

## MODULE #3: Paths to Careers

### Objectives:

- Participants will become aware of how much mathematics is needed for a given occupation.
- Participants will learn the importance of having a resume
- Participants will learn how to develop a cover letter to apply for a job
- Participants will receive practical skills for a job interview; they will learn new ways of being prepared for a job interview

### Context



*Due to the high cost of tuition and other factors, students opt for different decisions when the time for applying to college arrives. It is important for students to have more than one option upon their high school graduation. For example, some students attend two-year College; others attend four-year College or university. Others opt for vocational school or enter the workforce. Therefore, it is suggested that students begin by taking an interest survey or aptitude test. This can be done as early as in middle school or whenever possible. The feedback gathered from the survey or test assists in giving students an idea of what they might be good at and enjoy. The following activities are designed to assist students with needed tools in preparation to enter a secondary institution or the workforce.*

### Handouts & Resourced Needed:

Handout 3.1: How Much Mathematics Do You Need for a Job

Handout 3.1A: Some Questions and Answers

Handout 3.2: What is a Resume?

Handout 3.2A: Creating Your Sample Resume

Handout 3.3: Sample Cover Letter

Handout 3.4: Doing Well in a Job Interview

Handout 3.4A: Interview Tips

Handout 3.4B: What are Recruiters Looking For?

Handout 3.4C: Questions Asked by Employers

Handout 3.4D: Interviewing: Do's and Don'ts

Handout 3.4E: Interview Checklist

Pens/pencils

Sheet of paper- one for each participant

Journals

### Activity #1: Mathematics Anyone (45 min)

#### Procedure:

- Icebreaker
- Explain to participants that mathematics beyond arithmetic is necessary for many occupations.
- Provide Handout 3.1: How Much Mathematics Do You Need for a Job and discuss with participants. Tell them to be aware of how much mathematics their career of interest requires. Encourage them to pursue advanced mathematics courses to better prepare themselves for their future jobs, especially because many of the jobs available now may no longer exist in ten years, and in ten years, many people will be working in jobs that cannot even imagine or describe now...nearly all of these jobs will demand the type of thinking and analysis best developed by studying mathematics. People will change jobs at least six times during their working lifetime, and be expected to know more Math.
- Tell participants that they may be asking themselves a series of questions about how prepared they feel to enter the workforce and provide and review Handout 3.1A: Some Questions and Answers. Stress the importance of planning well in advanced. The more knowledge and skills they have in different subject areas the better it will be for them to compete with the demand of the workforce. Remind participants that mathematics is now more needed than it was 10-15 years ago. Refer to Handout 3.1 for a list of jobs demanding more math than they did 10 years ago.
- Debriefing

### Activity #2: Resume Building (55 min)

#### Procedure:

- Icebreaker
- Explain to participants that while in high school, they need to start thinking about their resume so that they can be better prepared when applying for college and/or begin looking for a job. Provide Handout 3.2: What is a Resume? And review it with participants.
- Then, provide a sample resume (Handout 3.2A) and have participants begin to develop their own resume. Make sure to provide sheets of paper.
- Debriefing

### Activity #3: Writing a Cover Letter (30 min) (For advanced students)

#### Procedure:

- Icebreaker
- Tell participants that alike the resume, writing a cover letter is also essential when applying for a job. In the cover letter the applicant has an opportunity to get the reader's attention to continue to look at the resume.

This is why making sure the letter is proofread prior to submission is important. Provide Handout 3.3: Sample Cover Letter and review step by step with participants.

- Debriefing

Activity #4: Doing Well in a Job Interview (55 min) (For advanced students)

Procedure:

- Icebreaker
- Tell participants that the purpose of this activity is for them to understand what is it that employers are looking for and thus be prepared for a job interview. (Refer to Handout 3.4: Doing Well in a Job Interview, which provides an introduction for the facilitator).
- Provide Handout 3.4A: Interview Tips and review with participants. Emphasize that making a good impression is very important during the interview. Thus, knowing the tips is helpful. Interviewees are being evaluated when they least expect it; upon meeting the receptionist or secretary. Likewise, it is important for them to know what recruiters are looking for in an interview. Provide Handout 3.4B: What are Recruiters Looking For? And review each interview tip as well as the type of questions that students make ask during the interview.
- Once Handout 3.4B is reviewed, proceed to study the type of questions recruiters ask during an interview (Handout 3.4C: Questions Asked by Employers).
- Next, provide and review Handout 3.4D: Interviewing-Do's and Don'ts and tell participants that knowing what to do and what not to do during an interview may help them be better prepared and be more likely to get a job offer.
- Finally, provide and review Handout 3.4E: Interview Checklist and tell participants to follow this interview checklist when they do an interview. Remind participants that knowing how to interview is an important skill. There are many people with the right skills, qualifications and trainings, but if the interview does not go well, they may lose good opportunities to be hired or obtain what they are looking for.
- Debriefing

Activity #5: Evaluation (20 min)

Students should be asked to complete the evaluation for this unit.

