Lab Safety and Equipment

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| ERLENMEY | labsafety | /i/whmis/Symbols&Labels/SymbolD1_sm.gif (2478 bytes) |

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Block: \_\_\_\_\_

**WHMIS Symbols**

WHMIS stands for Workplace Hazardous Materials Information System

|  |  |  |
| --- | --- | --- |
| 1) Compressed \_\_\_\_\_\_\_\_\_\_\_\_/i/whmis/Symbols&Labels/SymbolA_sm.gif (1883 bytes) |  | 2) Flammable and \_\_\_\_\_\_\_\_\_\_\_\_ Material/i/whmis/Symbols&Labels/SYMBOLB_SM.GIF (1999 BYTES) |
|  |  |  |
| 3) \_\_\_\_\_\_\_\_\_\_\_\_ Material/i/whmis/Symbols&Labels/SymbolC_sm.gif (1995 bytes) |  | 4) Materials Causing \_\_\_\_\_\_\_\_\_\_\_\_ and Serious Toxic Effect/i/whmis/Symbols&Labels/SymbolD1_sm.gif (2478 bytes) |
|  |  |  |
| 5) Materials Causing \_\_\_\_\_\_\_\_\_\_\_\_ Toxic Effects/i/whmis/Symbols&Labels/SymbolD2_sm.gif (1680 bytes) |  | 6) \_\_\_\_\_\_\_\_\_\_\_\_ Infectious Material/i/whmis/Symbols&Labels/SYMBOLD3_SM.GIF (2172 BYTES) |
|  |  |  |
| 7) \_\_\_\_\_\_\_\_\_\_\_\_ Material/i/whmis/Symbols&Labels/SymbolE_sm.gif (2532 bytes) |  | 8) Dangerously \_\_\_\_\_\_\_\_\_\_\_\_ Material/i/whmis/Symbols&Labels/SymbolF_sm.gif (2330 bytes) |

*Match the WHMIS symbol with the correct definition:*

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| --- | --- | --- | --- |
| 1)  | \_\_\_\_\_\_\_ | /i/whmis/Symbols&Labels/SYMBOLB_SM.GIF (1999 BYTES) | a) These materials contain harmful micro-organisms.b) These materials increase the risk of fire if they come in contact with flammable or combustible materials.c) These materials can destroy the skin or eat through metals. d) These materials are capable of catching fire in the presence of a spark or open flame.e) These materials can cause death or immediate injury when a person is exposed to small amounts.f) These materials include compressed gases, dissolved gases, and gases liquefied by compression or refrigeration.g) These materials may self-react dangerously. h) These materials can cause life-threatening and serious long-term health problems.  |
| 2) | \_\_\_\_\_\_\_ | /i/whmis/Symbols&Labels/SYMBOLD3_SM.GIF (2172 BYTES) |
| 3)  | \_\_\_\_\_\_\_ | /i/whmis/Symbols&Labels/SymbolD1_sm.gif (2478 bytes) |
| 4)  | \_\_\_\_\_\_\_ | /i/whmis/Symbols&Labels/SymbolF_sm.gif (2330 bytes) |
| 5)  | \_\_\_\_\_\_\_ | /i/whmis/Symbols&Labels/SymbolC_sm.gif (1995 bytes) |
| 6) | \_\_\_\_\_\_\_ | /i/whmis/Symbols&Labels/SymbolE_sm.gif (2532 bytes) |
| 7) | \_\_\_\_\_\_\_ | /i/whmis/Symbols&Labels/SymbolD2_sm.gif (1680 bytes) |
| 8)  | \_\_\_\_\_\_\_ | /i/whmis/Symbols&Labels/SymbolA_sm.gif (1883 bytes) |

