



# PROJECT **FIRSTLINE**

CDC's National Training Collaborative  
for Healthcare Infection Prevention & Control

# **ESCAPE ROOM**

**MANUAL**



**#WEAREFIRSTLINE**

# SUPPLIES

## CHECKLIST

### STATION ONE:

- Figure 1 (One puzzle piece)
- Clues A, B, C1, C2 & D (Red Herring)
- Sign 1
- Sink & Hand Soap (*Hand sanitizer can be subbed in*)
- Glo Germ and Light
- Lock Box or Bag that can be Locked
- Combination Lock Set to "9-1-2"

### STATION TWO:

- Figure 1 (One puzzle piece)
- Figure 2 & 3
- Lock box
- Combination Lock set to "M-A-S-K"
- Black light
- Invisible ink pen
- Handheld mirror
- Tape

### STATION THREE:

- Figure 1 (One puzzle piece)
- Mannequin
  - *If no mannequin is available, alternatives include: a team member dressed in PPE, a white board with markers to demonstrate proper donning and doffing sequencing, or Figure 4 provided in the manual*
- PPE
  - One mask
  - One gown
  - One pair of gloves
  - One face shield
  - *Unused PPE that is expired and/or near expiration should be considered to prevent wasteful usage of critical resources.*
- Lock box
- Combination Lock Set to "G-L-O-V-E"
- One Container of Cleaning & Disinfecting Wipes
- One copy of the CDC PPE Sequence:  
[www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf](http://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf)

### STATION FOUR:

- Figure 1 (One puzzle piece)
- Clue 4A, 4B, 4C and 4C Answer Key & 4D
- Disposable Glove
- Cereal Box
- Ketchup Bottle
- An empty container of EPA-registered hospital-grade disinfectant wipes (necessary to have 15 second contact time to match Clue B)
- 2-3 Other Cleaning Solution Containers
  - (*Decoy Items*)
- Empty Mr. Clean Sponge Box
- Four digit lock

*Attached you will find the necessary printouts and signage to set up each station. It is recommended that you print the figures, clues, and signage on cardstock for easier use!*



# ***–BREAKING NEWS –***

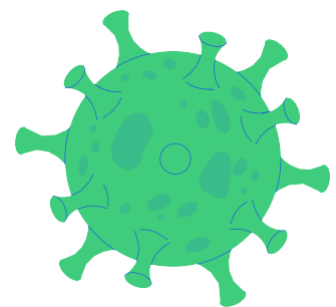
## ***GERMS THREATEN THE UNIVERSE!***

We are in desperate need of your help! Our beloved superhero, Captain Germ-B-Gone, is fighting the never-ending battle to protect our world from the devastating power of multiplying variants, but he can't do it alone! He needs you, the REAL heroes in this story, to help outwit his arch-enemy, Clutterbug, and stop his evil germ-spreading deeds right at the source.

***Do you have what it takes to unlock the clues without catching the flu? It's all up to you!***


In teams of five to six people, you will have 30 minutes to navigate Clutterbug's clever traps and unite with Captain Germ-B-Gone to proclaim victory. Get ready to shine!

You must complete each station as a team. If at any time during the exercise the team breaks apart, a 10-second penalty will be added to your time. You are allowed two hints but each one will cost you 30 seconds. ***Use the hints wisely!***



**ALL STATIONS:**

*Print out on cardstock/laminate. Cut out for use in all 4 stations*

Figure 1: 



# STATION ONE: CLUES, SIGNS & FIGURES

Print & Cut Out All Clues for Use in Station 1

Clue A: 

Dear Challengers . . .

I guess you know, one of the most effective ways to ruin my plot is to prevent harmful germs from spreading by cleaning your hands. Don't forget, I thrive in health care settings when shortcuts are taken. I want to see if you are able to understand and demonstrate the correct hand hygiene steps. I've hidden some clues that will help you unlock the steps to proper hand hygiene. **Can you do it before time runs out? I dare you!**

- Clutterbug

Clue B: 




## Will you crack the code?

On average, nursing staff touch \_\_\_\_\_ surfaces during a 12-hour shift.