Handouts:

*3.5A: Evaluation Form-Student*

*3.5B: Evaluation Form-Facilitator*

### **Handout 3.1: How Much Mathematics do you Need for a Job?**

*You will need at least two years of high school mathematics, beginning with one year of algebra, in order to work effectively as...*

Policeman	Electrician	Dental assistant
Fireman	Machinist	medical assistant
Bank teller	Carpenter	Cabinet maker
Hotel desk clerk	Brick layer	Plumber
Postal clerk	Social worker	Construction

*You will need at least three years of high school mathematics, beginning with one year of algebra, in order to work effectively as...*

Computer programmer	Teacher	Dietician
Mental health worker	Dental hygienist	Physical therapist
Draftsman	Pharmacist	Nurse
Accountant	Forestry aide	Photographer
Home economist	Sociologist	Medical secretary

*You will need at least four years of high school mathematics—two of algebra, one of geometry, and a year of precalculus mathematics—if you wish to work effectively as...*

Airline pilot	Biochemist	Astronomer
Veterinarian	Engineer	Mathematics teacher
Physician	Geologist	Economist
Medical researcher	Statistician	Computer scientist
Political scientist	Chemist	Meteorologist

*These and many other jobs require further mathematics in college, such as...*

Calculus	Numerical analysis	Linear programming
Differential equations modeling	Game theory	Mathematical
Probability statistics	Matrix algebra	

*In almost any job, more mathematics is needed today than was needed 15 years ago. Jobs that formerly used little mathematics now demand more. For example, working as...*

Fireman	Stock clerk	Insurance clerk
Policeman	Bank clerk	Payroll clerk
Postal clerk	Constructional worker	Shipping clerk
Office Worker	Beautician	Reservations clerk

**Try to get started in high school on some of these courses, such as the Advanced Placement Program for calculus.**

## Handout 3.1A

### Some Questions and Answers

1. Will mathematics be important in my future work?

Yes, today's technological developments of society involve more mathematics in nearly all jobs.

2. Can I get a job without taking mathematics beyond arithmetic in the elementary and junior high school?

Yes, but the more mathematics you do take, the better the opportunities will be for you later whether you are a man or a woman. Don't close the door to an opportunity by not being prepared for it.

3. Can I do anything if I find that I need more mathematics after I have finished my formal education?

Yes, but it is both difficult and expensive. Evening courses are available from community colleges, colleges, and universities, but tuition is expensive and much time outside of your job will be required. Take mathematics in school while you have the time for it and can make use of free public education.

4. Do I need mathematics to get into colleges?

Yes, in nearly all cases. Most of the more demanding colleges and universities require three years of high school mathematics, two of algebra and one of geometry, for entrance, regardless of your plans. A university which requires only a high school diploma will still have mathematics requirements for many of its programs. You will still want to be prepared to take college mathematics courses even when there may be no mathematics requirements for entrance.

## Handout 3.2

### What is a Resume?

**The resume is a selling tool** that outlines your skills and experiences so an employer can see, at a glance, how you can contribute to the employer's

**Your resume has to sell you in short order.** While you may have all the requirements for a particular position, your resume is a failure if the employer does not instantly come to the conclusion that you "have what it takes." The first hurdle your resume had to pass—whether it ends up in the "consider file" or "reject file"—may take less than thirty seconds.

**The most effective resumes are clearly focused on a specific job title and address the employer's stated requirements for the position.** The more you know about the duties and skills required for the job—and organize your resume around these points—the most effective the resume.

**You will need information to write a good resume.** Not just information about jobs you've held in the past but also information to select the most relevant accomplishments, skills and experience for THIS position. The more you know about the employer and the position, the more you can tailor your resume to fit the job.

