

HEAR FROM PROFESSIONALS. LEARN FROM EXPERIENCE.



HEALTH SCIENCES

This cluster orients students to careers that promote health, wellness, and diagnosis as well as treat injuries and diseases. Some of the careers involve working directly with people, while others involve research into diseases or collecting and formatting data and information.



Learning that works
for Nebraska

WHAT TO EXPECT IN THIS GUIDE



INTERVIEWS

Each video contains interviews with employees and business representatives discussing work requirements, education levels, salary and job prospects.



TOURS

Experience virtual industry tours that provide a unique opportunity to get a glimpse inside Nebraska-based companies without leaving your home or classroom.



INFORMATION

Throughout the videos you will find valuable information regarding job markets, salaries, and educational requirements to help you identify a possible career path.

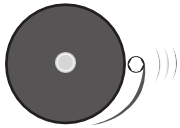
NOTE TO INSTRUCTOR:

These are suggested activities and questions to accompany the virtual industry tour. Each component may be used individually or modified to fit the needs of the classroom. Use these websites for more information on this career cluster:|

- www.education.ne.gov/nce/career-clusters
- <https://www.education.ne.gov/nce/careerdevelopment/>
- [Nebraska H3 Reports](#)
- www.nebraskacareerconnections.org

In addition, NWorks has an array of resources, including Nebraska Workforce Trends magazine, Labor Market Regional Reviews, Occupational Profiles, and Career Ladder Posters, available at <https://neworks.nebraska.gov> under Labor Market Information>Additional Services>Publications.

BELL RINGER:



Post on a writing surface for students to answer as they enter the room. They will respond individually in their notes. Then have students share with a partner or discuss as a class.

“The leading cause of death in the United States is heart disease. A healthy diet and exercise can help prevent this illness. List all fruits and vegetables you consumed and exercise you completed yesterday.”

ANTICIPATORY SET:



Guide students to think about the importance of the Health Sciences Career Cluster by providing each with a “Health Science Bingo” worksheet. A printable worksheet can be found at the end of this section. Give these instructions:

“Raise your hand if you have played “Bingo” before. Today we will be playing a form of human bingo.”

“In each box of the worksheet is a descriptor. When we begin, you will find individuals to whom the descriptors apply. Have the individual initial the box on the bingo sheet. A person may only sign your paper one time. When your worksheet is completed, return to your desk. Questions?”

Allow about four minutes for this activity. Then ask these questions:

“How many were able to complete the entire bingo sheet? What boxes were the most challenging to get filled? All of the descriptors are related to the Health Science Career Cluster. Most of us have interacted with professionals in this area at one time or another.”

INTRODUCTORY
QUESTIONS:



Ask the following questions to students in journal form or aloud. If asking aloud, have students share with a partner first, then ask two or three students to share. Responses will vary. Remember these responses are based on the students' knowledge prior to watching the virtual tour.

“When you think of Health Sciences, what types of jobs come to mind? Are these careers YOU might be interested in?”

CONTENT:



Show the 15-minute virtual industry tour, which features three businesses to the class: www.necareertours.com Students may individually view the video online as well. Have students complete the guided notes worksheet as they learn about the Career Cluster. Introduce the virtual tour by saying:

“Today we will watch a video highlighting three different businesses in the Health Sciences Career Cluster. Each business will describe their involvement in the industry, as well as the different careers associated with this area.”

FOLLOW-UP
QUESTIONS:



Ask the following questions to students after they view the virtual industry tour. Questions can be given as journal questions or asked aloud. Questions can also be assigned individually or in groups.

1. How would you define this Career Cluster?

- The Health Sciences Cluster involves careers that promote health, wellness, and diagnosis as well as treat injuries and diseases. Some careers work directly with people while others involve research into disease or collecting and formatting data and information.

2. What surprised you about this Career Cluster?

- Answers will vary.

