


# ***Introducing Digital Forensics Science in a Virtual Learning Environment***

# Cyber Sleuth Science Lab

## Prime Directive

***“Engage more young women  
and underrepresented students  
to pursue education and careers  
in Digital Forensics and  
Computer Science in Middle &  
High School”***





Why teach  
Digital  
Forensics and  
Cybersecurity?





*Millions*

**of unfilled job openings**



*0%*

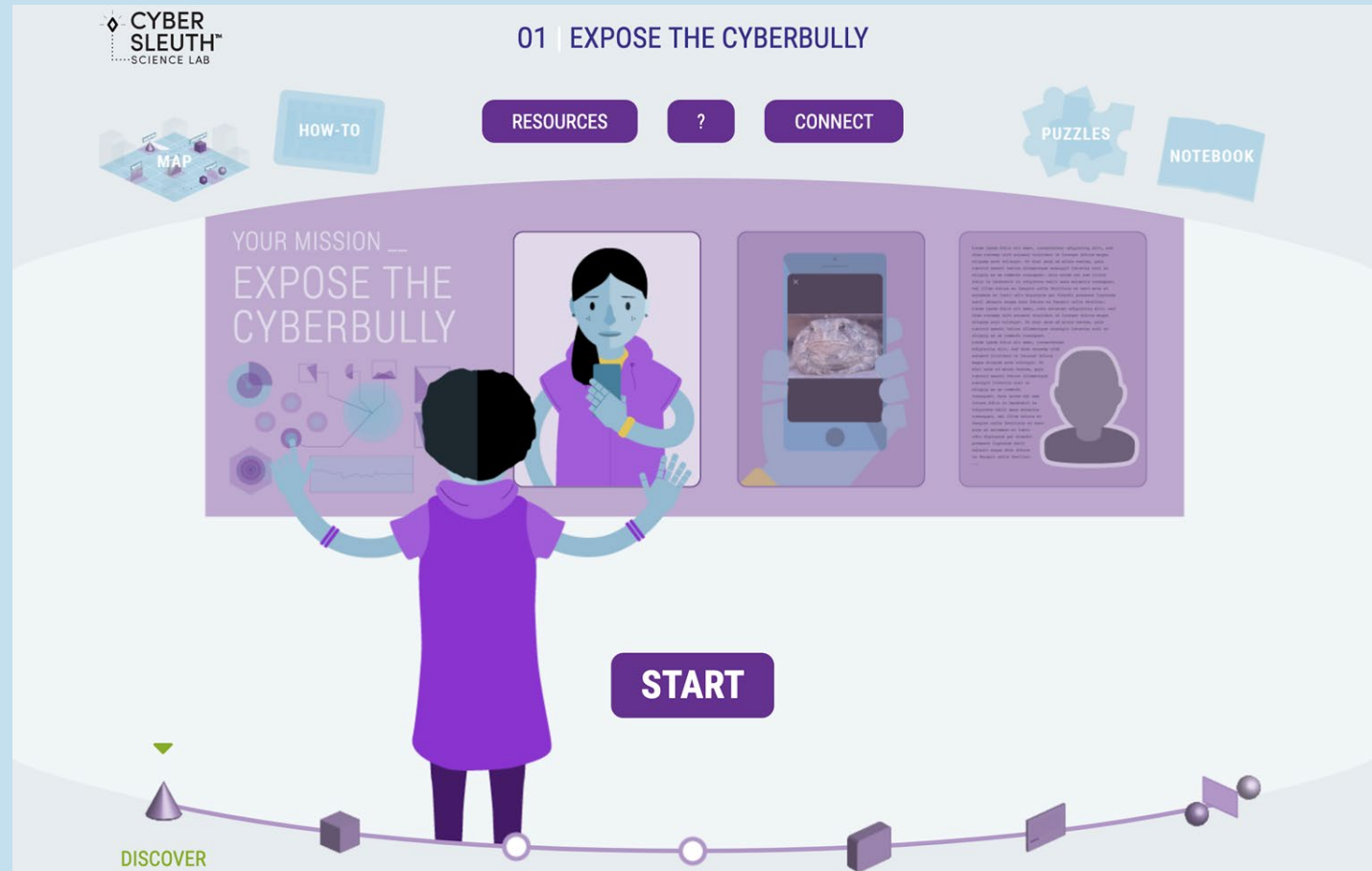
**Unemployment**

# (If You Need) MORE MOTIVATION...

- **DFIR has the power to attract youth who might otherwise self-select out of Computer Science and STEM Careers**
- **A career in DFIR has the potential to fuel systemic change and a chance to escape multi-generational poverty**
- **Cybersecurity skills are valuable to EVERYONE and transfer to other domains**

# Virtual Laboratory

**Engaging, age-appropriate, life-relevant investigative missions**



# Virtual Toolkit

## Digital Forensic Tools & Scenario Datasets

Microsoft Remote Desktop Edit Connections Window Help  
ec2-52-15-191-243.us-east-2.compute.amazonaws.com

Recycle Bin Mission 0  
Autopsy Mission 1  
AXIOMEx... Mission 2  
XRYViewer  
JPEGsnoop  
FTK Imager

File Tools Process Help  
Evidence Artifacts Content types Date and time Tags and comments Profiles Partial results  
FILTERS  
Keyword lists Skin tone Media categories

« Artifacts Column view

**EVIDENCE (107)**

ALL EVIDENCE	2,796
<b>REFINED RESULTS</b>	<b>164</b>
Facebook URLs	42
Google Searches	15
Identifiers	107
<b>WEB RELATED</b>	<b>957</b>
<b>CHAT</b>	<b>147</b>
<b>MEDIA</b>	<b>768</b>
<b>DOCUMENTS</b>	<b>5</b>
<b>MOBILE</b>	<b>549</b>
