



Events

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Hands-On Career Fair Toolkit

For college and career preparation

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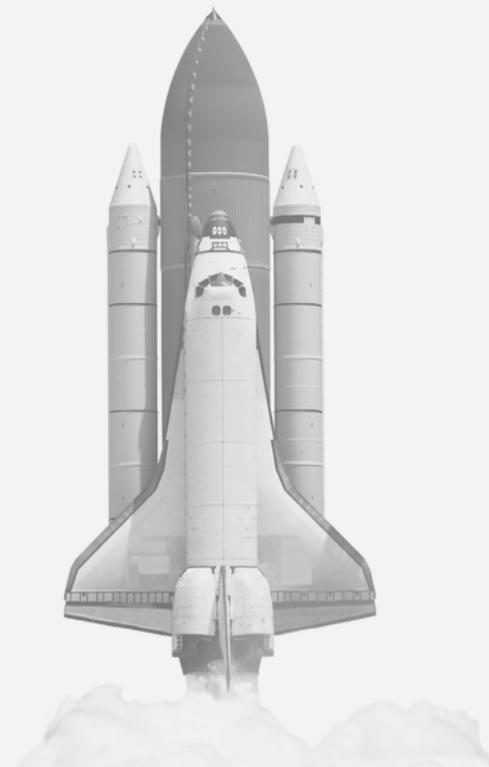
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WELCOME

- 4 | Introduction
- 5 | Research and Design Process



Introduction

This hands-on career fair toolkit was created as a resource for teachers and counselors who work with students to explore options and plan for their futures. The resources in this toolkit are designed to make prep, setup, and implementation as easy as possible.

- Each station comes with “ACTIVITY PACKETS”, which include signs, career profiles, hands-on activities, and student worksheets. These items will be need to be printed for each station. Make sure to print enough student worksheets for each student who is participating.
- The toolkit also features reflection activities that can be submitted as a classroom assignment. The activities in this toolkit can be used together as a large, comprehensive event, or divided out and used to supplement presentations or classroom activities.

The Why

The hands-on career fair was created to overcome the barriers and supplement the limitations of traditional career fairs. When students attend traditional career fairs they have the ability to network and learn about companies, but they rarely get to engage at a level that helps them grow their understanding and interest in specific careers. Providing students with hands-on experiences allows them to gain insight by engaging in activities that simulate the skills used and the tasks performed in different careers. This method provides a low-risk opportunity for students to experience careers and decide if they are interested in exploring a career further.

In addition to deciding whether or not they are interested in learning more about a specific career, students can also learn what their preferences say about their career values and interests and begin applying that knowledge to their lives on a regular basis. Engaging in experiential learning allows students to try and fail in a safe environment, helping them overcome fears and potentially save time and resources by filtering interest for higher-stakes opportunities, such as a job shadow or internship. The hands-on career fair concept can help promote opportunity equity in areas where access to a variety of career representatives is limited due to gaps in expertise or geographic location.

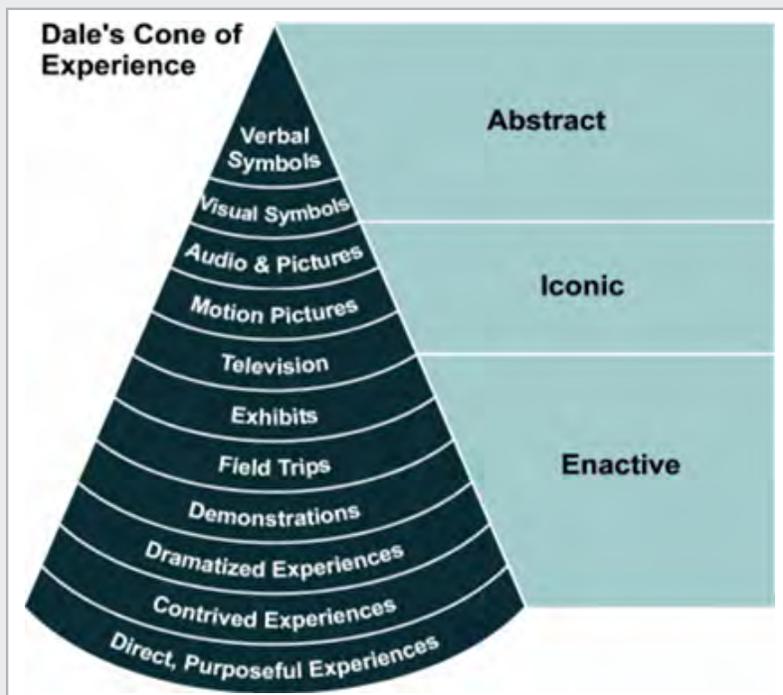
Research and Design Process

Levels of Learning

Research suggests that simulation learning can increase application and knowledge retention of new concepts. A series of hands-on workshops, paired with guided reflection, can help students process and apply new information as they work to make decisions about their futures.

Dale's Cone of Experience can be used as a continuum for designing learning experiences. "Dale emphasizes that the Cone is merely a visual analogy of the progression of abstract learning experiences to concrete ones. Similarly, it represents that the more concrete the learning experiences are, the more senses are involved—seeing, hearing, tasting, touching, and feeling" (Bariuad, 2022).

Most traditional career activities fit within the abstract or iconic ranges. Fieldtrips and demonstrations, where students are welcomed into an environment and are able to view a new concept in action, move towards the enactive range. These activities bring the mind and body together in the learning process. The hands on career fair is designed as a contrived experience, providing imitated scenarios where students play the role of each career professional. With the next level in concrete experiences (direct, purposeful experiences) including higher-stakes and higher investment activities such as internships, apprenticeships, or job shadows, the hands-on career fair is an excellent option to expose students to concrete information about multiple potential careers.



*Dale E 1946
The cone of experience
Audio-visual methods in
teaching. Creative
Commons Attribution 3.0
Unported*

The Process

Engaging students in meaningful experiential learning opportunities requires more than simply setting up simulations or events. Regardless of whether the career activities are set up as a supplement for a classroom presentation or as an entire event, creating a meaningful experiential learning opportunity requires structure and process. The process drafted below is adapted from the transformational learning cycle model and can be used to guide the development of a hands-on career fair or activity.

Safety (20%): Ensure students understand what is expected of them. Let them know it is ok to fail at something or to dislike something. Reiterate that they should work to find meaning in every experience, good or bad. Provide details that relate to student comfort and include a timeline.

Experience (50%): Provide a quality experience that allows students to engage in self-discovery in a safe and personal way.

Integration (30%): Schedule plenty of time for a debriefing to help participants make meaning of the experience by sharing knowledge, insights, remaining questions, and plans for application.

Learn More About Costa's Levels of Questioning (TeachThought Staff, 2021). <https://www.teachthought.com/education/costas-levels-of-questioning/>

Integration is the phase that is most commonly overlooked. It is really easy to work hard to provide an experience for students and then fail to reserve time for reflection. Reflection or debrief is the time where students can work by themselves or together to create meaning and work towards applying their new knowledge to other contexts. The hands-on career fair toolkit provides multiple resources for the integration process. These resources were designed using Costa's Levels of Questioning. The three levels include:

LEVEL

1

GATHERING

Observing, completing, matching, reciting, counting

Students will engage in Level 1 inquiry by reading career profiles and answering questions.

LEVEL

2

PROCESSING

Comparing, contrasting, classifying, sequencing, analyzing

Students will engage in Level 2 inquiry by analyzing their performance on a task.

LEVEL

3

APPLYING (EXPERIENCE-BASED)

Evaluate, judge, apply, speculate, predict

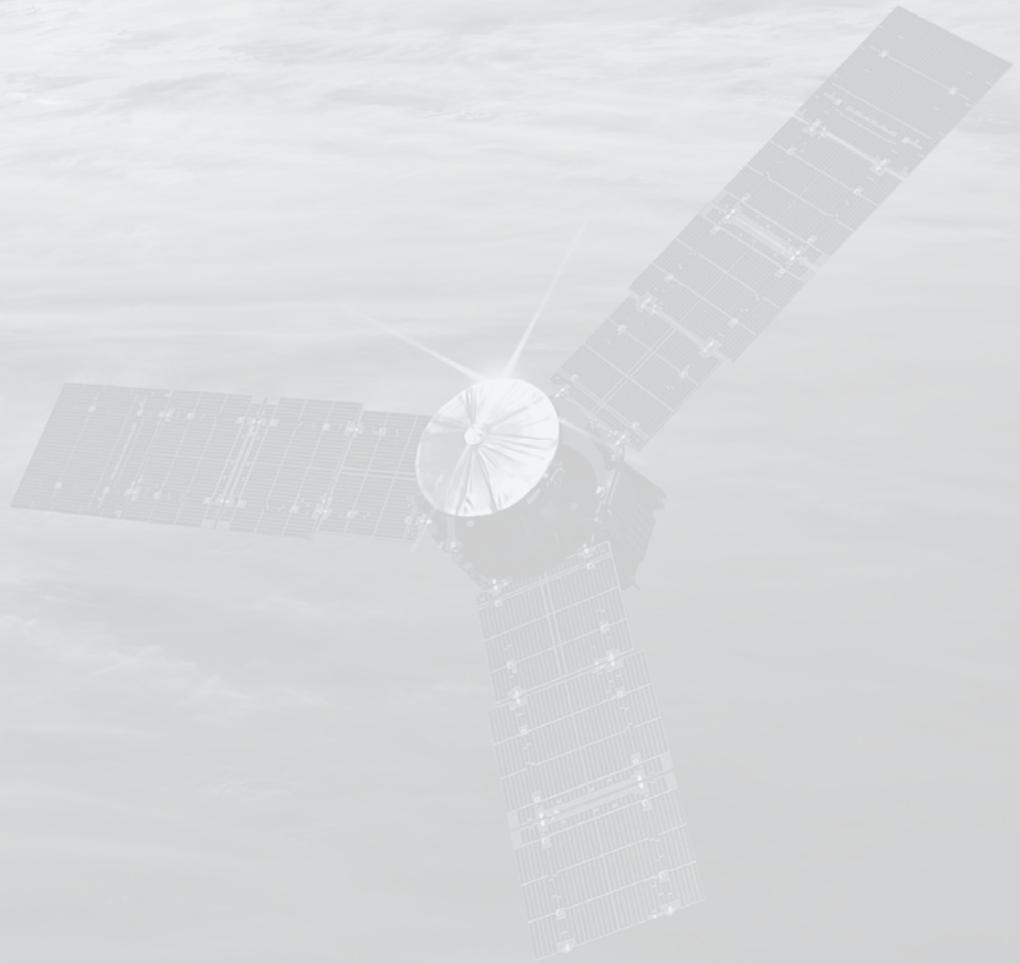
Students will engage in Level 3 inquiry by evaluating their skillset and interests in relation to what they have learned and by predicting how the way they reacted to different components might influence future exploration.

References

- (Bariuad, S. (2022, September 28). The Cone Of Experience and Its Role in Learning in 2023 [web log]. Retrieved August 1, 2023, from <https://www.edapp.com/blog/the-cone-of-experience>).
- TeachThought Staff. (2021, November 15). What are Costa's Levels of Questioning? [web log]. Retrieved August 1, 2023, from <https://www.teachthought.com/education/costas-levels-of-questioning/>.

FACILITATOR MANUAL

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Hands-On Career Fair Logistics

The logistics of the Hands-On Career Fair are not as black and white as they are laid out in this guide. There is a lot of room to adapt implementation. Use the logistics as a general scope of the event, but incorporate your own unique interpretations of the event based on what you want your priorities and audience needs.

Number of Participants

Flexible; depending on the number of career stations and size of your space, you can easily tailor this activity for small groups (10 or less) or for large groups (up to 200).

Time Requirement

If you require students to complete each station with 10-15 stations, the time frame would be around 2-3 hours, compared to setting a time-frame of 1 hour to have participants complete what they can. Single stations may be used within a class period to supplement a lesson or guest speaker experience.

Age Group

Any age, any grade—the great thing about this toolkit is that it can be adapted to any audience. If you plan to focus on students only, you may choose to implement more complex careers and activities. If you plan to implement this activity as a family event, you may choose to mix and max between simple and complex careers and activities. The possibilities are endless!

Set-Up Time

1-1.5 hours, (if you are extremely organized, less than 30 minutes). Some prep and shopping is required before setup.

Cost

Cost will vary depending on the number of stations and students. Pre-made kits can be purchased but are also more expensive. You might be able to secure donations of some items. The estimated cost for an event for 200 students is around \$800.

Volunteers

This event needs at least 4 adults/volunteers to guide the experience. The main facilitator will be available for general guidance and questions. Additional adults or volunteers can be available to check off career activities and support students throughout their experience. Adults or volunteers might also be assigned to lead small-group reflection after the event.

Community Involvement

This career fair provides an excellent opportunity to work with community partners in a meaningful way. Work with businesses or education/training partners to set up booths around the stations. You might even invite them to create their own stations. Businesses might also be willing to sponsor the event, donate materials for stations, or even provide giveaways for students.

Up Keep

You will need to revamp your activity at least once after each event to replenish consumable materials. Add used materials back in, or recreate career profiles depending on how you use and adapt the activity.

Career Supply List

The list below shows the materials that are needed for each station. The careers and materials can be swapped in/out for any additional career profiles you might want to feature. Activities can also be modified for the audience. There are less expensive options for some materials on amazon and other websites.

Many of the supplies needed for the activities can be found around your school. You might also reach out to members of your business community or individuals on social media to get materials donated. We have done our best to provide an estimate of the per-student cost (found near the title of each station) for stations that require purchased materials.

These costs are based off of a bulk rate for an event of 200 people.

Note: Materials marked with an * are printable resources found in this toolkit. You will need to print 2-6 of these documents for each station. Materials marked with ** are printable materials in this toolkit. You will need to print one of these for each student who will visit the station.



ATHLETIC TRAINER (\$0.15)

Kinesiology taping book or printouts
Athletic training tape
Scissors



CRIMINOLOGIST (\$0.20)

Ink pads
Fingerprinting card**
Fingerprint identifiers*
Magnifying glasses



DENTAL HYGIENIST

Teeth model
Toothbrush
Dry erase marker
Floss
Dental tools

Note: Reach out to a dentist in your community for donations.



ELECTRICIAN

Blueprint card**
Copper tape
5 mm LED lights
CR2032 Cell batteries
Small binder clips



ELEMENTARY SCHOOL TEACHER

Lesson plan*
Classroom scenarios*
Student scenarios*
Differentiation notes page**



ENTOMOLOGIST

Bug identification sheet*
Bug siting clue sheet*
Recording sheet**

Career Supply List



EVENT PLANNER

Event planning worksheet**
Venue pricing sheet*
Calculators Pens or Pencils



EXECUTIVE CHEF

Modeling dough
Plastic kitchen knives
Knife cuts diagrams*



FASHION DESIGNER

Design activity sheet**
Pencil/colored pencils
Fabric swatches
Client request cards*

Note: Reach out to members of your community for cloth and fabric samples.



FLORAL DESIGNER

Client request card
Styrofoam balls or blocks
4" potting cups
Assortment of artificial foliage
Assortment of artificial flowers
Ribbon
Scissors/pliers



GEOLOGICAL ENGINEER

Napkins or paper plates
Chocolate chip cookies (not soft)
Toothpicks, paperclips, forks, straws
Return on Investment (ROI) sheet**
Excavation site worksheet**



GRAPHIC DESIGNER

Client request cards*
Colored pencils
Logo design worksheet**



MECHANICAL ENGINEER

Popsicle sticks with 3 holes
Masking Tape
Wooden skewers
Hydraulic syringe with tube
Cardboard squares and metal brads
Water



MUSEUM CURATOR

Museum collection description*
Piece of paper Pen/pencil

Career Supply List



NUTRITIONIST

Client profiles*
 Food pyramid printout*
 Meal plan template printout**
 Pen/Pencil



PHARMACY TECHNICIAN

Pharmacy abbreviation cheat sheet*
 Doctor provided prescriptions (fake)*
 Prescription labels*
 Empty, blank pill bottles
 Pills (skittles, m&m's, mike n' ikes)
 Pill counting tray and spatula (can be
 popsicle stick or plastic knife and a plate)



RADIOLOGIST

X-ray images (8)*
 Match-up worksheet**
 Skeleton image for reference*



SOFTWARE DEVELOPER

Lego maze board (create on your own)
 Note cards
 Pen/Pencil



SUPPLY CHAIN MANAGER

Supply chain manager worksheet**
 Supply chain vendor list*
 Colored pencils



SURGICAL TECHNICIAN

Silicon suture pad
 Bananas (alternative to suture pads)
 Suture practice kit (tweezers and
 scissors)
 Patient profile*



WATER/WASTEWATER TREATMENT PLANT AND SYSTEM OPERATOR

PH 1-14 test paper
 3 water samples (tap, bottled, lake/river/
 pond/puddle)
 Conclusion paperwork**



WEB AND DIGITAL INTERFACE DESIGNER

Project description*
 Wire frame template**
 Wireframe example

Implementation Ideas

Start your career fair off on the right foot by providing clear instructions to participants. Make sure you cover expectations, provide any safety warnings, and let participants know who to go to if they have questions. Remind participants that they might not like every activity, and that this is okay! Depending on if you're orchestrating the career fair as a family event or in-class activity, the instruction style will differ.

Setting the Scene

When it comes to providing a family event or new activity to students, the way you set the scene and prepare their experience plays a big role in its success. Some considerations for setting the scene for your event are provided below:

- Make sure each participant has a writing tool and either the student reflection packet or a paper to take notes on. Play upbeat music to help set the tone of the event: fun, exploration! Music will also help student feel less self-conscious as they tackle different activities.
- Place career stations around the room with their career profile, hands-on activity instructions, and any materials needed for the activity.
- Consider setting up computers/tablets with career database resources or other career video resources to help add context to the career activities.

Implementation Ideas

The Hands-On Career Fair is an exciting resource because it can be implemented in many different capacities. Consider how the career fair can be adapted as a school wide event, family event, classroom unit, classroom lesson, or even a career counseling resource.

School Wide Career Fair

Compared to a traditional career fair that is limited to the resources and availability of the community, this hands-on career fair can be reinvented year after year by interchanging careers or focusing on different areas of interest each time. The hands-on career fair concept does not have to replace a school's career fair, but it can supplement the already-established school event. Imagine adding a few hands-on career stations at your next career fair or even having your career fair partners offer a hands-on activity of their own!

Family Event

The activities range from easy to difficult, which allows families of all ages to participate in the exploration of the event. Add additional resources or videos to keep younger students engaged if they were to attend with their families.

Classroom Unit

Each of the careers have a career profile and hands-on activity. Realistically, each career could take anywhere from 30-45 minutes to explicitly explore. This could allow for a career exploration unit that consists of however many careers you choose, a specific career field, or a selection specific to student requests.

Classroom Lesson

As mentioned above, each career's resources can be extended for an entire classroom period. A micro-career fair could allow for 1-3 careers to be explored in a class period or block period. Use a hands-on activity to explore careers related to the content you are teaching in class, or follow up a guest speaker with an activity to help students better understand a particular career.

Career Counseling Resource

A less formal implementation of the hands-on career fair could easily be set up at tables in the library or counseling center to let students explore at their own pace and based on their individual interests.

Activity Packets

This toolkit provides most of what you will need to host a hands-on career fair.

The activity packets are intended for students or participants to engage and reflect on the careers as they are exploring them. The questions are curated to get students to reflect on their interest in each of the careers they participate in, and whether or not they want to pursue the career topic further.

Each career station may require the following printable resources:

<p><i>Career Sign</i></p> <p>Labels for each station</p>	<p>PRINT</p> <p>1</p> <p>PER STATION</p>	<p><i>Career Profile</i></p> <p>Information about each career</p>	<p>PRINT</p> <p>1</p> <p>PER STATION</p>
<p><i>Hands-on Activities</i></p> <p>Instructions for hands-on activities print a few of these per station</p> <p>NOTED IN SUPPLY LIST WITH "**"</p>	<p>PRINT</p> <p>A FEW</p> <p>PER STATION</p>	<p><i>Theme or Client Cards</i></p> <p>Cards with themes or client requests on them for some stations</p> <p>NOTED IN SUPPLY LIST WITH "**"</p>	<p>PRINT</p> <p>1</p> <p>PER STATION</p>
<p><i>Worksheets</i></p> <p>Documents for students to write on</p> <p>NOTED IN SUPPLY LIST WITH "***"</p>	<p>PRINT</p> <p>1</p> <p>PER STUDENT</p>		

ACTIVITY PACKETS

16	Athletic Trainer
19	Criminologist
23	Dental Hygienist
26	Electrician
30	Elementary School Teacher
36	Entomologist
42	Event Planner
46	Executive Chef
50	Fashion Designer
55	Floral Designer
59	Geological Engineer
64	Graphic Designer
69	Mechanical Engineer
72	Museum Curator
76	Nutritionist
81	Pharmacy Technician
87	Radiologist
109	Software Developer
112	Supply Chain Manager
117	Surgical Technician
126	Water/Wastewater Treatment Plant and System Operator
130	Web and Digital Interface Designer



ATHLETIC TRAINER



CAREER PROFILE

Athletic Trainer

Athletic trainers work with people of all ages and all skill levels, from young children to soldiers and professional athletes. Athletic trainers are usually one of the first healthcare providers on the scene when injuries occur on the field. They work under the direction of a licensed physician and with other healthcare providers, often discussing specific injuries and treatment options or evaluating and treating patients, as directed by a physician. Some athletic trainers meet with a team physician or consulting physician regularly. Athletic trainers apply protective or injury-prevention devices such as tape, bandages, and braces, develop and implement plans to prevent injury among athletes. Trainers might also be called upon to provide first aid or emergency care.

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Sociologists, at <https://www.bls.gov/ooh/life-physical-and-social-science/sociologists.htm> (visited July 03, 2023).

Career Characteristics

- Plan and implement prevention or treatment plans
- Ability to keep records and write reports
- Good people skills
- Work in close proximity to others
- Ability to work in different environments

Similar Careers

- Physical Therapist
- Exercise Physiologist
- Massage Therapist
- Chiropractor

Correlating Degrees / Programs

- Exercise Science and Health
- Athletic Training
- Kinesiology
- Biology
- Physical Therapist
- Physical Therapist Assistant

Career Check-In

- Do you like helping people reach their potential?
- Are you comfortable being in close proximity to others?
- Do you like working in an environment where you might stand or move around a lot?
- Are you good at keeping detailed records and following plans?



HANDS-ON ACTIVITY

Athletic Trainer

As an athletic trainer, you might be responsible for helping athletes prevent injury, manage physical pain, or promote certain physical movements. Athletic tape might be one of the tools or devices that you use. Athletic tape is used to keep muscles or bones in certain positions.

Materials

- Kinesiology taping book or printouts
- Athletic training tape
- Scissors

Directions

Use the materials provided to research a use for athletic tape and then practice using athletic tape on yourself or a partner. Think about the experience from a trainer's perspective and note what the tape does from a patient's perspective.





