

## Lab Safety

### Activity 1: Before You Start

#### Question Group 1

##### Question 1

Before you start a year's worth of labs, it would be a wise idea to ...

- A. Know the location of the eye-wash station, fire blanket, fire extinguisher, and safety shower
- B. Pull the lever on the safety shower to make sure it is working
- C. Sign a contract with the school to hold them legally liable for any injury that may occur
- D. Let your teacher know that handling certain chemicals is against your religion.

##### Question 2

Before you start a year's worth of labs, it would be a wise idea to ...

- A. Pull the lever on the safety shower to make sure it is working
- B. Know the location of the eye-wash station, fire blanket, fire extinguisher, and safety shower
- C. Let your teacher know that handling certain chemicals is against your religion.
- D. Sign a contract with the school to hold them legally liable for any injury that may occur

##### Question 3

Before you start a year's worth of labs, it would be a wise idea to ...

- A. Sign a contract with the school to hold them legally liable for any injury that may occur
- B. Let your teacher know that handling certain chemicals is against your religion.
- C. Know the location of the eye-wash station, fire blanket, fire extinguisher, and safety shower
- D. Pull the lever on the safety shower to make sure it is working

##### Question 4

Before you start a year's worth of labs, it would be a wise idea to ...

- A. Sign a contract with the school to hold them legally liable for any injury that may occur
- B. Pull the lever on the safety shower to make sure it is working
- C. Let your teacher know that handling certain chemicals is against your religion.
- D. Know the location of the eye-wash station, fire blanket, fire extinguisher, and safety shower

## **Question Group 2**

### **Question 5**

Before you start any lab this year, it is important to ...

- A. Read all lab procedures and pay attention to all written and oral directions.
- B. Take a selfie of your lab group and post it to social media.
- C. Put your name and your partner's name on your lab sheet.
- D. Turn on the bunsen burners to make sure they're working; report any issues.

### **Question 6**

Before you start any lab this year, it is important to ...

- A. Turn on the bunsen burners to make sure they're working; report any issues.
- B. Read all lab procedures and pay attention to all written and oral directions.
- C. Take a selfie of your lab group and post it to social media.
- D. Put your name and your partner's name on your lab sheet.

### **Question 7**

Before you start any lab this year, it is important to ...

- A. Put your name and your partner's name on your lab sheet.
- B. Take a selfie of your lab group and post it to social media.
- C. Read all lab procedures and pay attention to all written and oral directions.
- D. Turn on the bunsen burners to make sure they're working; report any issues.

### **Question 8**

Before you start any lab this year, it is important to ...

- A. Take a selfie of your lab group and post it to social media.
- B. Turn on the bunsen burners to make sure they're working; report any issues.
- C. Put your name and your partner's name on your lab sheet.
- D. Read all lab procedures and pay attention to all written and oral directions.

## **Question Group 3**

### **Question 9**

Before you start a procedure in which you must add chemicals from a bottle or jar to a test tube or beaker, you should ...

- A. Double-check the label on the bottle or jar to insure you're adding the correct chemical.
- B. Shake the bottle or jar thoroughly to make sure its contents are uniformly mixed.
- C. Wash your hands thoroughly so that you don't transmit germs to the bottle or jar.
- D. Hold the test tube or beaker next to your stomach to allow your body temperature to warm it up.

**Question 10**

Before you start a procedure in which you must add chemicals from a bottle or jar to a test tube or beaker, you should ...

- A. Shake the bottle or jar thoroughly to make sure its contents are uniformly mixed.
- B. Double-check the label on the bottle or jar to insure you're adding the correct chemical.
- C. Hold the test tube or beaker next to your stomach to allow your body temperature to warm it up.
- D. Wash your hands thoroughly so that you don't transmit germs to the bottle or jar.

**Question 11**

Before you start a procedure in which you must add chemicals from a bottle or jar to a test tube or beaker, you should ...

- A. Hold the test tube or beaker next to your stomach to allow your body temperature to warm it up.
- B. Wash your hands thoroughly so that you don't transmit germs to the bottle or jar.
- C. Double-check the label on the bottle or jar to insure you're adding the correct chemical.
- D. Shake the bottle or jar thoroughly to make sure its contents are uniformly mixed.

