show students the videos: ask them for feedback and invite discussion about the videos.

## **Student Participation:**

Students will watch the videos and ask questions and contribute to the discussion as appropriate.

## **How are you addressing Universal Design for Learning Principles in this activity? Are you:**

- Presenting the information flexibly in multiple ways?
- Providing multiple and flexible means for expression?
- Providing multiple and flexible ways to engage the learner?

# STEM Careers

**Time:** 20 minutes

**Purpose:**

To get students excited about the possibilities within the STEM career field.

**Key Concepts:**

STEM careers, career choices, interest-based learning

**Preparation:**

Preview the following websites:

- ⇒ It's Your Career  
University of Washington, DO-IT. (2014). [It's your career](http://www.washington.edu/doit/Video/index.php?vid=17) (Video). Available online at <http://www.washington.edu/doit/Video/index.php?vid=17>
- ⇒ Spellbound Episode 2: Finding Her Way - Kristala L. Jones Prather, Ph.D.  
ACSVideoTheater. (2011, August 16). [Spellbound episode 2: Finding her way - Kristala L. Jones Prather, Ph.D.](https://www.youtube.com/watch?v=FF4D3iKFfs) (Video file). Available online at <https://www.youtube.com/watch?v=FF4D3iKFfs>
- ⇒ Semester by the Sea (video)  
The University of Maine. (2017, Dec. 8). [Semester by the sea](https://www.youtube.com/watch?v=v3Gaq7k706E&t=2s). [YouTube]. Available online at <https://www.youtube.com/watch?v=v3Gaq7k706E&t=2s>
- ⇒ Science Careers -  
Science Kids. (2014). [Science facts: Science jobs & careers](http://www.sciencekids.co.nz/sciencefacts/careers.html). Available online at <http://www.sciencekids.co.nz/sciencefacts/careers.html>

**Leading the Activity:**

Show the students the videos. Ask for comments and invite them to share what is interesting to them about the videos. Are they interested in pursuing any of the careers presented in these videos?

**Student Participation:**

Students will review the websites, view the videos and participate in conversations about what interests them about the careers presented.

**How are you addressing Universal Design for Learning Principles in this activity? Are you:**

- Presenting the information flexibly in multiple ways?
- Providing multiple and flexible means for expression?
- Providing multiple and flexible ways to engage the learner?

## “10 Green”

**Time:** 10 minutes

**Purpose:**

Exploration of “10 Green” website to expose students to different careers within the STEM fields.

**Key Concepts:**

Understanding the different STEM careers and how the STEM information from this field contributes to our daily lives.

**Preparation:**

Review the information on the 10 Green website. 10 Green is an interactive tool that provides a comprehensive assessment of the health of your environment. “10 Green leverages decades of ice core research that has allowed us to understand how the chemistry of Earth’s atmosphere has changed as a consequence of human activities.” (*10 Green* website)

University of Maine, Climate Change Institute. (n.d.). *10 Green* (website). Available online at <http://10green.org>

**Leading the Activity:**

Show students the website. Have them take turns exploring levels of chemical exposure in various locations.

**Student Participation:**

Students will choose which parts of the state are viewed.

**How are you addressing Universal Design for Learning Principles in this activity? Are you:**

- Presenting the information flexibly in multiple ways?
- Providing multiple and flexible means for expression?
- Providing multiple and flexible ways to engage the learner?



# Interests, Strengths and Skills

People tend to excel in classes and careers that they enjoy and in which they experience success. This activity encourages students to explore these aspects of themselves and think about how their interests, strengths and skills can inform their choice of a college major and a career. Students will save the surveys and questionnaires completed during this activity for their portfolios. Knowing and being able to articulate their strengths will help students write great essays on their college applications, too!



Photo courtesy of the University of Maine.



Photo courtesy of the University of Maine.

## Interests and Skills

**Time:** 30 minutes

**Purpose:**

Dreams and aspirations for life

**Key Concepts:**

Dreams, aspirations, interests outside of school

**Preparation:**

View the Going to College: Exploring My Interests web page.

Virginia Commonwealth University, Going to College. (2009). *Exploring my interests*. Available online at <http://going-to-college.org/myplace/interests.html>

**Leading the Activity:**

Show students the website. Ask them to write their responses to the following questions on sticky notes and move about the room to post them on sheets of chart paper with these questions as headers:

- ⇒ What do you dream about for your future?
- ⇒ What do you like doing outside of school?
- ⇒ During what activities do you get so involved that you lose track of time?
- ⇒ If success was guaranteed and money was no object, what would you like to accomplish in your life?