CRIMINOLOGIST



CAREER PROFILE

Criminologist

Criminologists are sociologists who specialize in crime. These workers apply their sociological knowledge to conduct research and analyze penal systems and populations and to study the causes and effects of crime. Their research may help administrators, educators, lawmakers, and social workers solve social problems and formulate public policy.

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Sociologists, at <https://www.bls.gov/ooh/life-physical-and-social-science/sociologists.htm> (visited July 03, 2023).

Career Characteristics

- Analytical thinking skills
- Excellent written communication skills
- Attention to detail
- Knowledge of sociology and anthropology for understanding society and culture

Similar Careers

- Criminology Professor
- Forensic Scientist
- Sociologist
- Detective
- FBI Agent

Correlating Degrees / Programs

- Criminology
- Sociology
- Psychology
- Criminal Justice

Career Check-In

- Do you have an interest in criminology and the research component behind the job?
- Do you have an interest in behavioral patterns and human nature?
- Do you have strong attention to detail and observation skills?
- Do you have the ability to act objectively when evaluating evidence?



HANDS-ON ACTIVITY

Criminologist

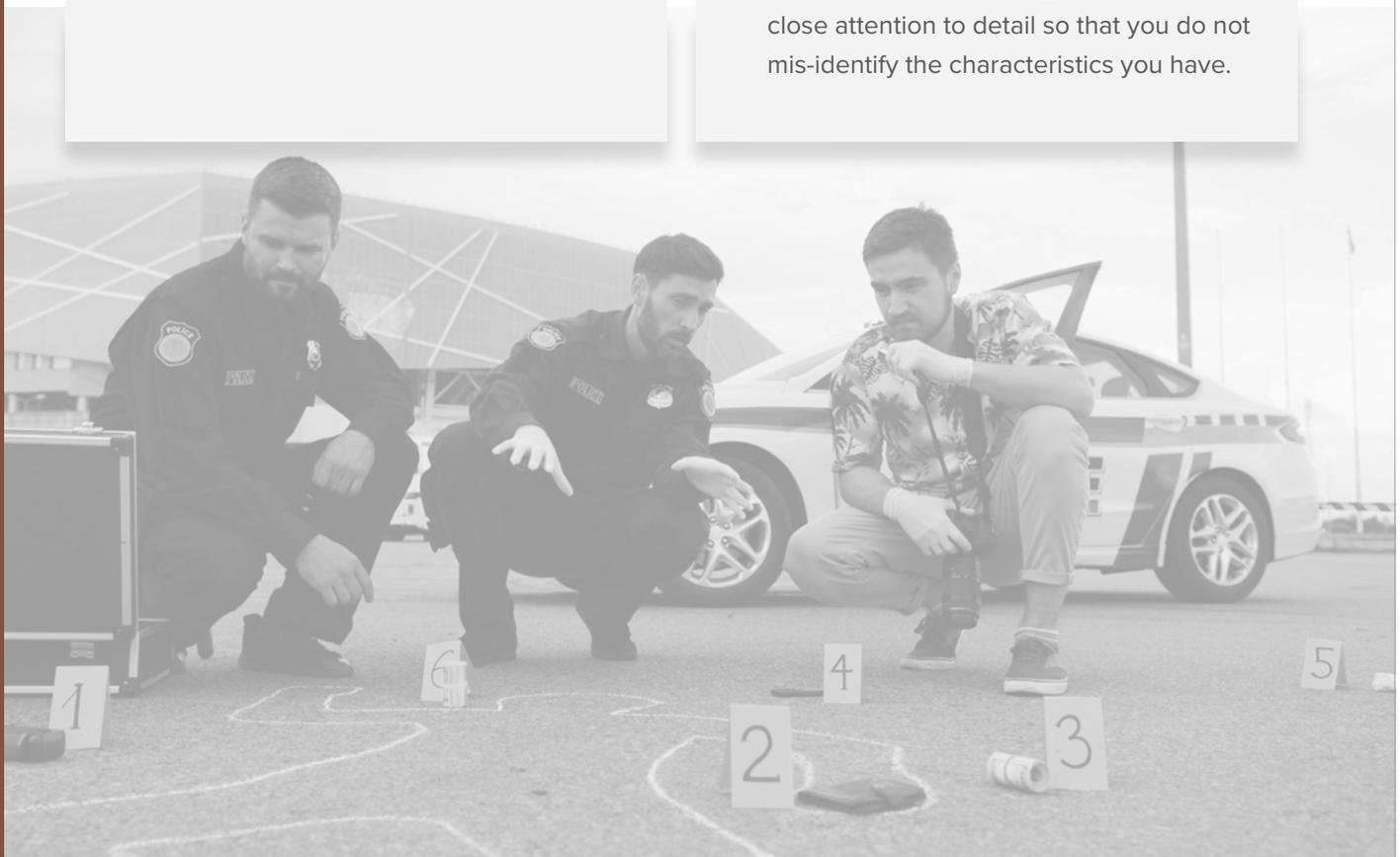
As a criminologist, you may be asked to inspect and identify fingerprints to help narrow down a suspect in a crime case you are working on. There are many different identifiers when it comes to observing fingerprints, whether it's the shape of the arch, the type of swirls in the print, etc. It is important to become familiar and memorize the specific characteristics of fingerprints to gain an expertise in fingerprint examination.

Materials

- Ink pad
- Fingerprinting card**
- Fingerprint identifiers**
- Magnifying glass

Directions

1. Gather a fingerprint card, an ink pad, and the fingerprint identifier page
2. Wash your hands or wipe your fingers clean before starting
3. After your fingers are dry, begin fingerprinting your left and right hand onto the fingerprint card
4. Using the fingerprint identifier page and magnifying glass, begin labeling the characteristic of your fingerprints. Pay close attention to detail so that you do not mis-identify the characteristics you have.



Criminologist

FINGERPRINT IDENTIFICATION TEMPLATE

FINGERPRINT IDENTIFICATION CARD			
SUSPECT NAME		DATE	
NOTES			
LEFT HAND		RIGHT HAND	
INDEX PATTERN	MIDDLE PATTERN	INDEX PATTERN	MIDDLE PATTERN
RING PATTERN	LITTLE PATTERN	RING PATTERN	LITTLE PATTERN
THUMB PATTERN		THUMB PATTERN	

FINGERPRINT IDENTIFICATION TEMPLATE

FINGERPRINT IDENTIFICATION CARD			
SUSPECT NAME		DATE	
NOTES			
LEFT HAND		RIGHT HAND	
INDEX PATTERN	MIDDLE PATTERN	INDEX PATTERN	MIDDLE PATTERN
RING PATTERN	LITTLE PATTERN	RING PATTERN	LITTLE PATTERN
THUMB PATTERN		THUMB PATTERN	



DENTAL HYGIENIST



CAREER PROFILE

Dental Hygienist

Dental hygienists examine patients for signs of oral diseases, such as gingivitis, and provide preventive care, including oral hygiene. They also educate patients about oral health. Dental hygienists use many types of tools—including hands, power, and ultrasonic tools—in their work. Dental hygienists talk to patients about ways to keep their teeth and gums healthy.

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Dental Hygienists, at <https://www.bls.gov/ooh/healthcare/dental-hygienists.htm> (visited July 08, 2023).

Career Characteristics

- Empathetic
- Attention to Detail
- Communication Skills
- Problem-Solving Skills
- Optimistic

Similar Careers

- Dental Assistant
- Dentist
- Medical Assistant
- Physician Assistant
- Radiation Therapist

Correlating Degrees / Programs

- Dental Hygiene
- Oral Anatomy
- Applied Sciences

Career Check-In

- Do you enjoy working with the public?
- Can you handle potentially disturbing issues when it comes to oral health?
- Are you passionate about oral health and sharing that information with others?
- Do you have the skills to calm and comfort people during a potentially stressful time?



HANDS-ON ACTIVITY

Dental Hygienist

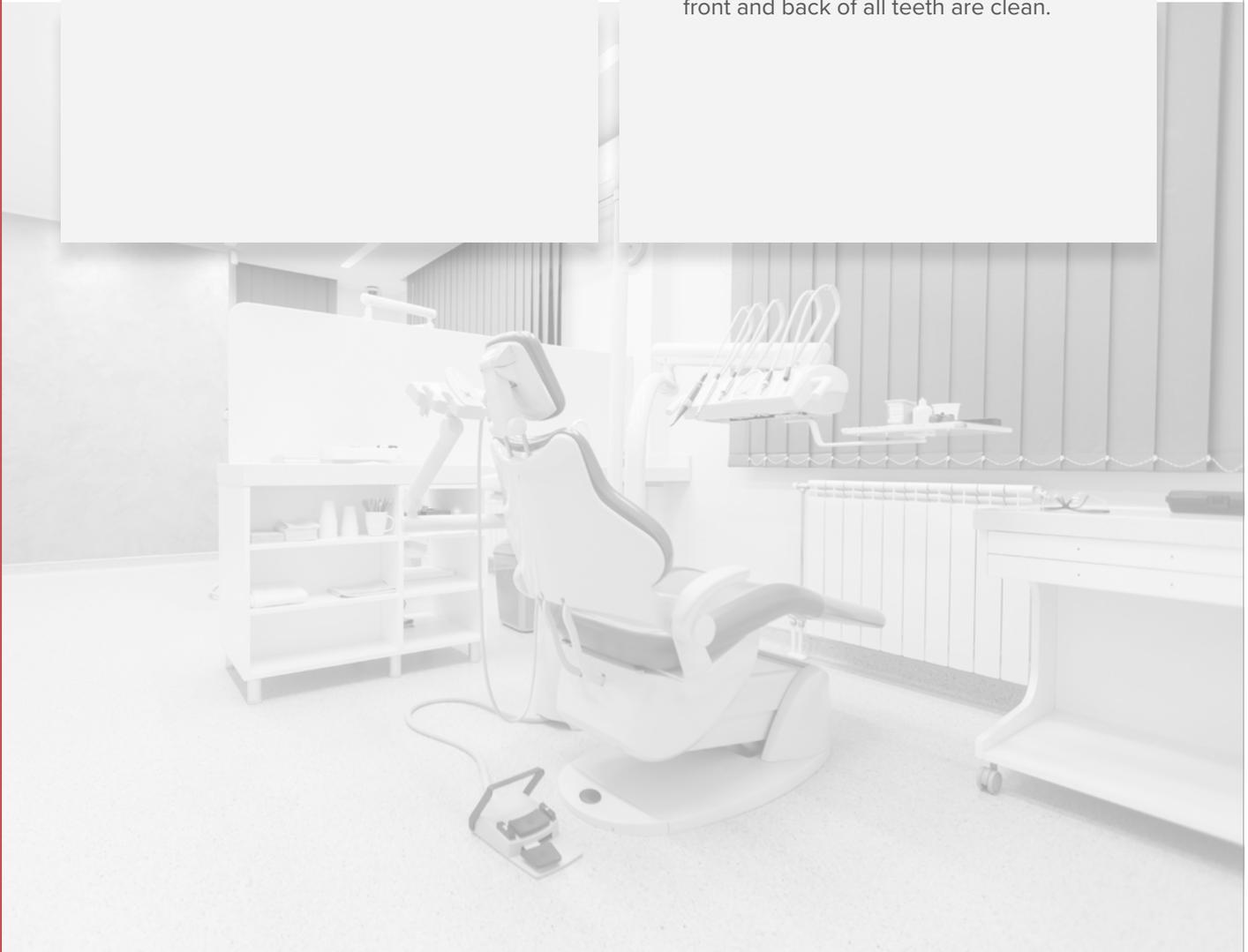
Dental hygienists perform patients' semi-annual teeth cleanings that help the patient maintain their oral health. Hygienists will floss, brush, and scrape plaque from teeth to help keep them healthy and clean.

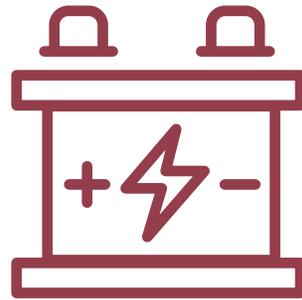
Materials

- Teeth model
- Floss
- Dry erase marker
- Toothbrush
- Tartar scraper

Directions

1. Start by creating your own "plaque" on the tooth model by drawing on the teeth with a dry erase marker.
2. Scrape the plaque between the teeth with the plaque scraper.
3. Finally, use a toothbrush to ensure that the front and back of all teeth are clean.





ELECTRICIAN



CAREER PROFILE

Electrician

Electricians install, maintain, and repair electrical power, communications, lighting, and control systems in homes, businesses, and factories. Electricians read blueprints, which include technical diagrams of electrical systems that show the location of circuits, outlets, and other equipment. They use different types of handtools and power tools, such as conduit benders, to run and protect wiring. Other commonly used tools include screwdrivers, wire strippers, drills, and saws. While troubleshooting, electricians also may use ammeters, voltmeters, thermal scanners, and cable testers to find problems and ensure that components are working properly.

Many electricians work alone, but sometimes they collaborate with others. For example, experienced electricians may work with building engineers and architects to help design electrical systems for new construction. Some electricians may also consult with other construction specialists, such

as elevator installers and heating and air conditioning workers, to help install or maintain electrical or power systems. Electricians employed by large companies are likely to work as part of a crew; they may direct helpers and apprentices to complete jobs.

<https://www.bls.gov/ooh/construction-and-extraction/electricians.htm#tab-2>

Career Characteristics

- Good physical condition
- Independent and collaborative
- Good communication skills
- Problem solving skills
- Time management skills
- Mathematical skills

Similar Careers

- Elevator Installers/Repairers
- Aircraft Mechanics
- Automobile Mechanics
- Heating and Cooling System Mechanics
- Millwrights

Correlating Degrees / Programs

- Electrical Technology
- Electrical Apprenticeship Program

Career Check-In

- Do I have math skills and understanding?
- Do I have the ability to successfully organize, plan, and prioritize my time?
- Do I have the ability to work in different environments? Inside and outside?
- Do I enjoy critical thinking and problem solving?



HANDS-ON ACTIVITY

Electrician

As an electrician, you will spend much of your time reading and analyzing blue prints that display electrical wiring needed for a new building or for updates to an existing building. It is important to take your time when looking through the blue print, make an organized and thought-out plan, and organize necessary materials to execute the blue print correctly. Electricians continuously monitor progress and quality.

Materials

- Blueprint card**
- Copper tape
- 5 mm LED lights
- CR2032 Cell batteries
- Small binder clips

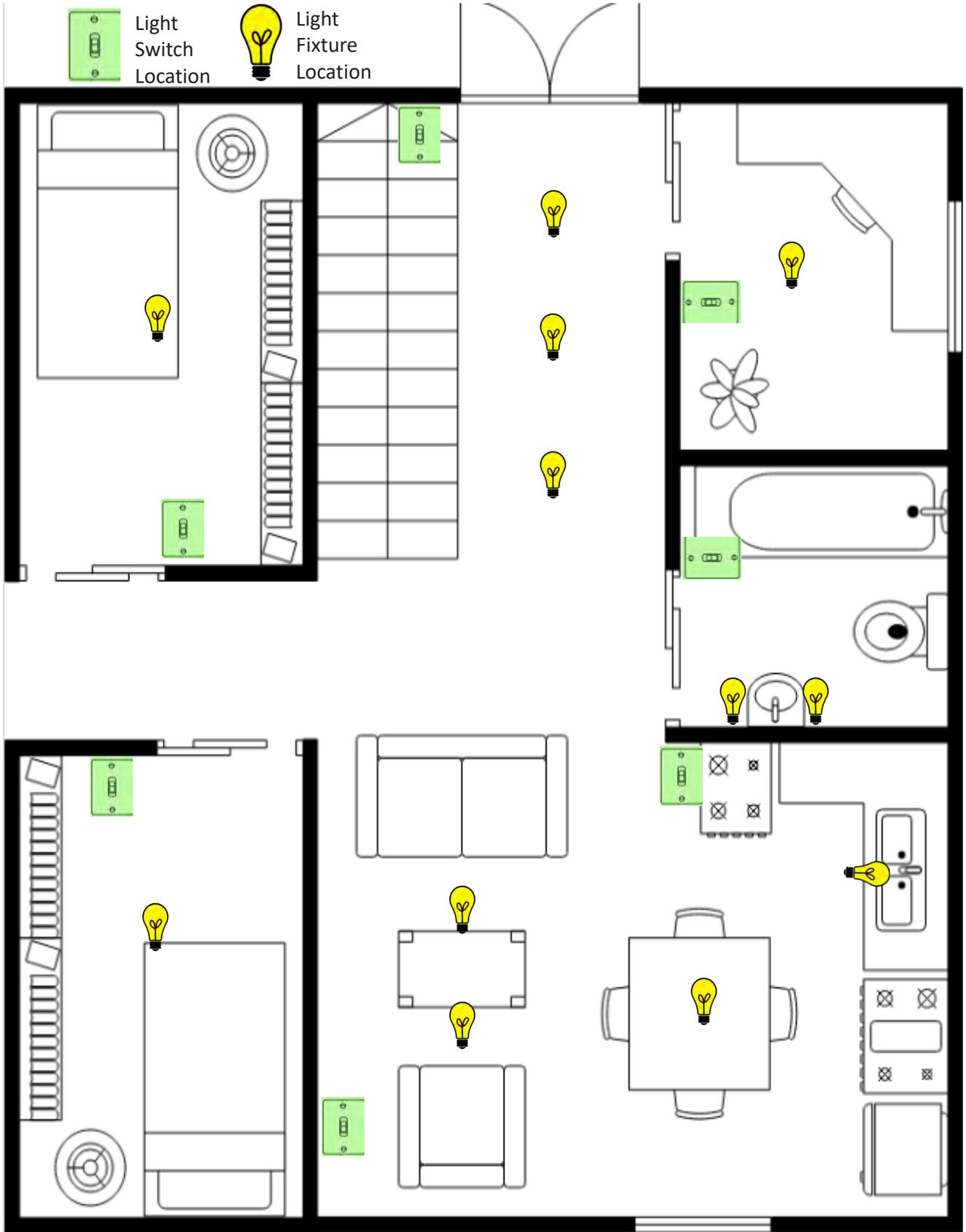
Directions

Use the blue print card and provided materials to complete the wiring plans for your new-build, single level family home. Pay close attention to the number needed lights in each room. When each light is lit, your job is complete.

Hint Homes are wired with parallel circuits, where each light has its own path to the power source.



Electrician





ELEMENTARY SCHOOL TEACHER



CAREER PROFILE

Elementary School Teacher

Elementary school teachers instruct young students in basic subjects in order to prepare them for future schooling. Elementary school teachers work in public and private schools. They generally work during school hours when students are present and use nights and weekends to prepare lessons and grade papers. Most teachers do not work during the summer. Elementary school teachers help students learn and apply important concepts. Many teachers use a hands-on approach to help students understand abstract concepts, solve problems, and develop critical thinking skills.

School Teachers, at <https://www.bls.gov/ooh/education-training-and-library/kindergarten-and-elementary-school-teachers.htm> (visited July 03, 2023).

Career Characteristics

- Love for learning
- Strong communication skills
- Compassionate and empathetic
- Enthusiastic
- Strong moral philosophy

Similar Careers

- Guidance counselor
- School administrator
- Librarian
- Private tutor
- Social worker

Correlating Degrees / Programs

- Elementary Education
- Early Childhood Education
- Teaching Certification

Career Check-In

- Do I enjoy being around school-aged children?
- Do I have patience and understanding for personal situations and circumstances?
- Do I enjoy creating classroom resources, games, and activities?
- Do I have strong organization and executive functioning skills?



HANDS-ON ACTIVITY

Elementary School Teacher

As a teacher, you will interact with many different students with a variety of learning preferences and needs. Although curriculum is typically provided to teachers in their classrooms, there is not always differentiated content that can accommodate a unique learning style or an individualized education plan. It is important to get creative and think outside the box so that your classroom instruction is tailored towards your audience, which is typically a classroom of 20 or more students.

Materials

- Lesson plan*
- Classroom scenarios*
- Student scenarios*
- Differentiation notes page**

Directions

Look over the provided lesson plan. Once you are familiar with the content, choose one classroom scenario and one student need scenario. Use the differentiation notes page to write your accommodations for the given scenarios.

Student Scenario

- Tommy consistently gets distracted by their neighbor in the class, and their table is towards the back of the room.
- Carly has an individualize education plan that accommodates the student to have manipulatives when working on math problems
- Sam did not get very much sleep last night because their new baby brother was crying all night. They are having a hard time focusing
- Sarah's skills are above the rest of the class, and they are getting bored during classroom instruction
- The students had frosted brownies for lunch. They are very hyper and are having a hard time staying on task.



HANDS-ON ACTIVITY

Elementary School Teacher

Teacher Scenario

- Your co-teacher is having a small emergency in their classroom next door and needs you to take her class in the middle of a lesson.
- The principal is coming in for an evaluation in the middle of a lesson that your students are struggling to understand
- 4 of your student desks are broken and you do not have enough seating for all of the students
- The projector stopped working in the middle of your lesson, and you had the rest of the content planned out by using the projector
- You are trying to lead a classroom discussion about the lesson, but the students are sitting silently and not participating.



Elementary School Teacher

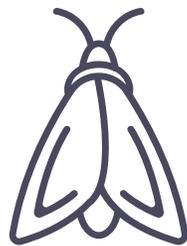
Lesson Plan

<p>Grade/Class: 1st Grade/Ms. Frizzle</p> <p>Duration: 35 minutes</p>	<p>Topic: Word problems with adding and subtraction within 20</p>
<p>Standards: 1.OA.A.1 Using addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</p>	<p>Materials:</p> <ul style="list-style-type: none"> • Word problems examples for “I do” with highlighted key words • Word problem examples for “We do” with highlighted key words • Worksheet for “I do” • Math manipulatives • Blank paper
<p>Student will be able to (SWBAT): The student will be able to read a word problem, extract an addition or subtraction problem, and solve the math problem using math manipulatives.</p>	
<p>Introduction: Good morning students! Today we are going to work on adding and subtraction in a new way. We are going to find math problems inside word problems and then solve those math problems. We will do a few examples together before you work in small groups or independently.</p>	
<p>Task/Activity Summary: <u>I do (teacher)</u>- walk through 2 word problem examples while pointing out key words that will help them find the type of math problem (add/subtract)</p> <p><u>We do (teacher and students)</u>- walk through 3 word problem examples together; pointing out key words that help us find the type of math problem (add/subtract), and solve together</p> <p><u>You do (students)</u>- word problems worksheet</p>	
<p>Assessment: <u>Informal</u>- Teacher will walk around and observe student work as they are working on word problems as a class and independently <u>Formal</u>- Students will be assessed formally through the grading process for the word problem worksheet</p>	

Elementary School Teacher

Lesson Plan Reflection: Differentiation Notes	
Student Challenge:	
Differentiation Method:	
Classroom Challenge:	
Differentiation Method:	
Overall adjustments or changes to lesson plan and teaching strategies:	

Lesson Plan Reflection: Differentiation Notes	
Student Challenge:	
Differentiation Method:	
Classroom Challenge:	
Differentiation Method:	
Overall adjustments or changes to lesson plan and teaching strategies:	



ENTOMOLOGIST



CAREER PROFILE

Entomologist

Entomologists' (insectary managers) work is all about arthropods—that is, invertebrates that include insects. The focus of their work depends on the purpose of the colonies they oversee. For example, George raises insects for use in research and in teaching about arthropods and their habitats. Other insectary managers raise insects for agricultural uses, such as to eat problem insects that damage crops. Still others raise them for healthcare applications, such as creating vaccines for insect-borne diseases.

