

HOTT ACTIVITIES



Lesson
Plan

Occupation Tidbits

Name: _____

Date: 6-11-12

Class/Classes: Announcements

Professions: A variety of health professions

Grade Level: 6-12

All HOTT lesson plans are designed with the purpose of increasing students' awareness of the variety of health careers that are available to them. If possible, invite the corresponding health professional into your classroom to discuss his/her occupation. If this is not an option, use the attached sheet(s) to share this/these career(s) with your students.

Purpose: To give students a wide range of knowledge on health careers.

Materials needed: none

Duration: none

Instructions:

- Read an occupation a day during announcements.

References:

- Main Reference: www.bls.gov/oco

Pick one tidbit and one fact for each occupation to deliver in your announcements each day.

Allergist

Tidbits:

- Allergies affect 40 to 50 million people in the U.S.
- The likelihood of a child having allergies is 1 in 4 if one parent has allergies and 2 in 3 if both have allergies.
- The number of people getting asthma and the severity of asthma is increasing. Also the number of deaths is increasing as well. No one knows why.

Facts:

- An allergy is a high sensitivity to certain substances such as pollen, foods, etc. An allergist is a physician who treats and diagnoses allergies.
- It takes a bachelor's degree, 4 years of med school and 2 to 3 years of allergy and immunology training.
- Allergists take a sample of your blood and measure the levels of antibodies produced when your blood is mixed with a series of substances in the laboratory. If the levels increase you are allergic to the substance.

Anesthesiologist

Tidbits:

- In the U.S. in the 1840's 2 dentists and 2 doctors were experimenting with chemicals that lead to surgical painkillers or anesthesia.
- Anesthesia is the drug that is used during surgery. It reduces pain that is felt, loss of sensation, and partial or complete sensory paralysis during surgery.

Facts:

- Anesthesiologists complete a bachelor's degree, 4 years of medical school and 4 years of anesthesiology training.
- Anesthesiologists put you under for surgery, and monitor your vital life functions (heart, breathing, etc.) during surgery.

Athletic Trainer

Tidbits:

- Most sports injuries occur at practice instead of games.
- You should stretch before and after physical activity.
- Sprains are the most common type of injury.

Facts:

- To be an athletic trainer, you need to obtain a minimum of a bachelor's degree.
- Athletic trainers may work as a health care team in secondary schools, colleges and universities, sports medicine clinics, professional sports programs and other athletic health care settings.
- Athletic trainers help recover from or even avoid injury. They help athletes maintain peak physical fitness for participation in competitions.

Audiologist

Tidbits:

- There are more than 22 million hearing-impaired persons in the U.S.
- Every day in the U.S. about 1 in 1,000 babies are born deaf with 2 out of 1,000 born with partial hearing loss which makes hearing loss the number one birth defect in America.
- Approximately 70,000 people have ear implants worldwide.

Facts:

- You must obtain at least a master's degree in audiology.
- The baby boomers are now reaching middle age. Because hearing loss is associated with aging, the employment rate for audiologists is growing faster than average.
- Audiologists work with people who have hearing and related problems. They employ various testing devices to determine the nature and extent of hearing loss.

Cardiologist

Tidbits:

- Your heart pumps thousands of gallons of blood every day.
- Your blood makes 1,000 trips around your body every day.
- Laid end to end all the body's blood vessels would measure 60,000 miles. Enough to go around the earth 2 times!

Facts:

- A cardiologist is a physician who is certified to treat problems in the cardiovascular system such as the heart, veins or arteries.
- You must complete a bachelor's degree, 6-8 years of med school and 2 years of inpatient services.
- Fewer than 1 in 5 cardiologists are female.

Chiropractor

Tidbits:

- Your spine is made up of about 32 small bones and each bone is called a vertebra.
- The strongest muscle in your body is your masseter or jaw muscle.
- There are 45 miles of nerves in the skin of a human being.

Facts:

- Chiropractors treat and diagnose health problems associated with the muscular, nervous, and skeletal systems.
- Most chiropractors must receive a bachelor's degree plus a 4 year program at a chiropractic school.
- Employment of chiropractors is expected to grow faster than average as people are turning to alternate health care.

Clinical Medical Geneticist

Tidbits:

- A hereditary unit consisting of a sequence of DNA that occupies a specific location on a chromosome and determines a particular characteristic in an organism.
- Genetic disorders are caused by mutations on a set of genes.
- Cystic fibrosis, hemophilia, down's syndrome, and fragile x syndrome are only a few genetic disorders.

