

Safety Before Samples

Choose protective equipment and procedures for a water-quality investigation.

8.1.C “use appropriate safety equipment and practices during laboratory, classroom, and field investigations as outlined in Texas Education Agency-approved safety standards;”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each item of safety equipment and each action that protects people. Write F, C, or A above each underlined part to show whether it applies in the field, classroom, or all investigation settings.

Testing Pond Water Safely

- ① Before a class investigates water quality at a nearby pond, the team studies the procedure and identifies hazards. The field site has uneven ground, deep water, insects, and possible poison ivy. Students wear closed-toe shoes, long pants, and gloves when collecting samples. They work with a partner, stay behind the marked shoreline boundary, and use a long-handled sampler rather than reaching into the pond. A teacher checks the weather and site conditions before the class leaves school.
- ② Back in the classroom, students place the sealed samples in a tray and label them before testing. Some water-quality tests use indicator solutions that can irritate eyes or skin. Students wear splash goggles and keep their hands away from their faces while using these materials. They use only the stated amount, never taste a sample, and report a spill or broken container immediately. At the end, they dispose of materials as directed, wash hands, and clean the work surface.
- ③ Safety equipment is useful only when students use it correctly and follow the investigation plan. During data collection, one student records observations while another handles the sampler or test materials, reducing clutter and confusion. If a student notices lightning, an unknown substance, damaged equipment, or an injury, the group stops work and tells the teacher. Students do not guess about a hazard or try to fix it alone. Careful choices protect people, preserve samples, and make results more trustworthy.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 At the pond, which two clothing items protect students from hazards on the ground and in plants?

2 A student says the water sample looks clear, so goggles are unnecessary. What should the student do, and why?

3 Which field practice keeps a student from reaching into pond water to collect a sample?

4 What must the group do if it finds damaged equipment or an unknown substance during the investigation?

3 YOUR TURN _____ Your own words

Plan a class investigation that measures soil moisture in a school garden. Write four numbered safety steps, including protective clothing or equipment, a safe work practice, and what you will do if you find a hazard.

PART 1 • READ AND MARK

Underline each item of safety equipment and each action that protects people. Write F, C, or A above each underlined part to show whether it applies in the field, classroom, or all investigation settings. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	At the pond, which two clothing items protect students from hazards on the ground and in plants?	Closed-toe shoes and long pants.
2	A student says the water sample looks clear, so goggles are unnecessary. What should the student do, and why?	The student should wear splash goggles because indicator solutions can irritate eyes.
3	Which field practice keeps a student from reaching into pond water to collect a sample?	Use a long-handled sampler.
4	What must the group do if it finds damaged equipment or an unknown substance during the investigation?	Stop work and tell the teacher. Students should not guess about the hazard or try to fix it alone.

PART 3 • YOUR TURN (SAMPLE ANSWER)

1. I will wear closed-toe shoes and gloves while working in the garden. 2. I will work with a partner and keep tools pointed toward the ground. 3. I will use the soil probe only as my teacher directs. 4. If I find a sharp object, insects that sting, or damaged equipment, I will stop and tell the teacher.

Accept equivalent safety choices that match the hazard, such as sturdy shoes, gloves, working with a partner, and reporting hazards. For the open response, look for four numbered, practical steps that include equipment or clothing, a work practice, and an appropriate response to a hazard.