

Personal & Occupational Health & Safety

Media Type: Microsoft® PowerPoint® Presentation

Duration: 116 slides

Goal: To enhance awareness and knowledge of job site health and safety.

Description: In this lesson students will review the general safety and health policies and procedures on the job site. This lesson reviews rules and regulations, job site safety, personal protection equipment, as well as emergency preparedness.

Objectives:

1. To understand OSHA’s role in occupational health and safety.
2. To learn the rules and regulations of a job site.
3. To understand basic job site hazards and safety.
4. To learn about and care for personal protective equipment.
5. To understand emergency preparedness plans and actions.



Architecture & Construction Career Cluster (AC)

Cluster	Standard
	Comply with regulations and applicable codes to establish and manage a legal and safe workplace.
	Describe the roles, responsibilities and relationships found in the architecture and construction trades and professions, including labor/management relationships.
Construction Career Pathway (AC-CST)	Apply practices and procedures required to maintain jobsite safety.
	Safely use and maintain appropriate tools, machinery, equipment and resources to accomplish construction project goals.
Design/Pre-construction Career Pathway (AC-DES)	Use effective communication skills and strategies (listening, speaking, reading, writing and graphic communications) to work with clients and colleagues.
	Apply building codes, laws and rules in the project design.
Maintenance/Operations Career Pathway (AC-MO)	Maintain and inspect building systems to achieve safe and efficient operation of buildings.

Manufacturing Career Cluster (MN)

Cluster	Standard
	Comply with federal, state and local regulations to ensure worker safety and health and environmental work practices.
Health, Safety & Environmental Assurance Career Pathway (MN-HSE)	Demonstrate the safe use of manufacturing equipment.
	Develop safety plans for production processes that meet health, safety and environmental standards.
	Demonstrate a safety inspection process to assure a healthy and safe manufacturing environment.
	Evaluate a system of health, safety and/or environmental programs, projects, policies or procedures to determine compliance.
	Evaluate continuous improvement protocols and techniques in health, safety and/or environmental practices.
	Conduct job safety and health analysis for manufacturing jobs, equipment and processes.
	Develop the components of a training program based on environmental health and safety regulations.
Quality Assurance Career Pathway (MN-QA)	Identify inspection processes that ensure products meet quality specifications.

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College & Career Readiness Anchor Standards for Writing

Writing Standards

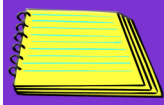
Text Types & Purposes	Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.	
	9-12.2	Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
Production & Distribution of Writing	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	
	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.	
	Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.	
	9-12.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
	9-12.5	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
	9-12.6	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

College & Career Readiness Anchor Standards for Speaking and Listening

Speaking & Listening Standards

Comprehension & Collaboration	Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.	
	Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.	
	9-12.1	Initiate and participate effectively in a range of collaborative discussions with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
Presentation of Knowledge & Ideas	9-12.2	Integrate multiple sources of information presented in diverse media or formats evaluating the credibility and accuracy of each source.
	Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.	
	9-12.4	Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

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Lesson Plan

Student and Teacher Notes are available to print in outline format. You can access these documents under the "Printable Resources" section. If student licenses have been purchased, an interactive version of the Student Notes is available in the "Interactive Activities" section. If printing the full PowerPoint® is desired, you may download the file and print the handouts as needed.

Class 1: Begin class by distributing the *Personal & Occupational Health & Safety Vocabulary Handout* and *Student Handouts*. Show slides 1 to 17 of the *Personal & Occupational Health & Safety - Rules & Regulations* segment. Hand out the *OSHA Project* and allow the remainder of the class for students to begin.



Slides
1-17

Class 2: Show slides 18 to 31 of the *Personal & Occupational Health & Safety - Rules & Regulations* segment. Students should complete the corresponding *Assessment*. Distribute the *Public Service Announcement Project* and allow the remainder of the class for groups to work.



Slides
18-31

Class 3: Distribute the *Safety Inspection Checklist Activity* and *Safety Data Sheet Information Activity*, and allow the entire class for students to work.

Class 4: Hand out the *Hazard Solutions Activity* and allow students to participate in the class discussion. Remind students to continue using their *Vocabulary Handout*. Show slides 32 to 43 of the *Personal & Occupational Health & Safety - Job Site Safety* segment.



Slides
32-43

Class 5: Distribute the *Safety Equipment Student Handout*. Show slides 44 to 56 of the *Personal & Occupational Health & Safety - Job Site Safety* segment. Hand out the *Personal Protective Equipment Activity* and *Compatible & Incompatible Substances Project* and allow the remainder of the class for students to work.



Slides
44-56

Class 6: Show slides 57 to 72 of the *Personal & Occupational Health & Safety - Job Site Safety* segment. Distribute the *MSDS vs. SDS Activity* and allow the remainder of the class for students to work.