Facts:

- Medical Geneticists are doctors who specialize in treating genetic disorders.
- Medical Geneticists usually complete a bachelor's degree, 4 years of medical school and sometimes 2 years of specialty work.
- Employment is expected to grow as fast as average.

Cytotechnologist

Tidbits:

- The most common type of cancer on the list is non-melanoma skin cancer. Non-melanoma skin cancers represent about half of all cancers diagnosed in this country.
- There are over 100 different types of cancer. Each is unique in its own way.
- National Cancer Survivor Day is held the first Sunday in June.

Facts:

- Cytotechnologists study cells and they are important in early detection of cancer.
- Cytotechnologists must receive a bachelor's degree in cytotechnology.
- Employment opportunities are expected to increase 10%-20% in the next 6-8 years.

Dental Hygienist

Tidbits:

- Americans number one choice for toothbrush color is blue.
- Americans purchased 3 million miles of dental floss in 1996 - enough to go to the moon and back *six times!*
- Modern toothpaste was introduced in the 1850's but fluoride wasn't introduced until 1956.
- Approximately \$ 2 Billion a year is spent on dental products like toothpastes, mouthwashes and dental floss.

Facts:

- Most colleges require a bachelor's degree and 2 years in a dental hygiene program.
- Dental hygienists clean patients teeth, show them how to practice good oral hygiene, take x-rays and much more.
- The employment rate is expected to grow much faster than average as the demand for dental care is increasing.
- Dental hygienists work closely with the dentist to provide good oral healthcare.

Dentist

Tidbits:

- According to Consumer Reports, dentists are among the 5 most trusted professionals in the United States.
- You will get fewer cavities if you eat a bag of candy in one sitting and then brush your teeth than if you slowly eat the candy a piece at a time all day.
- Dentists recommend brushing twice and flossing once daily.
- According to the Sugar Association, the average American consumes 80 grams of sugar per day.

Facts:

- Your dentist should be visited yearly.
- Dentists diagnose, prevent, and treat problems with the teeth or mouth. They fill cavities, read x-rays, perform oral surgeries, etc.
- Most dentists receive a bachelor's degree plus 4 years of dental school.
- Job opportunities are expected to grow slower than average however; most jobs will become available as a large number of dentists are expected to retire by 2012.

Dermatologist

Tidbits:

- The largest human organ is the skin.
- Humans shed about 600,000 particles of skin every hour - about 1.5 pounds a year. By 70 years of age, an average person will have lost 105 pounds of skin. A human being also loses an average of 40 to 100 strand of hair a day.
- A fingernail or toenail takes about 6 months to grow from base to tip.

Facts:

- A dermatologist diagnoses and treats diseases of the skin, hair and nails.
- Dermatologists complete a bachelor's degree, 4 years of medical school, and 5 years in dermatology school.
- If you are seeing a dermatologist to maintain healthy skin, you should have a check-up once a year.

Dietitian/Nutritionist

Tidbits:

- 10 pieces of McDonald's selects contains 1270 calories.
- You should be active at least 30 minutes a day most days of the week.
- People who read nutrition information on food labels eat 5% less fat than people who don't.
- Drinking 8 glasses of water a day is important in most of your bodily functions.

Facts:

- Dietitians need at least a bachelor's degree in dietetics, food and nutrition, etc.
- Dietitians help develop food plans and nutrition programs in hospitals, schools, etc. as well as promote a healthy diet and exercise.
- Employment rate is about as fast as average.

Emergency Medical Technician

Tidbits:

- For one person adult CPR, it takes 15 compressions to 2 breaths.
- Over 12 million people each year participate in American Red Cross health and safety training classes.
- 911 was first used in 1968 when the United States wanted a "universal phone number" that people could call for emergencies. They chose 911 because it is easy to dial and remember.

Facts:

- EMTs rush to the scene by ambulance and give appropriate medical care and transport patients to the hospital if needed.
- Training varies but the most advanced level is a paramedic which involves 2 years of training.
- Employment rates are expected to grow faster than average as the population is growing.

Epidemiologist

Tidbits:

- Malaria, caused by parasites, kills over 1 million people per year.
- Everyday 30,000 people in the developing world die from curable diseases. Many because they cannot afford medications.
- West Nile, which is transmitted by mosquitoes, was first detected in the Western Hemisphere in 1999.

Facts:

- Epidemiologists study human diseases needed to improve human health. Research epidemiologists do research on diseases that affect the entire body, while clinical epidemiologists work in consulting roles informing about outbreaks and providing solutions.
- Epidemiologists have at least a master's degree. Most of them have a degree in Public Health.
- Employment is expected to grow faster than average.

