



In the NICK of Time- Training for Law Enforcement and Technical Rapid DNA Users

**Rapid DNA Technology Forum
Alexandria, VA
August 17, 2017**



Overview

- Training Questions
- Student Profiles
- Training Considerations/ Obstacles
- Mass Disaster Exercises
- Lessons Learned
- NICK
- NICK Training
- The Future



Training Questions

- Why?
 - Goal of training
 - Circumstance
 - Organization
 - Individual
- What?
 - Competency
 - Collections
 - Instrumentation
 - Data Review
 - Calculations/Reporting





Training Questions

- Who?
 - Forensic Technical
 - DNA Analysts
 - CODIS Databank Analysts
 - Forensic Non-Technical
 - Law Enforcement
 - Customs and Border Patrol Officers
 - Medical Examiners
 - Volunteers/Voluntold Individuals
 - Neighbors
 - Fire Department
 - National Guard





Student Profiles

- Forensic Technical

- Highly Trained in Biology/ Chemistry
- Genetics, Molecular Biology and Statistical Training
- College Educated
- Lab Setting
- Documentation
- Multi-Step Task Oriented



- Forensic Non-Technical

- Highly Trained
- Diverse Backgrounds
- Varied Levels of Education
 - (Ph.D to High School)
- Office, Lab, Morgue or Field Setting
- Documentation
- Multi- Step Task Oriented





Student Profiles

- Volunteers
 - Varied Education
 - Varied Backgrounds
 - Single Purpose
 - Field Setting
 - Desire to help
 - May have no training in documentation
- Voluntolds
 - Chain of Command
 - Varied Educations
 - Varied Backgrounds
 - Single Purpose (Maybe)
 - Desire





Training Considerations

- Accreditation
 - What is required per the accreditation document
- Certifications
 - Federal
 - State
 - Local
- Documented
 - Single Use Contract





Training Considerations

- Individual
 - Knowledge
 - Skills
 - Abilities
- Background
 - Vernacular
 - Ease of use with electronics
 - Biohazard Waste
 - Stressful situations



NOTICE

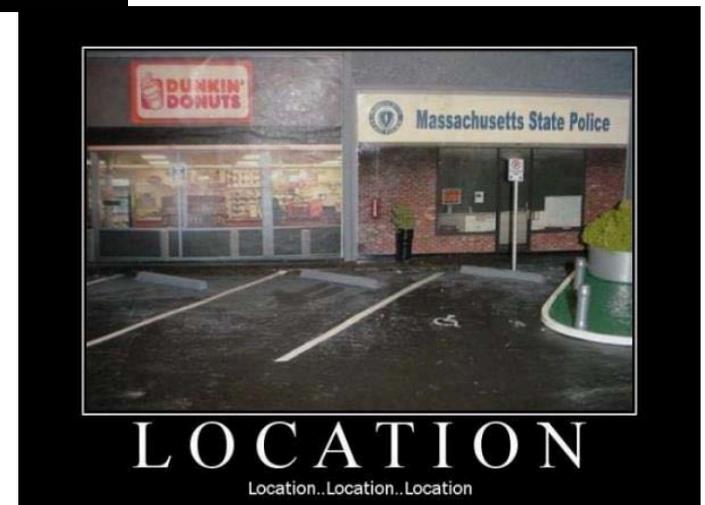
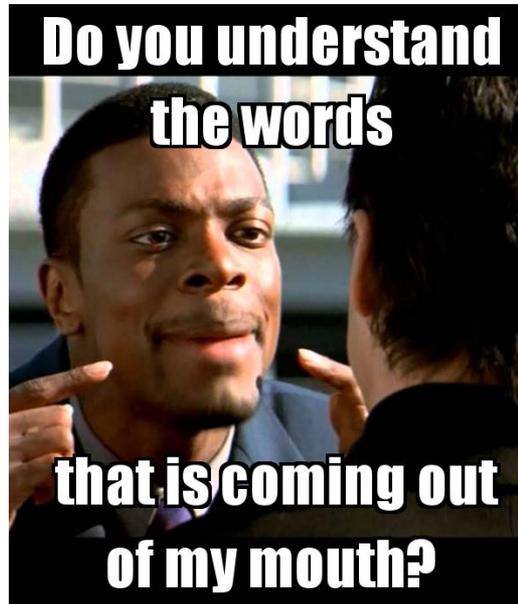
**AUTHORIZED
PERSONNEL
ONLY**