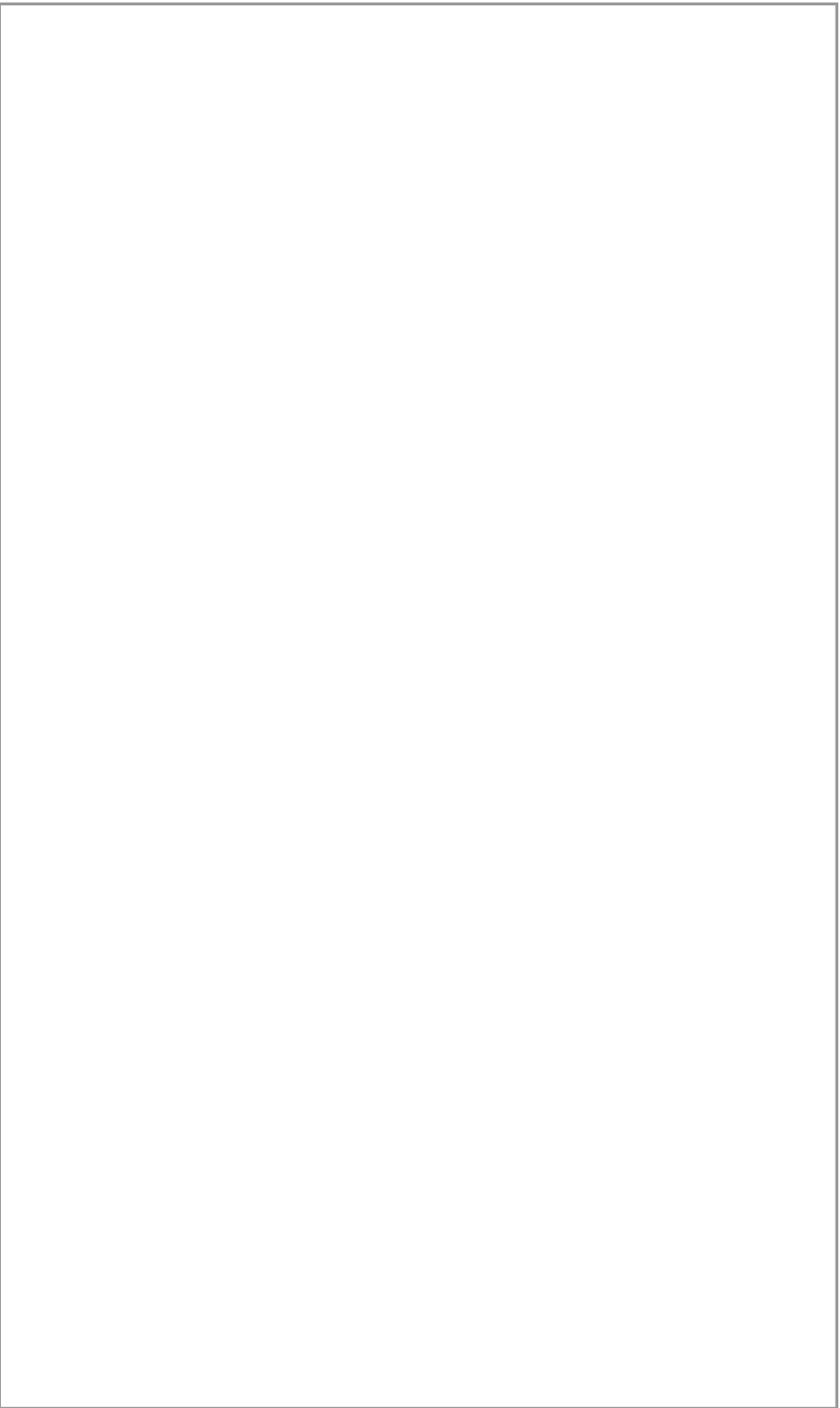
CODE

6	8	2	One number is correct and well placed
6	4	1	One number is correct but in the wrong place
2	9	6	Two numbers are correct but in the wrong place
7	3	5	Nothing is correct
7	5	9	One number is correct but in the wrong place

Clue C1: 

## ***Final Hand Hygiene Clue***

Find all the missing pieces in order to correctly demonstrate how to wash or sanitize your hands in order to unlock the next piece of the puzzle.



### **Steps to Wash Your Hands:**

1. Wet your hands with clean, running water (warm or cold), and apply soap.
2. Lather your hands by rubbing them together with soap, lather the backs of your hands, between your fingers, and under your nails.
3. Scrub your hands for at least 20 seconds. Need a timer? Hum the "Happy Birthday" song from beginning to end twice.
4. Rinse your hands well under clean, running water.
5. Dry your hands using a clean towel.
6. Using your elbows or the paper towel, turn off the tap water.

### **Steps to Use Hand Sanitizer**

1. Apply the gel product to the palm of one hand (read the label to learn the correct amount).
2. Rub your hands together.
3. Rub the gel over all the surfaces of your hands and fingers until your hands are dry. This should take around 20 seconds.

### **Sanitizers can Quickly Reduce the Number of Germs on Hands in Many Situations. However,**

- Sanitizers do not get rid of all types of germs.
- Hand sanitizers won't be as effective when hands are visibly dirty or greasy
- Hand sanitizers won't remove harmful chemicals from hands like pesticides and heavy metals

***Congratulations! You've outwitted Mr. Clutterbug. You must now choose one brave hero to demonstrate correctly cleaning their hands. If you correctly complete the task, you may move on the next leg of your journey.***




**Clue C2:**

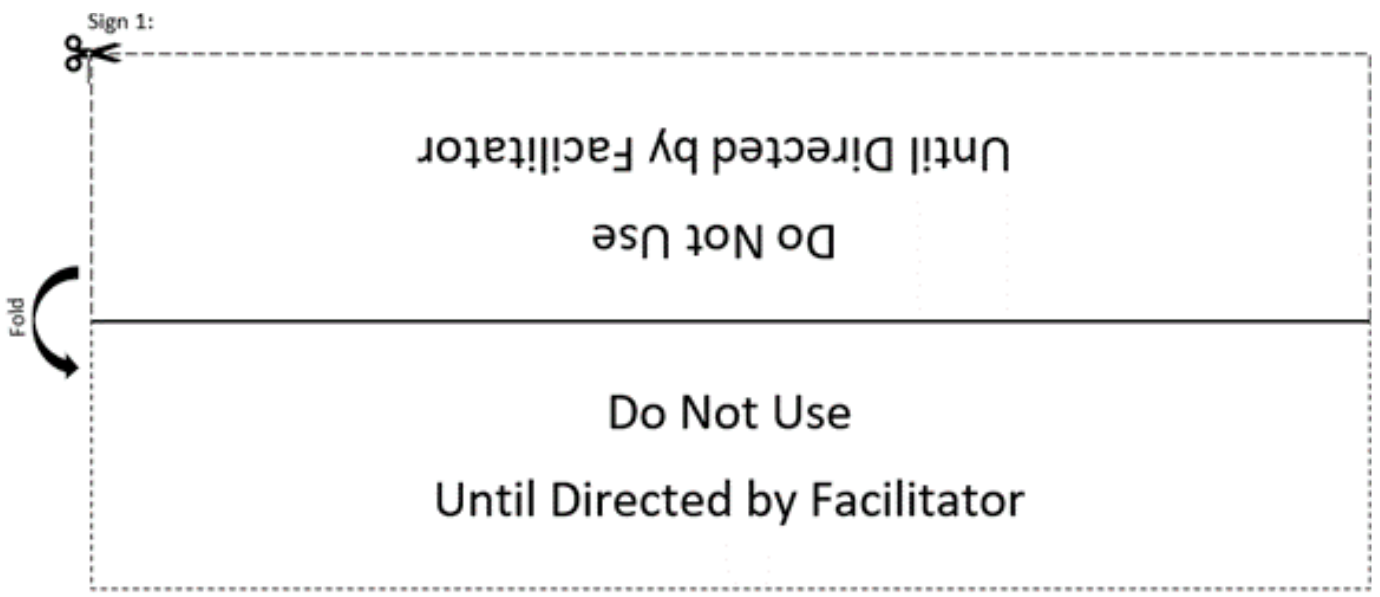
Clue D (Red Herring): 