Health Educator

Tidbits:

- Each cigarette you smoke is supposed to shorten your life by 11 minutes.
- A Burger King Double Whopper with cheese has 1,060 calories and 620 grams of fat.
- Physical activity is good for you in many ways such as helping your body release endorphins which helps make you happier.

Facts:

- Health educators work to promote, improve, and maintain healthy lifestyles.
- Health educators must receive a bachelor's degree in health promotion, health education, public health, etc.
- Employment opportunities are expected to grow faster than average. Preventative health care is becoming increasingly important.

Hospital Administrator

Tidbits:

- The hospital administrator plays a vital role in saving lives, without having to take scalpel in hand.
- Health administrators in large cities usually manage a division of the hospital where in smaller areas they handle most of the decisions.

Facts:

- Health administrators manage and keep a hospital running smoothly.
- Health administrators most likely have at least a master's degree in health administration.
- Employment is expected to grow at a faster than average rate because of the expansion of healthcare.

Laboratory Technician

Tidbits:

- The human body is made up of about 50 trillion cells.
- In a lifetime, your heart might pump 77 million gallons of blood.
- There are 4 main types of body tissue in the body: epithelial, connective, muscle, and nervous.

Facts:

- Laboratory technicians examine body fluids, cells, and tissue for diagnose.
- Most laboratory technicians receive at least a bachelor's degree in medical technology or a life science.
- Employment is expected to grow about as fast as average.

Licensed Practical Nurse

Tidbits:

- The body temperature is lower in the morning, due to the rest the body received and higher at night after a day of muscular activity and after food intake.
- Hypotension means that you have low blood pressure while hypertension means that you have high blood pressure.
- The heart squirts about $\frac{1}{2}$ cup of blood through its valves with every heartbeat.

Facts:

- Licensed Registered Nurses provide basic bedside care such as checking the patient's pulse, blood pressure, and temperature. Also applying dressings, give massages and much more.
- LPN's should have a high school diploma and one year of a nursing program.
- Employment is expected to grow about as fast as average.

Massage Therapist

Tidbits:

- Massages are good for your body emotionally and physically, especially for stress.
- The human body has over 650 muscles, over half of the body's weight.

Facts:

- A massage therapist focuses on the soft tissues affected by stress, injury and illness. Massages relieve pain, reduce stress, improve circulation, and improve the immune system and much more.
- Massage therapists are required to have about 500 hours of classroom training.
- Employment rate is expected to grow faster than average.

Music Therapist

Tidbits:

- Music is a significant mood-changer and reliever of stress, working on many levels at once.
- Music was found to reduce the pain during dental procedures.
- Music was found to reduce heart rates and to promote higher body temperature - an indication of the onset of relaxation.

Facts:

- Music Therapy is an established healthcare profession that uses music to address physical, emotional, cognitive, and social needs of individuals of all ages.
- Music therapists receive at least a bachelor's degree in music therapy.
- Music therapy is expected to grow faster than average.

Neurologist

Tidbits:

- The average human brain weighs 3 pounds.
- Information travels in the nerves at speeds up to 268 miles per hour (429 kilometers/hour).
- Neurological illnesses affect over 50 million Americans each year.

Facts:

- Neurologists are doctors who are trained in the diagnoses and treatment of the brain, spinal cord, nerves, and muscles.
- Neurologists complete a bachelor's degree, 4 years of medical school, and 4 years of specialty training.
- Employment rates are expected to grow about average.

Obstetrician

Tidbits:

- At week 5, the embryo is about one-half inch long and weighs less than an ounce.
- Teratogens are any agents that cause harm or structural abnormality to an unborn fetus, while the mother is pregnant, such as smoking, consuming alcohol, and medications to name a few.
- A pregnant woman needs about 300 extra calories a day.

Facts:

- Obstetricians are medical doctors who specialize in the care of pregnant women from conception through delivery through the period postpartum after delivery.
- Obstetricians need a bachelor's degree, 4 years of medical school and 4 years of special training.
- Employment will grow about as fast as average.

Occupational Therapist

Tidbits:

- Employment of occupational therapists is expected to increase faster than the average for all occupations through 2012.
- An occupational therapist would weigh backpacks to make sure students aren't carrying more than 15% of your body weight.
- The things that are done day to day such as brushing your teeth are called activities of daily living, are all things that you learn in occupational therapy.

Facts:

- Occupational therapists help people improve their ability to perform tasks in their daily lives.
- A master's degree is needed to become an occupational therapist.
- Employment rates are expected to grow faster than average.