3. What types of careers are included in this Career Cluster?

- Doctor, nurse, phlebotomist, radiologist, pharmacist, dietician, food service, psychology, social work, and CNA.
- Other careers not mentioned in the video: Biomedical engineer, lab technician, medical scientist, quality assurance technician, quality control technician, cardiovascular technologist, exercise psychologist, medical technologist, nuclear medicine technologist, radiologic technologist,

- Data analyst, health care administrator, health information coder, health service manager, medical records technician, dietary technician, facilities manager, food service, hospital maintenance engineer, dental hygienist/assistant, fitness trainer, home health aides, registered nurse, and surgical technician.
- A few careers mentioned in the virtual tour are not technically part of the Health Sciences Career Cluster. However, these jobs are an essential part of the industry.
- They include: Assembly line worker, electrical engineer, mechanical engineer, management, housekeeping, finance, marketing and drafting.

Note to instructor: This would be a good time to explain to students that this Career Cluster can be divided into five Career Pathways including:

- Biotechnology research and development
- Diagnostic services
- Health informatics
- Supportive services
- Therapeutic services
- Each Career Pathway has a narrower skill set for the occupations within this pathway.
- For more information about these careers, have students visit: <https://bit.ly/NECTEHS>.

4. What careers and jobs in this Career Cluster could be obtained immediately after high school graduation?

- Housekeeping, food service, and certified nurse's assistant (CNA). Many jobs in this Career Cluster require some type of degree.
- Other examples: Data entry, dietary manager, dental assisting, health aide, medical assistant, and equipment repair
- For more information about these careers, have students visit: <https://bit.ly/NECTEHS>.

5. The video mentioned an increase in jobs in this Career Cluster, especially nursing and residential care facilities. What factors contribute to this increase?

- Aging population, overall population increase, increasing health risk factors including stress and obesity and national health care reform to increase service to all individuals

6. Fifty percent of student interns obtain full-time employment at the place of their internship. Why? What are other benefits of internships?

- The benefit for the business is that it is very expensive to hire people for jobs. Companies like the opportunity to “try out” an employee without having to fully hire them. If the intern fits into the culture of the company, they are more likely to hire them.
- Work experience to include on resume and for future jobs, gain knowledge and experience, exposure to real tasks of the job to help determine if this is a future career, some internships are paid, potential to earn college credit, network with professionals in the career field, develop new skills, and develop confidence.

7. The Mary Lanning Healthcare pharmacist mentioned job shadowing in the 7th grade. What is the difference between a job shadow and an internship? Where in our local community could you complete a job shadow in this Career Cluster?

- Answers will vary. Local opportunity responses will be based on local community and area. Could include: Veterinary offices, physical and occupational therapy centers, dialysis centers, nursing home and hospital.
- Job shadowing is generally short (one or two days), unpaid, usually observing and watching. Internships are generally a summer or semester experience, can be paid, and involve completion of tasks with supervision.

8. The ScanMed tour demonstrated soldering a port to a coil. How is this job part of the Health Sciences Career Cluster? What other careers are essential to the industry?

- While assembly line work and engineering are not technically part of the Career Cluster, they are essential careers in the industry. Many careers cross over between the Career Clusters. The creation of medical tools is imperative to health care.
- Answers will vary: Lawyer, insurance, banking, communications, marketing, education, information technology and more.

9. Core academic skills include reading, written communication, listening, speaking, and mathematical reasoning with problem solving. How might these core academic skills be used in this Career Cluster?

- Answers will vary.
- Here are a few examples:
- Pharmacist must be proficient at reading labels for side effects, dosing instructions and more.
- Nurses must be able to write and type descriptions of patient observations and stats.
- Listening and speaking is very important for a care provide to communicate effectively with the family of patient.
- Math and problem solving is used daily by design engineers to create and improve medical devices.

10. The virtual industry tour mentioned three traits employers seek when hiring. What other Career Readiness Skills should a desirable applicant possess?

- Answers will vary.

11. Melinda Allen at Columbus Community Hospital discussed the wide variety of occupations they employ. What benefits exist for a healthcare company to have several components and services?

