

# Gamification of Security Awareness: Escape Rooms

Presented by Jamie Turner and David Luna  
of Texas Workforce Commission

# Who we are



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# Overview



WHY DID WE DO THIS?



WHAT'S AN ESCAPE ROOM?



ACCESSIBLY CONSIDERATIONS



AWARENESS TRAINING THOUGHTS



OUR ESCAPE ROOM



GOALS FOR OUR AGENCY



GAMIFIED CYBER SECURITY AWARENESS



EMPLOYEE FEEDBACK

Why do we do this?

Active vs Passive Learning



DRIVERS ED = MANDATORY



DEFENSIVE DRIVER TRAINING = PUNISHMENT



BUMPER CARS = FUN

# What is an Escape Room?

: a game in which participants confined to a room or other enclosed setting (such as a prison cell) are given a set amount of time to find a way to escape (as by discovering hidden clues and solving a series of riddles or puzzles).

-Merriam Webster Definition



# Accessibility



SIGHT



SOUND



COLOR

# Things You May Already Know



Games are fun.



Data breaches are continuing to grow.



Users on the frontlines are most vulnerable.



Not enough training.



# Misconceptions

“End users are the problem.”

- Instead, they are our first line of defense!

“Escape rooms are a waste of time.”

- A great way to test what users have learned.
- Allows for mixed division team building.

“You won’t get a ROI on an escape room.”

- Investing a small budget can save you thousands in a potential breach.

# The Scenario

- A disgruntled ex-employee has infiltrated TWC.
- They have begun collecting data from the agency.
- Mission: Find the USB with the collected information.

# The Escape Room Setup



# Contents of our Escape Room Kit

- Folder that included Scenario and Rules
- Hint Cards
- Information for puzzles 1,2, and 3
- Laptop
- Posters
- Decoys
- USB's
- Pouch with Lock attached
- Timer
- UV light/Pens