Duties vary by specialty. But these managers usually have some common tasks related to care, research, and outreach.

<https://www.bls.gov/careeroutlook/2017/youre-a-what/insectary-manager.htm>

Career Characteristics

- Investigative
- Creative and self-expressive
- Enjoy being outside
- Enjoy working with insects of all types
- Organized

Similar Careers

- Biologist
- Ecologist
- Population Ecologist
- Zoologist
- Forensic Entomologist

Correlating Degrees / Programs

- Entomology
- Environmental Science
- Biology

Career Check-In

- Do you enjoy being outside?
- Can you handle and interact with insects professionally?
- Do you have an interest in insects and the way they impact the ecosystems they are a part of?
- Do you enjoy science and biology subjects?



HANDS-ON ACTIVITY

Entomologist

As an entomologist, it is important to be able to identify certain insects in order to determine whether they are invasive, their population is declining, the level of danger to other animals and humans, etc. When people contact the experts with concerns related to bugs, the experts need to be able to make an assessment based on their descriptions and decide what type of action needs to be made.

Materials

- Bug identification sheet*
- Recording sheet**
- Bug sighting clue sheet

Directions

Pick 2-3 “Insect Reporting” prompts. Determine which bug the reporter is describing and what kind of guidance you need to provide back to the reporter.





Entomologist



HONEYBEE

- Excellent pollinator
- Makes honey
- Friendly unless provoked
- Needs our help the most
- Can only sting once



BUMBLEBEE

- Excellent pollinator
- Very friendly unless provoked
- Can sting multiple times
- Will let you pet it most times
- Basically a flying fat panda



CARPENTER BEE

- Lives in your fence/wood,
- Males can't sting, but are the aggressive ones
- Important pollinators
- More of nuisance than threat



HOVERFLY

- Wears striped uniform to scare you
- Can't sting
- Follows you around if it likes you



PAPER WASP

- Look scary, but not much of a threat unless provoked
- Build small nests that look like crumpled paper in corners
- Can sting multiple times
- Pollinators
- No sense of personal space



PAPER WASP

- Also look scary, but won't attack unless threatened
- Build nests that look like crumpled paper
- Resemble yellow jacket
- Pollinators



YELLOW JACKET

- Aggressive
- Wants your food and will fight for it
- Minimal Pollination
- Typically live in the ground
- Can sting multiple times
- Primary focus is insects for food

Entomologist

Pick 2-3 “Insect Reporting” prompts. Determine which bug the reporter is describing and what kind of guidance you need to provide back to the reporter.

Inspecting Report

DATE:

06/22/2023

REPORTER:

Carla

REPORT:

I was working in the back yard and a striped bug was buzzing by my head and wouldn't leave me alone. It has a long, skinny torso and a small tear-drop shaped back end. Should I exterminate the area to avoid more? What kind of bug was this?

BUG IDENTIFICATION:

ACTION STEPS:

Inspecting Report

DATE:

09/20/2023

REPORTER:

Darrel

REPORT:

I was harvesting vegetables from my garden and multiple bee-like bugs were flying all around me. They were big, fat, and fuzzy. I didn't get stung, and I was actually able to pet one of them.

BUG IDENTIFICATION:

ACTION STEPS:

Entomologist

Inspecting Report

DATE:

05/12/2023

REPORTER:

Bobby

REPORT:

I found a weird nest the corner of my shed in the back yard. It looks somewhat like a crumpled piece of paper. There were a few insects buzzing around. They looked like a wasp, but were more of a brownish and black color.

BUG IDENTIFICATION:

ACTION STEPS:

Inspecting Report

DATE:

04/21/2023

REPORTER:

Patricia

REPORT:

There are bee-like insects flying all over my wooden fence. They look like bees but their front half is all yellow and their back half is all black. They don't seem aggressive, but they are aggravating my dogs.

BUG IDENTIFICATION:

ACTION STEPS:

Inspecting Report

DATE:

06/22/2023

REPORTER:

Mike

REPORT:

I was tending to my flower garden, and an insect came around and stung me! It was quite painful, and the insect was dead on the ground after stinging me once. Do I have an infestation problem?

BUG IDENTIFICATION:

ACTION STEPS:

Inspecting Report

DATE:

08/11/2023

REPORTER:

Charles

REPORT:

A big wasp-looking insect was eating a cicada in my driveway. It looked terrifying, but I didn't get too close. I have never seen this kind of insect before. Should I be concerned?

BUG IDENTIFICATION:

ACTION STEPS:



EVENT PLANNER



Event Planner

Meeting, convention, and event planners organize a variety of social and professional events, including weddings, educational conferences, and business conventions. They coordinate every detail of these events, including finances. Before planning a meeting, for example, planners meet with clients to estimate attendance and determine the meeting's purpose. During the event, they handle logistics, such as registering guests and organizing audiovisual equipment. After the meeting, they make sure that all vendors are paid, and they may survey attendees to obtain feedback on the event. Event planners also price and select food and other event features and work with their clients to ensure expectations are met.

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Meeting, Convention, and Event Planners, at <https://www.bls.gov/ooh/business-and-financial/meeting-convention-and-event-planners.htm> (visited July 26, 2023).

Career Characteristics

- Detail Oriented
- Good at Multi-Tasking
- Strong Communication Skills
- Creative and Resourceful

Similar Careers

- Food Service Manager
- Floral Designer
- Fundraiser
- Hospitality Manager

Correlating Degrees / Programs

- Marketing
- Event Management
- Hospitality
- Public Relations
- Entrepreneur

Career Check-In

- Do you like working under pressure?
- Do you enjoy managing large and small details?
- Does creating positive experiences for other people excite you?
- Do you enjoy seeing a vision come to life?



Event Planner

As an event planner, you will be tasked with making decisions for a wide variety of details on any event you plan. These details might include the things that make an event memorable, like the look, feel, and features. However, event planners will also manage the details that make an event function such as the budget, schedule, and registration process.

Directions

You are planning a conference for 200 teachers in your state. The conference will be one day long and will go from 8:00am-4:00pm. You have already secured a venue but need to make some decisions to move forward. On your Venue Pricing Sheet, you will find a list of costs from the venue. The costs that are required are

marked with an *. You must include the required costs in your plan. Work through each of the categories provided and make selections for your event. When you are happy with your plan, estimate the cost per attendee that you will need to charge in order to break even.

VENUE PRICING SHEET		
	Item	Cost Per Item
Venue	Venue Rental (Entire event) *	\$15,000 (1 time)
	Tables/Chairs (10 people) *	\$30 each
	Tablecloth	\$8 each
Food	Breakfast	\$14 each
	Lunch*	\$18 each
	Snack	\$12 each
	Coffee	\$3 each
	Water	\$1 each
	Soda	\$2 each
	Ice Cream Sundae Bar	\$1,200
	Chocolate Fountain	\$800
Speaker or Entertainment	Main Conference Speaker	\$3,000 (1 hour)
	Conference Session Presenter	\$400 (3 hours for up to 100 people)
	DJ	\$1,200 (all day)
	Comedian or Magician	\$800 (1 hour)
	Local student group presentation	\$300 (1 hour)
Technology and Extras	Projector and Screen*	\$800
	Microphone and Speakers*	\$300
	Balloon Arch	\$500
	Stage Banner	\$800
	Spotlight	\$500
	Disco Ball	\$400
	Printed Conference Schedule	\$1

Event Planner

Choose the items you want to include in your event and come up with a total budget.

VENUE PRICING SHEET

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	Stage Banner	\$800
	Spotlight	\$500
	Disco Ball	\$400
	Printed Conference Schedule	\$1

How much would you have to charge each participant to break even?

If you had to reduce the price, what items would you get rid of first?

If you get rid of those items, what would your cost per participant be?

TOTAL EVENT BUDGET

Event Brainstorm

Describe your event. How do you want it to look and feel?

What features do you think your participants would enjoy?

Is there anything, not on the venue pricing list, that you would like to include?



EXECUTIVE CHEF



CAREER PROFILE

Executive Chef

Chefs and head cooks use a variety of kitchen and cooking equipment, including step-in coolers, high-quality knives, meat slicers, and grinders. They also have access to large quantities of meats, spices, and produce. Some chefs use scheduling and purchasing software to help them in their administrative tasks.

Chefs who run their own restaurant or catering business are often busy with kitchen and office work. Some chefs use social media to promote their business by advertising new menu items or addressing patrons' reviews.

The following are examples of types of chefs and head cooks: Executive chefs, head cooks, and chefs de cuisine are responsible primarily for overseeing the operation of a kitchen. They coordinate the work of sous chefs and other cooks, who prepare most of

the meals. Executive chefs also have many duties beyond the kitchen. They design the menu, review food and beverage purchases, and often train cooks and other food preparation workers. Some executive chefs primarily handle administrative tasks and may spend less time in the kitchen.

Sous chefs are a kitchen's second-in-command. They supervise the restaurant's cooks, prepare meals, and report results to the head chefs. In the absence of the head chef, sous chefs run the kitchen.

<https://www.bls.gov/ooh/food-preparation-and-serving/chefs-and-head-cooks.htm#tab-2>

Career Characteristics

- Passionate about food
- Organized and effective planning
- Good communication skills
- Leadership skills
- Follows cooking trends
- Applies best practices
- Problem solving skills

Similar Careers

- Culinary director
- Catering chef
- Pastry Chef
- Food service director
- Kitchen supervisor

Correlating Degrees / Programs

- Culinary Arts
- Food and Beverage Management
- Food Service Management
- Baking and Pastry Arts
- Hotel and Restaurant Management
- Nutrition
- Culinary Nutrition

Career Check-In

- Do I enjoy cooking for myself, friends, and family?
- Do I have multi-tasking and task delegating abilities?
- Am I creative when it comes to food and mixing ingredients?
- Am I a good leader?



Executive Chef

Best practices in the kitchen include a wide range of abilities, including food preparation, attention to detail, knowledge of nutrition, and creativity. Although it may seem minuscule, knife and chopping skills are a big component when it comes to chef skills and best practices. A detailed chop can make all the difference in the appearance of a plate, or even change the essence of a meal.

Materials

- Chopping utensils*
- Plastic kitchen knives
- Non-drying modeling dough
- Knife cuts diagram

Directions

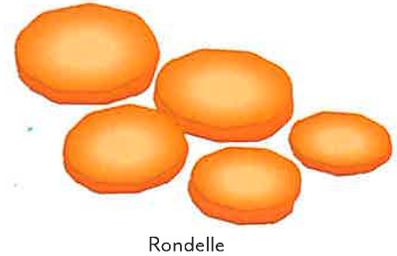
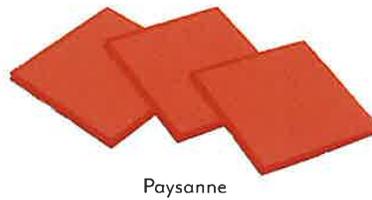
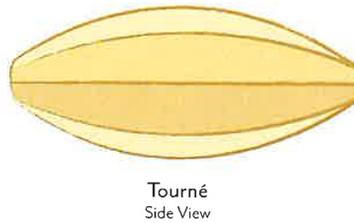
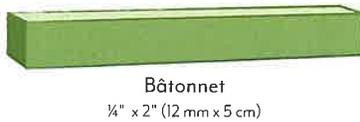
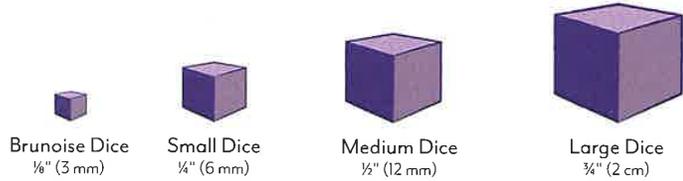
Choose 3 out of the provided cutting styles and chop your vegetables accordingly. Show your work to someone nearby to show off your newly developed chopping skills!



Executive Chef



Culinary Knife Cuts





FASHION DESIGNER



CAREER PROFILE

Fashion Designer

Larger apparel companies typically employ a team of designers headed by a creative director. Some fashion designers specialize in clothing, footwear, or accessory design; others create designs in all three fashion categories.

For some fashion designers, the first step in creating a new design is researching current fashion and making predictions about future trends, such as by reading reports published by fashion industry trade groups. Other fashion designers create collections using a variety of inspirations, including art media, their surroundings, or cultures they have experienced and places they have visited. After they have an initial idea, fashion designers try out various fabrics and produce a prototype, often with less expensive material than will be used in the final product. They work with models to see how the design will look and adjust the designs as needed.

<https://www.bls.gov/ooh/arts-and-design/fashion-designers.htm#tab-2>

Career Characteristics

- Creative and artistic
- Organized and thoughtful
- Fashion forward
- Good communication skills
- Negotiation skills
- Confident

Similar Careers

- Personal stylist
- Boutique owner
- Fashion buyer
- Beauty business owner
- Blogger/Journalist/Writer

Correlating Degrees / Programs

- Fashion Design
- Fine Arts
- Entrepreneur

Career Check-In

- Do I enjoy styling outfits for myself, family and/or friends?
- Do I enjoy sewing, knitting, creating fashion pieces?
- Am I creative or do I have artistic abilities?
- Do I have an interest in fashion and fashion trends?

HANDS-ON ACTIVITY



Fashion Designer

As a fashion designer, there is opportunity to work with clients who may request unique, individualized pieces to be designed. Working with clients requires strong communication skills, time management, and creativity.

Materials

- Client request cards*
- Design activity sheet**
- Pencil/Colored pencils
- Fabric swatches (optional)

Directions

Select one client request. Using your own unique flair and the client's specific details in their request, create an ensemble for them. Tap into the important skills and qualities of a fashion designer when completing this task.



Fasion Designer

CLIENT REQUEST

Occasion: Formal Gala

Description: I have to attend a gala ball with my husband, Brad Pitt. We have chosen to follow a blue color palette for this event. I prefer a floor length gown, with some type of floral accents. My sciatica is acting up, so no heals please.

CLIENT REQUEST

Occasion: Fashion Show Catwalk

Description: I am walking in a community fashion show, and we want to spotlight local designers like you. Please design a full outfit, head to toe, that I can walk down the runway in. I am one of only 3 men who plan to walk in this show, so I want my outfit to be a show stopper!

CLIENT REQUEST

Occasion: Prom

Description: My little Betty June is going to her first prom!! She wants a lacy, form fitting dress but would love to see her in a large ball gown. Her favorite colors are green and orange. I don't think the colors should be mixed. I would like to see a design of what she is looking for, as well as a design of what I'd like to see. We can choose between them when you're finished with the designing process.

CLIENT REQUEST

Occasion: Extravagant Birthday

Description: It's my birthday, and I'll cry if I want to! Next week I am turning 50! I am throwing the most fabulous party with my most fabulous friends. I am looking for an outfit that brings the WOW factor. I want everyone to be absolutely shocked with excitement at my birthday outfit. My only request is LOTS of sparkle; otherwise, you can take whatever creative direction you are comfortable with.

CLIENT REQUEST

Occasion: Themed Wedding

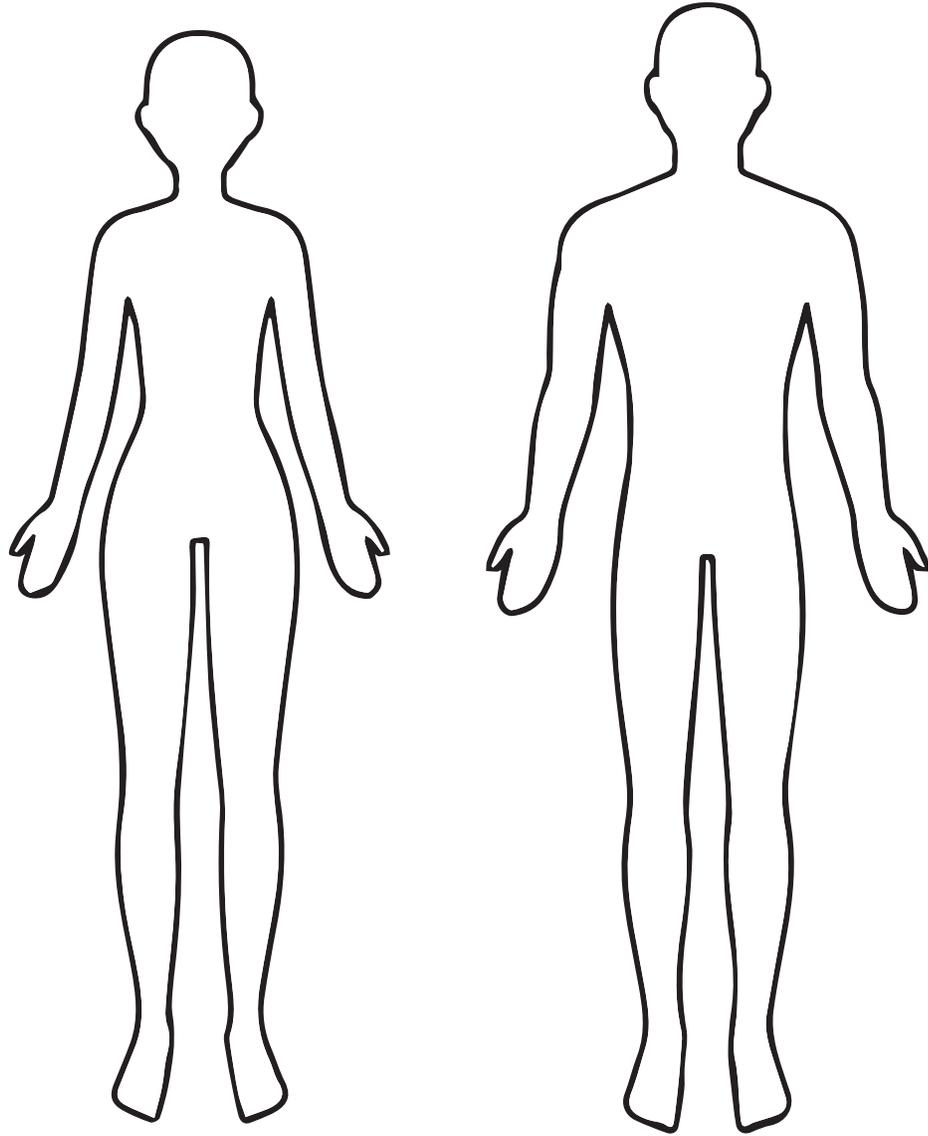
Description: My husband and I are having a Halloween themed wedding. Everything is going to be black and spooky! Please make me a non traditional black wedding gown. I do not like poof. I am looking for something like Morticia from the Addam's Family.

CLIENT REQUEST

Occasion: Music Festival

Description: Me and my buddies are going to the Watershed Country Music Festival. We love country music just as much as we love spinning brodies in the local Walmart parking lot. I need a super country get up to make me look yee haw fantastic for the ladies. I've got he boots, but I need you to design everything else. Heads up I'm allergic to polyester.

Fasion Designer



COLOR PALETTE

Five empty square boxes stacked vertically, used for selecting a color palette.

Five empty square boxes stacked vertically, used for selecting a color palette.

FABRIC SWATCH

Four empty square boxes arranged in a 2x2 grid, used for selecting fabric swatches for the front view.

Four empty square boxes arranged in a 2x2 grid, used for selecting fabric swatches for the back view.



FLORAL DESIGNER



CAREER PROFILE

Floral Designer

Floral designers, also called florists, arrange live, dried, and silk flowers and greenery to make decorative displays. They also help customers flowers and containers, ribbons, and other accessories. Floral designers may create a single arrangement for a specific purpose or multiple displays for special occasions, such as weddings or funerals. They use artistry and their knowledge of different types of blooms to choose appropriate lowers or plans for each occasion. Floral designers need to know when flowers and plants are in season and available. Floral designers also need to know the properties o flowers and other plants. Some flowers, such as carnations, can last for many hours outside of water. Other flowers are delicate and wilt more quickly. Some plants are poisonous to certain types of animals. For example, lilies are toxic to cats.

<https://www.bls.gov/ooh/arts-and-design/floral-designers.htm>

Career Characteristics

- Attention to detail
- Artistic abilities
- Knowledge of flowers and care process
- Creative and confident
- Organizational skills

Similar Careers

- Craft and Fine Artist
- Fashion Designer
- Graphic Designer
- Interior Designer

Correlating Degrees / Programs

- Floral Design
- Floral Management
- Business
- General Education Degree (GED)

Career Check-In

- Do I enjoy flowers and creating with them?
- Do I have artistic abilities and natural creativity?
- Do I find joy in creating for others' special events?
- Do I have attention to detail?



HANDS-ON ACTIVITY

Floral Designer

A floral designer will work with many different kinds of people for many different kinds of events. Events include baby showers, weddings, bridal showers, birthdays, funerals, holiday parties, etc. Each client request will pose a unique perspective into what the client envisions for their floral arrangement, boutonniere, or corsage. It is important to keep an open mind to the client's specific details requested while also taking creative liberties to ensure satisfaction from your client.

Materials

- Client request card
- Styrofoam balls or blocks
- 4" potting cups
- Assortment of artificial foliage
- Assortment of artificial flowers
- Ribbon
- Scissors/pliers

Directions

Pick a client request card. Follow the client's request so that you have a satisfied and returning customer. Be sure to pay close attention to any unique directions in the request. Your client may leave you to implement your own creative designs or they may be very specific about their vision. Allow yourself to get creative!



Floral Designer

CLIENT REQUEST

Occasion: Adult's Birthday
Description: My wife is turning 29 (again) and I want to surprise her with flowers at work. She loves yellow and white color combinations, and she enjoys foilage details. No carnations, please!

CLIENT REQUEST

Occasion: Retirement
Description: My beloved boss is retiring, and we want to make her feel special. She has always been a ray of sunshine in our office. I'd like to replicate that in the floral arrangement with bright and vibrant flower pairings.

CLIENT REQUEST

Occasion: Wedding
Description: I'm getting married!!! We are looking for centerpieces for all of our guest tables, and it HAS to match the color scheme we have selected. We are going with earth tones like green, pale orange and reds, brown, etc. Lots of foilage is a plus!

CLIENT REQUEST

Occasion: Child's Birthday
Description: My darling Patricia is turning 13 this week! She absolutely loves being surprised with flowers at school colors as best as you can. Her school colors are red and gold.

CLIENT REQUEST

Occasion: Pet's Funeral
Description: My best friend's dog, Puppy McSnouzer, passed away and I want to give my condolences with a flower arrangement. Puppy McSnouzer loved running through fields of tulips when we would visit them in Oregon. If you can shape it like a dog bone or tennis ball, that would be awesome!