**Question 12**

Before you start a procedure in which you must add chemicals from a bottle or jar to a test tube or beaker, you should ...

- A. Wash your hands thoroughly so that you don't transmit germs to the bottle or jar.
- B. Shake the bottle or jar thoroughly to make sure its contents are uniformly mixed.
- C. Hold the test tube or beaker next to your stomach to allow your body temperature to warm it up.
- D. Double-check the label on the bottle or jar to insure you're adding the correct chemical.

**Question Group 4**

**Question 13**

Before you start cleaning up your lab station at the end of a lab, you should ...

- A. Review your teacher's specific directions for safe disposal of waste chemicals since not everything should be poured down the drain.
- B. Place a bit of each chemical in small baggies so that you can conduct further testing at home.
- C. Return unused chemicals to the original bottle and pour everything else down the drain.
- D. Pour all liquid chemicals down the drain; place all solid chemicals in the grabage can.

**Question 14**

Before you start cleaning up your lab station at the end of a lab, you should ...

- A. Return unused chemicals to the original bottle and pour everything else down the drain.
- B. Review your teacher's specific directions for safe disposal of waste chemicals since not everything should be poured down the drain.
- C. Place a bit of each chemical in small baggies so that you can conduct further testing at home.
- D. Pour all liquid chemicals down the drain; place all solid chemicals in the grabage can.

**Question 15**

Before you start cleaning up your lab station at the end of a lab, you should ...

- A. Return unused chemicals to the original bottle and pour everything else down the drain.
- B. Pour all liquid chemicals down the drain; place all solid chemicals in the grabage can.
- C. Review your teacher's specific directions for safe disposal of waste chemicals since not everything should be poured down the drain.
- D. Place a bit of each chemical in small baggies so that you can conduct further testing at home.

**Question 16**

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- B. Return unused chemicals to the original bottle and pour everything else down the drain.
- C. Pour all liquid chemicals down the drain; place all solid chemicals in the grabage can.
- D. Review your teacher's specific directions for safe disposal of waste chemicals since not everything should be poured down the drain.

### **Question Group 5**

#### **Question 17**

Before you start a procedural step that is said to produce noxious fumes, you should ...

- A. Move to the fume hood, turn on the fan, and lower the glass window.
- B. Move to the back corner of the room, far from other students.
- C. Put on a gas mask or similar personal protective equipment.
- D. Go to the hallway to perform the step so your class mates are not in harm's way.

#### **Question 18**

Before you start a procedural step that is said to produce noxious fumes, you should ...

- A. Put on a gas mask or similar personal protective equipment.
- B. Move to the fume hood, turn on the fan, and lower the glass window.
- C. Move to the back corner of the room, far from other students.
- D. Go to the hallway to perform the step so your class mates are not in harm's way.

#### **Question 19**

Before you start a procedural step that is said to produce noxious fumes, you should ...

- A. Put on a gas mask or similar personal protective equipment.
- B. Move to the back corner of the room, far from other students.
- C. Move to the fume hood, turn on the fan, and lower the glass window.
- D. Go to the hallway to perform the step so your class mates are not in harm's way.

#### **Question 20**

Before you start a procedural step that is said to produce noxious fumes, you should ...

- A. Move to the back corner of the room, far from other students.
- B. Put on a gas mask or similar personal protective equipment.
- C. Go to the hallway to perform the step so your class mates are not in harm's way.
- D. Move to the fume hood, turn on the fan, and lower the glass window.

## **Activity 2: Chemistry Etiquette**

### **Question Group 6**

#### **Question 21**

If you are considering bringing food and drink to the lab, then you should ...

- A. Reconsider. Food and drink is not allowed in the lab. Contamination with chemicals is too high of a risk.
- B. Bring enough for the entire class. It's not polite to just bring food for yourself.
- C. Bring enough for your entire lab table. You don't want to be in a position where you are eating in front of others.
- D. Bring some extra for your teacher. It will be remembered when your lab is graded.