Dear Challengers . . .

It's important to know when to use soap and water instead of hand sanitizer to clean your hands. Soap and water should be used when hands are visibly soiled such as after caring for a patient with diarrhea and/or after known or suspected exposure to spores (i.e., *C. difficile*).

- Clutterbug


Sign 1: 

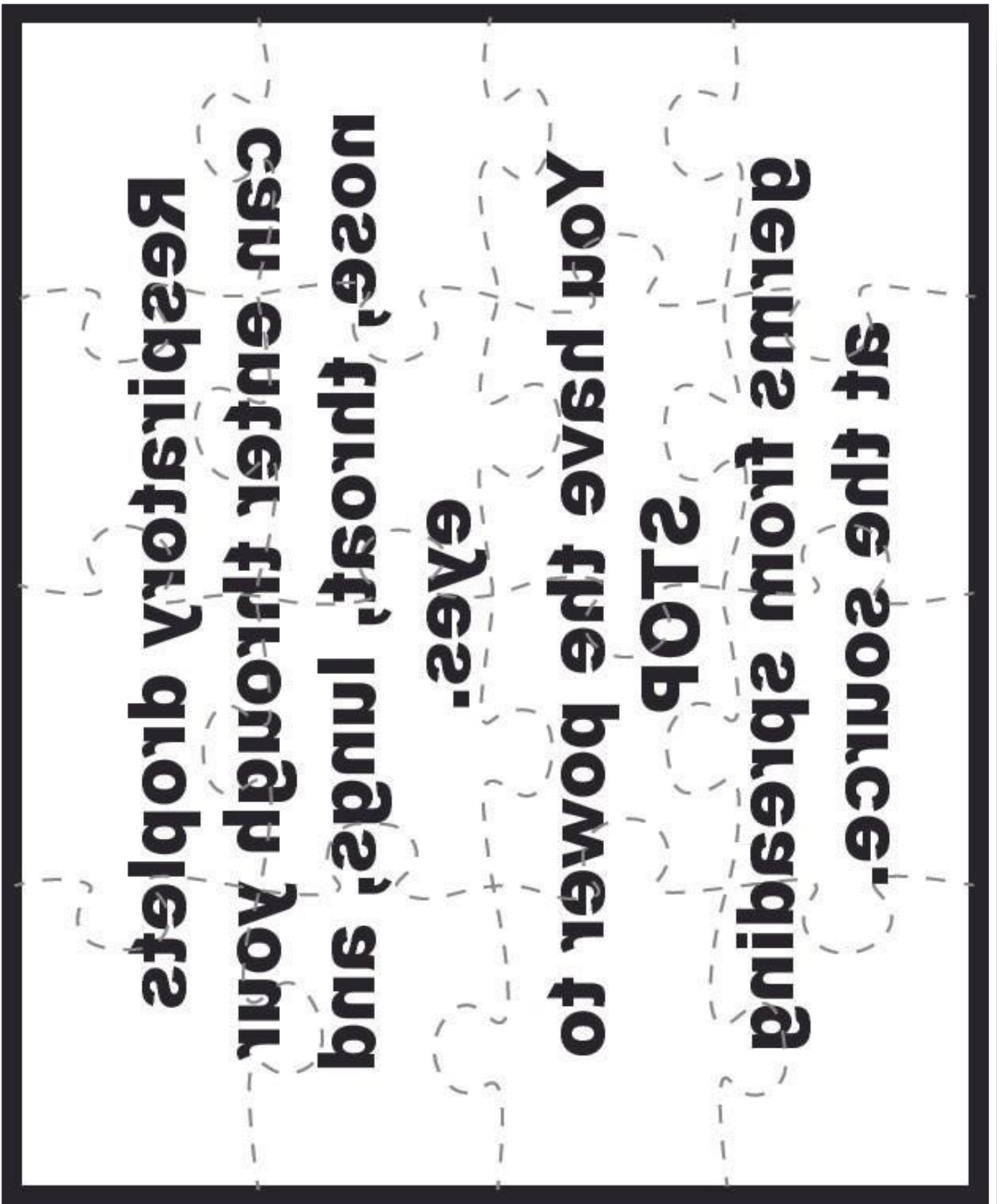





## STATION TWO: CLUES, SIGNS & FIGURES

*Print & Cut Out All Clues for Use in Station 2*

Figure 2: 




**Figure 3:** 

- *Print on cardstock. To be used in station 2*



# STATION THREE: CLUES, SIGNS & FIGURES

Print & Cut Out All Clues for Use in Station 3


Figure 4: 

