Activity 1: Worksheet 1 Answers

## Identifying hazards

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| 1. Poster covering first aid instructions and list of first aiders which may stop someone responding to an incident correctly. | 19. Student is not wearing any shoes. Closed-toed shoes should be worn in the lab to protect from spillages onto exposed skin and from dropping objects on feet. |
| 2. Too many plugs (and extension leads) are plugged into an electrical socket in the wall. This could overheat and cause a fire or trip the fuse and cause an electrical shortage. | 20. Radioactive compound is being allowed to leak onto the benchtop. This could expose students to ionising radiation or contaminate clothing, and cause radiation burns or poisoning. |
| 3. Fire extinguisher is not in correct storage location (see 29), so may take longer to find in the event of a fire, making responding to the fire more difficult. | 21. Student is pouring chemicals down the sink, which could harm the environment or lead to reactions that damage the pipes or release harmful substances. |
| 4. Use of an aerosol in a room with an open flame could cause a further uncontrolled fire/explosion. | 22. Student is not wearing respirator correctly and is pouring chemicals over the benchtop, potentially exposing themselves or others to harmful chemicals. |
| 5. Safety glasses are not being stored correctly in their designated storage shelves/are not present in the lab, so students are unable to wear them. | 23. Gloves have been left on the counter. These could be used/contaminated (it is unclear) and therefore could have harmful chemicals on them. They are also taking up benchtop space. |
| 6. Student is inside the fume cupboard so is potentially exposing themselves to harmful vapours, which could damage the respiratory system and/or cause them to faint and injure themselves. | 24. Boxes are blocking the fire exit, meaning that it could take longer for students to leave the classroom in an emergency. |
| 7. Compressed gas cylinder in the middle of the room where it could be knocked over and injure someone or become damaged. | 25. Glass in the door is broken, meaning that students could cut themselves on the sharp edges. |
| 8. Students drinking in the lab may accidentally ingest harmful substances. | 26. The exit sign is not fully illuminated, so the exit is not clearly signposted. It could take longer for students to exit in an emergency. |

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| 9. Student drinking from glassware might accidentally ingest harmful substances. | 27. Fire alarm bell has been muffled with tissues. This will make it harder to hear if it goes off, which could mean students do not hear the bell and get caught in a fire. |
| 10. A coffee maker in the laboratory could get contaminated with harmful chemicals that would pass to anyone who drinks coffee from it. | 28. Safety Data Sheets (SDSs) are in a locked cabinet, which means it will take longer to get to them in the case of an incident and so it will take longer to respond to the incident. |
| 11. Cables are trailing over the floor, which may cause injury to someone tripping over them. | 29. The fire extinguisher is not in correct position (see 3), so may be harder to find and use in the event of a fire. It could also easily be knocked over and damaged. |
| 12. Student is listening to loud music, which would make it difficult for peers/teacher to alert them to an incident. | 30. Boxes are blocking access to the safety shower, preventing quick access in the case of an emergency. |
| 13. Gas tap is on, leaking flammable gas into the room, causing respiratory issues and potentially an explosion/fire. | 31. Student either drinking from a straw or pipette could ingest harmful chemicals. |
| 14. Drawer has been left open with contents spilling out, which could be tripped over causing injury. | 32. Funnel in the barrel indicates that chemicals are being returned to their original containers after use, which could result in contamination. |
| 15. Student is smoking in the lab, which is not allowed and could cause a fire. Other students would inhale smoke, and for some this could trigger an asthma attack. | 33. The laser has broken/caused a piece of glassware to explode, causing shards of glass and chemicals to fly across the room, potentially causing injury. |
| 16. Student is wearing sunglasses, which is not appropriate PPE and makes it harder to see indoors, making trips and accidents more likely to occur. | 34. Box which should be kept upright is the wrong way up, potentially spilling or breaking its contents. |
| 17. Student is stepping across/in front of the laser beam whilst it is on, which could cause a severe burn and/or other injury. | 35. Student not wearing safety glasses or tinted goggles for use with the laser could damage their eyes if they look at the laser. |
| 18. Student is climbing up some shelves to retrieve something; they could fall off, or the shelves could break, causing injury to themselves or others. | 36. Student is not watching their experiment, and so is not able to respond if something goes wrong. |

## Risks vs hazards

Describe the difference between a risk and a hazard.

Here are two definitions. Identify the definition of a risk and the definition of a hazard.

1. Something that has the potential to cause injury or harm. **(Hazard)**
2. How likely it is that something will cause harm, **and** how  
   severe that harm would be (the consequence). **(Risk)**