Training Obstacles

- Common Language
 - What is said
 - How it was said
 - What was heard
 - How it is interpreted
- Leadership
- Location, location, location
- Learning Styles





Mass Disaster Training Exercises

- Vigilant Guard- July 2016
Jericho, Vermont
- Operation Mega Death- May 5, 2017
Dayton, Ohio
- Operation Heartland- May 7, 2017
Dayton, Ohio
- FEMORS- May 24-25, 2017
Miami, Florida





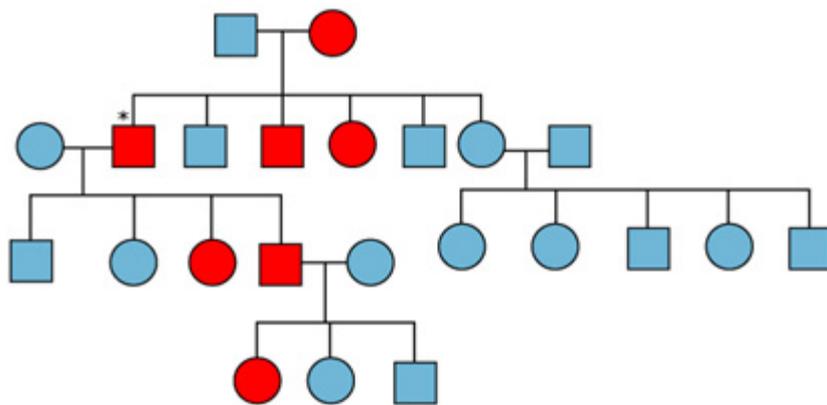
Lessons Learned

- Planning is only planning
- Short, digestible bites of information
- Condense training
- Step by step guides
- Screen shots or checklists
- Hands on competency
- Liaison which is available
- Effective Communication
- Weather proof
EVERYTHING
- Work in pairs



N.I.C.K

Necessary Instant Critical Kinships





N.I.C.K Training

- Includes only the necessary information
- Provides operators with short training guides for a specific task.
 - Typically procedures are PAGES of text
- Applies to kinship evaluation for an active event

Massachusetts Office of the Chief Medical Examiner		
Rapid DNA Laboratory		
Procedure #: 502	Kinship Calculation Using Kin Calc	
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7.3.3 **Complex Kinship Cases** - If the analysis is for a parent or complex relationship scenario where a known relative of the unknown has provided a sample, consult the Relationship Testing Laboratory Director for special instructions since you will need to use the Custom Pedigree tab at the bottom of the page.

7.3.3.1 If the Test sample is a known relative to one or more of the A/Ks and the alternative hypothesis is that a random person is in the test sample. For example:
 Dad = The brother of the mother is the biological father of the child
 Mom = The brother is related to the mother and the biological father of the child is a random man

7.3.3.1.1 Label your unknown individual on your pedigree drawing with the letter "A".

7.3.3.1.2 Label all people in the pedigree that you have DNA profiles for with the letters "B-K". Do not skip any letters. For example, if you have three known reference samples, they would be labelled B, C and D. In addition, label each sample with its sample number.

7.3.3.1.3 Label the remaining individuals (the individuals whose profiles you do not have a DNA profile for, but who are necessary for the pedigree) with the letters "L-Y". Again, do not skip any letters and set the manual alternative pedigree to "no".

7.3.3.1.4 For each letter A-K that is in your pedigree drawing, enter the gender in the first column and the letters for any parents represented in your pedigree

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results:

7.3.3.2 If the hypothesis for the question at hand is a user defined alternative hypothesis, if the Test sample is a known relative to one or more of the A/Ks and the alternative hypothesis defined by the user. For example:
 Mom = The brother of the mother is the biological father of the child
 Dad = The father of the mother is the biological father of the child

7.3.3.2.1 Label all people in the pedigree that you have DNA profiles for with letters "A-K". Do not skip any letters (example: four samples are labelled A, B, C and D). In addition, label each sample with its sample number.