CLIENT REQUEST

Occasion: Wedding
Description: My son and his new wife just had twins, Salsa Louise and Queso Michael! We are so excited to be grandparents! We are looking for a floral arrangement perfectly split down the middle, one side dedicated to each grandchild.



GEOLOGICAL ENGINEER



CAREER PROFILE

Geological Engineer

Geological engineers search for mineral deposits and evaluate possible sites. Once a site is identified, they plan how the metals or minerals will be extracted in efficient and environmentally sound ways.

Mining engineers often specialize in one particular mineral or metal, such as coal or gold. They typically design and develop mines and determine the best way to extract metal or minerals to get the most out of deposits.

Some mining engineers work with geoscientists and metallurgical engineers to find and evaluate ore deposits. Other mining engineers develop new equipment or direct mineral-processing operations to separate minerals from dirt, rock, and other materials.

<https://www.bls.gov/ooh/architecture-and-engineering/mining-and-geological-engineers.htm#tab-2>

Career Characteristics

- Analyze and interpret data
- Team player
- Good communication skills
- Problem solving skills
- Enjoy working outdoors
- Adapt to different environments

Similar Careers

- Geoscientist
- Hydrogeologist
- Environmental Scientist
- Exploration geologist
- Environmental protection specialist

Correlating Degrees / Programs

- Geology
- Engineering
- Environmental Engineering
- Civil Engineering
- Mine Engineering

Career Check-In

- Do I work well under pressure?
- Do I have an interest in science, geology, or the study of earth and its history?
- Do I have the ability to work in different environments? Inside and outside?
- Do I enjoy critical thinking and problem solving?



HANDS-ON ACTIVITY

Geological Engineer

As a geological engineer, it is your responsibility to find and explore potential dig sites. It is also part of your responsibility to decipher whether or not that site is going to provide more profit than it would cost to begin digging at the time. Geologists typically collect samples at potential dig sites, analyze the samples in a lab and determine the site's potential for mining. This process is called prospecting.

Materials

- Napkins or paper plates
- Chocolate chip cookies (not soft)
- Toothpicks, paperclips, forks, straws
- Return on Investment (ROI) sheet**
- Excavation site worksheet**

Directions

You are going site prospecting! Pick a dig site (chocolate chip cookie) and analyze whether your “dig site” in addition to your tool of choice is providing some form of profit for your company. Use the ‘return on investment’ sheet to help you decipher the profitability of your dig site and operational expenses.



Geological Engineer

Citation: Brooks, H., Martin, A., Gaddis, D., Marceau, S., & Trifunovic, L. (2022, June 17). *Cookie mining: Ore production & cost-benefit analysis - activity*. TeachEngineering.org. <https://www.teachengineering.org/activities/view/ncs-2031-cookie-mining-cost-benefit-analysis-analysis-profit>

Excavation Site

Cookie Mining Reference Chart	
Start-Up Cost	
Land Cost	<ul style="list-style-type: none"> • 1 cookie: \$1,200 • Land area: squares excavation location (partial squares = 1 full square)
Tool Cost	<ul style="list-style-type: none"> • Toothpick = \$300 • Paperclip = \$500 • Fork = \$150 • Straw = \$100
After Mining Time Ends	
Profit from Chocolate Chip Sale	<ul style="list-style-type: none"> • Chips that fall off excavation location = "lost" • Whole, clean chip = \$500 • "dirty" chips = chips that have cookie remains on them = \$200 • Partial chip (must combine to equal amount of one full chip) = \$100
Labor Cost (Time)	<ul style="list-style-type: none"> • Ongoing mining operation = \$50 a minute
Land Reclamation Cost	<ul style="list-style-type: none"> • Original land (cookie) = \$30 per square • Additional land (squares) affected during mining process = \$30

Geological Engineer

Citation: Brooks, H., Martin, A., Gaddis, D., Marceau, S., & Trifunovic, L. (2022, June 17). *Cookie mining: Ore production & cost-benefit analysis - activity*. TeachEngineering.org. <https://www.teachengineering.org/activities/view/ncs-2031-cookie-mining-cost-benefit-analysis-analysis-profit>

Return on Investment Worksheet

Mining Expenses

Land Cost & Area

Cost of Cookie = \$ _____

Initial size of cookie (in squares) = \$ _____

Final size of cookies (in squares) = \$ _____

Mining Equipment Cost

Paperclip _____ x \$500 = \$ _____

Toothpick _____ x \$300 = \$ _____

Fork _____ x \$150 = \$ _____

Straw _____ x \$100 = \$ _____

Labor Cost (Time)

Minutes spent mining _____ x \$50 = \$ _____

Subtotal: Cost of Mining Operations

Cost of land/cookie + mining equipment costs + labor/time cost = \$ _____

Reclamation Cost (land impacted by mining)

Final area taken up by cookie = _____ squares x \$30 = \$ _____

Mining Revenue (from sale of chocolate ore)

Number of whole chips removed = _____ x \$500 = \$ _____

Number of "dirty" chips removed = _____ x \$200 = \$ _____

Number of grouped partial chips removed = _____ x \$100 = \$ _____

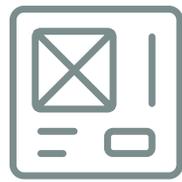
*To sell partial chips, amass the partial chips into groupings that contain at least the amount of chocolate as an intact whole chip

Subtotal: Total Mining Revenue

Income from whole chips + dirty chips + grouped partial chips = \$ _____

PROFIT (Net Revenue)

Mining Revenue – Cost of Mining operations – reclamation cost = \$ _____



GRAPHIC DESIGNER



CAREER PROFILE

Graphic Designer

Graphic designers, also referred to as graphic artists or communication designers, combine art and technology to communicate ideas through images and the layout of websites and printed pages. They may use a variety of design elements to achieve artistic or decorative effects.

Graphic designers work with both text and images. They often select the type, font, size, color, and line length of headlines, headings, and text. Graphic designers also decide how images and text will go together in print or on a webpage, including how much space each will have. When using text in layouts, graphic designers collaborate with writers, who choose the words and decide whether the words will be put into paragraphs, lists, or tables. Through the use of images, text, and color, graphic designers may transform data into visual graphics and diagrams to make complex ideas more accessible.

Graphic design is important to market and sell products, and it is a critical component of brochures and logos. Therefore, graphic designers often work closely with people in advertising and promotions, public relations, and marketing.

Frequently, designers specialize in a particular category or type of client. For example, some designers create the graphics used on product packaging, and others may work on the visual designs used on book jackets.

Graphic designers need to keep up to date with software and computer technologies in order to remain competitive.

<https://www.bls.gov/ooh/arts-and-design/graphic-designers.htm#tab-2>

Career Characteristics

- Able to consider ideas from different perspectives
- Creative and Artistic
- Good at communicating ideas verbally and visually
- Comfortable with computers and technology
- Open to receiving feedback from others

Similar Careers

- Advertising Director
- Communications Director
- Illustrator/Animator
- Technical Writer

Correlating Degrees / Programs

- Graphic Design
- Industrial Design
- Web Development
- Digital Arts

Career Check-In

- Do I enjoy creating visual art and designs?
- Do I have the ability to use a computer, learn design software, and meet deadlines?
- Am I good at thinking from the perspective of other people?
- Do I like working alone on projects?



HANDS-ON ACTIVITY

Graphic Designer

As a graphic designer, a client might come to you to design a logo for their business. A logo is a really important as it is the visual representation of the business and will likely be used for many years. To design an effective logo, a graphic designer must listen to the values of the business and the message the business owner wants to convey to potential clients. Sometimes, graphic designers will be asked to create something with very little guidance. Colors, shapes, images, and even text can hold different meanings to different people and should all be considered in the logo design.

Materials

- Client requests cards*
- Small bowl or bucket
- Logo design worksheet**
- Colored pencils

Directions

You will be working to design a logo for a client. Draw a client request card from a bucket, complete the client brainstorm, and design a logo that you think would work well for the company. When you are done with your challenge, put the client request card back in the bucket.

Graphic Designer Client Request Cards

CLIENT REQUEST Jerry owns "Jerry's Autos", an auto dealership. He sells used cars and it is very important to him that his company's logo conveys trust and reliability.	CLIENT REQUEST Jerry owns "Jerry's Autos", an auto dealership. He sells used cars and it is very important to him that his company's logo conveys trust and reliability.
CLIENT REQUEST Mike owns "Baguette's Bakery". His business has been making bread in the same small community for over 30 years. Mike wants his logo to highlight his delicious bread and have a hometown feel.	CLIENT REQUEST Mike owns "Baguette's Bakery". His business has been making bread in the same small community for over 30 years. Mike wants his logo to highlight his delicious bread and have a hometown feel.



Graphic Designer

CLIENT REQUEST

Jeff owns "Extreme Auto Shop". His shop specializes in customizing cars. He wants his logo to be wild and fun.

CLIENT REQUEST

Marie owns "Pampered Pooch Pet Spa". She wants her logo to tell customers that she offers an upscale spa experience for their dogs.

CLIENT REQUEST

Jorge owns "Ortiz Law Firm". He needs a logo that shows potential Clients he is a reputable attorney.

CLIENT REQUEST

Mario owns "Mario's Pizzeria". He is looking for a logo that shows potential customers he sells delicious pizza and celebrates his family's Italian heritage.

CLIENT REQUEST

Martin owns "Magic World", a store that sells magic supplies to magicians. He wants his logo to convey mystery and magic to potential customers.

CLIENT REQUEST

Cliff owns a gym called "Flex". He wants his logo to show that his gym is serious about fitness.

CLIENT REQUEST

Jeff owns "Extreme Auto Shop". His shop specializes in customizing cars. He wants his logo to be wild and fun.

CLIENT REQUEST

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CLIENT REQUEST

Cliff owns a gym called "Flex". He wants his logo to show that his gym is serious about fitness.

Graphic Designer

Client Brainstorm

BUSINESS NAME:

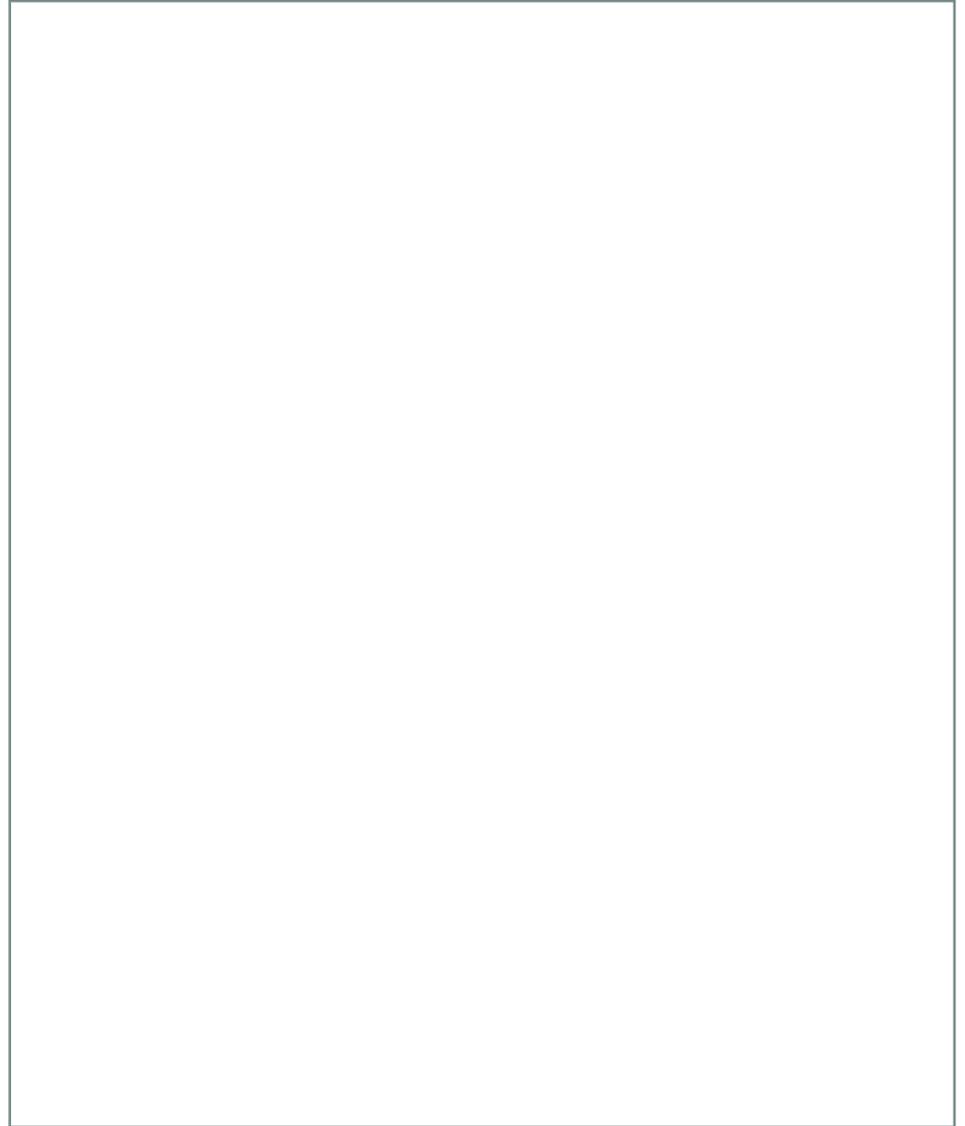
CLIENT REQUESTS:

CREATIVE BRIEF:

What colors do you think would work best for the logo?

What images would work well for the logo?

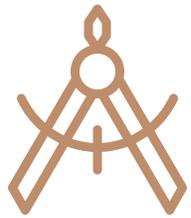
Logo Mockup



Logo Review

Do you think your client will like the logo?
Why/Why not?

What do you think this logo says about the company
it is designed for?



MECHANICAL ENGINEER



CAREER PROFILE

Mechanical Engineer

Mechanical engineering is one of the broadest engineering fields. Mechanical engineers design and oversee the manufacture of many products ranging from medical devices to new batteries.

Mechanical engineers design power-producing machines, such as electric generators, internal combustion engines, and steam and gas turbines, as well as power-using machines, such as refrigeration and air-conditioning systems.

Mechanical engineers design other machines inside buildings, such as elevators and escalators. They also design material-handling systems, such as conveyor systems and automated transfer stations.

Like other engineers, mechanical engineers use computers extensively. Mechanical engineers are routinely responsible for the integration of sensors, controllers, and machinery. Computer technology helps mechanical engineers create and analyze designs, run simulations and test how a machine is likely to work, interact with connected systems, and generate specifications for parts.

<https://www.bls.gov/ooh/architecture-and-engineering/mechanical-engineers.htm#tab-2>

Career Characteristics

- Creative problem-solving skills
- Mechanical skills
- Math knowledge and skill
- Clear communication abilities
- Collaborative with partners

Similar Careers

- Construction Engineer
- HVAC Engineer
- Water Engineer
- Mining Engineer
- Materials Engineer

Correlating Degrees / Programs

- Mechanical Engineering
- Mechanical Engineering Technology
- Energy Science
- Mechatronics

Career Check-In

- Do I enjoy the innovation process?
- Do I have patience to withstand a potentially lengthy process to your end goal?
- Do I enjoy learning about machines?
- Do I have fun, innovative ideas for new machinery?



Mechanical Engineer

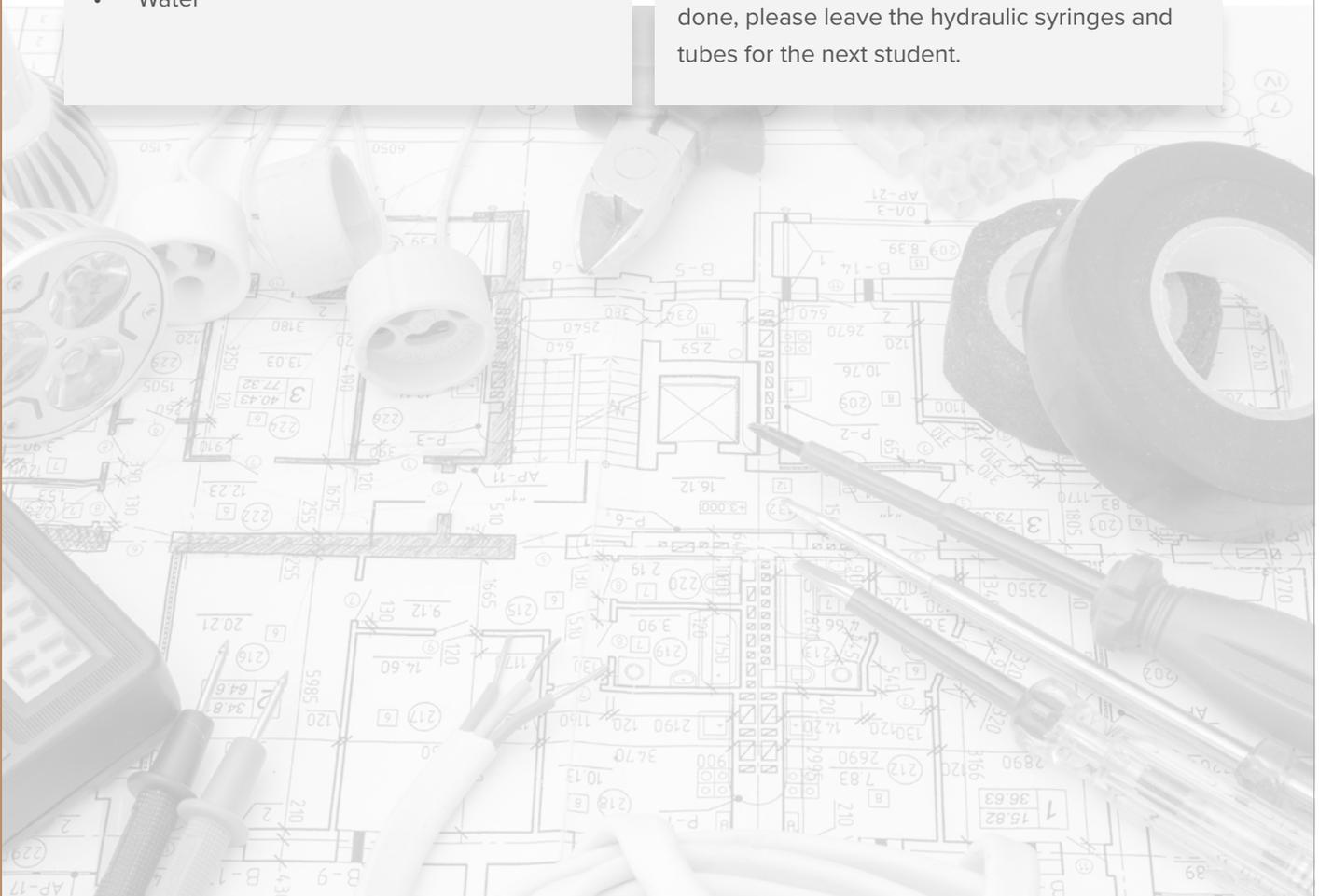
Mechanical engineers use their innovative thinking and mechanical skill set to design new machines based on consumer wants and needs. Mechanical engineering requires a lot of problem solving as well. When it comes to working through a new design plan, mechanical engineers need to work through and potential hurdles and find the best way to move forward with the new machine design.

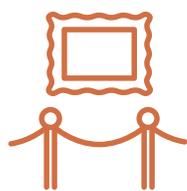
Materials

- Popsicle sticks with 3 holes
- Masking Tape
- Wooden skewers
- Hydraulic syringe with tube
- Cardboard squares and metal brads
- Water

Directions

Your team has pitched a new elevator design that will help keep elevators working in the result of a power outage. The elevator design is powered using hydraulics (water). Your job is to create a hydraulic elevator prototype to present to your supervisor. Use the provided materials to complete the job. When you are done, please leave the hydraulic syringes and tubes for the next student.





MUSEUM CURATOR



Museum Curator

Archivists preserve important or historically significant documents and records. They coordinate educational and public outreach programs, such as tours, lectures, and classes. They also may work with researchers on topics and items relevant to their collections.

Some archivists specialize in a particular era of history so that they can have a better understanding of the records from that period. Archivists typically work with specific forms of documentation, such as manuscripts, electronic records, websites, photographs, maps, motion pictures, or sound recordings.

Curators, who also may be museum directors, lead the acquisition, storage, and exhibition of collections. They negotiate and authorize the purchase, sale, exchange, and loan of collections. They also may research, authenticate, evaluate, and categorize the items in a collection.

Curators often perform administrative tasks and help manage their institution's research projects and related educational programs. They may represent their institution in the media, at public events, and at professional conferences.

In large institutions, some curators may specialize in a particular field, such as botany, art, or history. For example, a large natural history museum might employ separate curators for its collections of birds, fish, and mammals.

In small institutions, one curator may be responsible for many tasks, from taking care of collections to directing the affairs of the museum.

Museum technicians, who may be known as preparators, registrars, or collections specialists, care for and safeguard objects in museum collections and exhibitions.

Preparators focus on readying items in museum collections for display or storage. For example, they might make frames and mats for artwork or fit mounts to support objects. They also help to create exhibits, such as by building exhibit cases, installing items, and ensuring proper lighting. And they transport items and prepare them for shipping.

<https://www.bls.gov/ooh/education-training-and-library/curators-museum-technicians-and-conservators.htm#tab-2>

Career Characteristics

- Organizational skills
- Knowledge of public relations
- Passion for history
- Eye for aesthetic design
- Customer service skills

Similar Careers

- Tour guide
- Museum conservator
- Archivist
- Historian
- History teacher

Correlating Degrees / Programs

- Museum Studies
- Archaeology
- Historical Studies

Career Check-In

- Do I enjoy learning new things and seeking new information?
- Do I enjoy working with the public? Students and adults?
- Do I enjoy organizing and arranging to create the perfect aesthetic?
- Do I enjoy community outreach?



Museum Curator

Museum curators are able to take some creative liberties, but often times they are required to abide by the museum's overall vision for their new and existing collections. Curators build and expand their collections based on many factors, including the museum's request, the audience that will be viewing the collection, and factual evidence that supports the theme and display of the collection.

Materials

- Museum collection description*
- Piece of paper
- Pen/pencil

Directions

Based on your museum collection description, create a unique collection related to your exhibit topic. Be sure to include the "must-have" items described on your collection card.



Museum Curator

CLIENT REQUEST

Collection: Your Home Town

Description: Please design a collection for your local museum that includes your town history, artifacts, and details about the items you have chosen. Your audience is your local community.

MUST HAVES

- Labels for each object and artifact
- Explanatory text for history details
- Avoid direct sunlight on exhibit
- Avoid items less than 35 inches
- Avoid items more than 78 inches

CLIENT REQUEST

Collection: Your Home Town

Description: Please design a collection for your local museum that includes your town history, artifacts, and details about the items you have chosen. Your audience is your local community.

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NUTRITIONIST



CAREER PROFILE

Nutritionist

Dietitians and nutritionists evaluate the health of their clients through nutrition assessment and diagnostic laboratory testing. Based on their findings, dietitians and nutritionists advise clients on behavior modifications and intervention plans, including which foods to eat—and which to avoid—to improve their health.