Oncologists

Tidbits:

- The smallest clinically detectable tumor generally has a mass of 1g, about 1 cm diameter and contains approximately 10^9 cells.
- Chemotherapy is the treatment using chemical agents or drugs that target and destroy the cancerous cells.
- The form of cancer that ranks number one in South Dakota is prostate cancer.

Facts:

- Oncologists study, prevent, diagnose, and treat cancerous tumors.
- Oncologists obtain a bachelor's degree in a pre-med field, 4 years of medical school and 4-7 years of additional training depending on their specialty.
- Oncologist employment rates are expected to grow about as fast as average.

Ophthalmologist

Tidbits:

- About 1.3 million U.S. residents are considered legally blind.
- It has been estimated that by age 60, our eyes have been exposed to more light than a nuclear blast.
- Eyebrows protect our eyes from rain, sweat and debris.

Facts:

- Ophthalmologists are physicians who specialize in the medical and surgical care of the eyes and visual system and in the prevention of eye disease and injury.
- Ophthalmologists obtain a bachelor's degree, a medical degree, and 4 years of training in a ophthalmology program.
- Employment is expected to grow about as fast as average.

Optometrist

Tidbits:

- The eye can process 36,000 bits of information every hour.
- Eyes are composed of more than two million working parts.
- The average person blinks their eyes about 11,500 times per day or about 4.2 million times per year.

Facts:

- Optometrists provide primary vision care such as annual check-ups, diagnose vision problems, and prescribe glasses and contact lenses.
- Most optometrists obtain a bachelor's degree and 4 years of optometry school,
- Employment rates are expected to grow about as fast as average.

Orthopedic Surgeon

Tidbits:

- There are over 650 active muscles in your body and they act in groups.
- Your muscles make up more than half of your body weight.
- The feet account for more than $\frac{1}{4}$ of all the bones in the human body.

Facts:

- Orthopedic surgeons are medical doctors who specialize in bone, muscle, and joint surgery.
- Orthopedic surgeons obtain a bachelor's degree, a medical degree, and go through 4 years of residency usually with a year internship.
- Employment rates are expected to grow about as fast as average.

Pediatrician

Tidbits:

- Ear infections are the most common type of illness among children.
- The lollipop was invented in 1908 by George Smith. He named his treat after his favorite racing horse Lolly Pop.
- Children under the age of 18 make up 25% of the world's population.

Facts:

- A pediatrician is a doctor who cares for and treats infants and children when they are ill.
- Pediatricians obtain a bachelor's degree, a medical degree and 3 to 4 years of an internship and residency.
- Employment rates are expected to grow about as fast as average.

Pharmacist

Tidbits:

- The scales used in the pharmacy are so sensitive that they can weigh an individual grain of salt.
- Maple syrup was once used to cure colds.
- Aspirin went on sale as the first pharmaceutical drug in 1899.

Facts:

- A pharmacist is a person who is trained to prepare and distribute medications.
- A pharmacy degree requires 2 years of study prior to admittance and then a 4 year pharmacy program.
- Employment rates are expected to grow faster than average.

Physical Therapist

Tidbits:

- Weight bearing activities can prevent bone mineral loss.
- Walking may help with low back pain by rotating the spine 8°.
- Vitamin D is important in keeping bones strong. A deficiency in Vitamin D can make bones break and become thin and brittle.

Facts:

- Physical therapists provide services that help restore function, improve mobility, relieve pain, and prevent or limit permanent physical disabilities of patients suffering from injuries or disease.
- At the present time, there are two pathways to becoming a physical therapist: a master's degree and a Doctor of Physical Therapy. The four to six year program of a master's degree consists of two to four years of study in college and two to three years of professional education. Many colleges and universities are now in the process of changing their programs from a master's degree level to a Doctor of Physical Therapy degree.
- Employment rates are expected to grow faster than average.

Physician Assistant

Tidbits:

- Cuts heal because your platelets in your blood stick together like glue which clots the blood so a scab forms over the wound.
- Your bones are natural healers so when you break a bone, your bone will make new cells and blood vessels to help rebuild the bone.
- Strep throat is a disease caused by tiny egg-shaped [bacteria](#) called Group A streptococci. These bacteria cause 15% to 20% of all sore throats and are found in your throat and on your skin.

Facts:

- Physician assistants provide health care under the supervision of a physician.
- Most physician assistants hold a bachelor's degree and then attend a 2 year physician assistant program.
- Employment rates are expected to grow much faster than average due to the expansion of the health field.

