



TEACHER SET-UP INSTRUCTIONS

Station #1

1. Cut all of the cards for students to manipulate and sort.
2. Tape down the “Appropriate Procedures” & “Inappropriate Procedures” cards - students will sort cards into these two categories.

Station #2

Materials: 1 triple beam balance, 2 random objects

1. Provide a triple beam balance and two random objects small enough to fit on the scale.
2. Demonstrate to students, if needed, how to operate the scale to obtain each object’s mass.

Station #3

Materials: 1 beaker, 1 erlenmeyer flask, 1 graduated cylinder, 1 volumetric flask, food coloring, water

1. Obtain 3-4 different types of scientific glassware - beaker, erlenmeyer flask, graduated cylinder, volumetric flask, etc.
2. Fill each glassware with different amounts of water in each of them.
3. Add a few drops of food coloring to each glassware, coloring them all different colors.
4. Label each glassware with their respective names

Station #4

1. Tape down each scenario A, B, and C for students to analyze and answer questions.

Station #5

1. Cut all of the cards for students to manipulate and sort.

Group Station Slip Instructions: Students work in groups of 3-4. They read the directions at each station, solve the station, and individually answer the station’s questions. Once an entire group is done with their station, the teacher initials that station’s # on the slip, and students can move to the next needed station.



Lab Safety

GROUP STATION SLIPS

Student Names:

Stations Name: Lab Safety

1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____

Student Names:

Stations Name: Lab Safety

1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____

Student Names:

Stations Name: Lab Safety

1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____

Student Names:

Stations Name: Lab Safety

1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____

Student Names:

Stations Name: Lab Safety

1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____

Student Names:

Stations Name: Lab Safety

1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____



Lab Safety

STUDENT RESPONSE SHEET

Name:

Date:

Block:

STATION #1: APPROPRIATE VS INAPPROPRIATE PROCEDURES

1. Why is the way you dress during an experiment important?
2. If you are unsure about your directions, what should you immediately do?
3. How should you leave a lab station when you exit class?
4. Why shouldn't you eat or drink anything during an experiment?
5. What tool can be used to touch and transport something hot?

STATION #2: MEASURING MASS

1. Complete the table:

Object	Mass (g)

2. Write the claim to the question: "Which object has the LARGEST mass?"

STATION #3: MEASURING VOLUME

1. Complete the table

Glassware	Volume (mL)
Erlenmeyer Flask	
Beaker	
Volumetric Flask	
Graduated Cylinder	

2. Write the claim to the question: "Which object has the SMALLEST volume?"



Lab Safety

STATION #4: LAB SAFETY SCENARIOS

Scenario A

1. What is Penny doing incorrectly?
2. Determine whether Meredith or Jarvis is picking up glasses appropriately. Explain.
3. Look closely at Meredith, what does she need to change?
4. What's wrong with where Jarvis is putting the broken glass?

Scenario B

1. Amanda is wearing gloves and goggles, but is missing what?
2. What on Amanda's lab station should be removed? Why?
3. Name two things wrong with Javier and Sunil horseplaying.

Scenario C

1. What are Rick, Sarah, and Andrew all ignoring? What should be done instead?
2. Name two things Andrew is doing wrong.
3. What is the appropriate way Rick should be smelling the chemical?
4. Sarah has many inappropriate things going on. Try to name them ALL.

STATION #5: LAB SAFETY EQUIPMENT

1. Explain the difference between fire extinguishers and fire blankets.
2. What are examples of personal protective equipment (PPE)?
3. What would you use to protect you from chemicals with toxic fumes?
4. What two pieces of equipment can you use to wash off hazardous chemicals?
5. Which safety equipment do you consider to be the most important? Why?



STATION #1: APPROPRIATE VS INAPPROPRIATE PROCEDURES

DIRECTIONS:

Sort the cards. Then answer the questions.

QUESTIONS:

1. Why is the way you dress during an experiment important?
2. If you are unsure about your directions, what should you immediately do?
3. How should you leave a lab station when you exit class?
4. Why shouldn't you eat or drink anything during an experiment?
5. What tool can be used to touch and transport something hot?



Lab Safety

APPROPRIATE PROCEDURES

INAPPROPRIATE PROCEDURES

Terrance wears his safety goggles, lab coat, and gloves while performing an experiment.

Lashonda wears open-toed sandals, big earrings, and short pants while performing an experiment.

Kayla sees a lab setup when she enters class. She waits for the teacher to provide clear instructions before touching things.

Malik runs into class and sees cool science equipment setup. He immediately starts playing with that equipment.



Lab Safety

Tatiana's best friend Facetimes her while she is using an open flame for an experiment. Tatiana ignores the phone completely, and continues working.