Dietitians and nutritionists help prevent or support treatment of health conditions such as heart disease, autoimmune disease, and obesity. Many dietitians and nutritionists provide personalized information for individuals. For example, a dietitian or nutritionist might teach a client with diabetes how to plan meals to improve and balance the person's blood sugar. Other dietitians and nutritionists work with groups of people who have similar needs. For example, a dietitian or nutritionist might plan a diet with healthy fat and limited

sugar to help clients who are at risk for heart disease. Dietitians and nutritionists may work as part of a team with other healthcare staff to coordinate client care.

Dietitians and nutritionists who are self-employed may meet with clients, or they may work as consultants for a variety of organizations. Self-employed workers may need to spend time on marketing and other business-related tasks, such as scheduling appointments and keeping records.

<https://www.bls.gov/ooh/healthcare/dietitians-and-nutritionists.htm#tab-2>

Career Characteristics

- Compassionate
- Organizational skills
- Current with food and nutrition research
- Problem solving skills
- Analytical skills

Similar Careers

- Registered Dietician
- Health Coach
- Nutrition Educator
- Food Scientist
- Holistic Wellness Coach

Correlating Degrees / Programs

- Nutrition
- Public Health
- Food Science

Career Check-In

- Am I passionate about helping others achieve their health goals?
- Do I enjoy maintaining general health and wellness for myself?
- Do I have compassion and dedication to supporting clients?
- Do I enjoy research and planning related to health and wellness?



Nutritionist

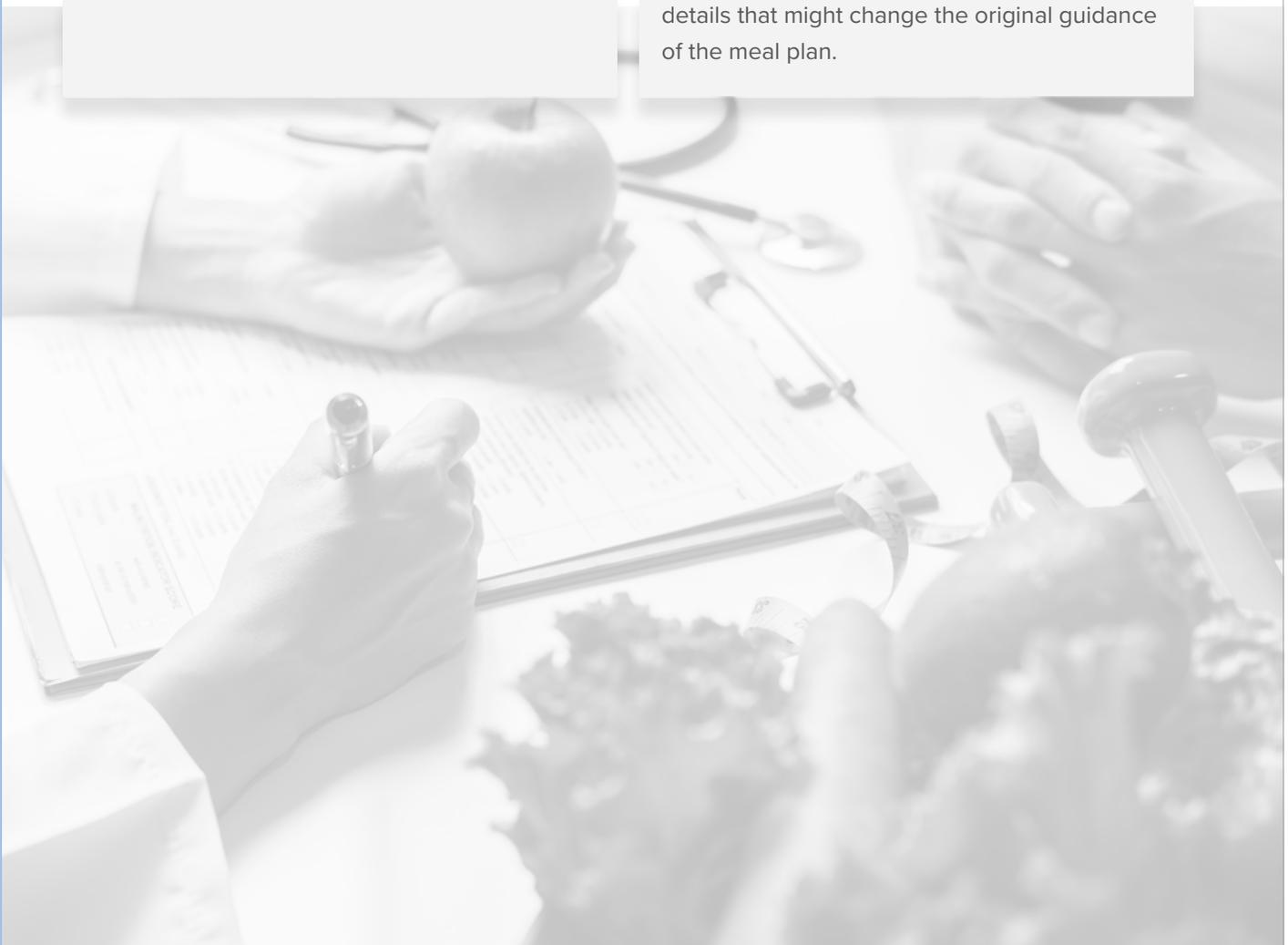
Nutritionist can help clients reach their health-related goals with additional support by offering intentional meal plans. Meal plans are best when based on a client's personal health conditions and meal preferences. Nutritionists must consider a client's age, overall wellness of their body, their level of activeness or inactiveness, and any potential allergies.

Materials

- Food pyramid printout*
- Client profiles*
- Meal plan template printout**
- Pen/Pencil

Directions

Choose a client profile. Using the client description and the food pyramid, design a week worth of meals for your client. Include breakfast, lunch, dinner, and at least 1 snack. Make sure to pay attention to any important details that might change the original guidance of the meal plan.



Nutritionist

CLIENT PROFILE

Susy is a very active 10-year-old, plays soccer and loves to dance. Suzy needs 4 servings from the whole meal cereals and breads, potatoes, pasta, and rice shelf. As a child between 9 and 18 years, she needs 5 servings from the milk, cheese, and yogurt shelf.

CLIENT PROFILE

Michael is a 52-year-old office worker who is overweight. He needs 4 servings from the whole meal cereals and breads, potatoes, pasta, and rice shelf. When he starts losing weight, he could have 5 servings and should aim to lose 1-2lbs a week.

CLIENT PROFILE

Tom is 67 years old and has recently retired. He has started his retirement plan of walking for at least 30 minutes 5 days a week and he needs to lose the weight he's put on over the last 10 years. He needs 4 servings from the whole meal cereals and breads, potatoes, pasta and rice shelf.

CLIENT PROFILE

Linda, aged 30, is a stay-at-home mom who is breastfeeding her 6-month-old baby. Since it's possible she could become pregnant, she is taking a folic acid supplement. Linda needs 5 servings from the whole meal cereals and breads, potatoes, pasta and rice shelf.

CLIENT PROFILE

Mary, aged 70, enjoys looking after her 2 young grandchildren, so she is kept active. Mary needs 5 servings from the whole meal cereals and breads, potatoes, pasta and rice shelf.

CLIENT PROFILE

Matthew is a 21-year-old student living away from home. Matthew needs 7 servings from the whole meal cereals and breads, potatoes, pasta and rice shelf.

CLIENT PROFILE

Jacob is a 5-year-old active boy. He loves being outdoors and playing with his friends. Jacob needs 3 servings from the whole meal cereals and breads, potatoes, pasta and rice shelf.

Nutritionist

Healthy Food for Life

www.healthyireland.ie



The Food Pyramid

For adults, teenagers and children aged five and over

Not needed for good health.

NOT every day

! Most people consume snacks high in fat, sugar and salt and sugar sweetened drinks up to 6 times a day (Healthy Ireland Survey 2016). There are no recommended servings for 'Top Shelf' foods and drinks because they are not needed for good health.

Foods and drinks high in fat, sugar and salt

Use as little as possible. Choose mono or polyunsaturated reduced-fat or light spreads. Choose rapeseed, olive, canola, sunflower or corn oils. Limit mayonnaise, coleslaw and salad dressings as they also contain oil. Always cook with as little fat or oil as possible – grilling, oven-baking, steaming, boiling or stir-frying.

In very small amounts

Fats, spreads and oils

Meat, poultry, fish, eggs, beans and nuts

Choose lean meat, poultry (without skin) and fish. Eat oily fish up to twice a week. Choose eggs, beans and nuts. Limit processed salty meats such as sausages, bacon and ham.

2 Servings a day

Milk, yogurt and cheese

Choose reduced-fat or low-fat varieties. Choose low-fat milk and yogurt more often than cheese. Enjoy cheese in small amounts. Women who are pregnant or breastfeeding need 3 servings a day.

3 Servings a day

Wholemeal cereals and breads, potatoes, pasta and rice

Wholemeal and wholegrain cereals are best. Enjoy at each meal. The number of servings depends on age, size, if you are a man or a woman and on activity levels. Watch your serving size and use the Daily Servings Guide below.*

3-5* Servings a day

Vegetables, salad and fruit

Base your meals on these and enjoy a variety of colours. More is better. Limit fruit juice to unsweetened, once a day.

5-7 Servings a day

*Daily Servings Guide – wholemeal cereals and breads, potatoes, pasta and rice

Active	Child (5-12)	Teenager (13-18)	Adult (19-50)	Adult (51+)
♣	3-4	4	4-5	3-4
♣	3-5	5-7	5-7	4-5

There is no guideline for inactive children as it is essential that all children are active.

Average daily calorie needs for all foods and drinks for adults

♣	Active 2000kcal	Inactive 1800kcal
♣	Active 2500kcal	Inactive 2000kcal

Serving size guide

Cereals, cooked rice and pasta, salad and fruit
Use a 200ml disposable plastic cup to guide serving size.

Cheese
Use two thumbs, width and depth to guide serving size.

Meat, poultry, fish
The palm of the hand, width and depth without fingers and thumbs, shows how much you need in a day.

Reduced-fat spread
Portion packs found in cafes can guide the amount you use. One pack should be enough for two slices of bread.

Oils
Use one teaspoon of oil per person when cooking or in salads.



Drink at least 8 cups of fluid a day – water is best



Get Active!
To maintain a healthy weight adults need at least 30 minutes of moderate activity on 5 days a week (or 150 minutes a week); children need to be active at a moderate to vigorous level for at least 60 minutes every day.



PHARMACY TECHNICIAN



CAREER PROFILE

Pharmacy Technician

Pharmacy technicians work under the supervision of pharmacists, who must review prescriptions before they are given to patients. In most states, technicians can compound or mix some medications and call physicians for prescription refill authorizations. Technicians also may need to operate automated dispensing equipment when filling prescription orders.

Pharmacy technicians working in hospitals and other medical facilities prepare a greater variety of medications, such as intravenous medications. They may make rounds in the hospital, giving medications to patients.

<https://www.bls.gov/ooh/healthcare/pharmacy-technicians.htm#tab-2>

Career Characteristics

- Detail oriented
- Multitasking and organizational skills
- Passion for helping others
- Problem solving skills
- Math skills

Similar Careers

- Patient advocate
- Medical receptionist
- Medical assistant
- Patient care technician
- Medical technologist

Correlating Degrees / Programs

- Pharmacy Technician Program
- Pharmacy Technician Certification

Career Check-In

- Do I enjoy interacting with and helping people?
- Do I have a strong attention to detail?
- Do I have necessary math skills to distinguish prescription needs?
- Do I enjoy working in the medical field?



HANDS-ON ACTIVITY

Pharmacy Technician

As a pharmacy technician, one of your main tasks on the job will be to fill medication prescriptions sent to your pharmacy. It is important to understand how to read prescriptions, identify the appropriate medication, and provide the appropriate amount of the medication that is listed on the prescription from the doctor. Although this task may seem easy enough, it is imperative that the pharmacy technician is paying close attention to their task at hand to ensure the patient is receiving the correct medication and the correct quantity of the medication.

Materials

- Pharmacy abbreviation cheat sheet*
- Doctor provided prescriptions (fake)*
- Prescription labels (fake)*
- Empty/Blank pill bottles
- Pills (skittles, m&m's, mike n' ikes)
- Pill counting tray and spatula (can be a Popsicle stick, plastic knife, etc.)

Directions

1. Review the prescription(s) sent to you by your doctor
2. Collect required materials to begin filling the prescriptions (pill bottle(s), required types of medication, correlating prescriptions and labels, pill counting tray)
3. Using the pharmacy abbreviation cheat sheet, begin filling your prescriptions. Directions for using the pill counting tray are below:
 - Begin by dumping a generous amount of the prescription medication onto the pill counting tray from the stock bottle.
 - Counting by fives, begin separating the needed number of pills from the remaining pills on the counting tray. Repeat as necessary.
 - Once you have the needed number of pills to fill the prescription, push them into the dispensing chute on the pill counting tray.
 - Return the leftover pills on the pill counting tray to the stock bottle.
 - Use the dispensing chute's open end, line it up with an empty pill bottle. Fill the bottle with the prescription pills.
 - Place a lid on the bottle and label the bottle with it's correct prescription label.

Pharmacy Technician

Pharmacy Abbreviation Cheat Sheet

Pharmacy Abbreviation	Meaning
ac	Before meals
pc	After meals
am	Morning
pm	Evening
ad	Right ear
as	Left ear
au	Both ears
otic	For the ear
ophth	Ophthalmic (eye-related)
os	Left eye
od	Right eye
ou	Each eye
asap	As soon as possible
po	By mouth
prn	As needed
qd	Every day
bid	Two times daily
tid	Three times daily
qid	Four times daily
q4h	Every 4 hours
q	Every
c	With
d	Day
daw	Dispense as written
gtt	Drop
h or hr	Hour

Pharmacy Abbreviation	Meaning
i	One
ii	Two
iii	Three
iv	Four
p	After
qs	Quantity sufficient to make
qsad	Add quantity to make specific volume
s	Without
sig	Write (on the label)
sl	Under the tongue
sol.	Solution
stat	At once or now
supp	Suppository
ud	As directed
subq	Subcutaneous
syr.	Syrup
tab.	Tablet
tbsp	Tablespoon
tpn	Total parenteral nutrition
w/o	Without
tsp	Teaspoon
top	Topical
ung.	Ointment
x	Times

Pharmacy Technician

Doctor provided prescriptions (fake)

For Karen Smith Date 6-13-23
Address 1234 Candy Cane Lane, Boise, ID

Rx

Skittles Candy 25 mg
2 Tablets PO TID
Qty (90)

LABEL yes no

Rept	ut	Dictum
1	2	3
4	5	times
<input type="checkbox"/>	<input type="checkbox"/>	
PRN	Non Rept	

Dr. _____ Dispense as Written
Dr. Pepper Oncini
Brand Exchange Permitted

DEA No. _____

Item # 52912

For Carol Lina Date 12-15-23
Address 1010 Boardwalk Blvd, Boise, ID

Rx

Skittles Candy 25 mg
2 Tablets TID
Qty (90)

LABEL yes no

Rept	ut	Dictum
1	2	3
4	5	times
<input type="checkbox"/>	<input type="checkbox"/>	
PRN	Non Rept	

Dr. _____ Dispense as Written
Dr. Pepper Oncini
Brand Exchange Permitted

DEA No. _____

Item # 52912

For Bill Montana Date 7-19-23
Address 543 Sugar Pop Ave, Boise, ID

Rx

Mike n' Ikes 50 mg
1 Tablet PO PRN (sleep)
Qty (60)

LABEL yes no

Rept	ut	Dictum
1	2	3
4	5	times
<input type="checkbox"/>	<input type="checkbox"/>	
PRN	Non Rept	

Dr. _____ Dispense as Written
Dr. Pepper Oncini
Brand Exchange Permitted

DEA No. _____

Item # 52912

For Sal Tines Date 10-13-23
Address 1234 Candy Cane Lane, Boise, ID

Rx

M & M Candy 60 mg
2 Tablets TID
Qty (90)

LABEL yes no

Rept	ut	Dictum
1	2	3
4	5	times
<input type="checkbox"/>	<input type="checkbox"/>	
PRN	Non Rept	

Dr. _____ Dispense as Written
Dr. Pepper Oncini
Brand Exchange Permitted

DEA No. _____

Item # 52912

For Rachel Berrie Date 9-06-23
Address 7 Eleven Street, Boise, ID

Rx

M & M Candy 60 mg
1 Tablets PO BID
Qty (30)

LABEL yes no

Rept	ut	Dictum
1	2	3
4	5	times
<input type="checkbox"/>	<input type="checkbox"/>	
PRN	Non Rept	

Dr. _____ Dispense as Written
Dr. Pepper Oncini
Brand Exchange Permitted

DEA No. _____

Item # 52912

For Rocki Balboa Date 6-13-23
Address 222 Electric Avenue, Boise, ID

Rx

Mike n' Ikes 50 mg
2 Tablet q4h 10d supply
Qty (60)

LABEL yes no

Rept	ut	Dictum
1	2	3
4	5	times
<input type="checkbox"/>	<input type="checkbox"/>	
PRN	Non Rept	

Dr. _____ Dispense as Written
Dr. Pepper Oncini
Brand Exchange Permitted

DEA No. _____

Item # 52912

Pharmacy Technician

Prescription labels (fake)

Rx Issued By:
Waypoint Pharmacy Inc.

Your Name Here Karen Smith

Prescription Name Skittle Skat Skittles

25 mg Skittles Candy No Refills

Dosage: Take 2 tablets by mouth three times

Quantity: 90

Side Effects: Excess happiness, joy and laughing

Rx Issued By:
Waypoint Pharmacy Inc.

Your Name Here Bill Montana

Prescription Name Mike n' Ike-aroonies

50 mg Mike n' Ikes Candy 2 Refills

Dosage: Take 1 tab by mouth as needed (sleep)

Quantity: 60

Side Effects: Excess happiness, joy and laughing

Rx Issued By:
Waypoint Pharmacy Inc.

Your Name Here Carol Lina

Prescription Name Skittle Skat Skittles

25 mg Skittles Candy No Refills

Dosage: Take 2 tablets three times daily

Quantity: 90

Side Effects: Excess happiness, joy and laughing

Rx Issued By:
Waypoint Pharmacy Inc.

Your Name Here Sal Tines

Prescription Name M & M Eminems

60 mg M & M Candy 1 Refill

Dosage: Take 2 tablets three times daily

Quantity: 90

Side Effects: Excess happiness, joy and laughing

Rx Issued By:
Waypoint Pharmacy Inc.

Your Name Here Rachel Berrie

Prescription Name M & M Eminems

60 mg Skittles Candy 2 Refills

Dosage: Take 1 tab by mouth two times daily

Quantity: 30

Side Effects: Excess happiness, joy and laughing

Rx Issued By:
Waypoint Pharmacy Inc.

Your Name Here Rocki Balboa

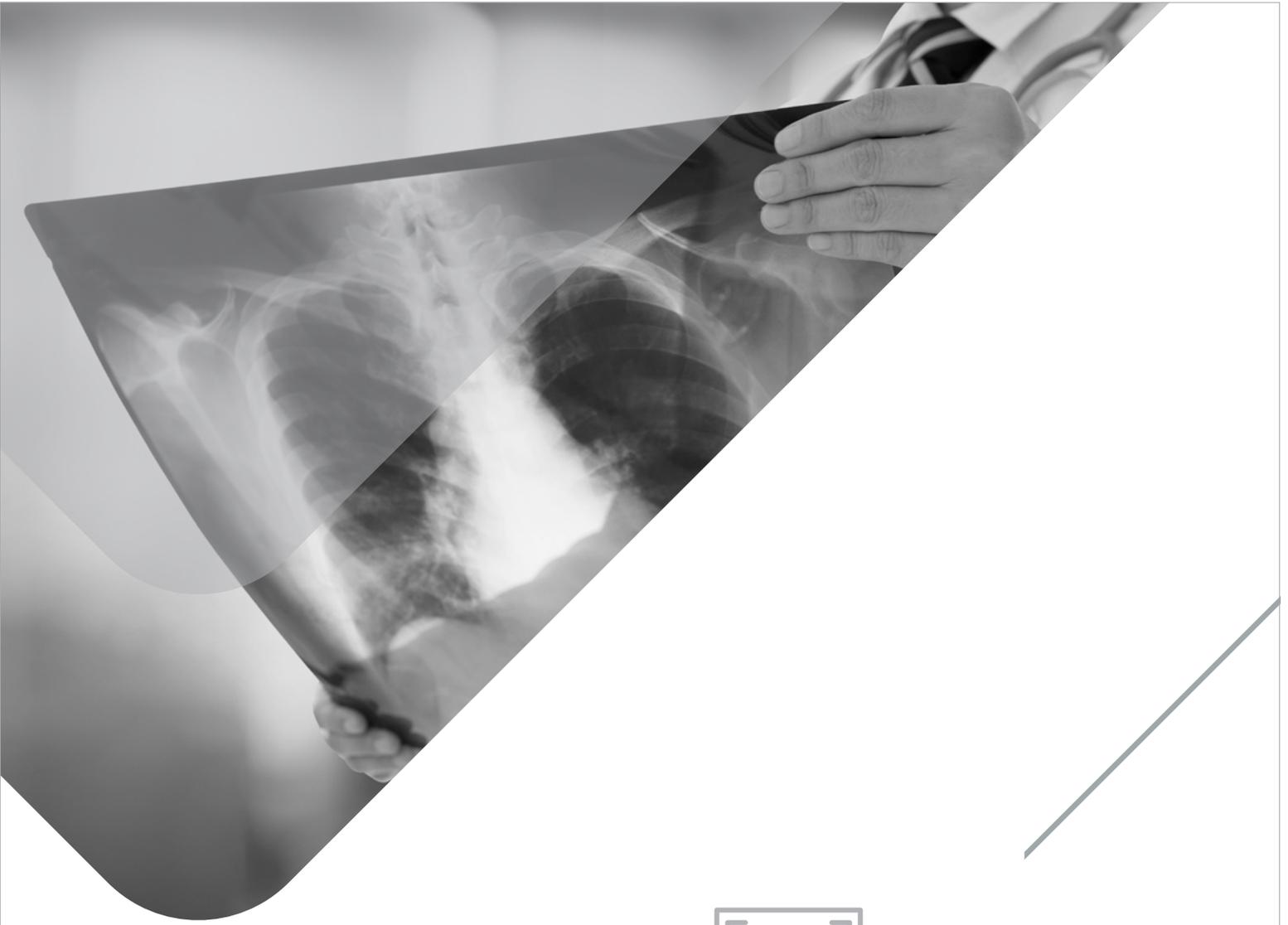
Prescription Name Mike n' Ike-aroonies

50 mg Mike n' Ike Candy 1 Refill

Dosage: Take 2 tablets every 4 hours (10 days)

Quantity: 60

Side Effects: Excess happiness, joy and laughing



RADIOLOGIST



CAREER PROFILE

Radiologist

Radiologic technologists are trained in the use of different types of medical diagnostic equipment. They may choose to specialize, such as in x-ray, mammography, or computed tomography (CT) imaging. Some radiologic technologists provide a mixture for the patient to drink that allows soft tissue to be viewed on the images that the radiologist reviews.