<b>OPERATING SYSTEM</b>	<b>206</b>

Identifier	Column Name	Artifact	Arti
12028486096	ID	iOS WhatsApp Contacts	369
James Lee	Full Name	iOS WhatsApp Contacts	370
13153165956	ID	iOS WhatsApp Contacts	371
12532608067	ID	iOS WhatsApp Contacts	372
(202) 848-6096	Phone Number	iOS WhatsApp Contacts	369
+13153165956	Phone Number	iOS WhatsApp Contacts	371
Mom	Full Name	iOS WhatsApp Contacts	371
Mom	Given Name	iOS WhatsApp Contacts	371
James	Given Name	iOS WhatsApp Contacts	370
(253) 260-8067	Phone Number	iOS WhatsApp Contacts	372
Miles Thomas	Full Name	iOS WhatsApp Contacts	372
Miles	Given Name	iOS WhatsApp Contacts	372
Sarah Jackson	Full Name	iOS WhatsApp Contacts	369
Sarah	Given Name	iOS WhatsApp Contacts	369
12028486096	Sender	iOS WhatsApp Messages	402



# Fundamental Forensic Science Concepts



## Students Explore Forensic Science Principles

- **Proper Handling of Digital Evidence**
- **Forensic Examination Processes and Activities**
- **Reaching Conclusions and Writing Reports**
- **Ethics in Technology**

# MEET OUR CYBER SLEUTHS!!!

***"The Lab report, it was really engaging and it made me feel like the work I did was useful and professional"***



***"I enjoyed learning and using the different applications like Autopsy and JPEGsnoop."***



***"I enjoyed recovering all of the text message conversations and figuring out what happened and why it happened."***



# Pilot Sites & Partners

BALTIMORE,  
NEW ORLEANS,  
SEATTLE / EVERETT



# EVERYONE CAN GET INVOL



- ROLE MODELS
- ADVISORY COUNCIL
- PILOT SITE PARTNERS
- STUDENTS
- EDUCATORS
- EMPLOYEERS
- SPONSORS



# THANK YOU!

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