Podiatrist

Tidbits:

- Each foot contains 26 bones plus muscles, nerves, ligaments, and blood vessels. Feet are designed for balance and mobility.
- People take an average of 10,000 steps in a day. That adds up to about 115,000 miles in a lifetime - enough to go around the planet more than four times.
- Having good shoes is the most important item to consider when walking, running, etc.

Facts:

- Podiatrists diagnose and treat disorders of the feet.
- Podiatrists are required to have 90 semester hours of undergraduate work and then attend a 4 year podiatry program.
- Employment rates are expected to grow about as fast as average.

Psychiatrist

Tidbits:

- Nearly two-thirds of all people with diagnosable mental disorders do not seek treatment.
- Nearly 1 in 5 adults in the United States suffer from a mental health disorder.
- 4 of the 10 [leading causes of disability](#) in the U.S. and other developed countries are mental disorders—major depression, bipolar disorder, schizophrenia, and obsessive-compulsive disorder.

Facts:

- Psychiatrists are the primary care givers of mental health.
- Psychiatrists must obtain a medical degree and then go on to further study.
- Employment rates are expected to grow about as fast as average.

Public Health

Tidbits:

- The benefits of quitting smoking are considerable and begin 20 minutes after you quit.
- 50 million people suffer from high blood pressure.
- About 1.2 billion people in the world are overweight.

Facts:

- Public Health professionals work to improve and prevent the health of a community.
- School varies for public health professionals depending on the area of specialty.
- Employment is expected to grow faster than average.

Radiologic Technologist

Tidbits:

- The vests that radiologists wear are made out of lead which protects them from radiation.
- The black parts on x-rays represents soft tissue, while the white parts represent dense human tissue...it all depend on how much light can pass through.
- The body is made up of 206 bones.

Facts:

- Radiologic technologists use radiation to provide images of tissues, organs, bones, and vessels in the body. They work along with the radiologist in the diagnoses and treatment of diseases.
- Radiologic technologists require a high school diploma along with 24 months of training.
- Employment rates are expected to grow faster than average.

Recreational Therapist

Tidbits:

- It has been suggested that successful aging is positively correlated with activity involvement.
- Some treatment is given more of a group basis as opposed to a 1:1 treatment.
- National therapeutic recreation week is the second week in July.

Facts:

- Recreational therapists provide treatment services to individuals with disabilities or illnesses. They use a variety of techniques, including arts and crafts, animals, sports, games, dance and movement, drama, music, and community outings.
- Most recreational therapists obtain at least a bachelor's degree in therapeutic recreation.
- Employment rates are expected to grow more slowly than average.

Registered Nurse

Tidbits:

- Registered nurses constitute the largest healthcare occupation, with 2.3 million jobs.
- Hospital nurses form the largest group of nurses.
- Six tips to staying healthy are: don't smoke, exercise regularly, drink very little alcohol, eat sensibly, control stress, and maintain a healthy weight.

Facts:

- Registered nurses (RNs) observe patients to assess symptoms, reactions to treatment, and progress. They administer medications, perform therapeutic procedures, and instruct patients and their families in proper health care practices.
- To get a bachelor's degree, a registered nurse needs to complete about 4 years of training.
- Employment rates are expected to grow faster than average.

Respiratory Therapist

Tidbits:

- Smoking is responsible for about 16% of all deaths in the United States each year.
- The heart beats about 100,000 times a day.
- You breathe in and out 15 to 25 times a minute.

Facts:

- Respiratory therapists evaluate, treat, and care for patients with breathing or other cardiopulmonary disorders.
- Respiratory therapists are required to complete either a two-year associate degree or a four-year bachelor's program.
- Employment rates are expected to grow faster than average.

Speech-Language Pathologist

Tidbits:

- Muscles in the mouth are used first for [feeding](#), then for speech purposes.
- The first 4 years of life are the most critical for speech and language development. Therefore, early identification of hearing loss is essential.
- Girls seem to develop the ability to communicate earlier than boys.

Facts:

- Speech-language pathologists diagnose, treat, and help prevent speech, language, cognitive, communication, voice, and fluency disorders.
- Most speech-language pathologists are required to obtain at least a master's degree.
- Employment rates are expected to grow faster than average.

Surgical Technologists

Tidbits:

- Heart bypass surgery is one of the most common operations with about 350,000 every year.
- Most surgeons recommend that you don't eat or drink anything after midnight the day preceding surgery.
- 40.3 million Inpatient surgical procedures were performed in the United States in 1996.

Facts:

- Before an operation, surgical technologists help prepare the operating room by setting up surgical instruments and equipment, sterile drapes, and sterile solutions.
- Surgical technologist programs vary from 12 to 24 months.
- Employment is expected to grow faster than average.