DIcipher: An escape room themed challenge
STEP 1:

INSTRUCTIONS:
Your group has been called forth by a hospital that is currently being quarantined. A patient has just been admitted to the hospital with a rare infection. The folder on the table contains information pertaining to the patient. The medical team has asked your group to assist with determining the antidote using your DI skills. The hospital has reserved a repository of medications stored in a lock box for emergency situations. Your team must solve a series of clues and answer the DI questions correctly in order to obtain the combination code to unlock the box and obtain the correct antidote.   **You have 45 minutes to retrieve the antidote.**

CLUES: Your group must solve the clues in sequential order to get the location of where the DI questions are hidden. There are 5 clues in the room and the first clue is provided to you on the table. Solve the clue to find the location of the first DI question and the second clue. Continue to do this until you obtain the fifth and final DI question. **NOTE: DO NOT MOVE ON TO THE NEXT CLUE/DI QUESTION UNTIL YOUR GROUP SOLVES THE CLUE/DI QUESTION AT HAND (E.G. SOLVE CLUE #1 THEN ANSWER DI QUESTION #1).**

DI QUESTIONS: You may use your Ipad or laptop to look up the answers to the DI questions. The answer to each DI question will serve as a number for the final combination to unlock the box.

COMBINATION CODE: After retrieving the answers to the DI questions, arrange the combination codes in the order of the DI questions (the code will consist of 5 numbers). If the combination does not open the lock box, you need to go back and verify the answers to the DI questions and try again. **You will have a maximum of 3 attempt to open the lock box during the 45-minute time limit.**

HINTS: If you are stuck on a clue, you can say "DI YODA" to get a hint. No hints will be given to solve the DI questions.

STEP 2:
Patient Case [On table 1]:
A 24-year-old, female patient has been admitted for symptoms of fever, malaise and headache. The patient also has pruritic papules on her arms and legs with edema of the surrounding tissues that emerged within the last hour. The patient's family relays that she has been caring for the cattle and sheep on their farm. The gram stain results from the lab showed *B. Anthracis*. The medical team has a series of questions for you to research in order to obtain the antidote. Remember, the antidote must be given to the patient within 45 minutes; otherwise, her symptoms will escalate.

Additional background: The patient is 15 weeks pregnant and lives on a farm. The patient is currently taking prenatal vitamins with folic acid, Tylenol for back pain, citalopram for depression, glyburide for gestational diabetes, and levetiracetam for seizure control.

STEP 3: Puzzles (must be solved correctly to find the location of the DI questions)

Clue #1: A page of random words will be printed on a sheet of paper. Another sheet of printed paper with rectangles cut out placed over the sheet of random words will spell out the name of the object that the DI question is hidden-CHAIR

Clue #2: Number "code" for the word Bacteria: 2, 1, 3, 20, 5, 18, 9, 1 (Hint: A=1, B=2)

Clue #3: Unscramble the following letters for the location of the next DI question: (SHARP): A S R P H

Clue #4: A page with the oath of the pharmacist printed on it will contain certain letters that will be highlighted to spell the word caution. The DI question will be taped to the back of the caution sign on the wall.

Clue #5: Riddle: What has a back and a spine but no arms? Book

STEP 4: DI Questions (DI questions must be answered correctly to unlock the lockbox)
[Questions will be "hidden" under or behind the designated object throughout the room]:

1. What is the preferred treatment for this patient? Provide a product, dose, and length of treatment. ***Cipro 500mg Q12 x <u>7</u> to 10 days***
   a. Number for combination: Length of treatment
2. List any significant drug interactions that the team should be aware of. ***<u>2</u> interactions***
   a. Number for combination: Significant drug interaction(s)
3. The patient's family relays that she is allergic to the following types of medication: Levofloxacin (or anything similar to it), clindamycin, sulfa drugs. What are the alternative treatment(s) that can be used based on the patient's medication allergies? ***Amoxicillin or penicillin (<u>2</u>)***
   a. Number for combination: The number of alternative(s) that this patient can take
4. A member of the patient's family is curious if there is a natural product that can treat this disease. List the number of natural product (or herbals) that have claims to treat this disease? ***Bletilla Striata (<u>1</u>)***
   a. Number for combination: The number of natural products found to have claims to 'treat' this disease.
5. A physician would like to know if there are any vaccines that may prevent this disease as the patient will continue to live and work on the farm. Provide name of product and scheduling dose. ***<u>5</u> injections for the anthrax vaccination***
   a. Number for combination: The doses of the vaccine that needs to be given