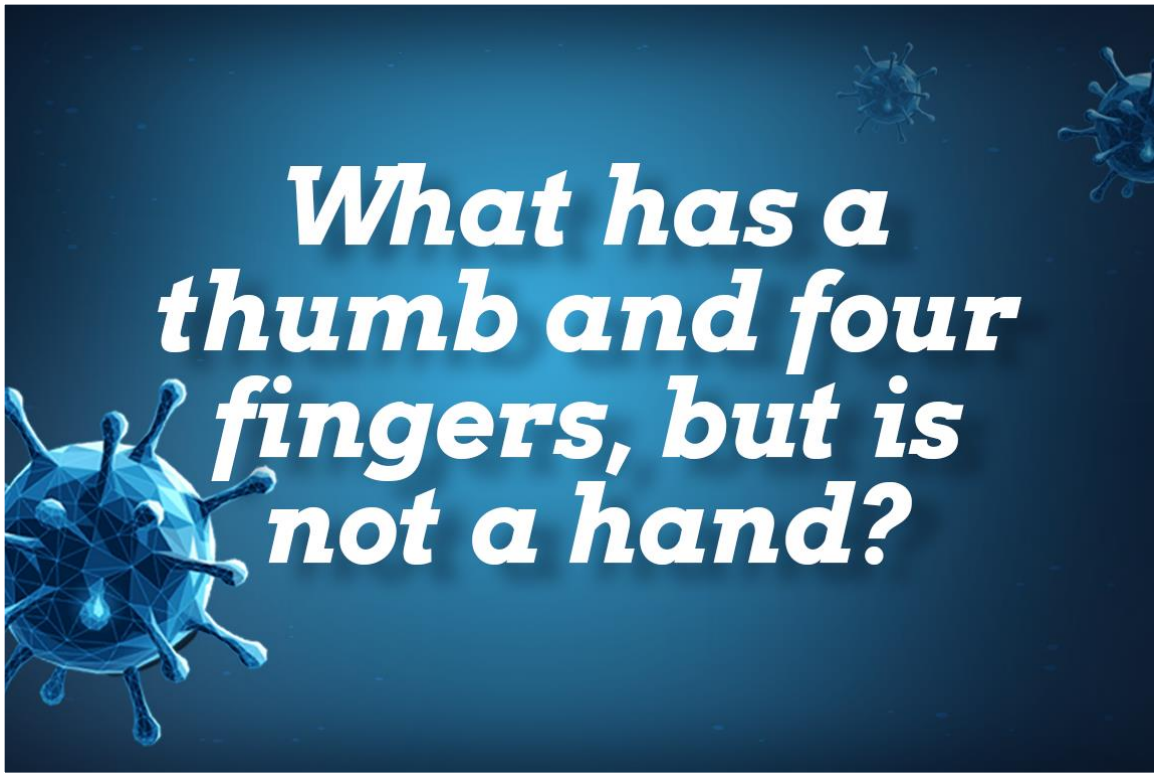
- Required if Mannequin or Team Member is not available




## STATION FOUR: CLUES, SIGNS & FIGURES


*Print & Cut Out All Clues for Use in Station 4*

Clue 4A: 