Have students discuss some of their responses in a large group.

**Student Participation:**

Students will post their sticky notes on appropriate sheets of chart paper around the room, and then participate in the large group discussion.

**Documents/Materials Needed:**

Chart paper, sticky notes, markers

**How are you addressing Universal Design for Learning Principles in this activity? Are you:**

- Presenting the information flexibly in multiple ways?
- Providing multiple and flexible means for expression?
- Providing multiple and flexible ways to engage the learner?

# Introduction to Exploring Student Strengths, Interests and Skills

**Time:** 15 minutes

## **Purpose:**

To promote students' thinking and reflection about their own strengths, interests and skills. To deepen their understanding of why it's important to be able to articulate these aspects of themselves.

## **Key Concepts:**

- ⇒ Identify strengths, interests and skills that may promote success in postsecondary education and beyond.
- ⇒ Importance of being able to articulate personal strengths, interests and skills.

## **Preparation:**

- ⇒ Bring needed materials (see below)
- ⇒ Make sure that a document with links listed is already inserted on student flash drives.

## **Leading the Activity:**

1. Distribute sticky notes and pens/pencils.
2. Ask students to think for a moment about the strengths, interests and skills they currently possess that should be useful to them as they prepare to go to college. Then ask them to write one or two strengths, interests or skills that came to mind on their sticky notes. The instructor could also ask, "What are you often told you're good at?" (or) "My parents or friends say I am really good at....." to spur student thinking.
3. Ask students to post their note(s) on the chart paper.
4. Read what was written, and then ask students to suggest several more strengths that would be useful as a student enters college. Write these on the chart paper.
5. Ask students, "Why do you think it is important to know your strengths, skills and interests and be able to explain them to others as you prepare for going to college?" (**Two important reasons:** college essays and interviews are typically places where students will need to be able to articulate these aspects of themselves). If the students do not offer these two examples (essays and interviews) themselves, then the instructor can add at the end of the discussion.

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6. On an LCD projector, show sample strengths, skills and interest surveys, and note that these can be found on their flash drives.

- a. *Assessment – Find Your Strengths* (web form)
- b. *Worksheet for Identifying Interests, Values, and Strengths* (PDF)

See the Documents/Materials Needed section below for where to access the documents listed above.

### Student Participation:

Students will participate in large group discussion and brainstorming, as well as by completing sticky notes.

### Documents/Materials Needed:

- ⇒ Chart paper, markers, pens, pencils, sticky notes
- ⇒ Computer and LCD projector with links to websites with strengths/interests surveys (see below):
  - a. *Assessment: Find Your Strengths!*  
Multiple Intelligences for Adults Literacy and Education. (n.d.). [Assessment: Find your strengths! \(web form\)](http://www.literacyworks.org/mi/assessment/findyourstrengths.html). Retrieved from <http://www.literacyworks.org/mi/assessment/findyourstrengths.html>
  - b. *Worksheet for Identifying Interests, Values, and Strengths* (PDF).  
Cornell University, Career Services. (n.d.). [Worksheet for identifying interests, values, and strengths \(PDF\)](https://ccids.umaine.edu/resource/worksheet-for-identifying-interests-values-and-strengths-pdf/). Available online from <https://ccids.umaine.edu/resource/worksheet-for-identifying-interests-values-and-strengths-pdf/>

### How are you addressing Universal Design for Learning Principles in this activity? Are you:

- Presenting the information flexibly in multiple ways?
- Providing multiple and flexible means for expression?
- Providing multiple and flexible ways to engage the learner?

# Know Your Strengths

**Time:** 30 minutes

## Purpose:

Students will become more aware of the strengths that they possess on a personal level, and how that affects their education.

## Key Concepts:

Personal/educational strengths, knowing yourself, planning for college

## Preparation:

- ⇒ Preview “Knowing My Strengths”

Virginia Commonwealth University, Going to College. (2009). *Knowing my strengths*. Available online at <http://going-to-college.org/myplace/strengths.html>

- ⇒ Preview the Happiness Institute-Strengths List; Wisdom and Knowledge (PDF)

The Happiness Institute. (n.d.). [Happiness institute strengths list](https://ccids.umaine.edu/resource/the-happiness-institute-strengths-list/). (PDF). Available online at <https://ccids.umaine.edu/resource/the-happiness-institute-strengths-list/>

## Leading the Activity:

Using their laptops, have students navigate to the *Going to College* website. On the right, under e-sources, ask them to click on the *Happiness Institute Strengths List* and use it to self-assess their strengths. After completion, ask students to discuss their results. As a group, discuss the implications of their results.