STEP 5: Unlocking the box to obtain the antidote (on Table 2)
After retrieving the answers to the DI questions, arrange the combination codes in the order of the DI questions. If the combination does not open the lock box, you need to go back and verify the answers to the DI questions and try again.

Room Layout

Door/Exit

DI Question #3
Trash Can

DI Question #5

DI Question #1

DI Question #4

DI Question #2

Chairs

Books

Poster/Wall decorations

Bacteria Poster

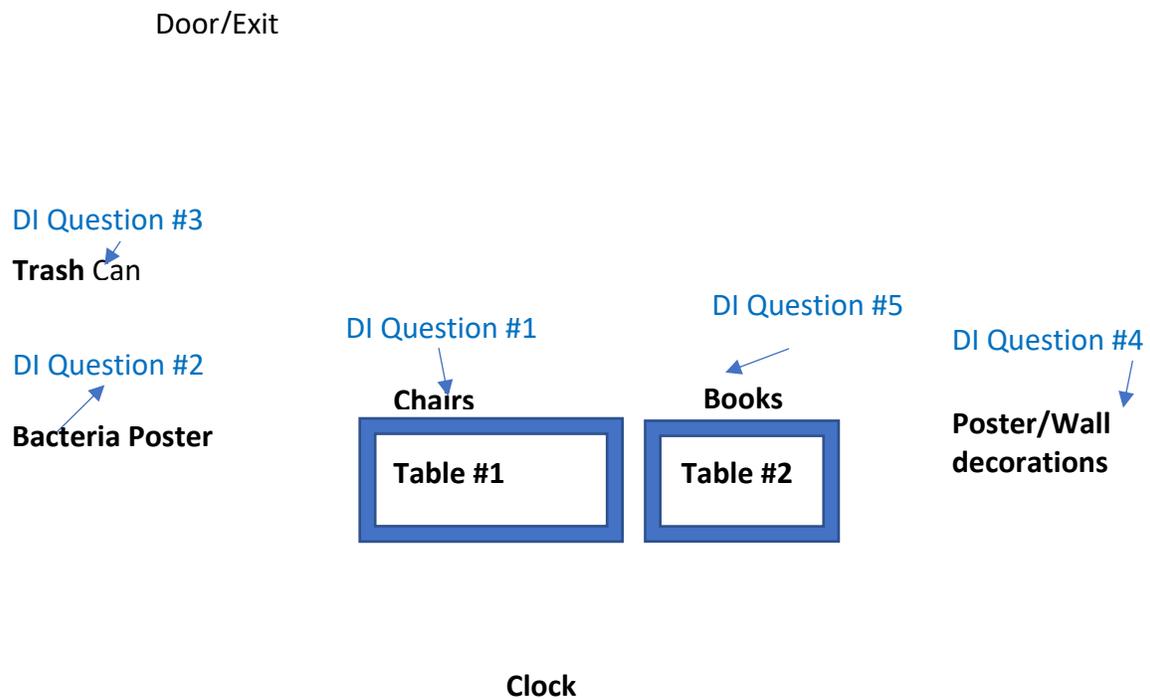| Table #1	Table #2

Clock

Table #1: Will have instructions in a folder and clues (puzzles) that the students must solve in order to reveal the location of the DI question.   Clues will be numbered 1-5 to correspond with the DI questions.
Table #2: Lock box with "antidote"