Professional Development Situation: Meeting

Skill Focus: Making Connections to STEM Careers

Time Required: 30 minutes

How Many Careers Use STEM?

Participants relate a list of different career titles to STEM in order to help youth make connections to careers that use STEM.

Agenda

Introduction – 2 minutes
Hands-On Activity and Discussion – 25 minutes
Conclusion – 3 minutes

Materials & Supplies

- Paper
- Stencils
- Shapes
- Pens
- Colored markers, colored pencils, crayons
- Rulers
- Flipchart and markers
- Job/Career Titles handout (1 per participant)
- 3 x 5 cards

Before the Session

- **Read this training guide** to become familiar with the content and allow time to personalize the activities to best suit your presentation style. Read informational materials.
    - *Italics indicate text that can be read aloud to participants.*

- Send reminder email about the training (below). Determine if any participants require accommodations (viewing video; hearing; etc.).
    - *The next professional development opportunity to enhance our STEM skills will be on DATE at TIME at LOCATION. Our focus for this session will be "Making Connections to STEM Careers." Let me know if you require any accommodations to participate in the training. I am happy to answer any questions you have and look forward to seeing you at the session. I can be reached at CONTACT INFO.*
- Gather all materials needed for the session.
- Develop a list of possible questions participants might have during the session.
- Set out a variety of drawing materials and paper at a central location or on the tables right before the session.

Session Outline

Introduction (2 min)

- Greet participants as they arrive. Make sure everyone feels welcome and comfortable in the learning environment.
- Introduce yourself and the focus of the session: making connections to STEM careers.
- *The goal of STEM learning experiences in OST is to help youth learn about STEM and become excited about using this knowledge and these skills in their lives. Today we are going to learn how to connect a variety of job titles to all areas of STEM and how we can make these connections for youth.*
- Ensure participants are aware of the locations of restrooms facilities, refreshments, etc.

Hands-on Activity (30 min)

- Direct each participant to fold a piece of paper into four sections and using the drawing materials, make a sketch that describes or symbolizes the four STEM areas, one in each section (Science, Technology, Engineering, and Math). Give participants about 10 minutes to complete their drawings.
    - If you want to adapt this for small groups, break your participants into teams and provide them with flip-chart paper. Instruct the teams to divide the flip chart paper into four sections and contribute sketches/words that describe or symbolize the four STEM areas.
- Ask for participants to share their pictures (or groups to share their papers) and discuss the symbols and ideas they have used. Ask participants the following questions:

- *How did you describe/define each of the STEM areas?*
- *How are they different? How are they similar?*

- Give each participant the Job/Career Titles handout. Instruct them to work with a partner or in their small groups to add job/career titles from the list to each STEM area in their drawings. Give participants about 5 minutes to list jobs/careers on their drawings. Ask participants to share:
  - *What do the jobs they listed have in common?*
- Ask for participants to share examples of jobs titles they have attached to the sketch. Discuss the examples and ask questions about the jobs. Youth need to know that there are many different careers that use the STEM concepts and practices they are learning in the STEM activities they participate in to help make connections to real-life experiences. They should be exposed to a variety of careers that require different levels of education and experience. It is not realistic for each youth to become a scientist, so making realistic career connections is important. Ask participants:
  - *How many jobs on your sketch do not require a 4-year degree?*
  - *How many jobs on your sketch require an advanced or graduate level degree?*
  - *How many jobs could you work in right out of high-school?*
  - *Why do you think it is important for youth to know about careers with a variety of educational levels?*
- Summarize the ideas from the group on flip chart paper, listing the strategies they have identified to connect youth to careers.
- Participants can make an important impact when they share career information with youth during STEM activities. Brainstorm ideas of how to help make this happen.
  - *What are some ways we can share career information with youth?*
    - Ideas to share:
      - youth create a poster of all of the careers related to the activities they've been participating in
      - career information is posted around the room for participants to reference during the activity
      - casual conversations with youth
      - giving youth career specific roles during activities
  - *How can you connect the program activity to careers that use STEM?*
  - *What resources do you have available to you? What additional resources do you need?*

Conclusion (3 min)

- Hand out a 3 x 5 card to each participants. Have each participants write two ideas they will use with youth in their next STEM learning experience. Ask the participants to take the cards with them to remind them of these strategies to try.

After the Session

- Email the participants:
  Thank you for your participation in the recent Click2Science training. I hope you found it useful and applicable to your practice. I am including a list of strategies you identified to help youth make career connections. I am also including the job/career titles handout that we used in the training. Additionally, you can reach me at ____.
- Attach Job/Career Titles handout and a list of strategies they brainstormed for connecting youth to STEM careers.

Job/Career Titles

This list of job titles is not in any order. They range from entry level to professional.

Animal Trainer
Pet Shop Operator
Wildlife Biologist
Baker
Agronomist
Food & Drug Inspector
Grocery Manager
Commercial Fisherman
Ecologist
Geologist
Park Manager
Farmer/Rancher
Golf Course Supervisor
Nursery & Greenhouse Worker
Tree Trimmer
Welder
Equipment Operator
Brick Mason
Carpenter
Painter
Plumber
Architect
Interior Designer
Landscape Architect
Janitor
Film & Video Editor
Lighting Expert
Sound Engineering Technician
TV/Film Producer
Announcer
Motor Vehicle Inspector
Dancer
Actor
Graphics & Printing Equipment Operator
Desktop Publishing Specialist
Telecommunications Technician
Line Repairer
Computer Programmer
Artist
Fashion Designer
Legal Secretary
Medical Transcriptionist
Postal Service Clerk
Product Manager
Insurance Adjuster
Hospital Manager
Flight Attendant
Human Resource Manager
Fund Raiser
Event Manager
Retail Salesperson
Teacher
Counselor
Coach
Nanny
Massage Therapist
Personal Trainer
Accountant
Banker
Bank Teller
Appraiser
Security Expert
Intelligence Officer
Military Serviceperson Pilot
Navigator
Housekeeper
Lifeguard
Wait Staff
Travel Agent
Nutrition Counselor
Preschool Teacher
Youth Program Director
Truck Driver
Call Center Specialist
Data Analyst
Software Architect
Video Game Designer
Network Architect
Guard
Probation Officer
Detective
Judge
Computer Forensic
Appliance Repairer
Small Engine Repairer
Electrical Engineer
Locksmith
Etcher
Engraver
Jeweler
Woodworker
Automotive Designer
Production Line Worker
Laboratory Technician
Medical Researcher
Pathologist
Genetic Counselor
Medical Research Technician
Nurse
Physician
Dentist
Emergency Medical Technician
Dental Hygienist
Home Health Aide
Physical Therapist
Veterinarian
Pharmacist
Stock Clerk
Warehouse Manager
Telemarketer
Product Planner
CAD/CAM Drafter
Electrical Engineer
Civil Engineer
Automotive Servicer
Bicycle Repairer

Recycling Coordinator
Car Rental Clerk
Air Traffic Controller
Railroad Engineer
Bus Driver
Ship Captain