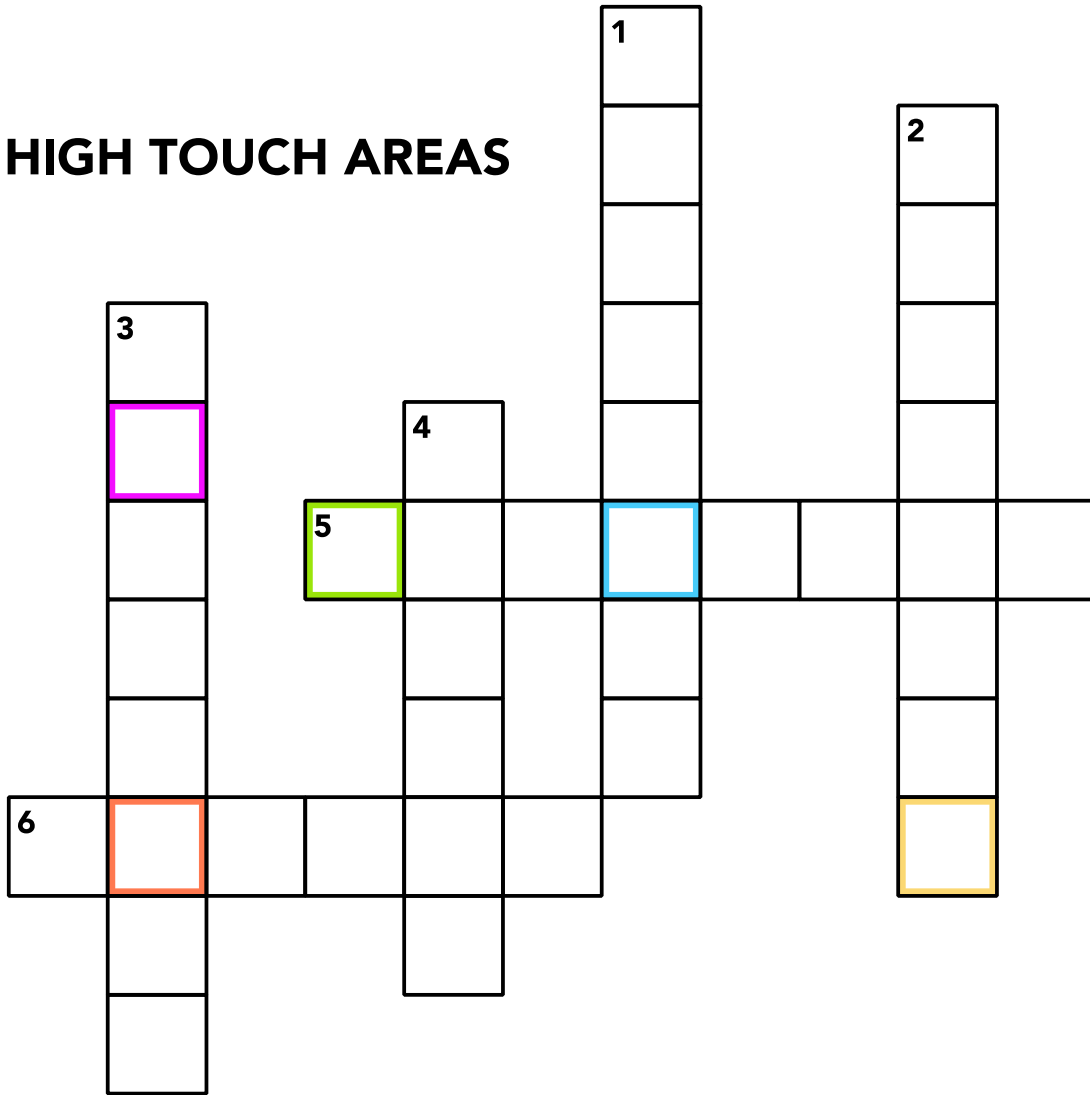


Clue 4B: 



Clue 4C: 

## HIGH TOUCH AREAS

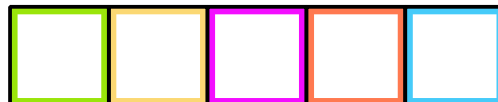


**DOWN:**

- 1. Turns to open a door
- 2. Can be grasped for support
- 3. Types in letters and numbers
- 4. Flushes

**ACROSS:**

- 5. Long flat top fixtures
- 6. Used to turn on water



## Clue 4C Answer Key :

**HIGH TOUCH AREAS**

**ACROSS:**

- Turns to open a door
- Can be grasped for support
- Types in letters and numbers
- Flushes

**DOWN:**

- Long flat top fixtures
- Used to turn on water

## Clue 4D:

*Now that you have completed the crossword puzzle, look for one of the high touch areas in the puzzle for an important piece of information to “shine the light” on infection control!*

# PROJECT FIRSTLINE ESCAPE ROOM

# OBJECTIVES

*Do You Have What It Takes to Get Out and Stay Out of the Escape Room?*

Captain Germ B Gone needs you, the real heroes, to stop germ spreading deeds right at the source!



## STATION 1: HAND HYGIENE

- *Participants will be able to define hand hygiene*
- *Participants will be able to demonstrate the correct steps of hand hygiene*

## STATION 2: SOURCE CONTROL

- *Participants can define source control through key infection control actions*
- *Participants will learn how respiratory droplets can spread*

## STATION 3: PPE

- *Participants will be able to explain and demonstrate how to safely don and doff Personal Protective Equipment (PPE)*

## STATION 4: CLEANING & DISINFECTION

- *Participants will recognize where to find the contact time on product label "Directions for Use"*
- *Participants will identify high touch areas in healthcare facilities*

***DON'T SPREAD GERMS ..SPREAD THE GOOD POINTS YOU LEARNED TODAY DURING THE PFL ESCAPE ROOM EXERCISE!***

# STATION ONE

## - HAND HYGIENE -

**Participants will follow the instructions and Complete the tasks. After completing the station, the team will be given a clue.**

### STATION ONE SUPPLIES:



Sink



Soap



Hand Sanitizer



Towels / Paper Towels



Cupboards / Cabinets

*- Places where clues can be hidden*



Lock Box or Bag with Lock Code

*- Set code to "9-1-2"*



Glo Germ & Black Light (if available)

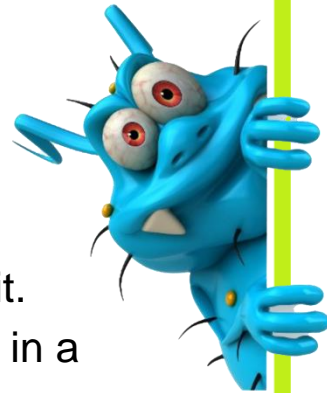


Clues A, B, C and Red Herring



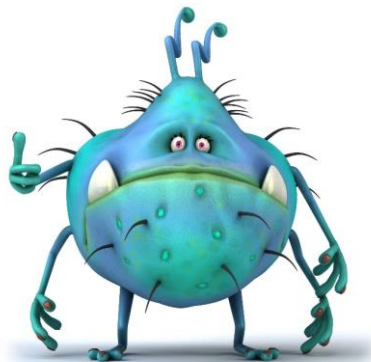
## STATION ONE SET-UP:

1. Station one should include a sink, soap, hand sanitizer & towels, which should be placed near the sink. If a sink is not available, hand sanitizer alone is acceptable.
2. Cut out clues A and B, clue C, part one(C1) and two(C2) and clue D, the red herring clue, as well as sign 1 (if using Glo Germ and light).
3. Write "Read me first!" on the back of clue A and place the clue face down in a visible location, somewhere in station one.
4. Hide clue B, clue C2 and clue D, the red herring clue somewhere within station one. If using cupboards or cabinets, you may choose to hide the clues there.
5. Place clue C2 pieces inside the lock box/bag and lock it. The lock code should be 9-1-2. Place the lock box/bag in a cabinet or under the table at station one.
6. If using Glo Germ and light, place them next to the sink. Place sign 1 next to the Glo Germ and light. Participants will use Glo Germ when directed by a facilitator.