- Improved communication between all doctors and physicians in all aspects of treatment and care, coordination for scheduling appointments between different departments, closer location of services for patients and opportunity to share employees and administration.

12. A majority of Health Science careers are considered high skill occupations. What does this mean?

- High skill occupations require some form of training and education beyond high school.
- For more information on the Nebraska H3 Methodology, visit: <https://bit.ly/NEH3Methodology>.

EXTENDED
LEARNING
ACTIVITIES:



The following are suggested activities that will increase student learning and exposure to this career cluster.

- Visit a nursing home.
- Organize a community blood drive.
- Take a CPR or first aid course.
- Complete CNA (Nursing Assistant Certification) or EMT (Emergency Medical Technical Basic) training.
- Job shadow or assist the sports therapist at sports activities. Duties can include helping tape ankles
- Select a career from this Career Cluster. Research the career and present information to the class in the form of an oral presentation, poster, PowerPoint, iMovie, or Prezi presentation. Information to find includes: Salary, education required, typical day schedule, positive aspects of the job and negative aspects of the job.
- Make a list of the Career Readiness Skills that are personal strengths. Then make a list of the skills and behaviors required for a career in Health Sciences. Compare the list to determine what Career Readiness Skills need to be strengthened for employment in this Career Cluster.
- Construct a resume for a specific career in this Career Cluster.
- Meet with the school counselor to discuss classes that would help prepare a student for careers in this Career Cluster. Also, discuss certifications that can be obtained during high school.
- Identify a post-secondary institution that offering certifications or degrees that could be utilized in this Career Cluster. Obtain and complete admissions and scholarship applications for the school or program.
- Participate in a HOSA competitive event and/or attend a conference hosted by Nebraska HOSA, a Nebraska community college, or Nebraska hospital or healthcare organization to learn more about healthcare careers and education paths.
- Visit <https://nehosa.org/> for more information.

THERE ARE MANY RESOURCES THAT CAN BE USED BY TEACHERS, PARENTS AND JOB SEEKERS FOR CAREER EXPLORATION.

Some resources are tailored for Nebraska and some are national, but all provide valuable information and many incorporate information from the Nebraska Department of Labor Market Information (LMI). This list is not comprehensive, and only represents a sampling of the many resources available. Share the Career Exploration/ Planning resources table with students and have them do a review of what each offers them as a tool for finding the right career fit. Nebraska Career Connections is a totally FREE resource that is highly recommended for use by career and technical education students and teachers.

CAREER EXPLORATION & PLANNING		
Website	Type of Resources Available	Produced & Sponsored By
Nebraska Career Connections www.nebraskacareerconnections.org	Education and career planning resources for students, parents, educators, adults and employers. Students can explore career options, search for colleges, find out about applying for college, tuition, scholarships & financial aid, and create an e-portfolio and resume.	Nebraska Departments of Education and Labor, Nebraska VR, and Partnerships for Innovation.
Nebraska H3 Reports: https://bit.ly/neH3	Information on High Wage, High Demand, High Skill jobs in Nebraska. Top H3 occupations are identified on the home page. Reports can be generated by each Nebraska Economic Development Region and also statewide. Reports include H3 Report, Nebraska Economic Industry Report and All Career Clusters Report, Jobs can be searched by Job Title or SOC Code.	Nebraska Departments of Education, Labor and Economic Development
O*NET OnLine www.onetonline.org	Occupation information: knowledge, skills, abilities, Career Interest profile, job outlook and wages	U.S. Department of Labor, Employment and Training Administration (sponsor) Developed by the National Center for O*NET Development
My Next Move www.mynextmove.org/	Condensed version of information from O*NET OnLine	
Occupational Outlook Handbook www.bls.gov/ooh/	Nationwide data on occupation pay, work environment, job outlook, similar occupations, and more	Bureau of Labor Statistics
Nebraska Reality Check https://www.education.ne.gov/nce/career-readiness-videos/	Lifestyle cost information and occupations in corresponding wage range	Nebraska Department of Education