#### **Question 22**

If you are considering bringing food and drink to the lab, then you should ...

- A. Bring enough for your entire lab table. You don't want to be in a position where you are eating in front of others.
- B. Reconsider. Food and drink is not allowed in the lab. Contamination with chemicals is too high of a risk.
- C. Bring some extra for your teacher. It will be remembered when your lab is graded.
- E. Bring enough for the entire class. It's not polite to just bring food for yourself.

#### **Question 23**

If you are considering bringing food and drink to the lab, then you should ...

- A. Bring some extra for your teacher. It will be remembered when your lab is graded.
- B. Bring enough for the entire class. It's not polite to just bring food for yourself.
- C. Reconsider. Food and drink is not allowed in the lab. Contamination with chemicals is too high of a risk.
- D. Bring enough for your entire lab table. You don't want to be in a position where you are eating in front of others.

#### **Question 24**

If you are considering bringing food and drink to the lab, then you should ...

- A. Bring enough for the entire class. It's not polite to just bring food for yourself.
- B. Bring enough for your entire lab table. You don't want to be in a position where you are eating in front of others.
- C. Bring some extra for your teacher. It will be remembered when your lab is graded.
- D. Reconsider. Food and drink is not allowed in the lab. Contamination with chemicals is too high of a risk.

## **Question Group 7**

### **Question 25**

Any student who has long hair should consider ...

- A. Tyeing it back so that it doesn't accidentally get caught in a bunsen burner flame or exposed to chemicals.
- B. Cutting it off and keeping it short for the entire school year. Long hair can be a hazard when dealing with flames and chemicals.
- C. Looking for some hydrogen peroxide in the various lab drawers and storeroom. It makes for an inexpensive dying agent.
- D. Draping your hair over your goggles as an extra layer of eye protection. You can never be too safe when it comes to your eyes.

### **Question 26**

Any student who has long hair should consider ...

- A. Looking for some hydrogen peroxide in the various lab drawers and storeroom. It makes for an inexpensive dying agent.
- B. Tyeing it back so that it doesn't accidentally get caught in a bunsen burner flame or exposed to chemicals.
- C. Draping your hair over your goggles as an extra layer of eye protection. You can never be too safe when it comes to your eyes.
- D. Cutting it off and keeping it short for the entire school year. Long hair can be a hazard when dealing with flames and chemicals.

### **Question 27**

Any student who has long hair should consider ...

- A. Draping your hair over your goggles as an extra layer of eye protection. You can never be too safe when it comes to your eyes.
- B. Looking for some hydrogen peroxide in the various lab drawers and storeroom. It makes for an inexpensive dying agent.
- C. Tyeing it back so that it doesn't accidentally get caught in a bunsen burner flame or exposed to chemicals.
- D. Cutting it off and keeping it short for the entire school year. Long hair can be a hazard when dealing with flames and chemicals.

### **Question 28**

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- A. Cutting it off and keeping it short for the entire school year. Long hair can be a hazard when dealing with flames and chemicals.

- B. Looking for some hydrogen peroxide in the various lab drawers and storeroom. It makes for an inexpensive dying agent.
- C. Draping your hair over your goggles as an extra layer of eye protection. You can never be too safe when it comes to your eyes.
- D. Tying it back so that it doesn't accidentally get caught in a bunsen burner flame or exposed to chemicals.

## **Question Group 8**

### **Question 29**

Your eyes may be the most important part of your body that needs protection during a chemistry lab. Which one of the following practices is required in a chemistry lab?

- A. Wear chemical resistant splash goggles over your eyes at all times when in the chemistry lab.
- B. Wear chemical resistant splash goggles over your eyes only when using a Bunsen burner.
- C. Wear prescription glasses or lab goggles. Glasses might work best; they are usually covering your eyes while goggles tend to cover your forehead or neck.
- D. There is no need for goggles as long as you perform each experiment behind a protective glass shield.

### **Question 30**

Your eyes may be the most important part of your body that needs protection during a chemistry lab. Which one of the following practices is required in a chemistry lab?