# Time and Penalties

- 30 minutes time slots
- 20 minute timer for game
  
- +1 minute penalty card
- +2 minute penalty card

$$\text{Person} + \text{Person} + \text{Person} = 9$$

$$\text{Person} + \text{TOP SECRET} + \text{TOP SECRET} = 11$$

$$\text{TOP SECRET} + \text{Key} + \text{Key} = 22$$

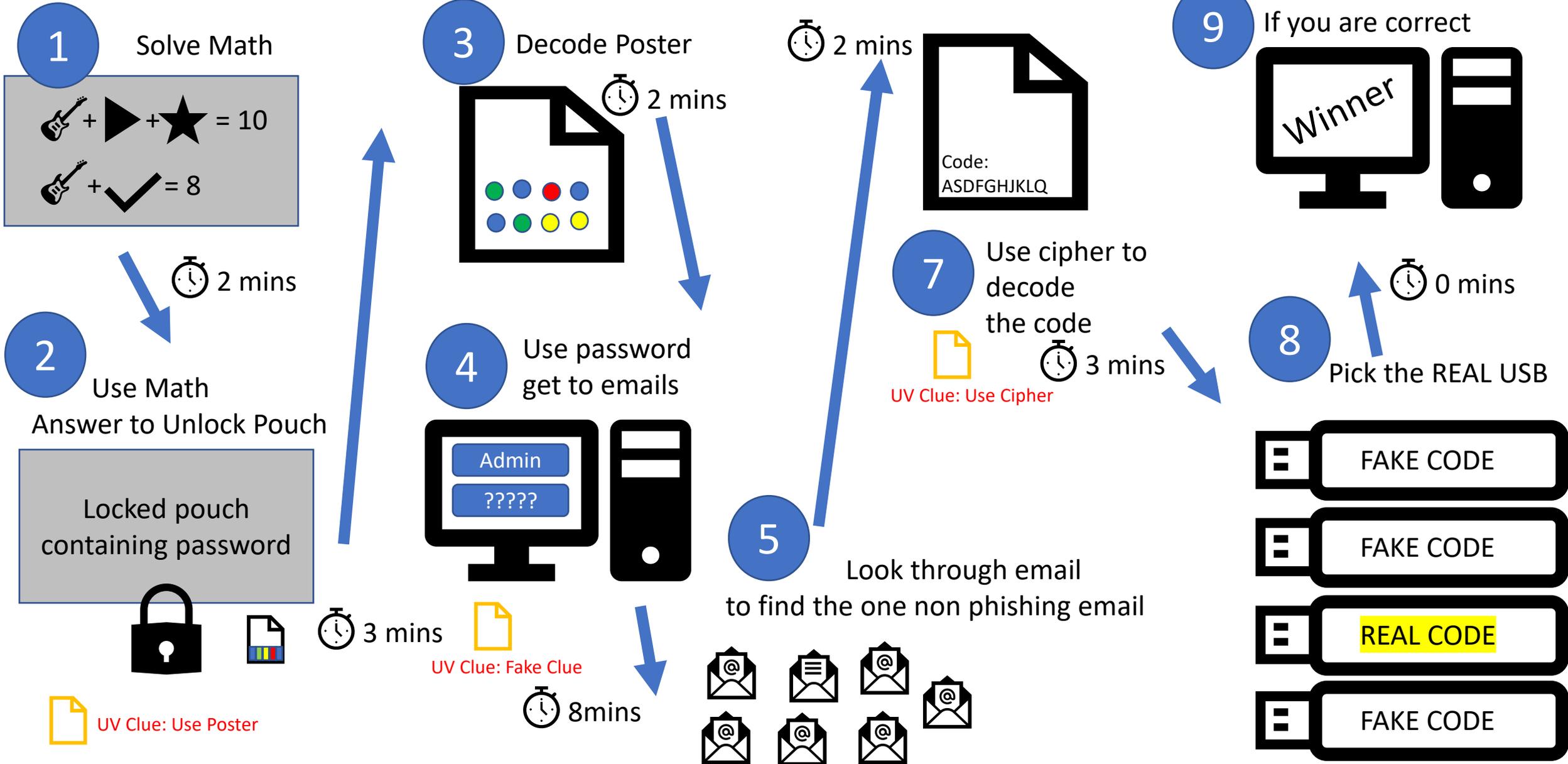
$$\text{TOP SECRET} + \text{Key} \div \text{Person} = \text{Lock}$$



Combo  
Lock

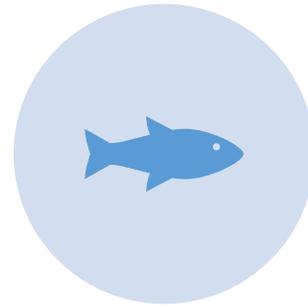
Math: A Fan  
Favorite

# Escape Room





What did we  
Want to  
Teach?



PHISHING



DECRYPTION



TEAMWORK

# Phishing Example

Please rate your employer!



Survey Monkey Customer Service <surveymonkeys@twc.tx.com>

To ✓ Turner, Jamie



Your employer has just been evaluated on survey monkeys:



"When I arrived at the office in the morning...." [Read more....](#)

Please rate your employer here:

Abstimmen

Survey-Monkeys OD, QG, IU, ES, QC ©

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# Goals for our Agency



INCREASING EMPLOYEE  
ENGAGEMENT



AWARENESS FOR  
CYBERSECURITY MONTH



TRAINING WHILE AVOIDING  
NEGATIVE CONSEQUENCES

# Increase Employee Engagement

Use of teams and leaderboards.

Team	Time Left	Team	Time Left
Brainiacs!	+1 min 10:13	Ent. Solvers	+1 min 5:06
Witches of the Annex	+1 min 9:08	Casper	2:13
Perfectly PMO	+3 min 7:28	Acid Burn	+1 min 9:35
Grapes	+1 min 10:51	Virtual Reality	3:08
Office of Ghouls and Corpses	+1 min 8:59	D.C. Opers	+1 min 8:27
Annoymous	+3 min 3:54	Smashing Pumpkins	+1 min 8:50
Stack Overflow	+3 min 7:38	Nickelback is still cool	6:47
Grapes of Wrath	+1 min 1:54		

# Make it Enjoyable for the Users



Keep it short; under 30 minutes.