MRI technologists specialize in magnetic resonance imaging scanners. They inject patients with contrast media, such as a dye, so that the images will show up on the scanner. The scanners use magnetic fields in combination with the contrast agent to produce images that a physician can use to diagnose medical problems.

<https://www.bls.gov/ooh/healthcare/radiologic-technologists.htm#tab-2>

Career Characteristics

- Attention to detail
- Problem solving skills
- Interest in imaging
- Communication skills
- Medical and anatomical skills

Similar Careers

- Radiation Oncologist
- Radiologist Assistant
- Radiation Therapist
- Sonographer
- Medical Appliance Technician

Correlating Degrees / Programs

- Radiology
- Applied Sciences
- Osteopathic Medicine

Career Check-In

- Do I enjoy being in a medical environment and working with patients?
- Do I have a general interest in medical and anatomical research?
- Do I have an interest in imaging? X-rays?
- Do I have attention to detail and problem-solving skills?



Radiologist

As a radiologist, your attention to detail and problem-solving skills will come in handy. Radiologists see many different kinds of images for a plethora of issues during their day, and with more exposure comes more expertise. Most important, radiologists must know how to evaluate diagnostic images. Basic knowledge and understanding of the human skeletal system are detrimental to determining issues and diagnosing patients after receiving their images.

<https://www.uen.org/lessonplan/view/22556>

Materials

- X-Ray match-up worksheet**
- Skeleton image for reference*
- X-ray images (8)**
- X-ray images answer key*

Directions

You have received a few x-ray images for past patients at your hospital. The images were separated from their appropriate diagnosis's documentation. Using the skeletal poster as reference, match the x-ray images to the right diagnoses to get your paperwork back in order.



Radiologist

X-ray Match Up Worksheet

Write the number of the x-ray next to the diagnosis.

Total knee replacement

Fracture of the middle phalange

Fracture of the distal radius and ulna

Scoliosis of the vertebrae

Fracture of the humerus

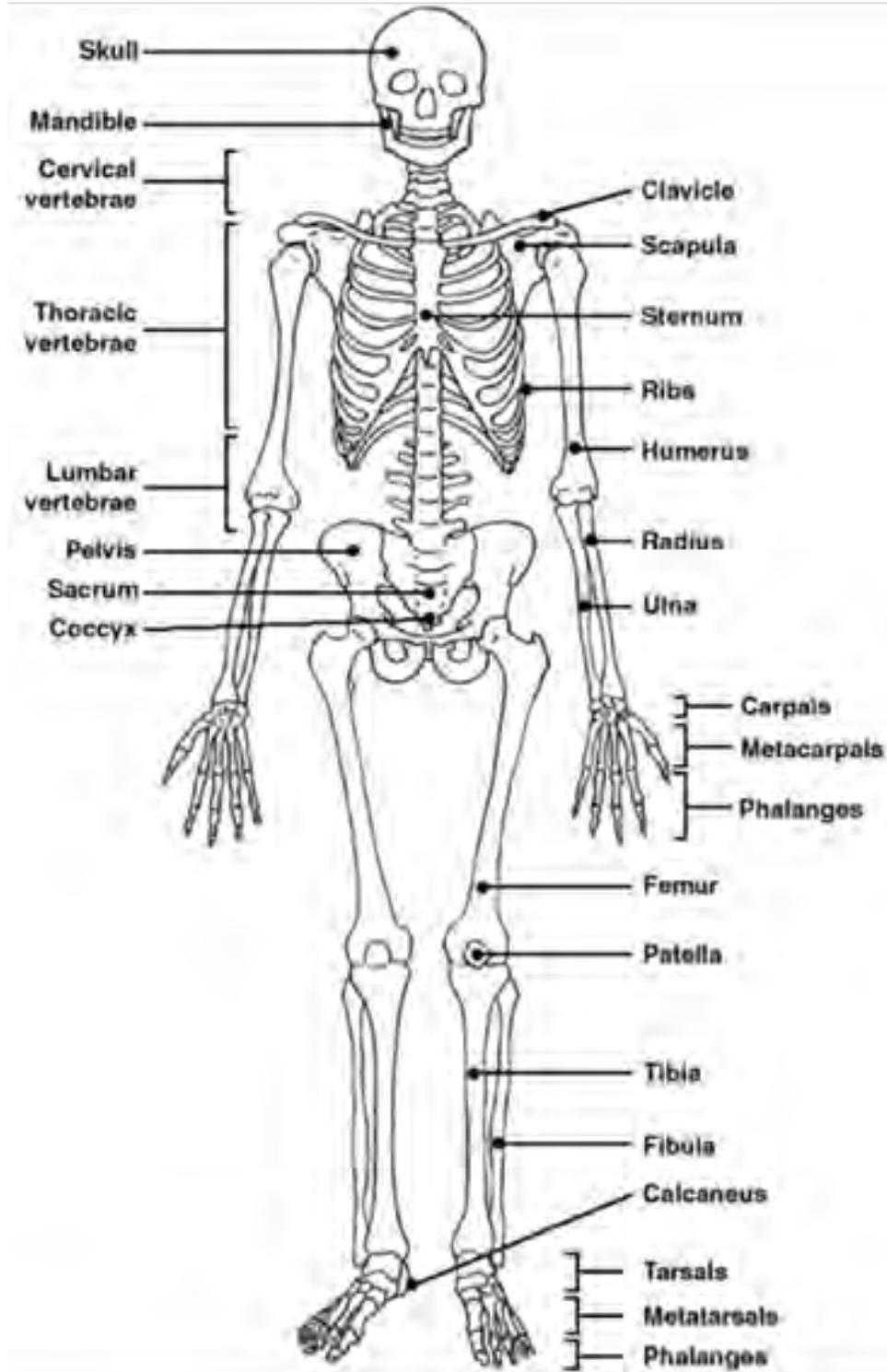
Total hip replacement

Compression fracture of a vertebrae

Surgical fixation of the tibia

Radiologist

Skeleton Image Reference



Radiologist



Radiologist



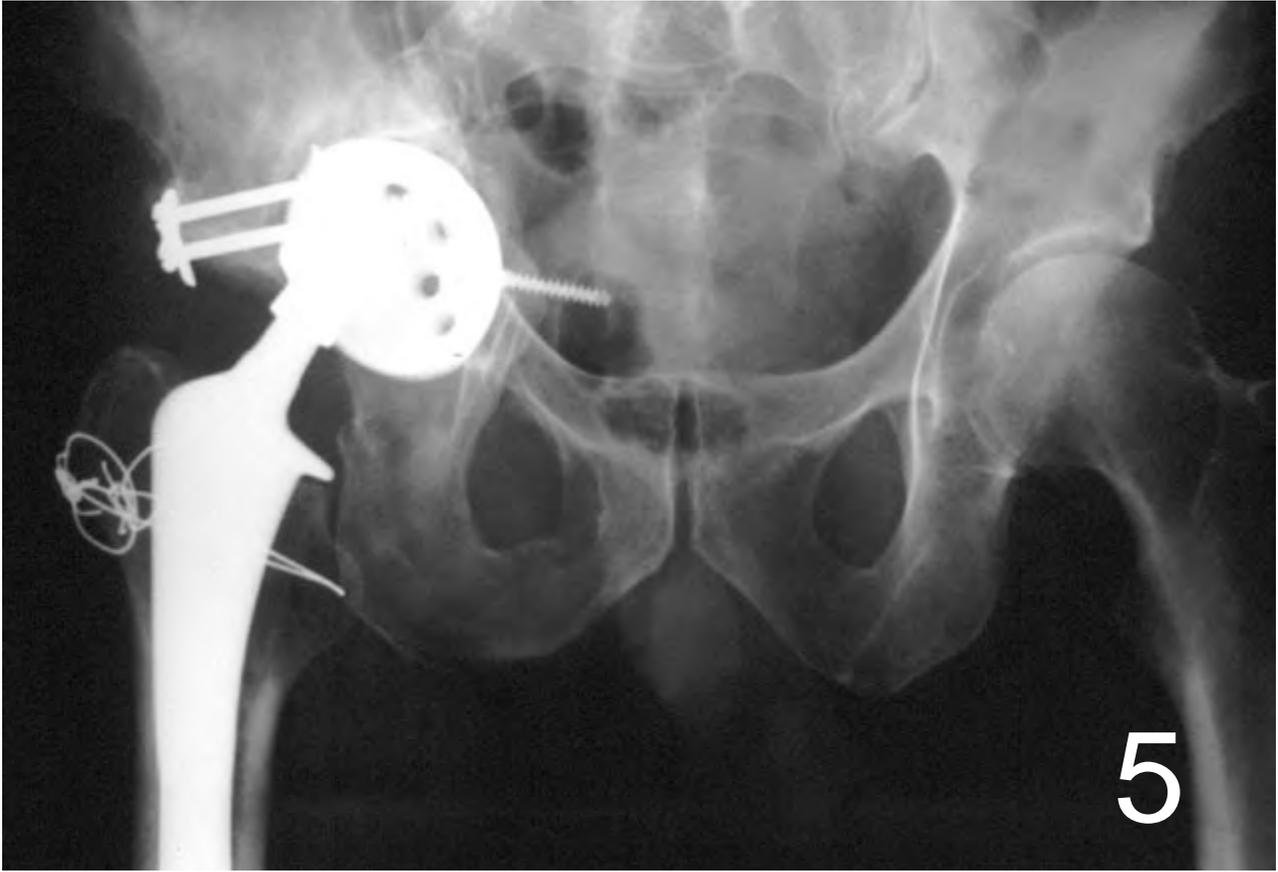
Radiologist



Radiologist



Radiologist



Radiologist



Radiologist



Radiologist

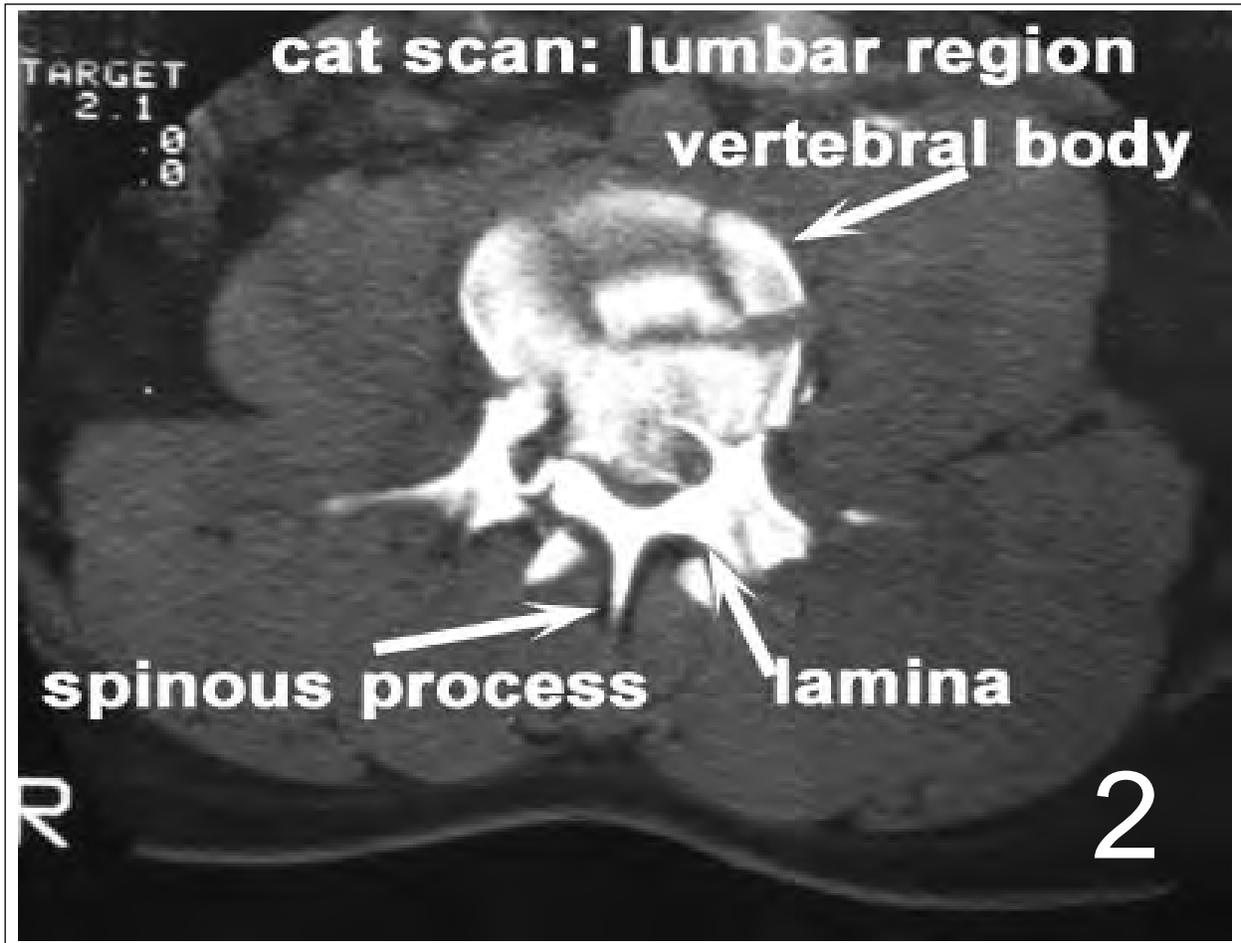


Radiologist

KEYS

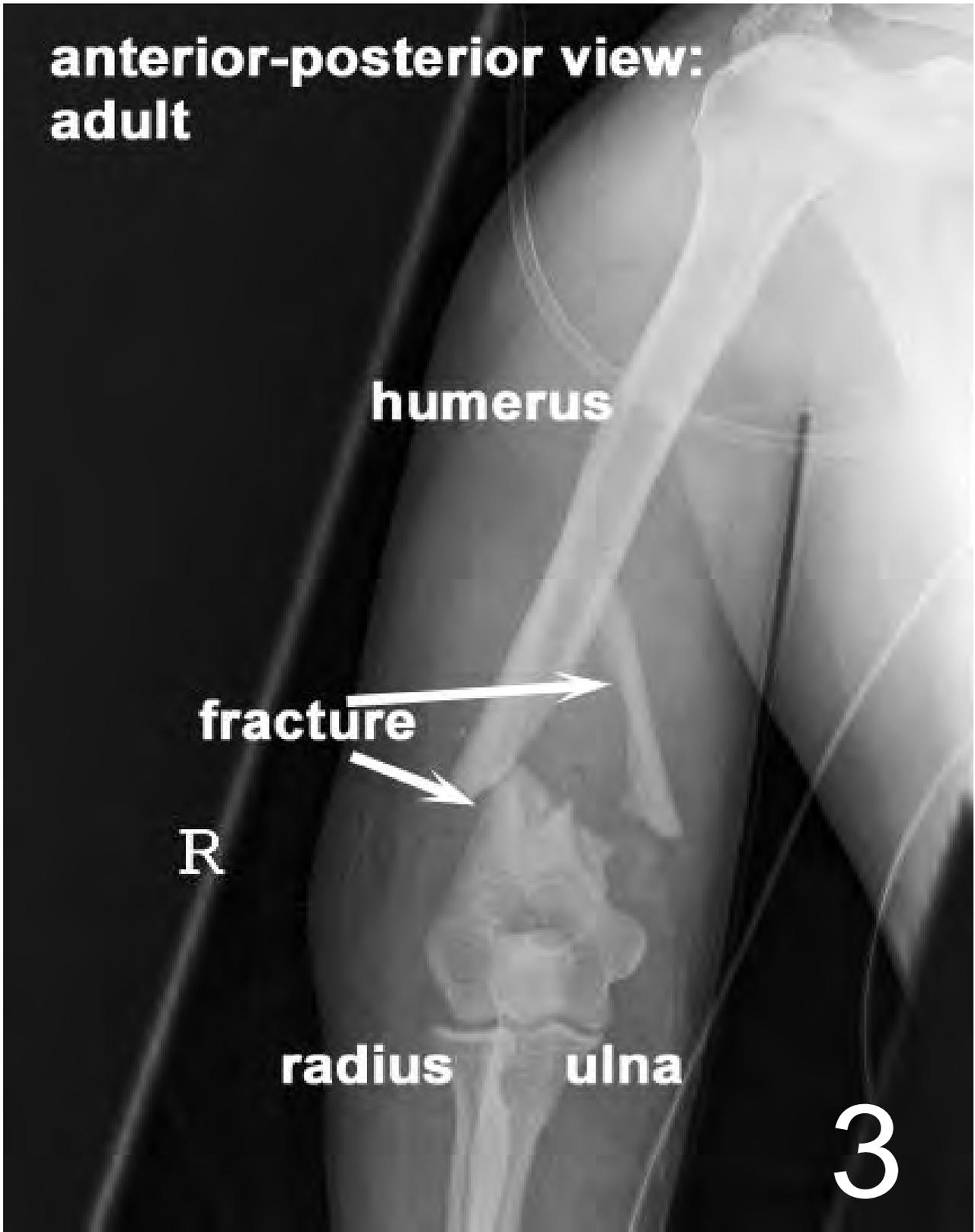


Radiologist



Radiologist

**anterior-posterior view:
adult**



humerus

fracture

R

radius

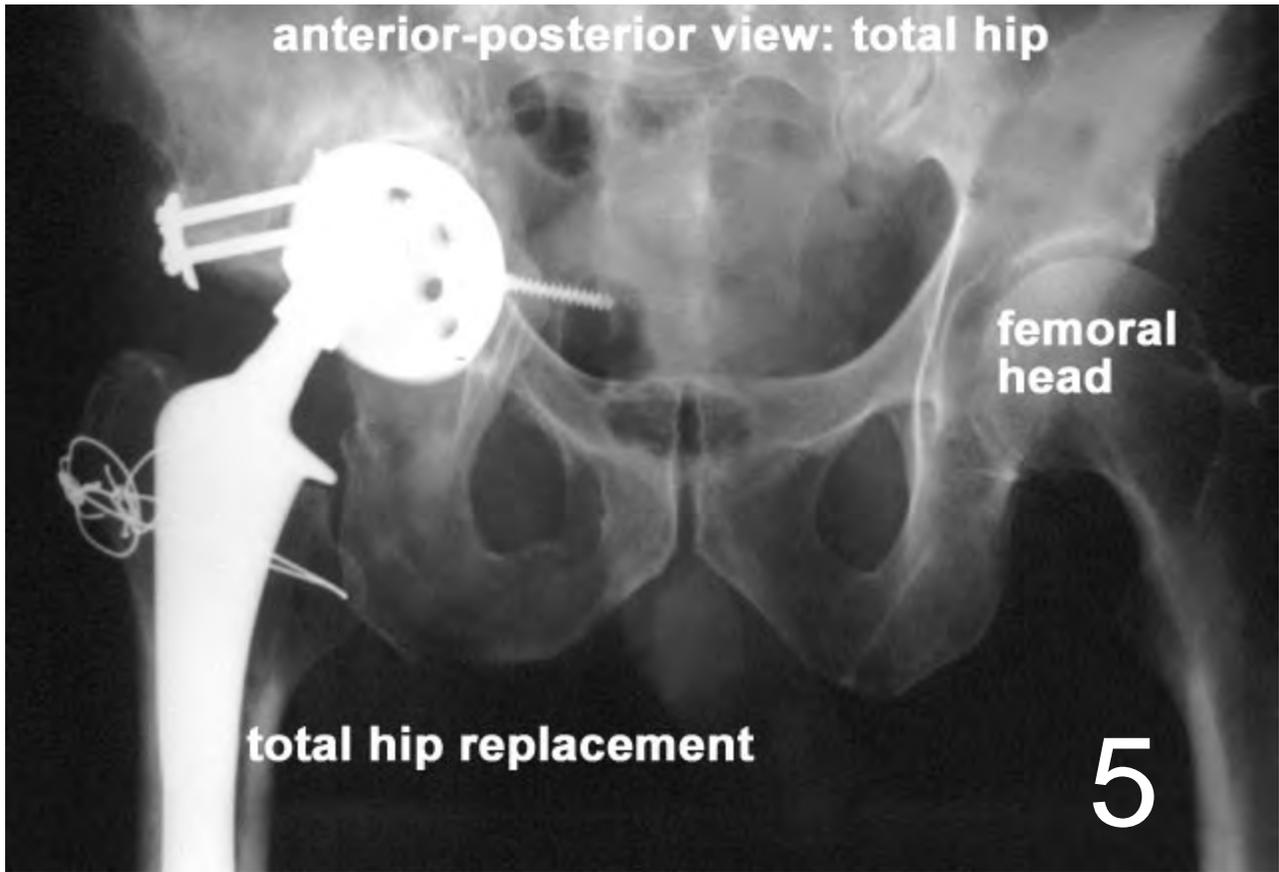
ulna

3

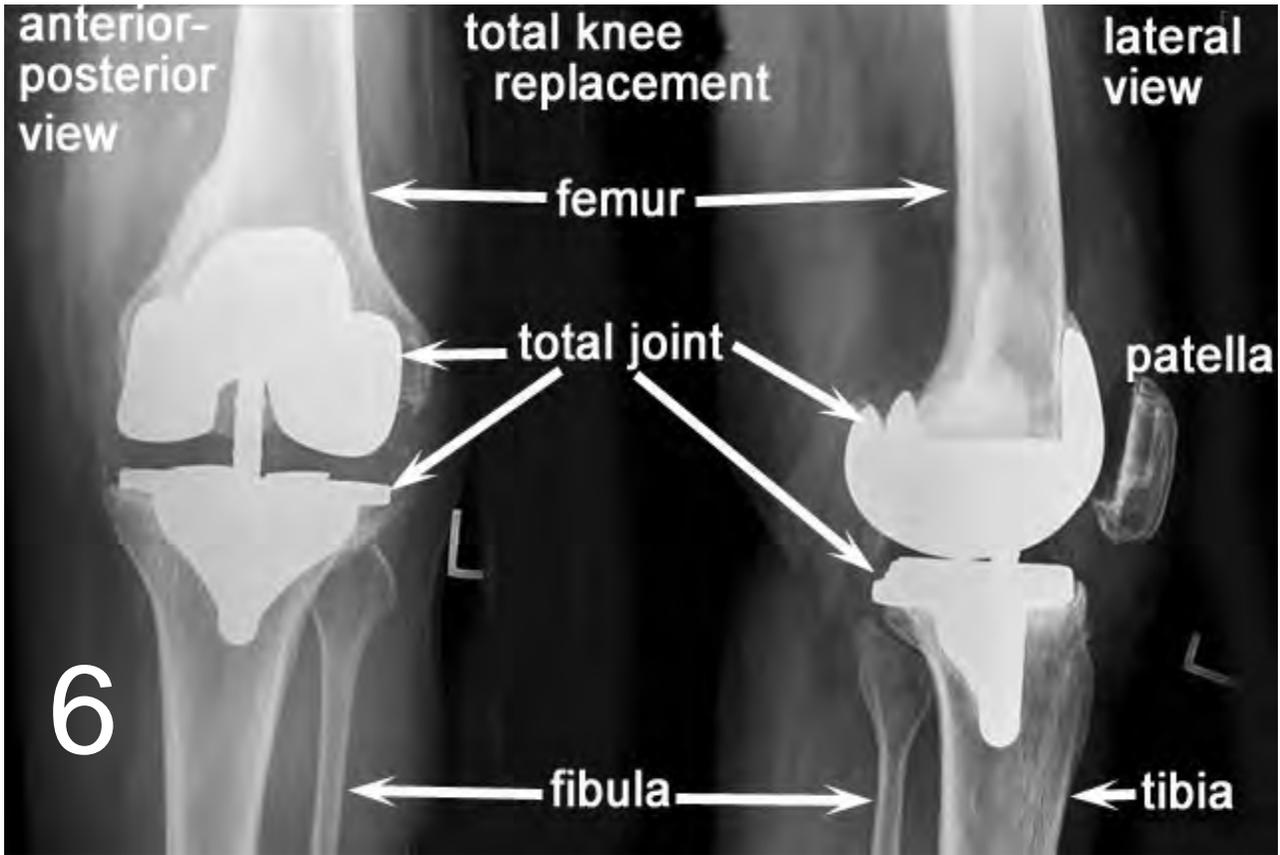
Radiologist



Radiologist



Radiologist



Radiologist



Radiologist



Radiologist

X-ray Match Up Answer Key

Total knee replacement

6

Fracture of the middle phalange

8

Fracture of the distal radius and ulna

4

Scoliosis of the vertebrae

1

Fracture of the humerus

3

Total hip replacement

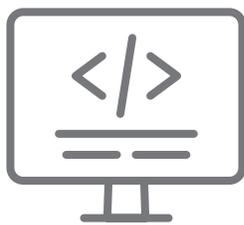
5

Compression fracture of a vertebrae

2

Surgical fixation of the tibia

7



SOFTWARE DEVELOPER



CAREER PROFILE

Software Developer

Software developers create the computer applications that allow users to do specific tasks and the underlying systems that run the devices or control networks. Software developers typically analyze users' needs and then design and develop software to meet those needs. They can also design each piece of an application or system and plan how the pieces will work together. They will create a variety of models and diagrams showing programmers the software code needed for an application. Application software developers design computer applications, such as games, for consumers. They may create custom software for a specific customer or commercial software to be sold to the general public. Some applications software developers create databases or programs for use internally or online.

