

Lesson Plan for the Teacher:

Laboratory Equipment and Safety Instructions

Objective:

By the end of this lesson, students will:

Identify and describe common laboratory equipment in English.

Understand and apply lab safety rules.

Use modal verbs (must, should, can, cannot) to give safety instructions.

Develop speaking and writing skills related to lab procedures.

Lesson Structure & Timing (Approx. 60 Minutes)

1. Warm-Up (5 minutes)

Ask students: "What do you know about lab safety?"

Elicit common safety practices from students.

2. Laboratory Equipment Vocabulary (10 minutes)

Write the names of lab equipment on the board.

Read aloud each term and its definition.

Ask students to repeat after you.

Show pictures or real lab equipment (if available) for better understanding.

Student Activity:

Activity 1: Matching exercise (students match the equipment to its function).

Check answers together.

3. Laboratory Safety Rules (10 minutes)

Write the key lab safety rules on the board.

Discuss why each rule is important.

Ask students for examples of dangerous situations in the lab.

Student Activity:

Pair Discussion:

In pairs, students discuss: "Why is each rule important?"

Share one idea per pair with the class.

4. Grammar Focus: Modal Verbs for Safety Instructions (10 minutes)

Write must, should, can, cannot on the board.

Explain their meanings with example sentences.

Ask students to create their own safety rule using each modal verb.

Student Activity:

Activity 2: Fill in the blanks with the correct modal verb.

Check answers together as a class.

5. Common Lab Phrases & Speaking Practice (10 minutes)

Read aloud common lab phrases.

Model a short role-play with a student (Lab Assistant gives safety instructions; Student follows them).

Student Activity:

Activity 3: Students role-play in pairs using safety instructions.

6. Writing Practice: Safety Instructions (10 minutes)

Student Activity:

Activity 4: Students write five safety rules using must, should, or cannot.

7. Error Correction & Writing Task (10 minutes)

Write incorrect sentences on the board and correct them together.

Explain common mistakes in safety-related English.

Student Activity:

Activity 5: Correct the grammar mistakes in given sentences.

Activity 6: Write a short paragraph on why lab safety is important using modal verbs.

Homework (Optional)

Read a short article on lab safety.

Find five new words and write their meanings.

Write three sentences using lab equipment vocabulary.

Answer Key for Teacher

Activity 1: Matching Equipment with Its Use

1. D – Beaker → A wide glass container for mixing chemicals.
2. A – Pipette → Used to transfer small amounts of liquid.
3. C – Erlenmeyer Flask → A conical flask for heating liquids.
4. B – Goggles → A protective item for the eyes.
5. E – Tongs → A tool for holding hot objects.

Activity 2: Fill in the Blanks (Modal Verbs)

1. You must wear a lab coat to protect your clothes.
2. You cannot mix chemicals unless given instructions.
3. After the experiment, you should wash your hands.
4. You must dispose of waste in the correct container.
5. Students cannot enter the lab without supervision.

Activity 3: Speaking Practice

(No fixed answers – students should practice lab instructions in pairs.)

Example:

Lab Assistant: "You must wear safety goggles before handling chemicals."

Student: "Okay, I will wear safety goggles now."

Activity 4: Writing Safety Rules (Possible Answers)

1. You must wear a lab coat and goggles.
2. You should always read chemical labels before use.
3. You cannot eat or drink in the lab.
4. You must dispose of waste in the correct container.
5. You should wash your hands after an experiment.

Activity 5: Correcting Safety Mistakes

1. Incorrect: You must wear goggles if handling water.
Correct: You must wear goggles when handling chemicals.
2. Incorrect: You should drinking water in the laboratory.
Correct: You should not drink water in the laboratory.
3. Incorrect: Chemicals must store in sealed containers.
Correct: Chemicals must be stored in sealed containers.
4. Incorrect: Students cannot to mix random chemicals.
Correct: Students cannot mix random chemicals.
5. Incorrect: The Bunsen burner should using carefully.
Correct: The Bunsen burner should be used carefully.

Activity 6: Writing Task Example Answer

"In a chemistry lab, safety is very important. Students must wear protective equipment like gloves and goggles. They should follow the teacher's instructions carefully. They cannot eat or drink in the lab because chemicals may be dangerous. If an accident happens, they must report it immediately. Following these rules helps prevent injuries and keep everyone safe."

Final Notes for Teachers:

Encourage students to speak in full sentences when answering.

Monitor students' grammar usage in safety rules and correct common mistakes.

If time allows, have students present their safety rules in small groups.