- A. There is no need for goggles as long as you perform each experiment behind a protective glass shield.
- B. Wear chemical resistant splash goggles over your eyes at all times when in the chemistry lab.
- C. Wear prescription glasses or lab goggles. Glasses might work best; they are usually covering your eyes while goggles tend to cover your forehead or neck.
- D. Wear chemical resistant splash goggles over your eyes only when using a Bunsen burner.

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- B. There is no need for goggles as long as you perform each experiment behind a protective glass shield.



- C. Wear chemical resistant splash goggles over your eyes at all times when in the chemistry lab.
- D. Wear chemical resistant splash goggles over your eyes only when using a Bunsen burner.

### **Question 32**

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- C. There is no need for goggles as long as you perform each experiment behind a protective glass shield.
- D. Wear chemical resistant splash goggles over your eyes at all times when in the chemistry lab.

### **Question Group 9**

#### **Question 33**

Which one of the following footwear options is the suggested footwear for a students in a Chemistry lab?

- A. Comfortable shoes that cover your entire feet and prevent chemical exposure in the event of a spill.
- B. Waterproof, breathable, foot-to-chest waders like those worn by fly fisherman.
- C. Comfortable and casual sandals that allow you to feel at ease as you perform the lab.
- D. Bare feet! It allows you to quickly detect broken glass and spilled chemicals and

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- B. Comfortable shoes that cover your entire feet and prevent chemical exposure in the event of a spill.
- C. Bare feet! It allows you to quickly detect broken glass and spilled chemicals and spontaneously warn others of such hazards with a loud scream.
- D. Comfortable and casual sandals that allow you to feel at ease as you perform the lab.

**Question 35**

Which one of the following footwear options is the suggested footwear for a students in a Chemistry lab?

- A. Bare feet! It allows you to quickly detect broken glass and spilled chemicals and spontaneously warn others of such hazards with a loud scream.
- B. Comfortable and casual sandals that allow you to feel at ease as you perform the lab.
- C. Comfortable shoes that cover your entire feet and prevent chemical exposure in the event of a spill.
- D. Waterproof, breathable, foot-to-chest waders like those worn by fly fisherman.

**Question 36**

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- B. Comfortable and casual sandals that allow you to feel at ease as you perform the lab.
- C. Bare feet! It allows you to quickly detect broken glass and spilled chemicals and spontaneously warn others of such hazards with a loud scream.
- D. Comfortable shoes that cover your entire feet and prevent chemical exposure in the event of a spill.

### Activity 3: The Safest Way

#### Question Group 10

##### Question 37

After mixing two chemicals in a test tube, the lab directions state "Observe the odor." The **safest way** to observe the odor is to ...

- A. Wafting - use your hand to fan odors from the test tube opening towards your nose from a safe separation distance.
- B. Plug one nostril. Place the unplugged nostril over the test tube opening. Slowly inhale.
- C. Insert a rubber tube or straw into the test tube; inhale odors through the tube or straw from the other end.
- D. Pour the test tube contents onto the table so the entire lab group can inhale odors through their nostrils.

##### Question 38

After mixing two chemicals in a test tube, the lab directions state "Observe the odor." The **safest way** to observe the odor is to ...

- A. Insert a rubber tube or straw into the test tube; inhale odors through the tube or straw from the other end.
- B. Wafting - use your hand to fan odors from the test tube opening towards your nose from a safe separation distance.
- C. Pour the test tube contents onto the table so the entire lab group can inhale odors through their nostrils.
- D. Plug one nostril. Place the unplugged nostril over the test tube opening. Slowly inhale.

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- A. Pour the test tube contents onto the table so the entire lab group can inhale odors through their nostrils.
- B. Plug one nostril. Place the unplugged nostril over the test tube opening. Slowly inhale.
- C. Wafting - use your hand to fan odors from the test tube opening towards your nose from a safe separation distance.
- D. Insert a rubber tube or straw into the test tube; inhale odors through the tube or straw from the other end.