*Specific questions to help guide the conversation:*

- ⇒ What did you learn about yourself?
- ⇒ How can you use this information in making your college plans?

Continue with small group discussion about why it is important to explore and be able to assess strengths with students. In preparation for college, job, life?

## Student Participation:

Students will complete the activity and participate in the follow-up discussions.

**How are you addressing Universal Design for Learning Principles in this activity? Are you:**

- Presenting the information flexibly in multiple ways?
- Providing multiple and flexible means for expression?
- Providing multiple and flexible ways to engage the learner?

# Learning Styles

Preferred learning styles: everybody has one, but it may not be the preferred teaching style of one's college instructor! Understanding how a student learns best (visual, auditory, verbal, kinesthetic, a combination of these or others) can help him/her plan for success in college. Students complete a learning styles quiz and saves it in their individual portfolios. They use it to plan for their study needs, make the most of class time, and to request appropriate accommodations, if needed.



# Individual Learning Styles

**Time:** 25 minutes

## Purpose:

To support students in identifying their personal learning styles with the goals of developing greater self-awareness and the ability to share their individual learning style with future teachers.

## Key Concepts:

Learning styles, self-awareness, college preparation

## Preparation:

Preview the following websites:

⇒ [Going to College; My learning style](http://going-to-college.org/myplace/style.html)

Virginia Commonwealth University, Going to College. (2009). [My learning style](http://going-to-college.org/myplace/style.html). Available online at <http://going-to-college.org/myplace/style.html>

⇒ [Learning Style Inventory](https://ccids.umaine.edu/resource/learning-style-inventory-pdf/)

Bixler, B. (n.d.). *Learning style inventory*. Available online at <https://ccids.umaine.edu/resource/learning-style-inventory-pdf/>

Alternative activities documents which can be downloaded and are included after this activity:

⇒ [Modalities...How Do You Learn? \(PDF\)](https://ccids.umaine.edu/resource/modalities-how-do-you-learn-pdf/)

Adapted from Colin Rose (1987). *Accelerated learning*. New York, NY: Dell Publishing. Available online from <https://ccids.umaine.edu/resource/modalities-how-do-you-learn-pdf/>

⇒ [Sensory Preference Self-Test \(PDF\)](http://appl003.lsu.edu/cas/learningjourney.nsf/selftests/$File/SensoryPreferenceSelfTest6-15-07.pdf)

Lousiana State University, Center for Academic Success. (2007). [Sensory preference self-test \(PDF\)](http://appl003.lsu.edu/cas/learningjourney.nsf/selftests/$File/SensoryPreferenceSelfTest6-15-07.pdf). Available online: [http://appl003.lsu.edu/cas/learningjourney.nsf/selftests/\\$File/SensoryPreferenceSelfTest6-15-07.pdf](http://appl003.lsu.edu/cas/learningjourney.nsf/selftests/$File/SensoryPreferenceSelfTest6-15-07.pdf) Also available from <https://ccids.umaine.edu/resource/sensory-preference-self-test-pdf/>

## Leading the Activity:

Introduce the activity to the group by asking these questions:

1. What do you know about your learning styles?
2. Why is it important to identify your learning style?

If the students are not responding or are having difficulty understanding, move on to viewing the Going to College video, *My learning style*.

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Next, have the students take the online *Learning Style Inventory*.

As an alternative, you could utilize the What is my learning style? online survey from 2Learn.org.

Thinkwell Corp. (2003). *Learning styles identifier. What is my learning style?* Available online at <http://www.2learn.org/learningstyles.html>

Follow up this activity with a small group discussion where students share their results peer-to-peer. Then the students can report out in a large group about the following items:

- ⇒ Their learning style
- ⇒ Whether the results were consistent with their experience of what works best with them.
- ⇒ How this information can be used to advocate or inform their college experience.

*Remind students to put this information in their portfolio.*

### **Student Participation:**

Students will take a learning styles inventory. Students will report their results in a small group setting as well as to the larger group.

### **Documents/Materials Needed:**

Computers/laptops/tablets for online activity and/or copies of the two learning style surveys; *Modalities...How Do You Learn?* and *Sensory Preference Self Test*, from the following three pages.

### **How are you addressing Universal Design for Learning Principles in this activity? Are you:**

- Presenting the information flexibly in multiple ways?
- Providing multiple and flexible means for expression?
- Providing multiple and flexible ways to engage the learner?

## Modalities...How Do You Learn?\*

### Directions:

Read the word in the left column and then put a check mark in the column to the right that best describes you. Your answers may fall into all three columns, but one column will likely contain the most answers. When you add them all up, the column with the most check marks indicates your primary learning style.