## STATION ONE RUN THROUGH:

1. Participants will begin by reading the message on clue A.
2. After reading clue A, encourage participants to look around for the remaining clues.
3. Clue B solves the code for the lock box/bag, which contains clue C2.
4. Clue C1 must be found and is used to assemble clue C2.
5. Clue D, the red herring clue gives good information but is not necessary for unlocking the lock box, or for moving into the next section. This clue is simply a distraction.
6. After unlocking the lock box/bag using the code from clue B, participants must correctly arrange clue C2.
7. Participants must now choose one team member to correctly demonstrate hand hygiene, as outlined in clue C2, to the escape room facilitator. If using Glo Germ, the facilitator will apply Glo Germ to the team member's hand prior to demonstrating hand washing and will examine under the black light the results before and after the hand washing.
8. If done correctly (see facilitator index card), the facilitator will give them a puzzle piece (figure one), and the participants can move onto the next part of the escape room.





# STATION TWO

## – SOURCE CONTROL –

*Participants will follow the instructions and Complete the tasks. After the task has been completed, the team will receive another clue.*

### STATION TWO SUPPLIES:



Lock Box



Black Light



Four Letter Combination Lock set to “M-A-S-K”



Figure 2 & 3



Hand-held Mirror



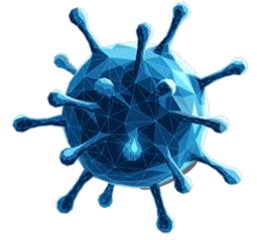
Invisible Ink Pen



Tape



## STATION TWO SET-UP:



1. This activity can be done at a table.
2. Cut the puzzle (figure 2) into pieces
3. Use the invisible ink pen to write this message on the stop sign (figure 3): "We do not always know who is infected. It is up to you to STOP germs at the source before they spread."
4. Place the stop sign, puzzle, black light and handheld mirror inside the lock box and lock it with a four-letter combination lock. The combination should be set as "M-A-S-K".

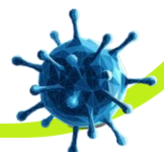
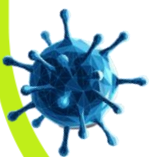
## STATION TWO RUN THROUGH:

MESSAGE:

*(Print as station prompt or read aloud as script)*

*"If your mask is ill-fitting and doesn't cover your nose and mouth, you can breathe in viruses and things can go south. Don't make that mistake at station two or I'll be there to get you and you won't make it through!"*

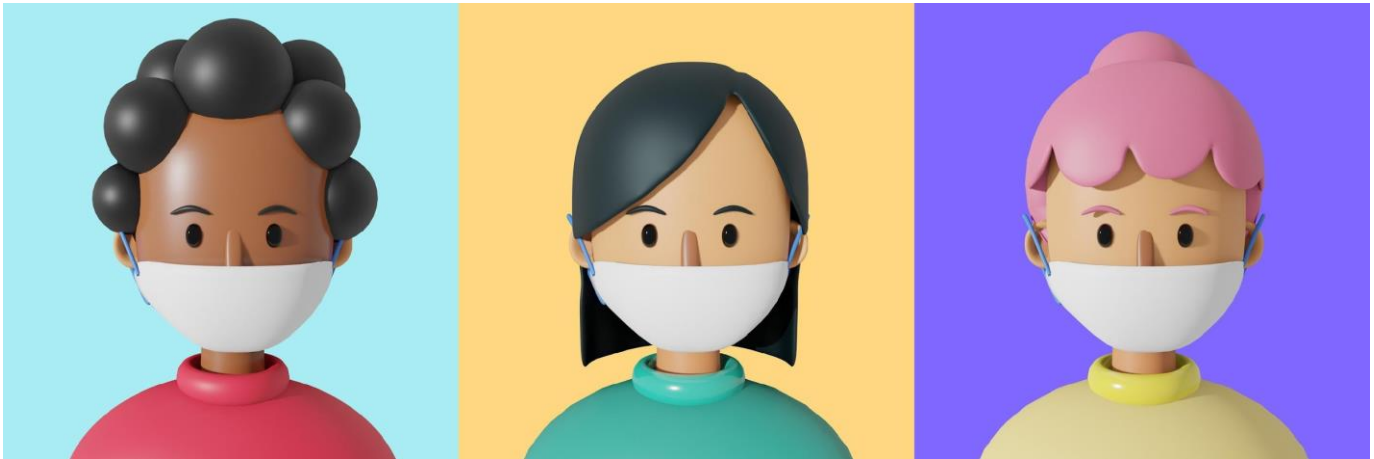
*- Clutterbug*



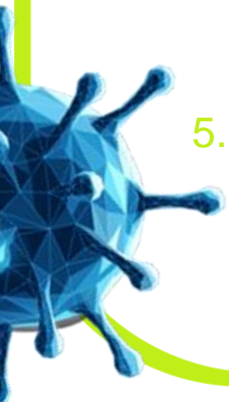
1. Begin with reading the following clue:

***What is something a superhero wears to hide their identity but is also used to prevent the spread of respiratory viruses?***

2. The answer to the clue is mask, which is the letter combination **M-A-S-K** to the lock on the lock box. The lock box will include:
  - a. Tape
  - b. Black Light
  - c. Puzzle (figure two) cut into pieces
  - d. Stop Sign (figure three)
  - e. Hand-Held Mirror



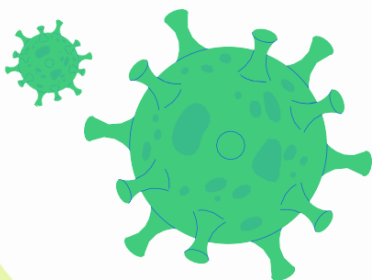
3. Figure two (the puzzle), will need to be assembled and taped together by participants.
4. Participants should then hold the message up to the handheld mirror to interpret the message that is spelled backwards. The message says, "Respiratory droplets can enter through your nose, mouth and eyes. You have the power to **STOP** germs from spreading at the source."
5. The word **STOP** in the puzzle from figure 2, is the next clue for them to look at the stop sign (figure 3).