## Handout 3.2A: Creating your Student Resume

As the beginning of this section, we described what a resume is and how it can help. Now, use this sample student resume as a template to create one for yourself. Be sure to keep your resume to one page, be truthful, and don't be afraid to toot your own horn.

Name  
Street Address  
City, State, Zip Code  
Phone  
Email, if applicable

### High School

Name  
City, State, Zip

**Graduation Date**  
**Current GPA**  
**Current Class Rank**  
**Test Scores**

Month, Year  
3.5  
Top 25 percent  
SAT I: May 2001  
V-600; M-540  
ACT: April 2001  
Composite-22; English-22; Math-21;  
Reading-22; Science Reasoning-24

### Academic Honors

National Honor Society, April 2000  
Honor Roll, 1998-2001

### Athletics

Soccer, October 1998-present  
Most Valuable Player-2000

### Activities

Student Government, September  
1998-present  
Secretary, 2000-2001  
Volunteer, spring 1997-present  
Children's Hospital, Philadelphia, PA  
5 hours per week

### Part-Time Work

Sales Clerk, May 1998-present  
Philadelphia Zoo gift shop  
Cashier/Sales, July 1997-May 1998  
Pet smart

### Major Goals

To major in biology or zoology  
(Optional, if you know your major)

### Interests

Sports, reading, animals

### Handout 3.3: Sample Cover Letter

Take a look at the sample cover letter below to help you get started on your own cover letters. Text that appears in all caps indicates the kind of information you need to include in that section. Before you send your letter, proofread it for mistakes and ask a parent or friend you trust to look it over as well.

(DATE)

June 29, 2008

(YOU'RE ADDRESS)

3467 Main Street

Atlanta, Georgia 30308

Email: [mthomas\\_987654321@yahoo.com](mailto:mthomas_987654321@yahoo.com)

Phone: 404-555-6721

(PERSON-BY NAME-TO WHOM YOU'RE SENDING THE LETTER)

Mr. Charles E. Pence

Manager, Human Resources

NexAir Wireless

20201 East Sixth Street

Atlanta, Georgia 30372

Dear Mr. Pence:

(HOW YOU HEARD OF THE POSITION)

Your job announcement in the Atlanta Gazette for an entry-level sales position asked for someone who has both computer and sales skills. (SOMETHING EXTRA THAT WILL INTEREST THE READER) My training and past job experience fit both of those categories. I also bring an enthusiasm and desire to begin my career in a communications form such as NexAir.

(WHAT PRACTICAL SKILLS YOU CAN BRING TO THE POSITION)

A few weeks ago, I graduated from John F. Kennedy High School here in Atlanta. While in school, I concentrated on gaining computer skills on both IBM and Macintosh machines and participated in organizations such as the Key Club, in which I was vice president, and the Future Business Leaders of America.

(RELATE PAST EXPERIENCE TO DESIRED JOB)

As you will see from my resume, I worked as a cashier at Winn-Dixie Supermarket for two summers and am currently employed as a sales clerk at The Limited. From these two positions, I have gained valuable customer service skills and an attention to detail; qualities which I'm sure are of most importance to you as you make your hiring decision.

I would very much like to interview for the position and am available at your convenience. I look forward to hearing from you soon.

Sincerely,

*Signature*

(YOUR FULL NAME)



## **Handout 3.4**

### **Doing Well in a Job Interview**

#### **What Employers Really Want to Know:**

Instructor:

Interviewing for a job is one of the hardest parts of the job search. You may be a bit nervous about it yourself. You may have had a bad interview experience, and you don't look forward to another.

Most people end up getting rejected, and they don't like it. But it doesn't have to be that way. In your case, you know what you want to do. And you have the skills, experience, and training to do it. All you have to do is convince the employer that you can do the job. This training will help you learn what you need to have a successful interview.

Employers use an interview to evaluate you. Will you be able to do the job? Will you be a good employer? If they don't believe you are qualified and willing to work hard, you won't get a job offer. If you do meet their expectations, you may get an offer or a referral. So you need to know what to do and say in a job interview.