When You...	Visual	Auditory	Kinesthetic & Tactile
<b>Spell</b>	Do you try to see the word? <input type="checkbox"/>	Do you sound out the word or use a phonetic approach? <input type="checkbox"/>	Do you write the word down to find if it feels right? <input type="checkbox"/>
<b>Talk</b>	Do you talk sparingly, but dislike listening for too long? Do you favor words such as <i>see</i> , <i>picture</i> and <i>imagine</i> ? <input type="checkbox"/>	Do you enjoy listening, but are impatient to talk? Do you use words such as <i>hear</i> , <i>tune</i> and <i>think</i> ? <input type="checkbox"/>	Do you gesture and use expressive movements? Do you use words such as <i>feel</i> , <i>touch</i> and <i>hold</i> ? <input type="checkbox"/>
<b>Concentrate</b>	Do you become distracted by clutter or movement? <input type="checkbox"/>	Do you become distracted by sounds or noises? <input type="checkbox"/>	Do you become distracted by activity around you? <input type="checkbox"/>
<b>Meet someone again</b>	Do you forget names, but remember faces or remember where you met? <input type="checkbox"/>	Do you forget faces, but remember names or remember what you talked about? <input type="checkbox"/>	Do you remember best what you did together? <input type="checkbox"/>
<b>Meet another student about a class project</b>	Do you meet face-to-face or by Skype? <input type="checkbox"/>	Do you talk with them on your cell phone? <input type="checkbox"/>	Do you text them while walking or participating in another activity? <input type="checkbox"/>

When You...	Visual	Auditory	Kinesthetic & Tactile
<b>Read</b>	Do you like descriptive scenes or pause to imagine the actions? <input type="checkbox"/>	Do you enjoy dialog and conversation or hearing the characters talk? <input type="checkbox"/>	Do you prefer action stories or are you not a keen reader? <input type="checkbox"/>
<b>Do something new at school</b>	Do you like to see demonstrations, diagrams, slides, or posters? <input type="checkbox"/>	Do you prefer verbal instructions or talking about it with someone else? <input type="checkbox"/>	Do you prefer to jump right in and try it? <input type="checkbox"/>
<b>Totals</b>			

\*Adapted from Rose, C. (1987). *Accelerated Learning*. New York, NY: Dell Publishing.

## Sensory Preference Self Test

*In this short self-test you will examine which senses you prefer to rely on when processing information and learning. Answer each question with your first "gut reaction" and try not to think too hard about each response.*

		A		B		C		D	
1.	If you could choose any way to learn, which would you choose?	<input type="checkbox"/>	Reading information on your own	<input type="checkbox"/>	Listening to a lecture	<input type="checkbox"/>	Participating in an experiment or lab activity	<input type="checkbox"/>	Watching a film or looking at diagrams
2.	When giving directions for how to get somewhere, do you:	<input type="checkbox"/>	Write the directions in sentence form	<input type="checkbox"/>	Describe the directions aloud	<input type="checkbox"/>	Show someone the way by taking them or having them follow you	<input type="checkbox"/>	Draw a map
3.	Which are you more likely to recall?	<input type="checkbox"/>	What was written in words	<input type="checkbox"/>	What was said in conversations or lectures	<input type="checkbox"/>	What you did	<input type="checkbox"/>	What you saw
4.	Which type of instructor do you prefer? On who.....:	<input type="checkbox"/>	Assigns reading and other text materials	<input type="checkbox"/>	Facilitates class discussion	<input type="checkbox"/>	Lets you discover ideas through experience	<input type="checkbox"/>	Uses flow charts/diagrams/slides/charts
5.	In planning to buy a car, what influences your choice the most?	<input type="checkbox"/>	Reading materials about cars	<input type="checkbox"/>	Talking to friends about their cars	<input type="checkbox"/>	Test-driving different cars	<input type="checkbox"/>	Television/promotional advertisements about different cars
6.	Which are you more likely to recall?	<input type="checkbox"/>	The way a person's name is spelled	<input type="checkbox"/>	The sound of a person's name	<input type="checkbox"/>	Your interactions with a person	<input type="checkbox"/>	The person's face
7.	Which would you prefer to do?	<input type="checkbox"/>	Write a story	<input type="checkbox"/>	Listen to music	<input type="checkbox"/>	Make something	<input type="checkbox"/>	Watch a movie
		<input type="checkbox"/>	<b>Total A answers</b>	<input type="checkbox"/>	<b>Total B answers</b>	<input type="checkbox"/>	<b>Total C answers</b>	<input type="checkbox"/>	<b>Total D answers</b>

