FloodLAMP
BIOTECHNOLOGIES

FloodLAMP QuickColor™ Covid-19 Training Course

STORYBOARD

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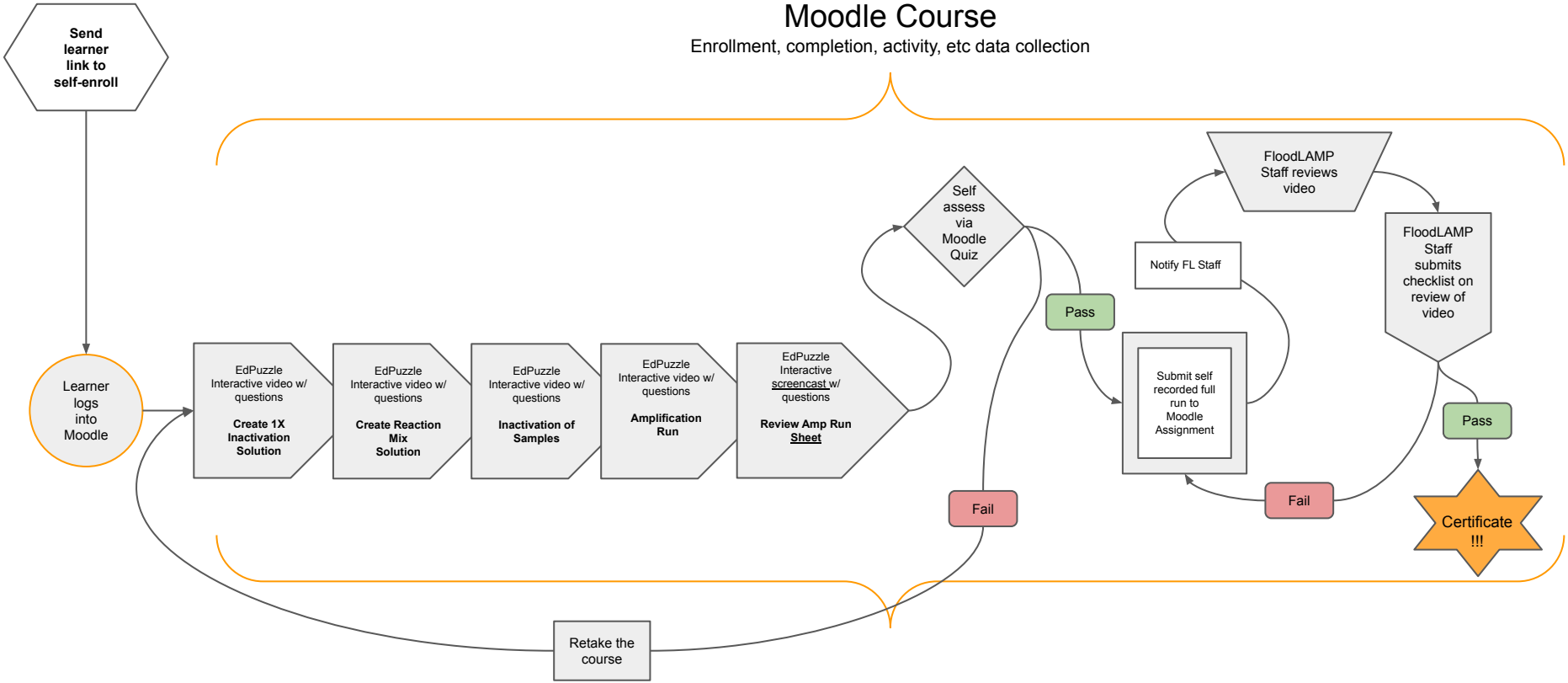