## Handout 3.4A: Interview Tips

### Making a Good Impression

*First impressions are very important—they help the manager decide whether they like you or not. Here are a few tips to help you make a good impression.*

- **Your Appearance:** Carefully select your clothes. Make sure your clothes are neat, clean and freshly pressed. Shine your shoes. Wear conservative colors. Avoid loud fashions, flashy colors and patterns that clash. Avoid excessive jewelry, excessive make up and strong perfumes or colognes.
- **Your Attitude:** Attitude separates the winners from the losers and can be more important than experience. Through facial expressions, voice tone, body language and hand gestures, you show you are enthusiastic and motivated. Look bright, alert and alive. Know the points you want to make and make them. Have an honest, wide open smile. Sit on the edge of the chair. Use your hands to illustrate what you mean. Ask questions.
- **Your Manners:** When you meet the manager, stand up, offer a warm friendly greeting, smile, extend a firm handshake, thank the manager for taking the time to speak with you. Once in the manager's office, don't sit down until the manager invites you to sit. Address the manager as "Mister (Jones)," or "Ms. (Jones)," unless they tell you to call them by their name. Always accept a cup of coffee or a soft drink if offered, it shows you
- **Your body language:** Sit up straight in the chair—it shows you are alert and interested. Look the manager straight in the eye—it says you are telling the truth. Do not tap your pen, drum your fingers, swing your foot or rock in the chair—it implies you are bored. Do not chew gum.

### Examples of Questions to ask employer during the interview include:

1. How soon could I expect to be advanced to the next level?
2. How much travel is normally expected?
3. Will I be expected to meet certain deadlines? How frequent are they?
4. How often are performance reviews given?
5. How much decision-making authority is given after one year?
6. Does the company provide any educational benefits?
7. How frequently do you relocate professional employees?

## Some Important Advice

*What separates the winners from the losers in the job interview? There are many factors. These are some of the most common:*

- **Dress the Part:** Pay close attention to your appearance.
- **Give Complete Answers:** A complete answer should take between thirty seconds and two minutes to explain. Use a lot of examples and details to add bulk to your answers.
- **Sell Yourself:** Six out of ten people do not get a job because they did not sell themselves. Sell yourself—when the manager asks you to tell about yourself, tout your education, experience and accomplishments. Explain how they relate to the job you are after.
- **Show Enthusiasm:** Do not just sit there. Participate in the conversation. Look the manager in the eye. Smile. Add humor or insight whenever possible or appropriate.
- **Ask for the Job:** Explain why you should be hired. Acknowledge the probationary period and the fact that you can prove yourself during or the employer can release you. DO not beg and do not be pushy.
- **Show You are a Team Player:** Managers like team players. So, instead of saying, “I did this...” or, “I did that...” Bring in the team. Whenever possible say, “We did this...” or “we did that...”
- **Show up on Time:** Plan to arrive 15 minutes early. If you are going to be late, call. Promptness shows you will be reliable.
- **Watch out for Trick Questions:** Turn a negative question into a positive question. For instance, when the manager asks, “what is your greatest weakness?” Say, “I am a workaholic—I like to get things done before I go home.”
- **Show what you can do for the Employer:** You know what skills the manager is looking for (you know this from reading the job advertisement, past job experience or from talking to people who have jobs in this field). So, offer examples from your past that show you can fill the manager’s needs.
- **At the Interview:** Shake hands with a firm grip, maintain eye contact, be positive about previous employers and end the interview by thanking the interviewer for their time.

## Handout 3.4B

### What are Recruiters Looking for?

**General Personality:** For many employers, the personality fit with a company is as important as your skills to perform the job!

**Personal Appearance:** A neat, attractive appearance is critical for a good first impression.

**Grades:** Many employers use grades as a way to evaluate candidates. Make sure you can explain marked deficiencies.

**Work Experience:** Be able to articulate the importance of past job experiences in terms of the job for which you are interviewing.

**Verbal Communication Skills:** This includes the ability to listen effectively, verbalize thoughts clearly, and express yourself confidently.

**Skills to perform the job:** It is important to emphasize the skills which you feel the employer is seeking and to give specific examples of how you developed them.

**Goals/Motivation:** Employers will assess your ability to articulate your short-term and long-term goals.

**Knowledge of the Recruiter's Company and Industry:** You are expected to have read everything the company has put in the placement library. Don't waste interview time asking questions that could have been answered by the printed material.