**Consumer Hazard Labels**

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| http://www.iconsdb.com/icons/download/black/octagon-outline-512.gif | 1) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| http://www.pokergamingproducts.com/images/D/40-814PB_1.jpg | 2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| http://healthycanadians.gc.ca/alt/images/security-securite/home-maison/chemicals-chimiques_2_75x73.gif | 3) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| http://healthycanadians.gc.ca/alt/images/security-securite/home-maison/chemicals-chimiques_4_75x73.gif | 4) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| http://healthycanadians.gc.ca/alt/images/security-securite/home-maison/chemicals-chimiques_1_75x71.gif | 5) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| http://healthycanadians.gc.ca/alt/images/security-securite/home-maison/chemicals-chimiques_3_75x73.gif | 6) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
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**National Fire Protection Association (NFPA) Labels**

The NFPA diamond is subdivided into four general categories:

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| 2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_nfpa-p4) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_3) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_1) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| nfpa |

**Safety Practices**

*Briefly describe the proper safety practices in regards to the following:*

*1) Food and drink in the lab \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*2) Proper attire during a lab \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*3) People with contacts \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*4) People with long hair \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*5) An accident occurs \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*6) A fire occurs \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*7) Somebody’s clothes catches on fire \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*8) Disposing of chemicals \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*9) Mercury is spilt \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*10) Acid is spilt \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*11) Base is spilt \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*12) Glassware breaks or chips \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*13) Heating a test tube with a Bunsen burner \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*14) Smelling chemicals \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*15) Mixing acid and water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*16) Chemical gets spilt on your skin \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*17) Chemical gets in your eyes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*18) The fire alarm goes off \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*19) You have completed your experiment \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*20) Testing hot objects \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

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| *Identify unsafe lab practices:*1) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_3) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_4) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_5) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_6) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_7) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_8) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_9) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_10) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**Safety Equipment**

*Name the following safety equipment.*

|  |  |  |
| --- | --- | --- |
| Go to fullsize image | 1) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Marked above doors that can be used as an exit route. |
| Go to fullsize image | 2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Puts out fires. |
| inox11 | 3)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Shuts off gas main. |
| Go to fullsize image | 4) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Used to dispose of broken or chipped glassware. |
| Go to fullsize image | 5) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Rinses off any substance that has come in contact with the eyes. |
| Go to fullsize image | 6) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Helps smother flames. |
|  | 7) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Contents of kit allow for treatment of minor injuries. |
| SA531P | 8) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Protects the eyes from chemicals. |
|  | 9) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Used to neutralize acids and bases. |
| fumehoodhttp://g02.a.alicdn.com/kf/HTB1bpTqHVXXXXcSXXXXq6xXFXXXD/Simple-Metal-Buckle-DIY-Handmade-Hair-Accessory-Hair-Rope-Rubber-Black-Headbands-Jewelry-WNC250.jpg_350x350.jpg 11) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Used to tie back long hair. | 10) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Used to vent harmful fumes. |

**Safety Map**

*Make a safety map of your classroom. Be sure to include all safety equipment: 1) fire exits, 2) fire extinguisher, 3) gas main shutoff, 4) broken glass container, 5) eye wash station, 6) fire blanket, 7) first aid kit, 8) goggles, 9) chemical spill kit, and 10) fume hood.*

