

Lab Safety

CSA - Summative Assessment

Name, Date, Period

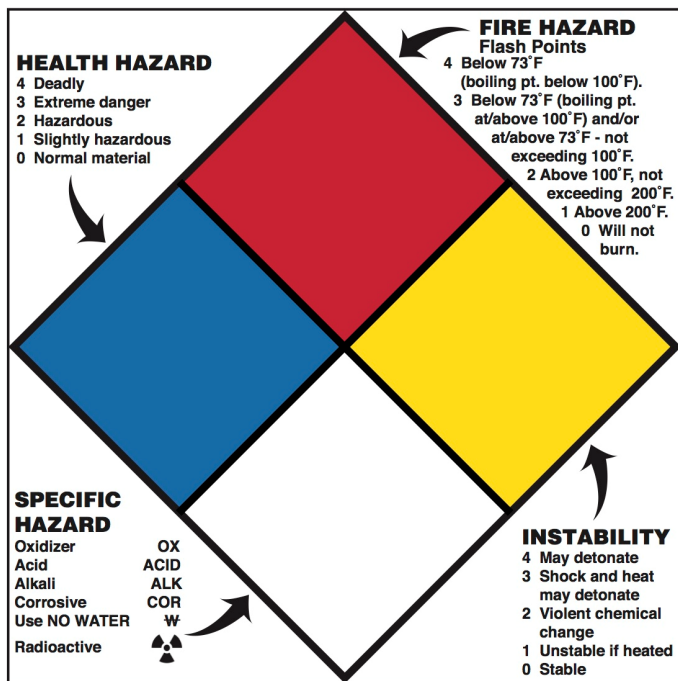
Directions: Complete the following activity below to assess your understanding of the concepts. Make sure to complete all required activities. Read the scenario before answering the questions.

The students come into the lab area and immediately head toward their station. They begin to set up for the lab so that they can get a head start before the teacher enters the room. They put on their safety goggles and lab apron. As they are getting ready to begin, a beaker containing 100mL of hydrochloric acid is knocked off the lab bench onto the floor because two students were horseplaying in the lab near the group's materials. The acid splashes onto the leg and foot of one of the students who were not wearing the correct protective equipment (PPE) or clothes. The student whom the acid spilled on had on flip flops and shorts. The beaker hits the ground and lays shattered on the floor. The lab area does not contain a safety shower or eye wash station but does have sinks for access to water.

Because the students have been studying HCl (hydrochloric acid), they know they can easily search the SDS sheet for more information. One student grabs a copy of the handout and flips to the hazard symbol and first aid information. He yells out to the students what to do after reading the information below:

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.
Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
Ingestion: If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.
Inhalation: POISON material. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Notes to Physician: Do NOT use sodium bicarbonate in an attempt to neutralize the acid.



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NFPA Rating: (estimated) Health: 3; Flammability: 0; Instability: 1

Target	Points Possible	Question	Score
I can list and follow the rules necessary for lab safety.	5pt	<p>Circle the correct answer choice or write in complete sentences</p> <p>1.) What did the students do incorrectly when entering the lab area? A. Gathered Materials B. Started Working</p> <p>2.) Why did the acid spill onto the student? A. Horseplaying B. Improper Use of Materials C. Neglect by teacher</p>	

		<p>3.) What code should the student have called out when the accident occurred? A. Code 101 B. Help! C. Code 1</p> <p>4.) Why should the students not pick up the broken beaker? A. contains chemicals B. The teacher should clean up broken glass.</p> <p>5.) Why did the student get burned with the acid? A. he was not wearing closed toed shoes B. because he was horseplaying in the lab</p>	
I can explain the importance of wearing PPE in the lab.	2pt	<p>1.) What PPE did the students wear when working? A. Lab Apron B. Safety Goggles C. Both A and B</p> <p>2.) When working with Hydrochloric acid, why is it important to wear safety goggles? A. Acid can cause permanent damage to the membranes in the eye. B. To keep acid from getting into your eye and causing damage.</p>	
I can identify and use lab equipment.	4pt	<p>1.) What lab equipment were the students using that got broken in the scenario above? A. Erlenmeyer Flask B. Beaker</p> <p>2.) What is the purpose of beaker (what is it used for)? A. to mix substances B. to measure substances</p> <p>3.) Which of the following devices are used to measure time? A. stopwatch B. meter stick</p> <p>4.) Which of the following devices are used to measure length? A. stopwatch B. meter stick</p>	
I can create a lab safety action plan.	12pt	<p>Write an action plan for the students to follow given the activities above? Action Plan must include:</p> <ul style="list-style-type: none"> • Give a solution to the problem (What to do if this situation occurs?) • List rules that were broken or would apply (ones you should follow) during that situation (Use your lab contract.) • Explain how to avoid the problem given 	
I can construct a map that shows the location of safety equipment.	3pt	<p>1.) What safety equipment was in the classroom in the scenario above? A. Safety Shower B. Eye Wash C. None of the above</p> <p>2.) Where in your classroom is the safety shower and eyewash located? <i>Explain using descriptive directions on how you would get to it from your desk.</i></p>	
I can construct a hazard symbol for a chemical given the SDS information.	4pt	<p>Construct a hazard symbol for HCl (hydrochloric acid) given the NFPA Hazard Information above. Make sure to color it correctly.</p>	