Slides
57-72

Class 7: Remind students to continue using the *Vocabulary Handout*. Show slides 73 to 78 of the *Personal & Occupational Health & Safety - Job Site Safety* segment. Students should complete the corresponding *Assessment*.



Slides
73-78

Class 8: Show slides 79 to 96 of the *Personal & Occupational Health & Safety - Personal Protection* segment. Students should complete the corresponding *Assessment*.



Slides
79-96

Class 9: Remind students to continue using the *Vocabulary Handout*. Show slides 97 to 106 of the *Personal & Occupational Health & Safety - Emergency Preparedness* segment.



Slides
97-106

Class 10: Show slides 107 to 116 of the *Personal & Occupational Health & Safety - Emergency Preparedness* segment. Students should complete the corresponding *Assessment*. Allow the remainder of the class for students to work on their *Projects*.



Slides
107-116

Class 11: Distribute the *Personal & Occupational Health & Safety Final Assessment* and allow time for students to complete it. Students should share their *Projects & Activities*.



Lesson Links

Occupational Safety and Health Administration

- <https://www.osha.gov>

Center for Disease Control and Prevention

- www.cdc.gov



Career & Technical Student Organizations

Skills USA

- Carpentry

Skills USA

- Occupational Health and Safety

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Career Connections

Using the *Career Connections Activity*, allow students to explore the various careers associated with this lesson. See the *Activity* for more details. *If student licenses have been purchased:* Students will select the interviews to watch based on your directions. *If only a teacher license is purchased:* Show students all the career interviews and instruct them to only complete the interview form for the required number of interviews.

- iCEV50393 Lee Lewis, CEO, Lee Lewis Construction
- iCEV50809 Kristen Harness, Interior Design Manager, Office Works
- iCEV50888 Duncan Fulton, Architect



Lab Activities

Safety Inspection Checklist

Directions:

Divide the class into groups of two. Using the technical program shop or classroom as a workplace, students will create a safety inspection checklist for the procedures and hazards listed. Once the list has been completed, groups will work through the inspection checklist and make observations and note the following: which of the safety guidelines are followed and which of the safety guidelines need attention. Once all groups have completed their inspection checklist, correct all errors which need attention. Also, they must identify the impacts of accident costs. This will assure a safe and healthy work area.

Hazard Solutions

Directions:

Ask students for possible hazards on the job site. Each student must provide one example for struck-by hazards, caught-in-between hazards, welding and cutting hazards, environmental hazards, chemical hazards, fire hazards, electrical hazards and confined space hazards. See the *Teacher Instruction Sheet* for more information.

Personal Protective Equipment

Directions:

Divide the class into groups of three or four. Groups will identify all personal protective equipment within the shop area. Include things such as gloves, hard hats, safety goggles, etc. Once all personal protective equipment has been identified, groups will inspect each piece of equipment for faults, such as: cracks, dents, rips, tears, cuts and missing components. Students should decide if each piece of equipment passes or fails the inspection. They will notify you of any faults in the equipment. Students should demonstrate the use and care of each piece of personal protective equipment and clean the equipment if necessary.

MSDS vs. SDS

Directions:

Students will use the Venn diagram provided to compare and contrast MSDS (Material Safety Data Sheets) and SDS (Safety Data Sheets).

Safety Data Sheet Information

Directions:

Students must research and explain Safety Data Sheet (SDS) information to manage and dispose of hazardous materials and identify proper ways to dispose of hazardous material. After completing their research, students must write a brief paragraph on the information they found and cite all sources used.

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Projects

OSHA

Directions:

Using the Internet, library or any other available resource, students should research OSHA's role in prevention and elimination of work-related illnesses and injuries. Using the research, they should create a two page report detailing their findings. Reports should include the following guidelines: define the acronym "OSHA" and explain what OSHA does; explain 1926 CFR Subpart C, explain OSHA's General Duty Clause, list at least three employer responsibilities required by OSHA; list at least three worker responsibilities covered under OSHA; describe or state where to find out more about OSHA; include information about employer/employee rights and responsibilities and any other information you deem necessary. Remind students to attach a citation sheet to their reports listing all sources used.

Public Service Announcement

Directions:

In groups, students will create a visual or auditory representation which communicates key emergency preparedness. Students should research and create a public service announcement which informs students about emergency preparedness plans and actions. Possible examples include: poster, rap song, newspaper article or school intercom announcement. Examples of public service announcement topics include: evacuation plan, location of first aid kit, location of fire extinguishers and fire prevention. Remind students to create a citation sheet listing all sources used. Groups should present their public service announcement to the class and be prepared to answer questions.

Compatible & Incompatible Substances

Directions:

Students research and determine two compatible substances which are commonly mixed during a construction project. Also, they must list the use of the mixture and be sure to list the safety precautions necessary and describe possible issues which need to be avoided while mixing. Then, research two incompatible substances and explain why they are incompatible and list the problems which might occur if they were to be mixed. After completing their research, students must create a poster board presentation on the information they found and cite all sources used and present their poster board to the class.