Maurice is listening to music while dealing with an open flame for an experiment. A song comes on that he does not like, so he turns around, pulls his phone out, and changes the song.

Yasir accidentally breaks a test tube while moving it. He immediately calls his teacher's attention, who then gets a broom to sweep it up.

While Jabari stirs two chemicals, a beaker falls off the table and breaks. Because the pieces were not that small, he picks them up with his bare hands and throws them in the class trash can.

When Cierra and her group approach the lab station, they move all backpacks, food, and drinks out of the way.

Because Darren and his group are not dealing with any chemicals, they open up a big bag of hot chips and start munching.



Lab Safety

To transport a beaker off of a hot plate, Chauncey uses tongs to pick it up and place it in its new location.

To impress a new student in class, Tarik grabs a hot beaker with his bare hands and quickly runs to its new location.

Brandon is unsure what a certain chemical is. He asks the teacher, and then labels it accordingly.

Andre is unsure what a certain chemical is. He leans directly over the chemical, takes a big whiff, and then dips his finger in to taste it.

After completing an experiment, Aleesha and her group clean up and reset their station. Then, they transition to their next class

In fear of being tardy to their next class, Jalecia and her group stop their experiment, leave all the supplies out, and rush to their next class.



STATION #2: *MEASURING MASS*

DIRECTIONS:

1. Complete the T-chart.

Object	Mass (g)

2. Use the triple beam balance (scale) to measure the mass of each object.
3. Record your measurements in the chart.
4. Answer the question by writing an appropriate CLAIM.

Question: Which object has the largest mass?

5. CLEAN UP by removing the objects and zeroing the scale.



STATION #3: *MEASURING VOLUME*

DIRECTIONS:

1. DO NOT MOVE ANYTHING!
2. Complete the T-chart.

Glassware	Volume (mL)
Erlenmeyer Flask	
Beaker	
Volumetric Flask	
Graduated Cylinder	

3. Use the markings on each glassware to measure the volume of each liquid.
4. Record your measurements in the chart.
5. Answer the question by writing an appropriate

CLAIM:

Question: Which glassware contains the smallest volume?

6. CLEAN UP by making sure all glassware is back to its original spot.



STATION #4: *LAB SAFETY SCENARIOS*

DIRECTIONS:

Use the scenarios to answer the questions.

QUESTIONS:

Scenario A

1. What is Penny doing incorrectly?
2. Determine whether Meredith or Jarvis is picking up glasses appropriately. Explain.
3. Look closely at Meredith, what does she need to change?
4. What's wrong with where Jarvis is putting the broken glass?

Scenario B

1. Amanda is wearing gloves and goggles, but is missing what?
2. What on Amanda's lab station should be removed? Why?
3. Name two things wrong with Javier and Sunil horseplaying.

Scenario C

1. What are Rick, Sarah, and Andrew all ignoring? What should be done instead?
2. Name two things Andrew is doing wrong.
3. What is the appropriate way Rick should be smelling the chemical?
4. Sarah has many inappropriate things going on. Try to name them ALL.

SCENARIO A



SCENARIO B



SCENARIO C





STATION #5: LAB SAFETY EQUIPMENT

DIRECTIONS:

Sort the cards. Then answer the questions.

QUESTIONS:

1. Explain the difference between fire extinguishers and fire blankets.
2. What are examples of personal protective equipment (PPE)?
3. What would you use to protect you from chemicals with toxic fumes?
4. What two pieces of equipment can you use to wash off hazardous chemicals?
5. Which safety equipment do you consider to be the most important? Why?

Fire Extinguisher



This safety equipment is used to put out large fires.

Fire Blanket



This safety equipment is used to put out small fires.

Eye Wash Station



This safety equipment is used to rinse out hazardous chemicals that enter your eyes.

Emergency Shower



This safety equipment is used to wash off hazardous chemicals when they come in contact with large areas of your skin.

Personal Protective Equipment



Safety Goggles



Labcoat



Gloves

This safety equipment is used to protect your body from physical harm during an experiment.

Fume Hood



This safety equipment is used when you are working with chemicals to remove their toxic vapors and fumes.

Tongs



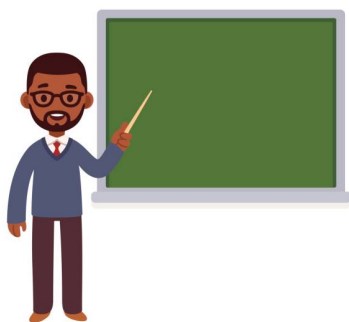
This safety equipment is used to carry hot glassware, instead of touching it with your bare hands.

First-Aid
Kit



This safety equipment is used by your teacher to treat you for minor injuries.

Teacher



This safety equipment is used whenever an accident occurs or you are unsure about the directions.