6. Participants should then hold the black light up to the stop sign. The message written in invisible ink, will read, "We don't always know who is infected. It is up to you to stop germs at the source before they spread!"
7. **Message from facilitator: (read aloud after the participants have correctly completed all of the above steps)**

*COVID-19 can spread by:*

- a. *Breathing in air when close to an infected person who is exhaling small droplets and particles that contain the virus.*
  - b. *Having droplets and particles that contain virus land on the eyes, nose, or mouth, especially through splashes and sprays like a cough or sneeze.*
  - c. *Touching eyes, nose, or mouth with hands that have the virus on them.*
  - d. *All the above*
8. If the quiz question is answered correctly (all of the above) the facilitator will then give the team their next puzzle piece.



# STATION THREE

## – PPE –

### – PERSONAL PROTECTION EQUIPMENT –

*Participants will follow the instructions and complete the tasks. After the task has been completed, the team will receive another clue.*

## STATION THREE SUPPLIES:



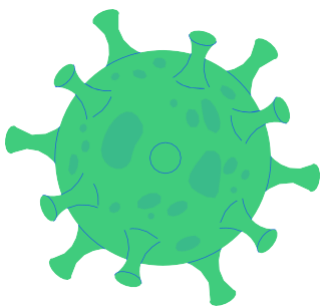
One Copy of the CDC PPE Sequence

[www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf](http://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf)



Mannequin

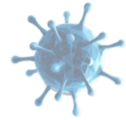
- A team member dressed in PPE
- A felt board with cut out pictures of PPE to demonstrate proper donning and doffing
- A white board with markers to illustrate proper donning and doffing sequencing



## STATION THREE PPE:



One Mask



One Gown



One Pair of Gloves



One Face Shield

- Unused PPE that is expired and/or near expiration should be considered to prevent wasteful usage of critical resources



One Container of Cleaning /  
Disinfecting Wipes



One Lock with a Five-Letter  
Combination Setting



One Lock Box



One Puzzle Piece with Letter on It  
(Figure 1)

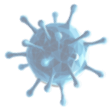


## STATION THREE SET-UP:

1. This can be done with a mannequin standing up, or at a table using the provided Figure 4.
2. Set up PPE station to test proper donning and doffing. (Mannequin, white board, or provided figure 4)
3. Place one puzzle piece from figure 1 inside the lockbox
4. Set the five-letter combination lock to “**G-L-O-V-E**”

## STATION THREE RUN THROUGH:

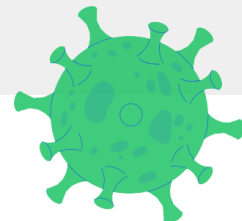
1. Once the team arrives at the PPE station, read the following riddle to them.



*"To win the battle, you must be dressed head to toe in proper PPE. Don correctly, safe you will be. Don it wrong, victory to the enemy!"*

2. The team should review the available CDC PPE sequence on how to don and doff PPE. A copy of the sequence is available for download and printing at the following link <https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf>

*Disclaimer: There are a variety of approved ways to don and doff PPE. While the goal in this exercise is to teach participants the CDC instructions for donning and doffing PPE, you want your participants to understand WHY the steps are important, rather than the exact steps.*



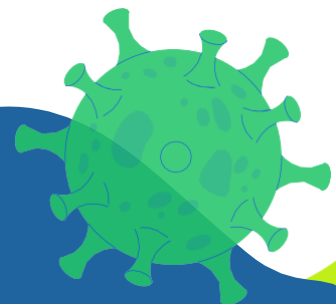
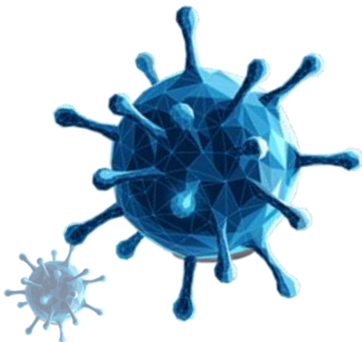
The team will need to work together to perform the proper sequence of donning PPE. This can be done in any of the ways previously mentioned in the supplies and set-up section of this station, depending on available resources. Once the team has successfully displayed the proper way to don PPE, the next riddle will be read to them.

*"A hero's work is never done. The battle is only halfway won. The PPE you wear is just for you, not meant to share. To save more lives, you must doff it right. If you do not, infection could be the patient's plight!"*

Once the team has successfully demonstrated the proper way to doff PPE, the final riddle will be read:

*"Congratulations! You donned and you doffed but can you open up the lock? The next puzzle piece is what you need, but with your hands well protected, it may be hard to achieve."*

The team will then attempt to open the lock box to obtain the puzzle piece. The box will be locked with a 5-letter combination lock (G-L-O-V-E). Once the team has successfully unlocked the box to get the puzzle piece (figure one), they will move on to the next station.