##### Question 40

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- B. Insert a rubber tube or straw into the test tube; inhale odors through the tube or straw from the other end.
- C. Pour the test tube contents onto the table so the entire lab group can inhale odors through their nostrils.
- D. Wafting - use your hand to fan odors from the test tube opening towards your nose from a safe separation distance.

### Question Group 11

#### Question 41

The lab directions require that you acquire 10 mL of high-concentration acid and dilute it to approximately 100 mL in a beaker. Which one of the following sayings describes the **safest way** to dilute the acid?

- A. Add acid to the water as you oughta.
- B. Add water to acid so you don't get blasted.
- C. Squirt water into the acid from a distance; those with the best shot will be christened.
- D. Dilution is the solution so add lots of water to the acid.

#### Question 42

The lab directions require that you acquire 10 mL of high-concentration acid and dilute it to approximately 100 mL in a beaker. Which one of the following sayings describes the **safest way** to dilute the acid?

- A. Squirt water into the acid from a distance; those with the best shot will be christened.
- B. Add acid to the water as you oughta.
- C. Dilution is the solution so add lots of water to the acid.
- D. Add water to acid so you don't get blasted.

#### Question 43

The lab directions require that you acquire 10 mL of high-concentration acid and dilute it to approximately 100 mL in a beaker. Which one of the following sayings describes the **safest way** to dilute the acid?

- A. Squirt water into the acid from a distance; those with the best shot will be christened.
- B. Add water to acid so you don't get blasted.
- C. Add acid to the water as you oughta.
- D. Dilution is the solution so add lots of water to the acid.

#### Question 44

The lab directions require that you acquire 10 mL of high-concentration acid and dilute it to approximately 100 mL in a beaker. Which one of the following sayings describes the **safest way** to dilute the acid?

- A. Add water to acid so you don't get blasted.
- B. Squirt water into the acid from a distance; those with the best shot will be christened.
- C. Dilution is the solution so add lots of water to the acid.
- D. Add acid to the water as you oughta.

## Question Group 12

### Question 45

The directions for a lab require you to heat a test tube containing a solid and a solution in a bunsen burner flame. What is the **safest way** to do this?

- A. Tilt the test tube slightly and point the open-end of the test tube away from yourself and others.
- B. Stopper the test tube tightly to prevent contents from escaping. Then heat the test tube.
- C. Heat the test tube. With goggles on, periodically look down the tube to monitor progress.
- D. DON'T!!! You should never heat a chemical in a test tube ... even if the directions say so. Most chemicals explode upon heating.

### Question 46

The directions for a lab require you to heat a test tube containing a solid and a solution in a bunsen burner flame. What is the **safest way** to do this?

- A. DON'T!!! You should never heat a chemical in a test tube ... even if the directions say so. Most chemicals explode upon heating.
- B. Tilt the test tube slightly and point the open-end of the test tube away from yourself and others.
- C. Heat the test tube. With goggles on, periodically look down the tube to monitor progress.
- D. Stopper the test tube tightly to prevent contents from escaping. Then heat the test tube.

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- B. Heat the test tube. With goggles on, periodically look down the tube to monitor progress.
- C. Tilt the test tube slightly and point the open-end of the test tube away from yourself and others.
- D. Stopper the test tube tightly to prevent contents from escaping. Then heat the test tube.

### Question 48

The directions for a lab require you to heat a test tube containing a solid and a solution in a bunsen burner flame. What is the **safest way** to do this?

- A. DON'T!!! You should never heat a chemical in a test tube ... even if the directions say so. Most chemicals explode upon heating.
- B. Stopper the test tube tightly to prevent contents from escaping. Then heat the test tube.
- C. Heat the test tube. With goggles on, periodically look down the tube to monitor progress.
- D. Tilt the test tube slightly and point the open-end of the test tube away from yourself and others.

### Question Group 13

#### Question 49

The directions for a lab ask you to heat a beaker of chemicals on a hot plate at high setting and then to remove the beaker to cool. What is the **safest way** to remove the beaker?