Rewards instead of punishments.



Minimum of two, max of five users per group.



Keep the excitement level up.



Every puzzle does not have to relate to security.



Know your intended audience.

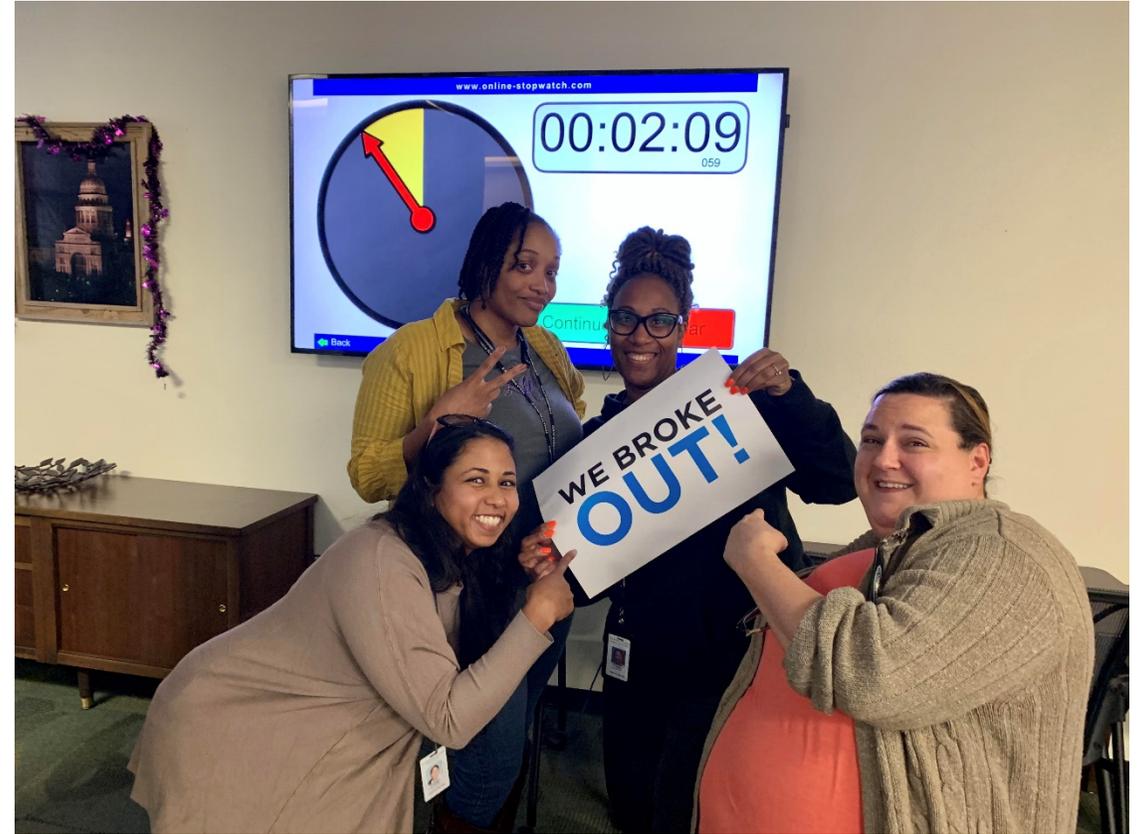
# Users who “Broke Out”

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# Users who “Broke Out”

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## The Wow Moment

Users requesting more active learning like this.

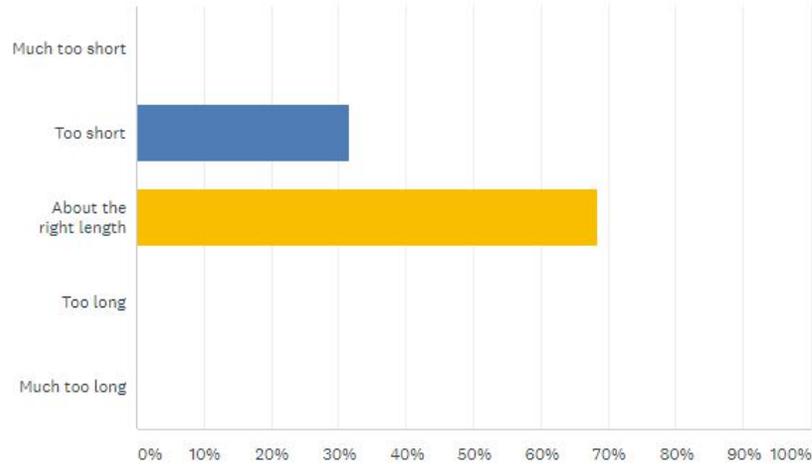
Users encouraging other employee to participate.

