Lesson Title	Lab Safety
Length of Lesson	50 minutes
Created By	Hannah Brackin
Subject	General Science
Grade Level	7-8th
State Standards	1c
DOK Level	DOK 3
DOK Application	Assess, compare, investigate, differentiate, critique
National Standards	5-8: F: Science in Personal and Social Perspectives
Graduate Research Element	General laboratory practices used daily

Student Learning Goal:

State Standards:

1(c) Summarize data to show the cause and effect relationship between qualitative and quantitative observations (using standard, metric, and non-standard units of measurement). (DOK 3)

National Standards 5-8: F: Science in Personal and Social Perspectives:

The potential for accidents and the existence of hazards imposes the need for injury prevention. Safe living involves the development and use of safety precautions and the recognition of risk in personal decisions. Injury prevention has personal and social dimensions.

Students will be shown laboratory safety rules, safety symbols, and safety hazards that are common in a laboratory setting and why they are important to understand and follow. Students will then be asked to apply this knowledge to their lab setting and to possible scenarios in which proper safety rules are not being followed. They will be given information about the local impact that the safety rule can have and be told about resources that are available for them to access

Materials Needed (supplies, hand-outs, resources):

Cow Eyeball, HCl acid, lab safety power point, pictures of lab scenarios where safety rules are being broken, and sheets of paper.

Lesson Performance Task/Assessment:

The student's outline of the lab and safety equipment will be an assessment.

Students will be shown pictures and/or videos of people in lab settings and asked what lab safety rules are being broken and followed

During a following class, the students will be asked to complete a quiz on safety rules, symbols, and location of lab equipment within their class lab.

Lesson Relevance to Performance Task and Students:

The students will learn lab safety rules and their importance as well as the types of safety equipment found in laboratories. They will be asked to find the safety equipment in the lab in hopes that they will be familiar with the locations if an accident were to occur. Students will be asked to show their understanding of the safety rules by identifying and critiquing pictures of lab scenarios. Finally, the students will have to display understanding through a quiz.

Anticipatory Set/Capture Interest:

The teacher will show the students what happens when acid is spilled on a cow eyeball.

Guided Practice:

The teacher will preform the cow eyeball demonstration for the students. After the demonstration, the teacher will go through the lab safety power point. At this point, each student will be given a blank sheet of paper. While at his or her desk, each student will draw an outline of the laboratory (doors, benches, furniture, etc.) Once they have completed the outline, they will be asked to walk around the lab and find all safety equipment (fire extinguishers, safety shower, eyewash, etc.) and draw the equipment on their paper with clear labels. Once the students are done, they should return to their desks and the teacher should go around and identify the equipment. The papers should be collected as an assessment.

The teacher will then ask students to identify what safety rules are being broken in pictures displayed on the projector. This can be done as a class or individually as an assessment.

Finally, the students will be asked to complete a quiz on all safety rules, equipment location, and symbols.

Independent Practice:

The students will be asked to map out the safety equipment in the lab, therefore making it easier to find in an accident situation. Students will also be asked to identify safety rules being broken.

Remediation and/or Enrichment:

Remediation:

Individual IEP. Cover the lab scenarios as a class and discuss which rules are being broken and why it is dangerous.

Enrichment:

Students could be assigned a common household chemical that they are required to look up the Material Safety Data Sheet (MSDS) using the Internet. They could also be asked to look at the chemicals in their homes and write down the warning labels and symbols that they find.

Check(s) for Understanding:

Why are these rules in place?

If these rules are not followed does the outcome only affect the person breaking the rule?

Can anyone think of broader impacts?

Closure:

Discuss the questions under "Checks for Understanding" section as a group

Students will be given a quiz on location of laboratory equipment, safety rules and symbols.

Possible Alternate Subject Integrations:

General Sciences: Any course in which students have to enter into a lab setting and perform experiments could benefit from this lesson plan (Chemistry, Biology, Physics, etc.)

Teacher Notes:

For cow eyeballs call meat processing plant- Sansing in Starkville, MS