IN-DEPTH		
Website	Type of Resources Available	Produced & Sponsored By
CareerOneStop www.careeronestop.org	Variety of resources related to career planning, job training, and job searches	U.S. Department of Labor, Employment and Training Administration (sponsor)
GetMyFuture (section of the CareerOneStop website) www.careeronestop.org/GetMyFuture	Resources tailored to students and young adults such as career exploration, information on finding education and training programs, and how to conduct a successful job search.	U.S. Department of Labor, Employment and Training Administration (sponsor)

Instructions: Questions 1, 2 and 3 should be answered by watching all nine sections of the virtual industry tour. www.necareertours.com

1. List eight careers mentioned during the virtual industry tour:

- | | |
|--|---|
| 5. Respiratory Therapist | 5. Registered Nurse |
| 6. Employment & Education Coordinator | 6. Health Information Management |
| 7. Imaging (Radiology, etc.) | 7. Pharmacy Technician |
| 8. Chief Operating Officer (COO) | 8. Psychologist |

Others mentioned: Certified Nursing Assistant, Monitor Tech, Social Worker, Radiation Therapist, Ultrasound Tech, Medical Lab Scientist, Lab Manager, Medical Coding, Documentation Specialist, Pharmacy Tech, Cardiac Tech, Licensed Clinical Therapist, Human Resources Specialist, Intake Coordinator, Community Outreach.

2. List three Career Readiness Skills employers want to use everyday on the job:

1. **Share knowledge**
2. **Provide customer service**
3. **Establish and execute plans to completion**

3. Where is each business located?

Business	Location
Columbus Community Hospital	Columbus, NE
Great Plains Health	North Platte, NE
Morningstar Counseling	Lincoln, NE
Mary Lanning Healthcare	Hastings, NE
Tabitha	Lincoln, NE
ScanMed	Omaha, NE

Instructions: The following questions are specific to the Columbus Community Hospital section.

4. Describe which main departments an acute care hospital, like Columbus Community Hospital, includes:

An acute care hospital includes an ER (Emergency Room), OB (Obstetrics/Labor & Delivery), specialized clinics like cancer, a Cath Lab, and maybe even a fieldhouse for training.

5. Which types of patients are cared for in the ICU (Intensive Care Unit)? Sickest patients

6. If you want to work in the ICU, but you think working as a Registered Nurse might be too much pressure, are there other options for working with patients? Name one of those jobs.

Yes, there are other options. For example, you could work as a Certified Nursing Assistant (CNA) or a Monitor Tech. You do not need to be a nurse or doctor to work in the ICU.

7. You met Heather, a Certified Respiratory Therapist. She didn't always plan to be a Respiratory Therapist. What was her previous job and how did she change her mind about her career?

Heather was a graphic designer until she had her own premature baby and decided she would like to work in healthcare. She saw how health care professionals cared for her son.

8. Hospitals have a large variety of job paths to choose from. Name a few reasons that a career in a hospital might be right for you:

Answers can vary: Hospitals help you get new education and training without paying for it yourself. You have a chance to save lives and help people, young and old. Some students might connect with changing their minds about a career path, enjoying the variety and adventure of the workplace, or the unique experiences you cannot have outside of a hospital setting.

Instructions: The following questions are specific to the Great Plains Health section.

9. Why might athletes use Great Plains Health services?

For rehabilitation after injuries

10. What are some good qualities to have as a Registered Nurse in Same-Day Services if you will follow patients through their procedure from start to finish?

You should be a 'people person'

Enjoy helping others

Detail oriented

11. What advice does the Jamie, the RN, give to anyone thinking about becoming a nurse?

Reach out to someone working in an area you are interested in and see if you can shadow them to experience their day. Get advice on important classes and be open-minded.

12. Describe how Information Systems supports the hospital and healthcare system:

Information Systems can help with documentation and computer systems to help take care of patients. They do HIM (Health Information Management) which include coding, information specialists, and business office work.