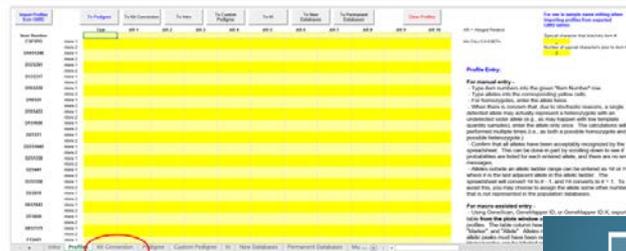
7.3.3.2.2 Label the remaining people (people that you do not have a DNA profile for, but who are necessary for the pedigree) with the letters "L-Y". Do not skip any letters.

7.3.3.2.3 Draw a second family pedigree that represents the alternative hypothesis and repeat the previous two steps using the same letters for each person represented in the pedigree.

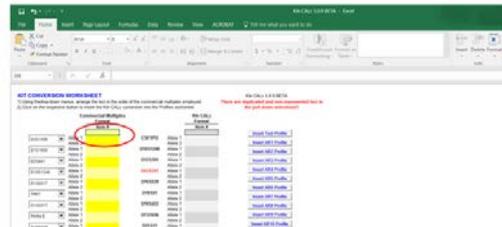
7.3.3.2.4 Go to the Custom Pedigree tab and set the manual alternative pedigree to "Yes".

7.3.3.2.5 For each letter "A-K" in your first pedigree drawing, enter the gender in the first column and the letters for any parents represented in your pedigree drawing in the mother and father columns in the top "References Available" box.

Step 4- Once the BLUE Button has been clicked on, the following screen will open. Left mouse click on the tab on the bottom of the file



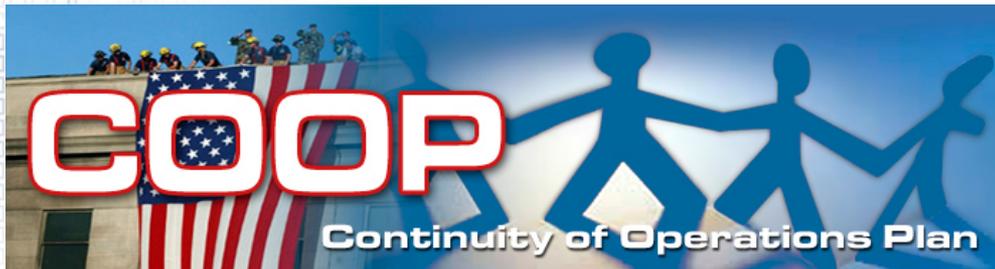
Step 5- The GREEN "ITEM # Cell" is the sample identifier, this information is entered to match the sample identifier from the case report sample identifier.





N.I.C.K Applications

- Mass Disasters
- COOP Planning
- Emergency Management
- Quick On-Boarding
- Refresher Training





The Future

- Discussions with Law Enforcement
- Accreditation Entities
- Discussions with Vendors
- Experts in the Field



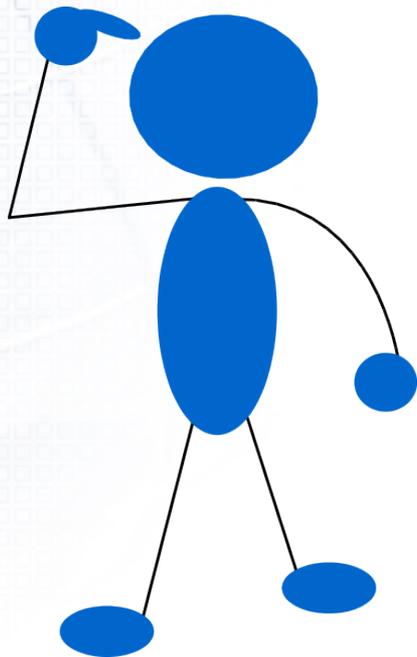


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Questions



www.cliparts.com/clipart/2356296

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