

# Lakeside High School ; Physical Science

## Plan for RTI


Grade Level: 9 , 10

### Essential Standard/Unit: Lab Safety - Arkansas Safety Standard #6




Common Mistakes Students Make in Unit	Example of Common Mistakes	Root Cause of Common Mistakes
<ol style="list-style-type: none"><li>1. Misidentification of PPE and equipment</li><li>2. Improper understanding of lab safety rules</li><li>3. Creating Hazard symbols given the SDS information for reactivity, health, and flammability.</li></ol>	<ol style="list-style-type: none"><li>1. Incorrectly labeling or identifying lab equipment/materials and its purpose; Confusion on when to wear the correct PPE - for example safety goggles, face shield, or apron.</li><li>2. Missed rules including proper wear in the lab; Code for emergencies; misidentification of students who were completing an activity incorrectly in the lab and what the rule stated or expected.</li><li>3. Identification of color and values for health and reactivity ratings. Reading to find the information in an SDS sheet.</li></ol>	<ol style="list-style-type: none"><li>1. Not knowing the proper name of safety equipment or materials.</li><li>2. Reading/Understanding the lab safety rules given in the contract.</li><li>3. Critical evaluation of information given in the SDS sheet about reactivity, health, and fire hazard.</li></ol>

What do we do if our students demonstrate that they have not learned the disciplinary core ideas represented in the essential standards tested?




#### RTI Lesson Plan:

The students will be given a pretest before the RTI Intervention.  lab safety exam.PDF







##### 1.) PPE, Lab Materials, and Lab Equipment


- a.) The students will be given a list of lab materials, equipment, and PPE and be required to identify the purpose and use of each material in the lab. An activity will be set up where the students will use the lab equipment and through the use of the equipment identify the purpose.  Lab Equipment - CER Activity
- b.) Students will read an article about wearing the correct safety PPE and watch a video about PPE in the workplace using ready for life. They will identify PPE in the workplace for a specific career they are interested in.
  - i.) Video: About PPE: Ready for Life <https://app.readyforlife.com/courses/1428/8265>
  - ii.) Career Activity  Career- PPE Activity
- c.) Students will make a map of the lab equipment in the room and identify the purpose and create a situation where the materials would need to be used.  Classroom Safety Equipment - Purpose and Location Activity

##### 2.) Lab Safety Rules

- a.) The students will be given a lab safety contract and will go over the basic lab safety rules as a class.  lab safety contract.PDF
- b.) They will create a lab safety plan where they identify the rules based on the scenario.  Lab Safety Action Plan Scenario
- c.) The students will be given a variety of scenarios where they will identify what the students are doing incorrectly and identify which rule the student is breaking and why they should follow the lab safety rule.  students incorrectly in the lab.pdf

##### 3.) NFPA Hazard Symbols (SDS Sheet - Reactivity, Flammability, Health Ratings)

- a.) The students, as a class, will go over an SDS sheet and identify the information given through a list of questions.  Lab Safety SDS Activity - HCl  hcl sds.pdf
- b.) The students will be given a research lab activity using hexanes and water. They will discover the properties through inquiry and have to decide which SDS sheet the material belongs to using the reactivity and flammability of the unknown materials. They will then create a hazard symbol using their collected data.
  - i.)  MSDS Inquiry Challenge.docx
  - ii.)  MSDS - Isopropyl Alcohol.pdf
  - iii.)  MSDS - Ethylene Dichloride.pdf
  - iv.)  MSDS - Hexanes.pdf

The students will be given a lab safety post exam at the end of the intervention. The score will serve as their new common summative assessment score.  lab safety exam.PDF