**Facilitator Message Read Out Loud:**

*Oh, darn you made it this far, but my germs  
will get you as we spar!*

*- Clutterbug*



# STATION FOUR

## – CLEANING & DISINFECTING –

**Participants will follow the instructions and Complete the tasks. After completing the station, the team will be given a clue.**

### STATION FOUR SUPPLIES:



Disposable Glove

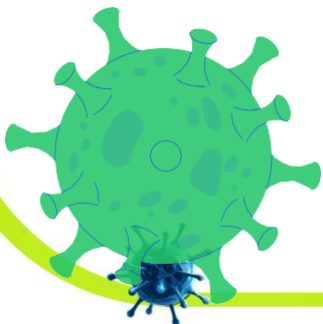


Small picture of a person putting a contact in their eye, a clock and 15-second contact time (Clue B)



Cereal Box, Ketchup Bottle, two to three empty disinfectant bottles (one with a hospital-grade disinfectant wipe container with a label that matches clue B with a contact time of 15 seconds)

*(“supplies” continues to next page)*





Clue C Crossword Puzzle and Answer Key



Blacklight and Invisible Ink Pen



Computer Keyboard



Empty Mr. Clean Sponge Box



Four-digit lock

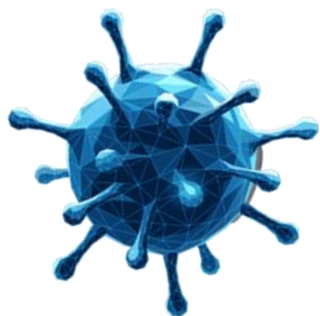


Various Project Firstline Posters hung on the Wall from CDC Website at <https://www.cdc.gov/infectioncontrol/projectfirstline/healthcare/print.html>

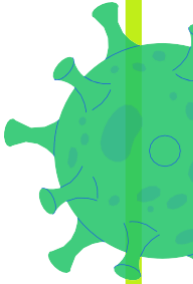


## STATION FOUR SET-UP:

1. Station four can be done on a table with the computer keyboard on one end and the black light placed next to it and the cereal box, ketchup bottle and two to three empty disinfectant bottles on the other end of the table. Have the various posters set up on the walls/table with information that will attempt to throw participants off.
2. Cut out Clue 4A and place it on the front of the table near the cereal box, ketchup bottle and empty disinfectant solution bottles.
3. Cut out Clue 4B and place it in an empty, disposable glove and hide it under the computer keyboard.
4. In an empty hospital-grade disinfectant wipe container, place a rolled-up copy of Clue 4C (the crossword puzzle), and a pen. Put the container on the table with the cereal box, ketchup bottle and empty cleaning solutions(examples could be Windex, Dawn dish detergent, Fantastic or other generic cleaners).
5. On the computer keyboard, write "4800" with the invisible ink pen.
6. Place Clue 4D inside the Mr. Clean sponge box.
7. Place one piece of the Germ-B-Gone "U" puzzle (figure 1) in a small lock box. Set the combination of the box to 4800.



## STATION FOUR RUN THROUGH:



1. Participants will begin reading Clue 4A.
2. After determining the answer to Clue 4A, which is "glove", participants should look on the table for the hidden glove under the computer keyboard.
3. Clue 4B is found rolled up in the hidden glove. The answer to Clue 4B is "Contact Time = 15 seconds".
4. Participants will find the hospital-grade disinfectant wipe product that has a label that has a contact time of 15 seconds like the contact time Clue 4B in the glove.
5. Participants will take out Clue 4C (the crossword puzzle) from container and complete.
6. Participants will complete the crossword puzzle. They will notice the five colored circles at the bottom of the puzzle. The colored circles spell the word "CLEAN".
7. Participants will find the Mr. Clean sponge box with Clue 4D inside at this point the facilitator will give the participants the black light.
8. Clue 4D will lead to the keyboard with the black light near it
9. Participants will shine the light on the keyboard to get the combination to the lock box which is 4800.

In the lock box, they will find the fourth piece to the Germ-B- Gone "U" puzzle.

# GRAND FINALE!

**Facilitator Message Read Out Loud:**

*“You thought you were finished? It turns out you are missing the most important piece of the puzzle!”*

Put the puzzle together with your team.

***What is the most important thing that is missing?”***

**ANSWER: "U"**



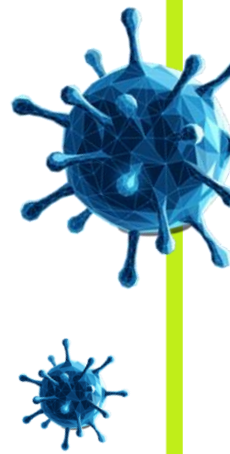


**Facilitator Message Read Out Loud:**

*What have you learned during your escape? Learn more about how you can be like Captain Germ-B-Gone in fighting and preventing infectious disease by visiting the CDC's Project Firstline web page:*

[www.cdc.gov/infectioncontrol/projectfirstline](http://www.cdc.gov/infectioncontrol/projectfirstline)

I hope this escape room has helped participants to understand infection prevention and control. Read on to view a list of quick tips to help keep your infection control knowledge fresh!



# QUICK TIPS



## YOU MADE IT!

Captain Germ B Gone thanks you for being a hero and learning how to stop the spread of germs right at the source!

- **HAND HYGIENE**

*Protect yourself and your patients from potentially deadly germs by cleaning your hands. Cleaning your hands the right way at the right time is important*

- **SOURCE CONTROL**

*Apply a mask that covers both your nose and mouth to stop the spread of respiratory droplets*

- **PPE**

*The donning and doffing of PPE must be done correctly to prevent the spread of germs which could cause infections*

- **CLEANING AND DISINFECTING**

*Contact time is found on a disinfectant product label usually in the section labeled "Directions for Use"*

***DON'T SPREAD GERMS ..SPREAD THE GOOD POINTS YOU LEARNED TODAY DURING THE PFL ESCAPE ROOM EXERCISE!***