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**Lab Equipment**

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| 559_thumb | 1) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A glass tube closed at one end, used to heat, mix and examine chemicals. |
| pyrex%20beakerpyrex%2520beaker | 2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A glass container with a pouring spout, used to store, mix, heat and examine chemicals.  |
| ERLENMEYERLENMEY | 3) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | An inverted cone shaped glass bottle used to store, heat, mix, and hold liquids. |
| 297_thumb297_thumb | 4) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A round bottle with a flat bottom used for boiling liquids. |
| 423_thumb | 5) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A glass cylinder marked in milliliters, used for measuring volume of liquids. |
| pfa-petri-dish | 6) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A round shallow dish used to examine materials and to grow bacterial cultures. |
| 957_thumb | 7) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A tube with a wide cone shaped mouth, used to pour liquids into small openings. |
| pfa-petri-dishF10254-01~wn | 8) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A curved circular piece of glass, used for holding and examining specimens. |
| 0500312 | 9) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A porcelain dish used to evaporate liquids. |
| 7905P40 | 10) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Used to transport small amounts of liquids. |
|  |  |  |
| 825050 | 11) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A metal rod fastened to a sturdy base to which ring clamps and burette clamps may be attached. |
| lab-thermometer | 12) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A sealed tube containing alcohol, used to measure temperature. |
| 683683 | 13) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A rack used to support test tubes. |
| 23122m | 14) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A narrow brush used to clean test tubes. |
| F162-01~wn | 15) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A metal scoop used to place chemicals into test tubes. |
| 23243a | 16) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A metal rack used to support glassware while drying it. |
| 33943 | 17) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A tool used for picking up or holding hot objects. |
| DB61_rgb | 18) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A tool used to hold hot beakers. |
| tweezers | 19) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A pair of small tongs used to grasp small items. |
| 670 | 20) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A solid glass rod used for stirring liquids. |
| 690 | 21) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A clamp used to hold a test tube with the hand. |
| Product Picture | 22) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A clamp used to hold test tubes, mounted on a support stand.  |
| image/_016ringclamp.jpg, 1.9K | 23) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A clamp which is mounted on a support stand, used to support beakers and flasks. |
| WreGazeCeramic_3419_M2 | 24) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A wire screen used with a ring clamp to support beakers and flasks |
| A bunsen burner with needle valve. The hose barb for the gas tube is facing left and the needle valve for gas flow adjustment is on the opposite side. Air inlet on this particular model is adjusted by rotating the barrel, thus opening or closing the vertical baffles at the base. | 25) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A device used to produce a flame. |
| Image Preview | 26) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | A device used to heat beakers and flasks. |
| triplebeam | 27) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Used to find the mass of objects or chemicals. |
| Strikerhandbook-dissecting_panSee full size imageSee full size imageSee full size imageSee full size imageSee full size imageSee full size imagethumbnail | 28) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_29) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_30) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_31) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_32) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_33) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_34) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_35) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_36) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Used to light Bunsen burners.Specimen is placed inside when dissecting. |

**Flashcards**

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| 1)/i/whmis/Symbols&Labels/SymbolA_sm.gif (1883 bytes) | 2)/i/whmis/Symbols&Labels/SYMBOLB_SM.GIF (1999 BYTES) |
| 3)/i/whmis/Symbols&Labels/SymbolC_sm.gif (1995 bytes) | 4)/i/whmis/Symbols&Labels/SymbolD1_sm.gif (2478 bytes) |
| 5)/i/whmis/Symbols&Labels/SymbolD2_sm.gif (1680 bytes) | 6)/i/whmis/Symbols&Labels/SYMBOLD3_SM.GIF (2172 BYTES) |
| 7)/i/whmis/Symbols&Labels/SymbolE_sm.gif (2532 bytes) | 8)/i/whmis/Symbols&Labels/SymbolF_sm.gif (2330 bytes) |

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| 9) | 10) |
| 11) | 12) |
| 13) | 14) |
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| 17)Go to fullsize image | 18)Go to fullsize image |
| 19)inox11 | 20)Go to fullsize image |
| 21)Go to fullsize image | 22)Go to fullsize image |
| 23) | 24)SA531P |

|  |  |
| --- | --- |
| 25) | 26)fumehood |
| 27)559_thumb | 28)pyrex%20beaker |
| 29)ERLENMEY | 30)297_thumb |
| 31)423_thumb | 32)pfa-petri-dish |

|  |  |
| --- | --- |
| 33)957_thumb | 34) |
| 35)0500312 | 36)7905P40 |
| 37)825050 | 38)lab-thermometer |
| 39)683 | 40)23122m |

|  |  |
| --- | --- |
| 41)F162-01~wn | 42)23243a |
| 43)33943 | 44)DB61_rgb |
| 45)tweezers | 46)670 |
| 47)690 | 48)Product Picture |

|  |  |
| --- | --- |
| 49)image/_016ringclamp.jpg, 1.9K | 50)WreGazeCeramic_3419_M2 |
| 51)A bunsen burner with needle valve. The hose barb for the gas tube is facing left and the needle valve for gas flow adjustment is on the opposite side. Air inlet on this particular model is adjusted by rotating the barrel, thus opening or closing the vertical baffles at the base. | 52)Image Preview |
| 53)triplebeam | 54)Striker |