- A. Grip the beaker with beaker tongs and carefully remove it from the hot plate and gently set it on the lab table.
- B. Fill a larger beaker with cold water. Using beaker tongs, quickly move the beaker from the hot plate to the cold water.
- C. Fill a larger beaker with cold water. Use a heat-resistant mitt to move the beaker from the hot plate to the cold water.
- D. Dare your partners to use their bare hands to move the beaker from the hot plate to the table; someone always responds to a dare.

#### Question 50

The directions for a lab ask you to heat a beaker of chemicals on a hot plate at high setting and then to remove the beaker to cool. What is the **safest way** to remove the beaker?

- A. Fill a larger beaker with cold water. Using beaker tongs, quickly move the beaker from the hot plate to the cold water.
- B. Grip the beaker with beaker tongs and carefully remove it from the hot plate and gently set it on the lab table.
- C. Dare your partners to use their bare hands to move the beaker from the hot plate to the table; someone always responds to a dare.
- D. Fill a larger beaker with cold water. Use a heat-resistant mitt to move the beaker from the hot plate to the cold water.

### Question 51

The directions for a lab ask you to heat a beaker of chemicals on a hot plate at high setting and then to remove the beaker to cool. What is the **safest way** to remove the beaker?

- A. Dare your partners to use their bare hands to move the beaker from the hot plate to the table; someone always responds to a dare.
- B. Fill a larger beaker with cold water. Use a heat-resistant mitt to move the beaker from the hot plate to the cold water.
- C. Grip the beaker with beaker tongs and carefully remove it from the hot plate and gently set it on the lab table.
- D. Fill a larger beaker with cold water. Using beaker tongs, quickly move the beaker from the hot plate to the cold water.

### Question 52

The directions for a lab ask you to heat a beaker of chemicals on a hot plate at high setting and then to remove the beaker to cool. What is the **safest way** to remove the beaker?

- A. Fill a larger beaker with cold water. Using beaker tongs, quickly move the beaker from the hot plate to the cold water.
- B. Fill a larger beaker with cold water. Use a heat-resistant mitt to move the beaker from the hot plate to the cold water.
- C. Dare your partners to use their bare hands to move the beaker from the hot plate to the table; someone always responds to a dare.
- D. Grip the beaker with beaker tongs and carefully remove it from the hot plate and gently set it on the lab table.

### Question Group 14

#### Question 53

After mixing two chemicals in a flask, the lab directions state *Observe the reaction that occurs*. Which of the following method is the **safest way** to make such observations?

- A. Get down at eye level with the flask and observe from the side with your goggles on.
- B. Remove your goggles momentarily so that you can make clear observations.
- C. Look down into the flask through the opening so that your observations are not obstructed by the glass.
- D. Get your binoculars out of your back pack and make observations from several feet away.

#### Question 54

After mixing two chemicals in a flask, the lab directions state *Observe the reaction that occurs*. Which of the following method is the **safest way** to make such observations?

- A. Remove your goggles momentarily so that you can make clear observations.
- B. Get down at eye level with the flask and observe from the side with your goggles on.
- C. Look down into the flask through the opening so that your observations are not obstructed by the glass.
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#### Question 55

After mixing two chemicals in a flask, the lab directions state *Observe the reaction that occurs*. Which of the following method is the **safest way** to make such observations?

- A. Remove your goggles momentarily so that you can make clear observations.
- B. Look down into the flask through the opening so that your observations are not obstructed by the glass.
- C. Get down at eye level with the flask and observe from the side with your goggles on.
- D. Get your binoculars out of your back pack and make observations from several feet away.

#### Question 56

After mixing two chemicals in a flask, the lab directions state *Observe the reaction that occurs*. Which of the following method is the **safest way** to make such observations?

- A. Remove your goggles momentarily so that you can make clear observations.
- B. Look down into the flask through the opening so that your observations are not obstructed by the glass.
- C. Get your binoculars out of your back pack and make observations from several feet away.
- D. Get down at eye level with the flask and observe from the side with your goggles on.



## **Activity 4: Now What?**

### **Question Group 15**

#### **Question 57**

During a lab, you drop a beaker on the table and it breaks. Now what should you do?