<https://www.bls.gov/ooh/computer-and-information-technology/software-developers.htm#tab-2>

Career Characteristics

- Attention to details
- Adaptable
- Time and task management
- Strong technology skills
- Independent starter

Similar Careers

- Computer and Information Research Scientists
- Computer Hardware Engineers
- Computer Network Architects
- Computer Programmer

Correlating Degrees / Programs

- Software Development
- Computer Programming
- Computer Science
- Coding Bootcamp

Career Check-In

- Do I enjoy exploring and using innovative technology?
- Do I enjoy critical thinking and problem solving?
- Do I enjoy creating and building applications and software?
- Do I enjoy and thrive working independently?



Software Developer

Depending on your interest when it comes to software developing, you may work more or less with software coding. Coding is converting a shape from a structure into an established language format. The goal of coding is to save costs and cut down on testing and maintenance later. All of our favorite applications like YouTube, Facebook, and Google Chrome are operated with coding.

Materials

- Lego maze board (create on your own)
- Note cards
- Pen/Pencil

Directions

You are coding a new Lego themed game for elementary school-aged children. Choose a Lego maze board and grab a stack of white note cards. Create a code that will help a potential Lego maze player complete the maze on their own. This game will be played on a computer with a keyboard, so think of the arrow keys the user would be using when coding the maze.





SUPPLY CHAIN MANAGER



CAREER PROFILE

Supply Chain Manager

Supply Chain Managers (Logisticians) oversee activities that include purchasing, transportation, inventory, and warehousing. They may direct the movement of a range of goods, people, or supplies, from common consumer goods to military supplies and personnel.

Logisticians use software systems to plan and track the movement of products. They operate software programs designed specifically to manage logistical functions, such as procurement, inventory management, and other supply chain planning and management systems.

<https://www.bls.gov/ooh/business-and-financial/logisticians.htm#tab-2>

Career Characteristics

- Project management skills
- Communication Skills
- Managing multiple tasks
- Relationship management

Similar Careers

- Industrial Engineer
- Management Analyst
- Purchasing or Procurement Manager

Correlating Degrees / Programs

- Arts in Logistics and Supply Chain Management
- Supply Chain and Operations Management
- Science in Management

Career Check-In

- Do you enjoy negotiating and creating partnerships?
- Do you like working under a timeline?
- Can you handle multitasking on a regular basis?
- Do you feel satisfied when you see pieces come together into a final product?



Supply Chain Manager

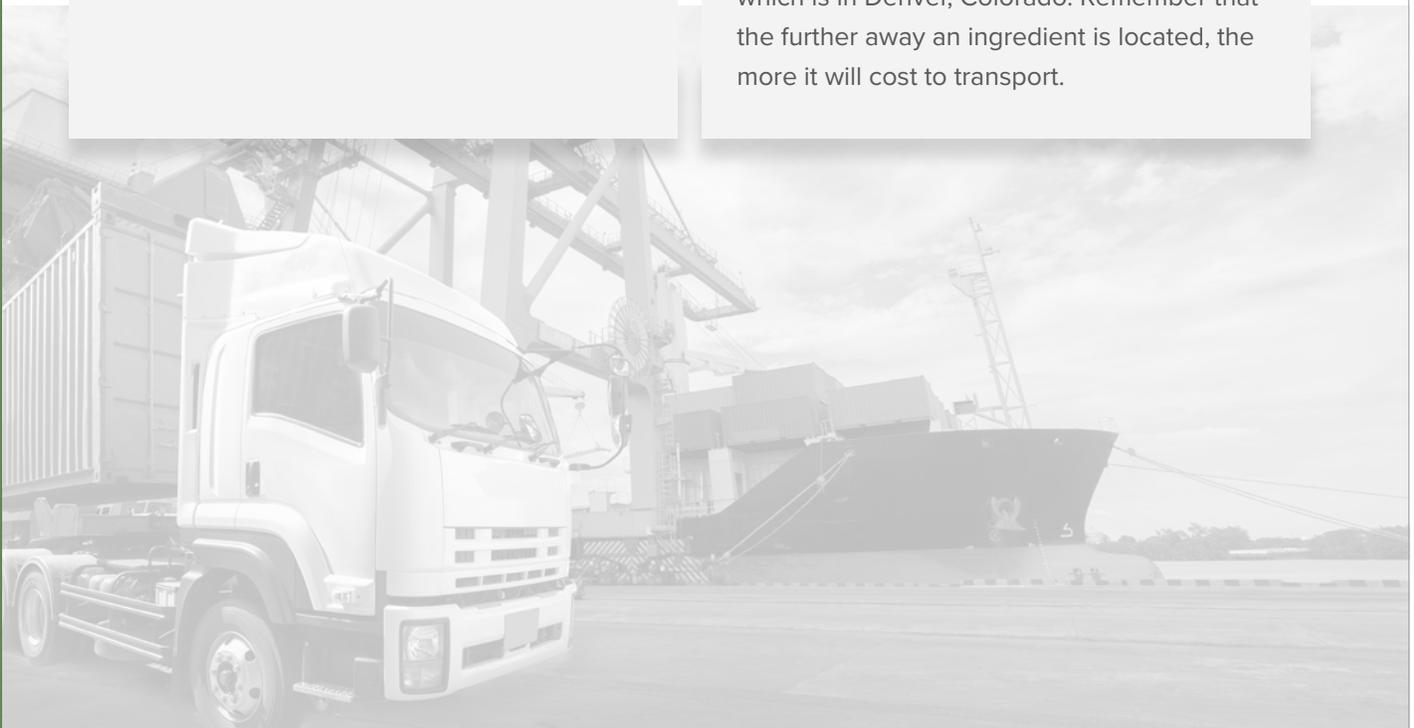
As a supply chain manager you will work locally, nationally, or globally to source all of the ingredients or materials needed to make a product. Some companies even have additional requirements related to where items are sourced geographically or how those items are produced (organic, local, fair-trade, etc.).

Materials

- Supply chain manager worksheet**
- Supply chain vendor list**
- Colored pencils

Directions

You are in charge of sourcing ingredients for a new candy bar for your company. Your boss would like you to develop a map that shows where all of the ingredients for this new product will come from. You have been directed to only source ingredients from within the United States and to do so as cheaply as possible. Create a new candy bar that can be made from the materials on the vendor list. Draw your product and create a description and ingredient list. Then, create a map by drawing lines from each ingredient location to your company headquarters, which is in Denver, Colorado. Remember that the further away an ingredient is located, the more it will cost to transport.



Supply Chain Manager

United States of America



Candy Bar Drawing

Candy Bar Details

Write a description of your candy bar.

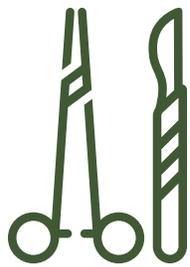
Write a list of needed ingredients.

Where do these ingredients come from?

Supply Chain Manager

Supply Chain Vendor List

State	Product
Alabama	Eggs
Alabama	Milk
California	Pineapple
California	Milk
Florida	Oranges
Florida	Eggs
Georgia	Pecans
Georgia	Peanuts
Hawaii	Pinapple
Hawaii	Coconut
Idaho	Milk
Idaho	Peppermint
Illinois	Pumpkin
Indiana	Popcorn
New Mexico	Chocolate
Louisiana	Sugar
Maine	Maple
Massachuesetts	White Chocolate
Michigan	Cherries
New York	Foil Ink (wrapper printing)
North Dakota	Honey
Pennsylvania	Chocolate
South Carolina	Foil (wappers)



SURGICAL TECHNICIAN



CAREER PROFILE

Surgical Technician

Before an operation, surgical technologists prepare the operating room by setting up surgical instruments and equipment. They prepare sterile solutions and medications used in surgery and check that all surgical equipment is working properly. Surgical technologists also bring patients to the operating room and get them ready for surgery by positioning them on the table, covering them with sterile drapes, and washing and disinfecting incision sites. And they help the surgical team put on sterile gowns.

During an operation, surgical technologists pass the sterile instruments and supplies to surgeons and first assistants. They might hold retractors, hold internal organs in place during the procedure, or set up robotic surgical equipment. Technologists also may handle specimens taken for laboratory analysis.

After the operation is complete, surgical technologists may apply bandages and other dressings to the

incision site. They may also transfer patients to recovery rooms and restock operating rooms after a procedure.

Surgical assistants have a hands-on role, directly assisting surgeons during a procedure. For example, they may help to suction the incision site or suture a wound.

<https://www.bls.gov/ooh/healthcare/surgical-technologists.htm#tab-2>

Career Characteristics

- Works well under pressure
- Physical stamina and manual dexterity
- Responds appropriately to emergency situations
- Good communication skills
- Ok with working holidays or late hours
- Empathetic

Similar Careers

- Surgical Assistant
- Surgical Nurse
- Nurse
- Sterilization Technician
- Clinical Coordinator

Correlating Degrees / Programs

- Biology
- Chemistry
- Exercise Science
- Nursing
- Pre-Health
- Operation-Room Technician

Career Check-In

- Do I work well under pressure?
- Can I act quickly and accurately in the case of an emergency?
- Do I feel comfortable around bodily fluids or open wounds?
- Do I have the physical stamina required to be on my feet for hours?

HANDS-ON ACTIVITY



Surgical Technician

As a surgical technician, you will be working in a fast-paced environment where a lot of situations are going to require quick thinking and action. The most common surgical emergencies you will encounter include acute abdominal emergencies (pancreatitis, kidney stones), urinary obstructions (stones or malignant tissue), and respiratory obstructions (inhaling foreign objects, allergic reaction, object lodged in nose or mouth, obstructive sleep apnea.)

Materials

- Silicone suture pad
- Suture practice kit (scissors and tweezers)
- Bananas (alternative to suture pads)
- Suture needle
- Patient profile*

Directions

Your patient is in need of stitches from an accident. Familiarize yourself with their patient profile and stitch (suture) them up so that they can head to the recovery room. Take your time as you are stitching up your patient so the area does not scar more than expected.



Surgical Technician

Client Intake Form

Full Name: Toe Mater DOB: 3/22/2006
 Address: 1275 Paved Way
 City: Radiator Springs State: CA Zip: 512697
 Phone #: 217-678-1011 Email: callforTOE@aol.com
 Occupation: Tow truck driver

Emergency Contact: _____ Phone #: _____
 Relationship: _____
 Physician: _____ Phone #: _____

Medical History

Health Conditions: _____

Medications Being Taken: _____

Please indicate any of the following conditions that you currently have:

- | | | |
|---|---|--|
| <input type="checkbox"/> headaches | <input type="checkbox"/> allergies | <input type="checkbox"/> arthritis, tendonitis |
| <input type="checkbox"/> cancer | <input type="checkbox"/> TMJ | <input type="checkbox"/> abnormal skin condition |
| <input type="checkbox"/> heart/circulation problems | <input type="checkbox"/> joint surgery | <input type="checkbox"/> high / low blood pressure |
| <input checked="" type="checkbox"/> major accident | <input type="checkbox"/> varicose veins | <input type="checkbox"/> blood clots |
| <input type="checkbox"/> neck / back injuries | <input type="checkbox"/> diabetes | <input type="checkbox"/> fibromyalgia |
| <input type="checkbox"/> numbness | <input type="checkbox"/> sprains, strains | <input type="checkbox"/> recent injuries |

Explain Any Conditions You Have Marked Above:

A crazy guy drove through town and held a piece of paper out the windows. I got a HUGE papercut on my arm.

Client Signature: Toe Mater Date: 5/31/23

Surgical Technician

Client Intake Form

Full Name: Sammy Samuels DOB: 9/22/1995
 Address: 5115 Sunny Lane
 City: Miami State: FL Zip: 512978
 Phone #: 512-331-5555 Email: smilingsammy@aol.com
 Occupation: Acting Coach

Emergency Contact: _____ Phone #: _____
 Relationship: _____
 Physician: _____ Phone #: _____

Medical History

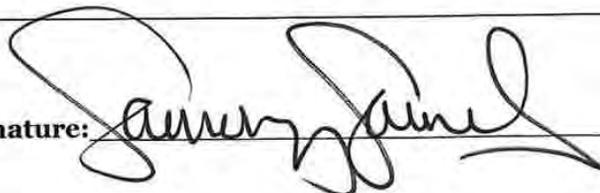
Health Conditions: _____
 Medications Being Taken: _____

Please indicate any of the following conditions that you currently have:

- | | | |
|---|---|--|
| <input type="checkbox"/> headaches | <input type="checkbox"/> allergies | <input type="checkbox"/> arthritis, tendonitis |
| <input type="checkbox"/> cancer | <input type="checkbox"/> TMJ | <input type="checkbox"/> abnormal skin condition |
| <input type="checkbox"/> heart/circulation problems | <input type="checkbox"/> joint surgery | <input type="checkbox"/> high / low blood pressure |
| <input checked="" type="checkbox"/> major accident | <input type="checkbox"/> varicose veins | <input type="checkbox"/> blood clots |
| <input type="checkbox"/> neck / back injuries | <input type="checkbox"/> diabetes | <input type="checkbox"/> fibromyalgia |
| <input type="checkbox"/> numbness | <input type="checkbox"/> sprains, strains | <input type="checkbox"/> recent injuries |

Explain Any Conditions You Have Marked Above:

I was preparing dinner and cut my
hand while chopping onions.

Client Signature:  Date: 5/31/23

Surgical Technician

Client Intake Form

Full Name: Edward Cullen DOB: 5/06/1902
 Address: 123 Rainy Blvd.
 City: Forks State: WA Zip: 811297
 Phone #: 331-222-4456 Email: notavampire@hotmail.com
 Occupation: Student

Emergency Contact: _____ Phone #: _____

Relationship: _____

Physician: _____ Phone #: _____

Medical History

Health Conditions: _____

Medications Being Taken: _____

Please indicate any of the following conditions that you currently have:

- | | | |
|---|---|--|
| <input type="checkbox"/> headaches | <input type="checkbox"/> allergies | <input type="checkbox"/> arthritis, tendonitis |
| <input type="checkbox"/> cancer | <input type="checkbox"/> TMJ | <input type="checkbox"/> abnormal skin condition |
| <input type="checkbox"/> heart/circulation problems | <input type="checkbox"/> joint surgery | <input type="checkbox"/> high / low blood pressure |
| <input checked="" type="checkbox"/> major accident | <input type="checkbox"/> varicose veins | <input type="checkbox"/> blood clots |
| <input type="checkbox"/> neck / back injuries | <input type="checkbox"/> diabetes | <input type="checkbox"/> fibromyalgia |
| <input type="checkbox"/> numbness | <input type="checkbox"/> sprains, strains | <input type="checkbox"/> recent injuries |

Explain Any Conditions You Have Marked Above:

I was being chased in the woods by a wolf, and as I was escaping, my foot got stuck on a branch. I have a huge slice on the bottom of my left foot.

Client Signature: Edward Cullen Date: 5/31/23

Surgical Technician

Client Intake Form

Full Name: Jackie Chan DOB: 6/14/1975
 Address: 337 Blank Road
 City: San Antonio State: TX Zip: 72351
 Phone #: 509-331-2275 Email: chanjackie@gmail.com
 Occupation: Jewelry maker

Emergency Contact: _____ Phone #: _____
 Relationship: _____
 Physician: _____ Phone #: _____

Medical History

Health Conditions: _____

Medications Being Taken: _____

Please indicate any of the following conditions that you currently have:

- | | | |
|---|---|--|
| <input type="checkbox"/> headaches | <input type="checkbox"/> allergies | <input type="checkbox"/> arthritis, tendonitis |
| <input type="checkbox"/> cancer | <input type="checkbox"/> TMJ | <input type="checkbox"/> abnormal skin condition |
| <input type="checkbox"/> heart/circulation problems | <input type="checkbox"/> joint surgery | <input type="checkbox"/> high / low blood pressure |
| <input checked="" type="checkbox"/> major accident | <input type="checkbox"/> varicose veins | <input type="checkbox"/> blood clots |
| <input type="checkbox"/> neck / back injuries | <input type="checkbox"/> diabetes | <input type="checkbox"/> fibromyalgia |
| <input type="checkbox"/> numbness | <input type="checkbox"/> sprains, strains | <input type="checkbox"/> recent injuries |

Explain Any Conditions You Have Marked Above:

As I was making a necklace and earring set, I slipped with my pliers and sliced open my leg.

Client Signature: Jackie Chan Date: 5/31/23

Surgical Technician

Client Intake Form

Full Name: Bucky Kentucky DOB: 1/26/2001
 Address: 1234 Rock Lane
 City: Kansas City State: KS Zip: 83916
 Phone #: 208-555-5555 Email: buckyk@aol.com
 Occupation: Singer

Emergency Contact: _____ Phone #: _____
 Relationship: _____
 Physician: _____ Phone #: _____

Medical History

Health Conditions: _____

Medications Being Taken: _____

Please indicate any of the following conditions that you currently have:

- | | | |
|---|---|--|
| <input type="checkbox"/> headaches | <input type="checkbox"/> allergies | <input type="checkbox"/> arthritis, tendonitis |
| <input type="checkbox"/> cancer | <input type="checkbox"/> TMJ | <input type="checkbox"/> abnormal skin condition |
| <input type="checkbox"/> heart/circulation problems | <input type="checkbox"/> joint surgery | <input type="checkbox"/> high / low blood pressure |
| <input checked="" type="checkbox"/> major accident | <input type="checkbox"/> varicose veins | <input type="checkbox"/> blood clots |
| <input type="checkbox"/> neck / back injuries | <input type="checkbox"/> diabetes | <input type="checkbox"/> fibromyalgia |
| <input type="checkbox"/> numbness | <input type="checkbox"/> sprains, strains | <input type="checkbox"/> recent injuries |

Explain Any Conditions You Have Marked Above:

I was jumping over a barbed wire fence
to get away from a wild squirrel. I got
my arm hooked on one of the barbs.

Client Signature:  Date: 5/31/23

Surgical Technician

Client Intake Form

Full Name: Jack B. Nimble DOB: 7/12/1967
 Address: 1023 Quick Road
 City: Candle Stick State: UT Zip: 72354
 Phone #: 112-332-1675 Email: jump.b.jack@gmail.com
 Occupation: Olympic Jumper

Emergency Contact: _____ Phone #: _____
 Relationship: _____
 Physician: _____ Phone #: _____

Medical History

Health Conditions: _____

Medications Being Taken: _____

Please indicate any of the following conditions that you currently have:

- | | | |
|---|---|--|
| <input type="checkbox"/> headaches | <input type="checkbox"/> allergies | <input type="checkbox"/> arthritis, tendonitis |
| <input type="checkbox"/> cancer | <input type="checkbox"/> TMJ | <input type="checkbox"/> abnormal skin condition |
| <input type="checkbox"/> heart/circulation problems | <input type="checkbox"/> joint surgery | <input type="checkbox"/> high / low blood pressure |
| <input checked="" type="checkbox"/> major accident | <input type="checkbox"/> varicose veins | <input type="checkbox"/> blood clots |
| <input type="checkbox"/> neck / back injuries | <input type="checkbox"/> diabetes | <input type="checkbox"/> fibromyalgia |
| <input type="checkbox"/> numbness | <input type="checkbox"/> sprains, strains | <input type="checkbox"/> recent injuries |

Explain Any Conditions You Have Marked Above:

I was jumping over a candlestick,
tripped over the table and sliced my
leg on the corner.

Client Signature: Jack Nimble Date: 5/31/23



WATER/ WASTEWATER TREATMENT PLANT AND SYSTEM OPERATOR



CAREER PROFILE

Water/Wastewater Treatment Plant and System Operator

Water/Wastewater treatment plant and system operators manage a system of machines, often through the use of control boards, to transfer or treat water or wastewater. They typically add chemicals, such as ammonia or chlorine, to disinfect water or other liquids. They also inspect equipment on a regular basis, monitor operating conditions, meters, and gauges, and collect and test water and sewage samples.

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Water and Wastewater Treatment Plant and System Operators, at <https://www.bls.gov/ooh/production/water-and-wastewater-treatment-plant-and-system-operators.htm> (visited July 03, 2023).

Career Characteristics

- Strong written and verbal communication skills
- Time management skills
- Work independently
- Concern for healthy and safety requirements
- Knowledge of water regulations

Similar Careers

- Water Resources Project Manager
- Environmental Engineer
- Source Water Protection Analyst
- Water Laboratory Research Manager
- Water Conservation Specialist

Correlating Degrees / Programs

- Environmental Science
- Wastewater Treatment Technology
- Chemical Engineering

Career Check-In

- Do you enjoy learning about water chemistry and biological properties related to water quality?
- Do you mind being on-call or called into work at the last minute for water quality emergencies?
- Do you have an interest in testing, sampling, cleaning, and inspecting the quality of water?
- Do you enjoy critical thinking and problem solving?