13. What kind of education path can you follow to work in the hospital pharmacy?

On-the-job training as a Pharmacy Tech for a year before your certification test. Pharmacists must earn a Doctorate degree.

Instructions: The following questions are specific to the Morningstar Counseling section.

14. How does Kyly say she can combat the stigma around mental health?

She can support her clients and students to help them understand that mental health doesn't have to be scary and mental health professionals want to really help and support you.

15. What type of education is needed to become a clinician (therapist)?

A master's degree is the minimum, though there are a variety of programs depending upon what area of expertise you'd like to pursue.

16. How can you know if a career in mental health is for you?

Those working in mental health should be curious and detail oriented. It's good to be creative, a good listener as well as being able and wanting to support others.

17. How does Morningstar impact their community with outreach?

They use a coach, who has also gone through recovery, to go out into the community and support those going through recovery to maintain their level of wellness. The coaches can connect with those community members through their shared experiences.

Instructions: The following questions are specific to the Mary Lanning Healthcare section.

18. Describe what Mary Lanning Healthcare does:

Services available at Mary Lanning include cancer care, cardiac care, obstetric care, diagnostic imaging, inpatient and outpatient surgery and psychiatry, among many others.

19. By 2030, pharmacy related careers are expected to increase by what percent? 19% minimum*
(*Bureau of Healthcare Workforce Allied Health Workforce Projections, 2016-2030.)

20. How many colleges in Nebraska offer programs in Medicine, Pharmacy and Pharmacy Tech? 4

21. How many years of education beyond high school are required to become a pharmacist? 8

22. Describe the responsibilities of a pharmacist within a healthcare facility:

In addition to “counting pills,” examining drug interactions and health history of patients, studying patient charts, making recommendations of medicine, and deciding correct dosages.

23. What percentage of pharmacists are male? 45% Female? 55%

24. What percent of interns become full-time employees at the place of their internship? 50%

Instructions: The following questions are specific to the Tabitha section.

25. Describe the services provided by Tabitha:

Long- and short-term care, living community, independent living, assisted living, private duty services, homecare, adult day services, hospice and meals on wheels.

26. How many people are employed by Tabitha? **Approximately 1,000**

27. How many Social Work programs are offered in Nebraska colleges? 8

Instructions: The following questions are specific to the ScanMed section.

High tech, manufacturing, engineering, design and repair of medical devices and instruments. MRI machines are their specialty.

28. Describe what ScanMed does:

29. On average, how much are mechanical and electrical engineers paid per hour? **\$38 - \$42**

30. What percent of Health Science occupations are considered high skill? **83.3%**

Instructions: The following question should be answered after all 9 sections of the Health Sciences career tour.

31. All of these Health Science areas we have explored are very focused on helping people. Which job(s) are you drawn to and why?

Answers will vary.



ABOUT THIS PROJECT

The virtual industry tours provide a unique opportunity for students, parents and job-seekers to experience Nebraska-based industries without leaving the home or classroom.

The videos showcase different businesses and industries in each of the sixteen Career Clusters plus Entrepreneurship in the Nebraska Career Education Model. In addition to the tour of the business or industry, the videos also contain interviews with employees and managers discussing work requirements, education levels, salary and job prospects. The videos provide an accurate picture of today's workplace, breaking down stereotypes and assumptions while emphasizing the knowledge and skills required to be successful.

The teacher and student guides are designed to enhance student learning for each virtual tour. For the students, a guided notes worksheet is included to help them record important information about the career cluster. The teacher's guide includes a lesson plan complete with anticipatory set, introductory questions, and discussion questions to follow the virtual tours.

Discussion Guides and Career Readiness Resources are available at:
WWW.NEBRASKACAREERCLUSTERS.COM/RESOURCES



It is the policy of the Nebraska Department of Education not to discriminate on the basis of sex, disability, race, color, religion, marital status, age, national origin, or genetic information in its educational programs, admission policies, employment, or other agency programs.

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