- A. Tell your teacher. She/he will bring you a broom and dust pan so you can clean it up and deposit the glass in the waste can dedicated for broken glass.
- B. Discreetly gather the broken glass and quietly place it in the garbage can without letting your teacher know.
- C. Using your hand and forearm, sweep the broken glass into the sink in one quick swoop. Cover with some wet paper towels so it isn't noticed.
- D. Find an unlocked lab drawer. Place the bigger chunks of broken glass in the drawer. Sweep the smaller pieces and splinters into the drain. Rinse with lots of water.

#### **Question 58**

During a lab, you drop a beaker on the table and it breaks. Now what should you do?

- A. Discreetly gather the broken glass and quietly place it in the garbage can without letting your teacher know.
- B. Tell your teacher. She/he will bring you a broom and dust pan so you can clean it up and deposit the glass in the waste can dedicated for broken glass.
- C. Find an unlocked lab drawer. Place the bigger chunks of broken glass in the drawer. Sweep the smaller pieces and splinters into the drain. Rinse with lots of water.
- D. Using your hand and forearm, sweep the broken glass into the sink in one quick swoop. Cover with some wet paper towels so it isn't noticed.

#### **Question 59**

During a lab, you drop a beaker on the table and it breaks. Now what should you do?

- A. Using your hand and forearm, sweep the broken glass into the sink in one quick swoop. Cover with some wet paper towels so it isn't noticed.
- B. Find an unlocked lab drawer. Place the bigger chunks of broken glass in the drawer. Sweep the smaller pieces and splinters into the drain. Rinse with lots of water.
- C. Tell your teacher. She/he will bring you a broom and dust pan so you can clean it up and deposit the glass in the waste can dedicated for broken glass.
- D. Discreetly gather the broken glass and quietly place it in the garbage can without letting your teacher know.

#### **Question 60**

During a lab, you drop a beaker on the table and it breaks. Now what should you do?

- A. Discreetly gather the broken glass and quietly place it in the garbage can without letting your teacher know.
- B. Using your hand and forearm, sweep the broken glass into the sink in one quick swoop. Cover with some wet paper towels so it isn't noticed.

- C. Find an unlocked lab drawer. Place the bigger chunks of broken glass in the drawer. Sweep the smaller pieces and splinters into the drain. Rinse with lots of water.
- D. Tell your teacher. She/he will bring you a broom and dust pan so you can clean it up and deposit the glass in the waste can dedicated for broken glass.

### **Question Group 16**

#### **Question 61**

During a lab, you knock over a graduated cylinder containing dilute acid solution. The solution spills on the floor and creates quite a mess. Now what should you do?

- A. Inform your teacher immediately and describe what was in the cylinder. She/he will take care of the mess and let you know what role you can play in the clean-up.
- B. It's just dilute acid. Use some paper towels to clean up the mess. Discard the towels in the garbage can.
- C. Don't tell your teacher!! You could lose lab privileges and even be expelled from the class.
- D. Dilution is the solution to just about any problem. Fill the cylinder with tap water and pour it on the acid spill. Repeat 10 times for a 10-fold dilution.

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- B. It's just dilute acid. Use some paper towels to clean up the mess. Discard the towels in the garbage can.
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B. It's just dilute acid. Use some paper towels to clean up the mess. Discard the towels in the garbage can.

C. Don't tell your teacher!! You could lose lab privileges and even be expelled from the class.

D. Inform your teacher immediately and describe what was in the cylinder. She/he will take care of the mess and let you know what role you can play in the clean-up.

#### **Question Group 17**

##### **Question 65**

During a lab, you become careless and spill some chemicals on your hand. Initially, you feel a bit of a burn but your lab partner assures you that you will be fine. Now what should you do?

A. Tell your teacher immediately. She/he will know the exact risk that the chemical poses and is trained in what the next steps are to treat the burn.

B. Don't tell your teacher yet. For now, place your hand under cold, running water. You can always email the teacher in the evening if your hand does not improve.

C. Don't tell your teacher! Tell your parents about the accident in the evening. They may wish to consult an attorney before informing the school of the incident.

D. Run immediately to the safety shower and drench yourself with water. If need be, roll up your sleeve or remove your shirt.