Water/Wastewater Treatment Plant and System Operator

Water quality specialists are responsible for ensuring water is at a quality that is appropriate for a variety of uses, including consumption. Disease or other foreign bacteria can get into drinking water and that can cause a huge issue within a community.

Materials

- pH 1-14 test paper
- 3 water samples (tap, bottled, lake/river/pond/puddle)
- Conclusion paperwork**

Directions

1. Take 3 individual samples of water supplied for this station
2. Label each sample accordingly (sample 1, sample 2, sample 3)
3. Dip one pH test paper in each sample, and set aside. Do this once for each sample.
4. Compare the results of each water sample pH test to the suggested pH levels on the scale.
5. Determine if each water sample is safe for: drinking, bathing, plant watering, dish washing.



Water/Wastewater Treatment Plant and System Operator

Wastewater Test

Test	Sample 1	Sample 2	Sample 3	Conclusion
1				
2				
3				
4				
5				
6				

Water Use	pH Level
Drinking water	6.5-8.5
Plant watering	5.0-7.0
Showering/Bathing	6.5-8.5
Dish washing	7.0-10.0



WEB AND DIGITAL INTERFACE DESIGNER



CAREER PROFILE

Web And Digital Interface Designer

Web and digital interface designers design digital user interfaces or websites, develop and test layouts, interfaces, functionality, and navigation menus to ensure compatibility and usability across browsers or devices. They may use web framework applications as well as client-side code and processes. Web and digital interface designers may design and test interfaces that facilitate the human-computer interaction and maximize the usability of digital devices, websites, and software with a focus on aesthetics and design.

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Employment and Wage Statistics, Web and Digital Interface Designers, <https://www.bls.gov/oes/current/oes151255.htm> at (visited July 31, 2023).

Career Characteristics

- Attention to detail
- Quick self-learning, flexible and adaptable
- Time and task management skills
- Creative thinking
- Strong technology skills

Similar Careers

- Interaction Designer
- Product Designer
- User Experience Architect
- Experience Designer
- Interface Specialist

Correlating Degrees / Programs

- Computer Programming
- Computer Science
- Computer and Informational Sciences
- Design and Visual Communications
- Digital Communication and Media

Career Check-In

- Do I enjoy exploring and using innovative technology?
- Do I enjoy critical thinking and problem solving?
- Do I enjoy working with and directing others?
- Do I feel comfortable with continuously working against deadlines?



Web and Digital Interface Designer

As a web and digital interface designer, you are in charge of making the best user experience you can for the project you're working on. For example, if you are creating an app, you want to make sure the app is user friendly and achieves the overall objective for the people who are using it. UI/UX designers use something called wireframes to mock up what a step-by-step user experience might look like at certain access points of an app.

Materials

- Project description*
- Wireframe example*
- Wireframe template**

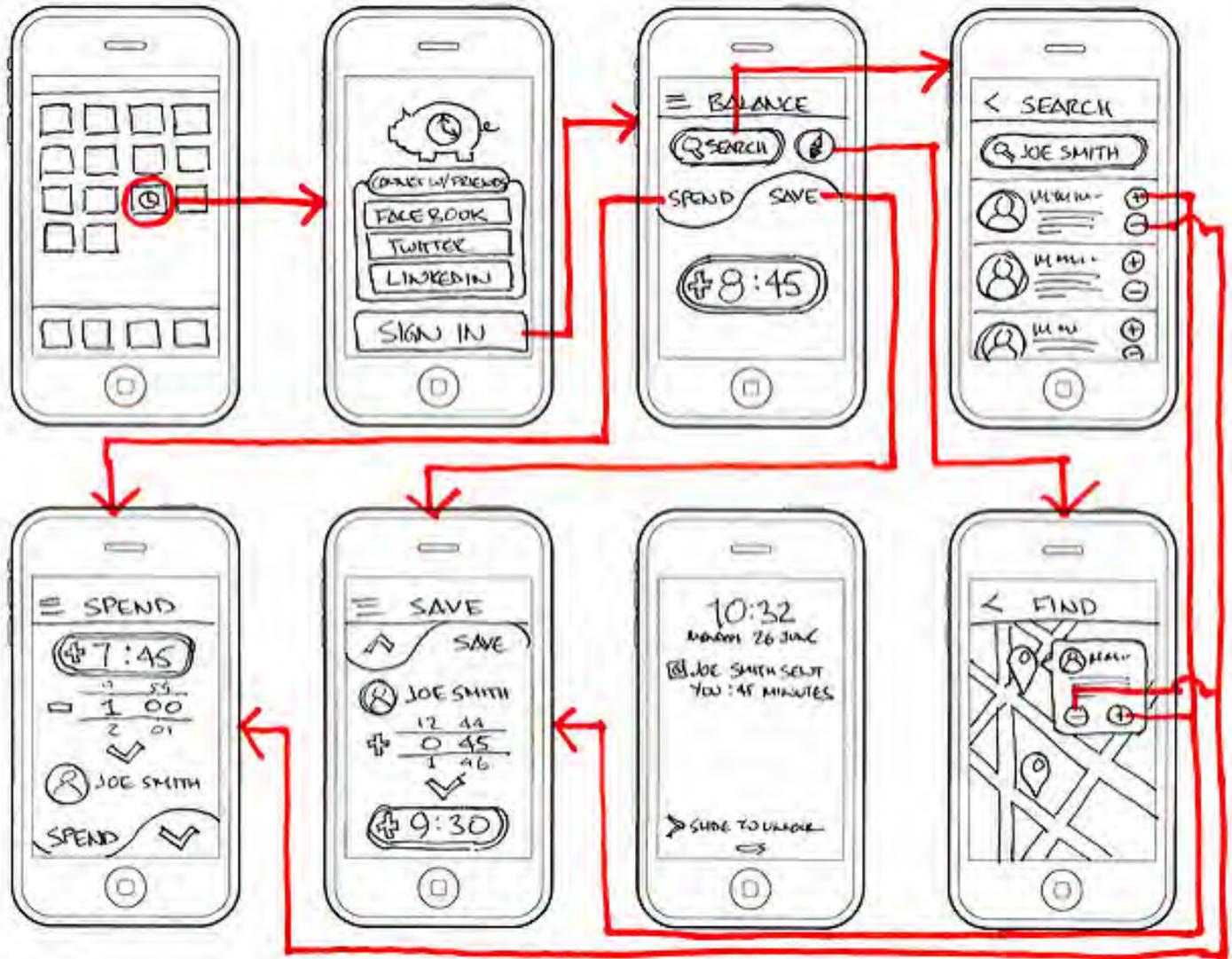
Directions

You are working for a client who is creating a doggy-date app that helps dog owners get together with other dog owners for doggy play-dates. The app is called "Play, Dog, Play". It is your job to create the user-experience for the owner of the application. Using the wireframe template provided, mock up the experience a user would have when first opening the application and how to schedule a play date with another dog and their owner.



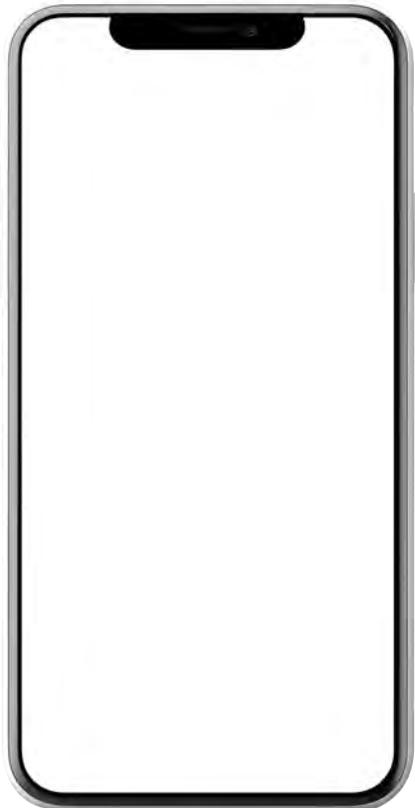
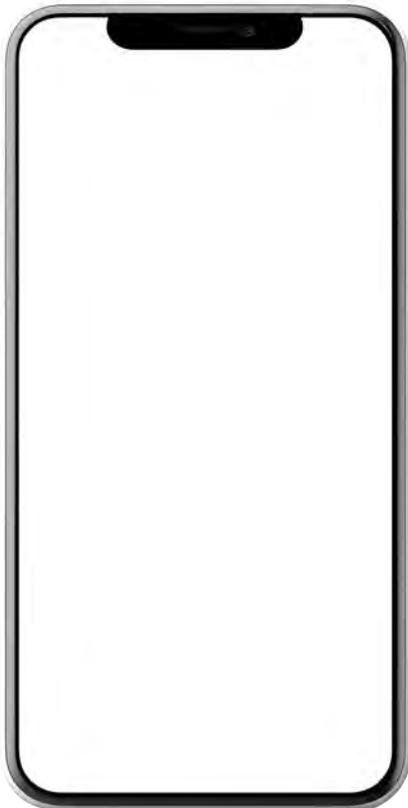
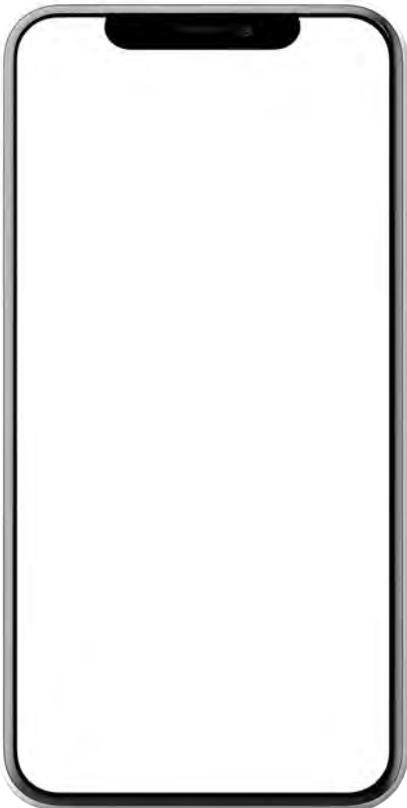
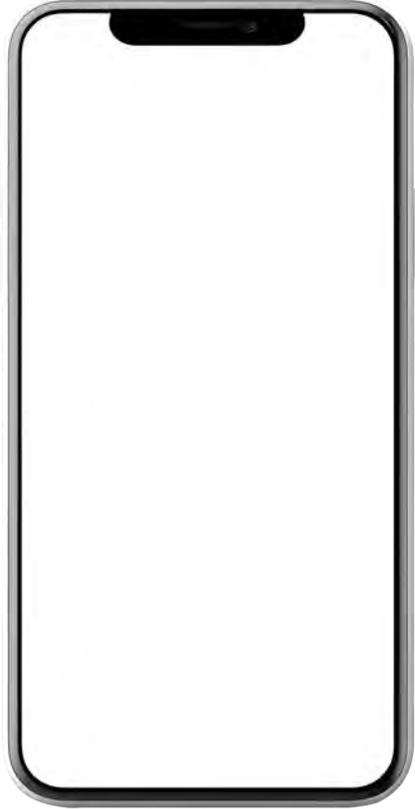
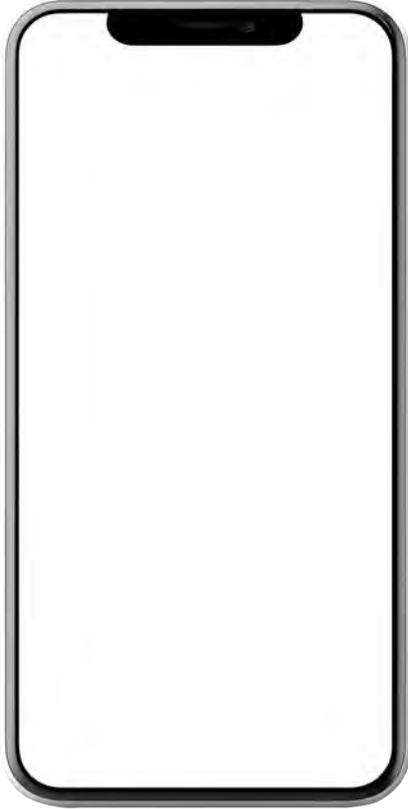
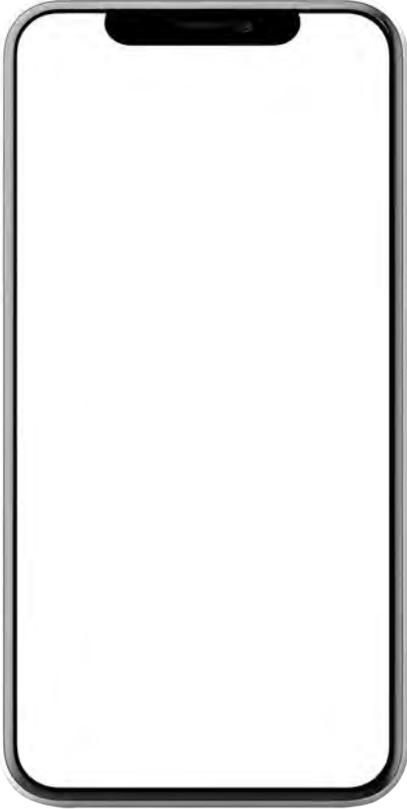
Web and Digital Interface Designer

Wireframe Example



Web and Digital Interface Designer

Wireframe Template



REFLECTIONS

- 136 | Student Reflection
- 147 | Post Reflection
- 148 | Educator Reflection



Student Reflection

Take time to reflect on each career as you explore through the hands-on career fair. You only need to reflect on the careers you participate in today.



ATHLETIC TRAINER

1. Athletic trainers have to have knowledge in a lot of areas of the body when it comes to potential injuries of their clients. What prior knowledge did you have, if any, that helped you complete this activity?
2. What did you find most challenging about this task? Explain.



CRIMINOLOGIST

1. As a criminologist, one of the common tasks you will have is analyzing fingerprints. What strategies or tricks did you use to help remember the different characteristics of fingerprints in order to identify your own?
2. A job like criminologist is going to put you in situations where you might be seeing and hearing about some gut-wrenching situations. What would be your plan-of-action to help keep you in your best mind if you were to start a career like this one?

Student Reflection



DENTAL HYGIENIST

1. In this activity as a dental hygienist, you were working with a tooth model. What would be some potential challenges you would experience if you were to complete this same procedure on a real person?
2. There are a lot of different factors that would impact a patient's oral health from socio-economic status to genetics. No matter a patient's situation, it is important to show them kindness and support during their dental experience. What are some strategies you might use to do so?



ELECTRICIAN

1. Electricians must do a lot of problem solving when it comes to wiring buildings and homes, just like the activity you completed. What challenged you the most during your own process?
2. What problem solving strategies did you use when working on wiring your house?

Student Reflection



ELEMENTARY SCHOOL TEACHER

1. In this activity, you made accommodations for only a few student needs. As an elementary school teacher, you are going to have a class of up to 30 students to work with. What would pose as the most difficult challenge when it comes to creating lessons and instruction for a group of that size?
2. The classroom scenarios described in this activity are something you might experience every once in a while or multiple times a week. What strategies would you put in place in your classroom or for your students to better prepare for an unscheduled interruption or emergency?



ENTOMOLOGIST

1. Which part of this activity was more challenging: the bug identification or the action-steps after? Why?
2. Realistically, could you have a career that primarily works with and researches insects? What life experiences have impacted that decision for you?

Student Reflection



EVENT PLANNER

1. An event planner has to pay close attention to big and small details of the event they are planning, down to how many cups of coffee they need to budget for. Was it difficult to stay on top of each of the expenses of your conference? What strategy did you use to get the job done?
2. A typical conference budget is provided to an event planner and they must stay within the parameters of that budget. What areas did you splurge on in your planning and could possibly get rid of if you were to actually go through with the event?



EXECUTIVE CHEF

1. How difficult did you feel the executive chef challenge was? Why?
2. How could you apply the skills from the executive chef activity in real life?

Student Reflection



FASHION DESIGNER

1. Describe your process when completing the fashion design activity. How did you come up with a plan of action to complete the task?
2. What characteristics and skills do you currently possess that supported your success in this activity?



FLORAL DESIGNER

1. How difficult did you feel the executive chef challenge was? Why?
2. How could you apply the skills from the executive chef activity in real life?

Student Reflection



GEOLOGICAL ENGINEER

1. What was your thought process when deciding what type of tool to use at your dig site?

2. Prospecting means to “look out for” or “search for”. What is one way you could use the concept of prospecting in your life?



GRAPHIC DESIGNER

1. After completing your client request, you did not have to deal with feedback from your client directly. What are some potential challenges you might face when working directly with a client?

2. The client request you received had minimal description and direction for the company’s logo. What additional questions and guidance do you wish you could have asked the company for to help create a logo that is more in line with the company’s vision?

Student Reflection



MECHANICAL ENGINEER

1. Overall, what were your thoughts about the hydraulic elevator? Is it realistic? Feasible?

2. What additional materials would have been helpful for the activity?



MUSEUM CURATOR

1. What was your organizational process when creating your hometown collection? How did you decide what was most important or less important to include in your display?

2. As a museum curator, you will have to do research, make connections with potential partners, and even stop by a few antique shops to find the perfect information and pieces to include in your collection. What type of connections do you have currently that could potentially help you find more information about your hometown and its' history?

Student Reflection



NUTRITIONIST

1. The food pyramid indicates different portions of each category based on someone's age range and lifestyle. How do your personal eating habits align or misalign with the guidance of the food pyramid?
2. There are many "helping careers" that one might choose to go into. These careers often require working one-on-one with people to create plans for their personal success. Would a service-focused career appeal to you? Why or why not?



PHARMACY TECHNICIAN

1. Although you were working with candy for this activity, which is very low-stakes, a pharmacist works with much higher-risk prescription drugs on a daily basis. What strategies would you use to keep the prescriptions and labels straight when filling multiple prescriptions in a short time frame?
2. There was an abbreviation cheat sheet that helped you match up the prescriptions and the prescription labels. Did you begin memorizing any of the abbreviations after a few prescription fills? What strategies could you use to keep certain abbreviations straight like am and pm, or left ear and right ear?

Student Reflection



RADIOLOGIST

1. Which x-ray was the hardest to identify? Why do you think this was the most challenging?
2. Some of the x-ray images depicted something pretty gruesome injuries. Is that something you could handle on a day-to-day basis? How would you handle potentially disturbing patient injuries?



SOFTWARE DEVELOPER

1. The activity you completed today is a very small example of what coding might look like for a software developer. Imagine you are coding for an entire video game sequence with 20 levels. Is this a career you could stay engaged in long-term? Why or why not?
2. Most software developers work on projects on their own, just as you did with this activity. When might it be helpful to have coworkers to collaborate with on a job like coding for video games or computer applications?

Student Reflection



SUPPLY CHAIN MANAGER

1. In this activity, you had a limited list of supplies and vendors to choose from. Some supply chain managers work nationally or globally to procure ingredients or materials. What do you think could be some challenges when performing this task?
2. Think about the different audiences a company might design a product for. How might adjusting a product for a specific audience impact the way you procure ingredients or materials?



SURGICAL TECHNICIAN

1. Luckily with today's activity, we were only working with fake skin/injuries. In a typical surgical environment, there would be a lot more biological fluid. Do you think you could handle that kind of sight on a regular basis?
2. Surgical technicians must maintain a steady hand and a strong focus when working on a patient. At any point of suturing, did you find yourself distracted or losing focus? Why could that be dangerous for you and the patient?

Student Reflection



WATER/WASTEWATER TREATMENT PLANT AND SYSTEM OPERATOR

1. In this activity you completed one pH test per water sample. Why do you think it would be important to run a water sample test multiple times before concluding your results? Why do you think it is important that professionals in this career do their job with great accuracy?
2. Luckily you were provided with some pretty easy water samples for today's activity. In this career field, you may not be so lucky. What are your boundaries when it comes to a potentially dirty job? Can you handle the potentially smelly and/or contaminated water? Explain.



WEB AND DIGITAL INTERFACE DESIGNER

1. The app idea that was provided to you in this activity was a bit silly, but could definitely be a true application for dogs and their owners. If you could create a start-up app company, what app idea would you want to create? What type of demographic would you target with your new application?
2. What skills do you already have that helped you be successful in this career? What skills would you need to develop or work on to be successful in this career?

Post Reflection

The post reflection is an activity that can be done after the hands-on career fair is complete, or it can be done multiple days following the career fair experience. This too is a way for students to reflect on the activities they participated in, and to decide if they're interested in pursuing further information.

1. Prior to participating in the Hands-On Career Fair, which careers did you find yourself being drawn to? Why do you think that was the case?

6. If you could choose one career to exclude from the Hands-On Career Fair for next time, which would it be and why?

2. After completing the Hands-On Career Fair, which careers did you find the most exciting or fun to explore? Why?

7. If you could choose one new career to include in the hands-on career fair, which would it be and why?

3. After completing the Hands-On Career Fair, which careers were you not interested in? Why? Did that surprise you?

8. What kinds of questions do you have after completing the Hands-On Career Fair?

4. Which of the careers do you think highlight your own natural skills and qualities? What skills and qualities of yours were highlighted?

9. What could make this experience even better the next time?

5. Which careers did you struggle with the most? Why do you think that is?

10. Overall, did you enjoy this experience? (Circle one) Yes or No Explain.

Educator Reflection

The educator reflection provides an opportunity for lead educators to model the hands-on career fair for their peers and have them reflect on the experience. The reflection allows educators to discuss the hands-on career fair and figure out innovative ways to implement the experience to their unique students, family, and community.

Complete the educator reflection once you (educator) have completed the activities. Discuss your responses and overall opinions of the experience.

1. After experiencing the hands-on career fair, what did you enjoy the most? Why?

4. Your hands-on career fair experience included a wide variety of careers. Which different career fields could you create a hands-on career experience?

2. What, if any, aspects did you not enjoy or would like to change? Explain.

5. What changes would you make to the hands-on career fair to better suit a family night event?

3. What are additional ways you could implement the career fair in your school? What differentiation would open this activity up for different/new audiences?

ADDITIONAL RESOURCES

- 150 | Template - Create Your Own Activity Packet
- 154 | Notes & Ideas
- 155 | Contact GEAR UP Idaho





**CAREER
NAME
GOES HERE**

CAREER PROFILE

Career Name Goes Here

Intro Text

Resource text

Career Characteristics

- Bullet

Similar Careers

- Bullet

Correlating Degrees / Programs

- Bullet

Career Check-In

- Bullet

HANDS-ON ACTIVITY

Career Name Goes Here

Intro text goes here

Materials

- Bullets go here

Directions

Directions go here

Career Name Goes Here

Secondary Title

Contact GEAR UP Idaho

College & Career Readiness

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