### **Handout 3.4C: Questions Asked by Employers**

1. How would you describe yourself?
2. How do you think a friend or professor who knows you well would describe you?
3. How has your college experience prepared you for a business career?
4. Why should I hire you?
5. What qualifications do you have that make you think that you will be successful?
6. How do you define or evaluate success?
7. In what ways do you think you can make a contribution to our company?
8. What qualities should a successful manager possess?
9. What two or three accomplishments have given you the most satisfaction? Why?
10. Why did you select this company?
11. What led you to choose your major field of study? What courses did you like best?
12. Do you think that your grades are a good indication of your academic achievement?  
What have you learned from participation in extra-curricular activities?
13. In what kind of work environment are you most comfortable?
14. How do you work under pressure?
15. In what part-time or summer job have you been most interested? Why?
16. How would you describe the ideal job for you following graduation?
17. Why did you decide to seek a position with this company? What do you know about  
our company?
18. What criteria are you using to evaluate the company for which you hope to work?
19. Are you willing to travel?
20. Are you willing to spend at least six months as a trainee?
21. Do you think you might like to live in the community in which our company is  
located?
22. What major challenge have you encountered and how did you deal with it?
23. What have you learned from your mistakes?
24. What are your long range and short range goals and objectives? When and why did  
you establish them and how are you preparing yourself to achieve them?
25. What are your greatest strengths and weaknesses?

## **Handout 3.4D: Interviewing Do's and Don'ts**

### **What to Do:**

1. Do express yourself clearly with a strong voice and good diction and grammar.
2. Do pay close attention to your personal appearance; dress to your advantage.
3. Do make concrete goals in planning for your career.
4. Do offer a firm handshake.
5. Do look the interviewer in the eye (but don't stare him or her down).
6. Do fill out application neatly and completely.
7. Do have as much knowledge about the industry, employer, and position as possible.
8. Do take criticism gracefully.
9. Do equip yourself with a strong knowledge of the company.
10. Do have prepared questions about the employer and position.
11. Do display as sense of humor.
12. Do display self-confidence.
13. Do bring a pen and small notebook with you to the interview.
14. Do remember the interviewer's name and use it during the interview.
15. Do take time to think before answering difficult or unexpected questions.
16. Do take advantage of services available to you in the school or in the community.
17. Do take an extra copy of your resume and a list of references to the interview.
18. Do follow-up with a thank-you note restating your interest in the position.
19. Do contact the employer by phone if the interviewer does not contact you one week after the time from which he or she indicated you would be notified.

### **What Not to DO:**

1. Don't be overbearing-aggressive-conceited.
2. Don't show a lack of interest or enthusiasm.
3. Don't emphasize money as your main interest in the job.
4. Don't expect too much too soon-be open to the idea of starting at the bottom and working your way up.
5. Don't make excuses for unfavorable factors on your record.
6. Don't condemn past employers or institutions of education; key comments positive.
7. Don't display a marked dislike for schoolwork.
8. Don't be indecisive.
9. Don't display intolerance or prejudice.
10. Don't interview unless interested in the job---don't just "shop around."
11. Don't be late to the interview.
12. Don't state specific geographic restrictions.
13. Don't contradict yourself in responses.
14. Don't take notes during the interview-jot down your notes immediately after the interview.
15. Don't forget: YOU control the content of the interview.
16. Don't glorify your past experiences-getting into a job for which you are under qualified is not recommended.
17. Don't assume that all employers will be delighted to hear of your plans for secondary education.
18. Don't smoke, chew gum, etc if offered or if the interviewer does so.

## Handout 3.4E

### INTERVIEW CHECKLIST

- Arrive on time or even a little early. Be neatly groomed.
- Locate the receptionist or secretary.
- Tell the receptionist your name and that you are there for an interview, the time of your appointment, and name of the person you are interviewing with.
- then wait until you are called. Sit or stand quietly.
- Use positive body language when meeting the interviewer. Shake hands as you smile and look in his eyes.
- Be prepared for questions about yourself and answer them calmly.
- Speak formally.
- Bring your own pen and paper in case that you need to write something down.
- Ask questions about the hours and duties of the job.
- End your interview with the same firm handshake you began with.
- Never, never bring anyone with you to a job interview (friend, family member).

## **Handout 3.5A: EVALUATION**

### **Evaluation Form Student**

Indicate three new things you learned.

How will you use this new knowledge in the future?

Were the handouts useful?

How could this workshop have been improved?



## **Handout 3.5B: Evaluation Form for Facilitator**

1. Did the workshops run smoothly? Why
2. What aspects of the workshops did not work? What would you change?
3. Was it easy to understand?
4. How would you make it more culturally relevant?
5. What visuals would you add?
6. How would you make it more hands-on for youth?