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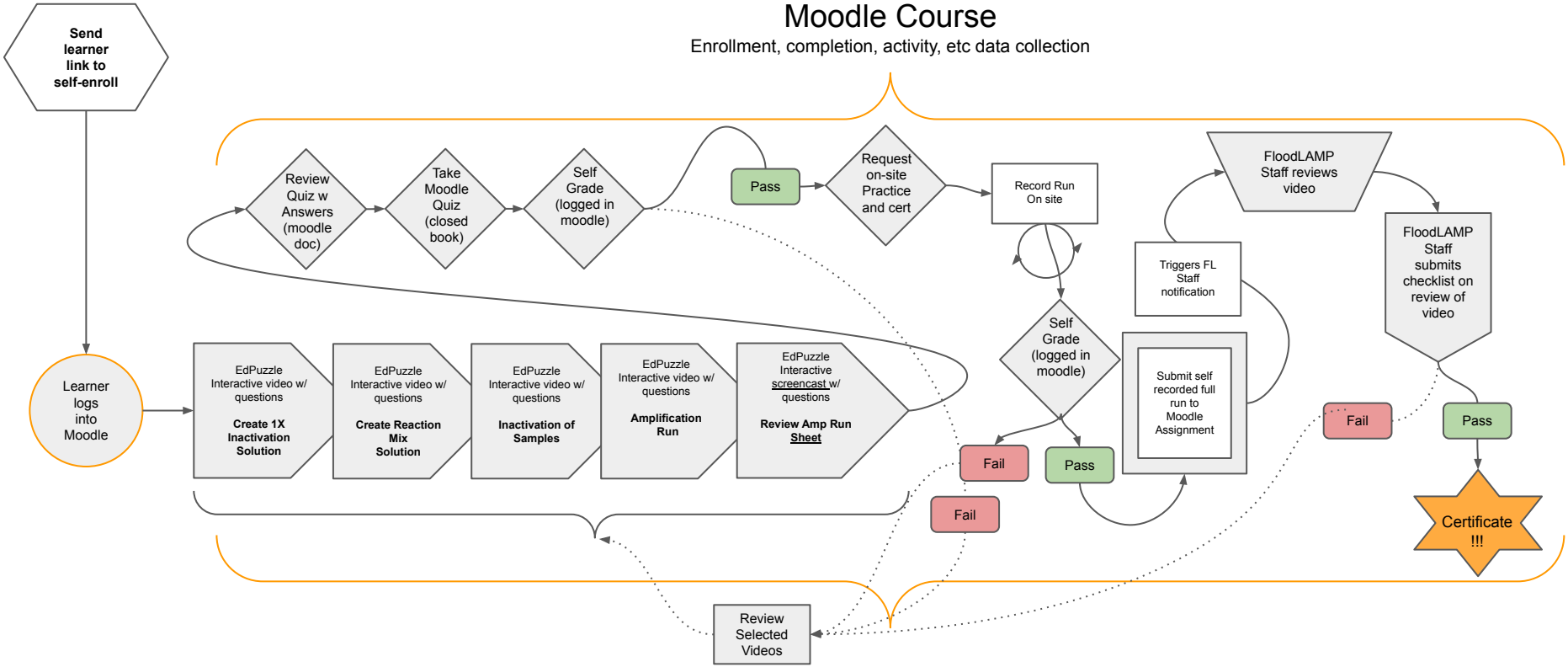
Video List for Phase1
1) Overview
2) Safety and Contamination
3) Prep 1X ISS
4) Prep Run Mix
5) Inactivation
6) Amplification (assay run)
7) App and Resulting
8) Dispenser