Users truly understanding security concepts.

# Feedback Received from Agency Employee's

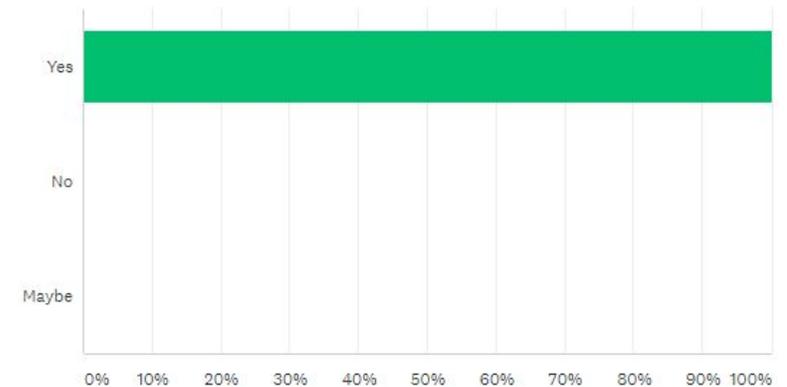
Was the event too long or too short?

Answered: 19 Skipped: 0



If an Escape Room was presented for next year, would you participate?

Answered: 19 Skipped: 0

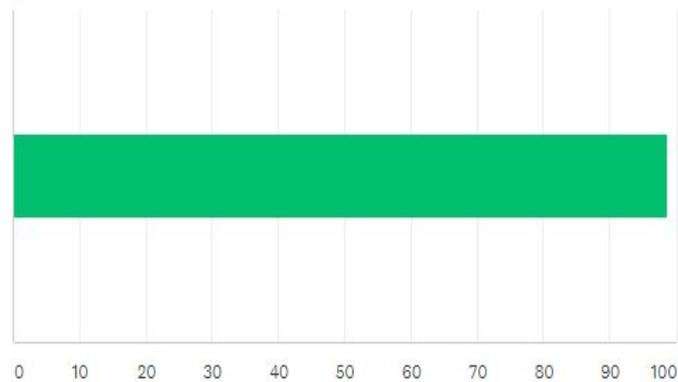


# Feedback Received from Agency Employee's

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How likely is it that you would recommend the Cybersecurity Escape Room to a friend or colleague.

Answered: 19 Skipped: 0



Overall, how would you rate the escape room?

Answered: 19 Skipped: 0

4.7★  
average rating



# Feedback Received from Agency Employee's

What did you like or dislike about the event?

Answered: 15 Skipped: 4

**RESPONSES (15)** WORD CLOUD TAGS (0)

 Sentime

Apply to selected ▾ Filter by tag ▾

Showing 15 responses

Fun way to learn about IT security and good team building.

11/7/2019 4:55 PM

[View respondent's answers](#)

even though i may not have learned 'more' about cyber security, it was a fun way to apply some of the stuff that was covered i the cyber security awareness training.

11/5/2019 9:48 AM

[View respondent's answers](#)

It was well-planned and provided a good opportunity to brush up on phishing.

11/4/2019 10:25 AM

[View respondent's answers](#)

I liked the fact that someone was there ready to help if needed.

11/4/2019 7:37 AM

[View respondent's answers](#)

## Resources and References

- We would like to give credit to Linda Ludwig of Grinnell College. Link to her Escape Room is [here](#).
- Supplies available at our agency.
- \$100
- Texas Administrative Code §202.24
- All escape room files will be available by contacting Jamie or David.

# Questions?



Please feel free to contact us for escape room files or more information.



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