##### **Question 66**

During a lab, you become careless and spill some chemicals on your hand. Initially, you feel a bit of a burn but your lab partner assures you that you will be fine. Now what should you do?

A. Don't tell your teacher! Tell your parents about the accident in the evening. They may wish to consult an attorney before informing the school of the incident.

B. Tell your teacher immediately. She/he will know the exact risk that the chemical poses and is trained in what the next steps are to treat the burn.

C. Run immediately to the safety shower and drench yourself with water. If need be, roll up your sleeve or remove your shirt.

D. Don't tell your teacher yet. For now, place your hand under cold, running water. You can always email the teacher in the evening if your hand does not improve.

### **Question 67**

During a lab, you become careless and spill some chemicals on your hand. Initially, you feel a bit of a burn but your lab partner assures you that you will be fine. Now what should you do?

A. Run immediately to the safety shower and drench yourself with water. If need be, roll up your sleeve or remove your shirt.

B. Don't tell your teacher yet. For now, place your hand under cold, running water. You can always email the teacher in the evening if your hand does not improve.

C. Tell your teacher immediately. She/he will know the exact risk that the chemical poses and is trained in what the next steps are to treat the burn.

D. Don't tell your teacher! Tell your parents about the accident in the evening. They may wish to consult an attorney before informing the school of the incident.

### **Question 68**

During a lab, you become careless and spill some chemicals on your hand. Initially, you feel a bit of a burn but your lab partner assures you that you will be fine. Now what should you do?

A. Don't tell your teacher yet. For now, place your hand under cold, running water. You can always email the teacher in the evening if your hand does not improve.

B. Don't tell your teacher! Tell your parents about the accident in the evening. They may wish to consult an attorney before informing the school of the incident.

C. Run immediately to the safety shower and drench yourself with water. If need be, roll up your sleeve or remove your shirt.

D. Tell your teacher immediately. She/he will know the exact risk that the chemical poses and is trained in what the next steps are to treat the burn.

### **Question Group 18**

#### **Question 69**

You have completed the lab. But now that it is over, you notice that you have an extra 100 mL of unused solution that you had poured from a stock bottle at the beginning of the lab. Now what should you do?

A. Discard the solution in the appropriate manner; returning it to the stock bottle can contaminate the entire bottle.

B. Leave the beaker of solution on your lab table for next period's lab group to use.

C. There's no need for waste. Return the solution to the stock bottle before leaving the lab.

D. Empty a water bottle and fill it with the solution. You can take it home and probably have some fun with it.

### **Question 70**

You have completed the lab. But now that it is over, you notice that you have an extra 100 mL of unused solution that you had poured from a stock bottle at the beginning of the lab. Now what should you do?

A. There's no need for waste. Return the solution to the stock bottle before leaving the lab.

B. Discard the solution in the appropriate manner; returning it to the stock bottle can contaminate the entire bottle.

C. Empty a water bottle and fill it with the solution. You can take it home and probably have some fun with it.

D. Leave the beaker of solution on your lab table for next period's lab group to use.

### **Question 71**

You have completed the lab. But now that it is over, you notice that you have an extra 100 mL of unused solution that you had poured from a stock bottle at the beginning of the lab. Now what should you do?

A. Empty a water bottle and fill it with the solution. You can take it home and probably have some fun with it.

B. Leave the beaker of solution on your lab table for next period's lab group to use.

C. Discard the solution in the appropriate manner; returning it to the stock bottle can contaminate the entire bottle.

D. There's no need for waste. Return the solution to the stock bottle before leaving the lab.

### **Question 72**

You have completed the lab. But now that it is over, you notice that you have an extra 100 mL of unused solution that you had poured from a stock bottle at the beginning of the lab. Now what should you do?

A. Leave the beaker of solution on your lab table for next period's lab group to use.

B. There's no need for waste. Return the solution to the stock bottle before leaving the lab.

C. Empty a water bottle and fill it with the solution. You can take it home and probably have some fun with it.

D. Discard the solution in the appropriate manner; returning it to the stock bottle can contaminate the entire bottle.