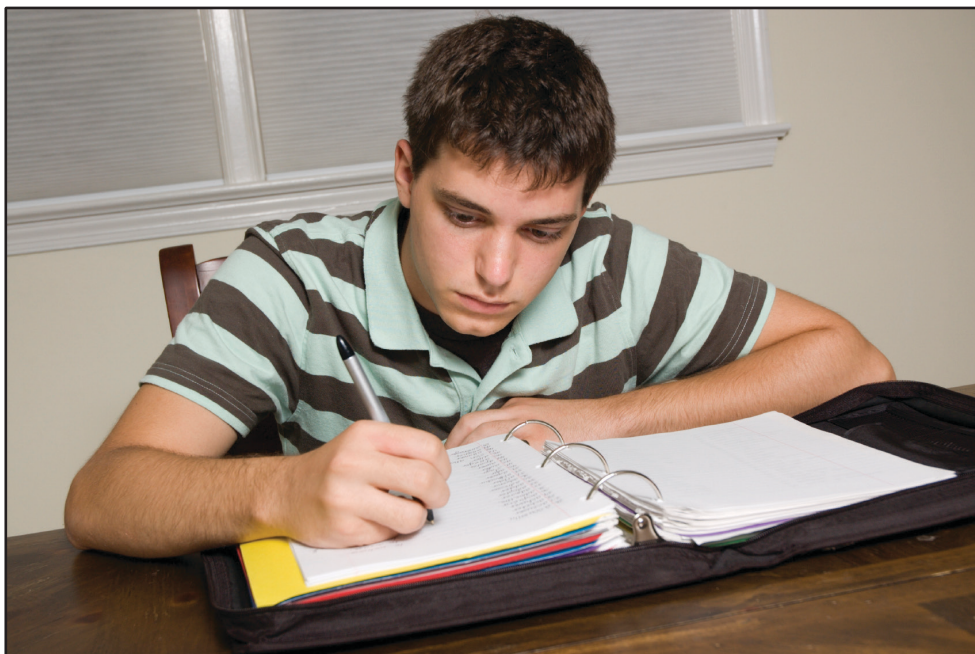
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# Homework

To build students' skills in self-determination, they need to understand their own individualized education plan (IEP). During elementary school, parents or guardians of students with disabilities tend to become skilled in understanding and influencing the student's educational plan. Now is the time for high school students, if they haven't previously, to become the essential part of the TEAM. This homework activity encourages students and their parents/guardians to discuss their IEP document and identify the accommodations they currently receive. Encourage students to include a copy of their IEP in their portfolio.



# Homework: Compiling Important Documents

**Time:** 30 minutes

## Purpose:

- ⇒ Familiarize students with items that may be helpful to have in their student portfolios.
- ⇒ Chart progress in adding to the student's individual portfolio.
- ⇒ Become more familiar with the individualized education plan (IEP).
- ⇒ Prepare to discuss the concept of accommodations in upcoming activities/sections.

## Key Concepts:

- ⇒ Keeping an individual student portfolio.
- ⇒ Students understanding their IEP.
- ⇒ Knowing individual accommodations.

## Preparation/Materials needed:

- ⇒ The document, Student Portfolio Items, as either a hard copy or electronic copy on a flash drive.  
 University of Maine Center for Community Inclusion and Disability Studies. (2014). *Student portfolio items* (PDF). Available online at <https://ccids.umaine.edu/resource/student-portfolio-items-pdf/>
- ⇒ Copy of student's IEP

## Student Homework Activity:

- ⇒ Students and their parents/guardians can review the document, *Student Portfolio Items*, together.
- ⇒ Students check off the items they already have in their portfolio folder. (After the first section, each student should have documents that discuss his or her interests, strengths and skills, and learning style).
- ⇒ Brainstorm with parents/guardians: what other documents will demonstrate the student's competence and progress toward postsecondary education goals? (Add to the list, if needed.)
- ⇒ Students' Individualized Education Plan(s): Students can choose to do one of the following: 1) Ask their parents/guardians what accommodations they are entitled to receive; 2) Ask their special education or regular education teacher what accommodations they are currently receiving; or preferably; 3) Sit down with their parents/guardians and review what is written in their IEP and make a list of their current accommodations.

## How are you addressing Universal Design for Learning Principles in this activity? Are you:

- Presenting the information flexibly in multiple ways?
- Providing multiple and flexible means for expression?
- Providing multiple and flexible ways to engage the learner?