Moodle Course

Enrollment, completion, activity, etc data collection



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Module 1 - The Basics

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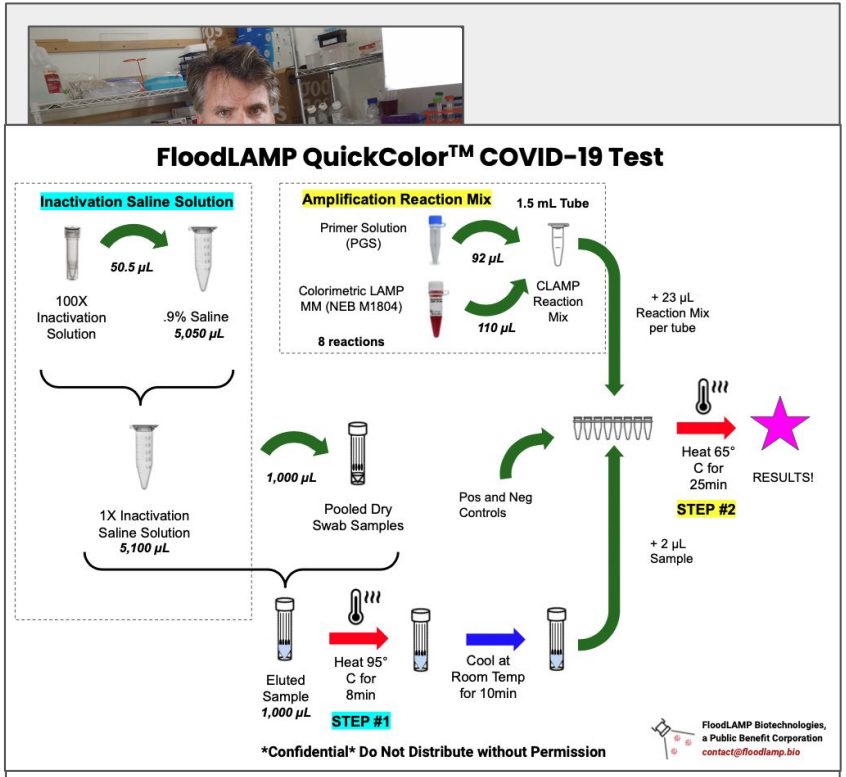

- **Randy to Camera**
- **1.5 minutes**

Start Here: Video 1.01

- Big picture:
  - FloodLAMP's purpose is to "unlock and scale" molecular testing, during COVID pandemic and also to improve health care moving forward.
- The goal of these modules:
  - Prepare someone who has basic pipetting skills to run the testing process.
  - There are 15 videos that follow this one. All of them together will take about 2 hours (?) to complete.
  - Embedded Note: List the Videos that follow
- Each video contains questions that about important steps of the process. These steps are what will be checked during the both the quiz and the video review of your certification run. Please pay close attention to these steps and questions and make sure you understand them.
- You'll be able to review the videos and the summary [what are we calling the notion version of the quiz with answers?] as many times as you want and use the questions to test yourself and build your confidence.
- Embedded Question: I will be able to watch the videos over and over, and use the questions to build confidence.
  - True/False
- (Continued)
- There are two top concerns when you are running this process. Safety and contamination. Continue to the next video to learn about how to best address those concerns.

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- Assumption 1
- Assumption 2
- Assumption 3
- Assumption 4
- Assumption 5
- Assumption 6

NEED new video here to cite assumptions

- **Interactive Video in EdPuzzle**
- **Randy to Camera**
- **20 seconds**

Assumptions: Video 1.02

- We have some assumptions about the learner's previous experience and knowledge.
- Answer the following questions to ensure you feel confident about your own experience and knowledge
- Embedded Question: (Feedback can be the same for all, they must be confident for all)
  - I am comfortable using a pipette to distribute different volumes of liquids (Likert? Yes/No?)
  - I can explain basic RNA/DNA contamination concerns in a lab environment (Likert? Yes/No?)
  - I know how to prevent most common contamination concerns (Likert? Yes/No?)
  - I understand and can mitigate most of the safety concerns in a reaction that has chemicals that might cause eye or skin irritation (Likert? Yes/No?)
  - **(Randy to review and complete these)**

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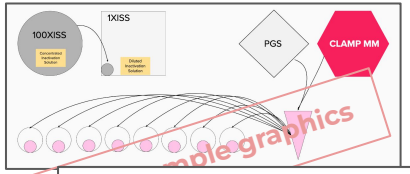

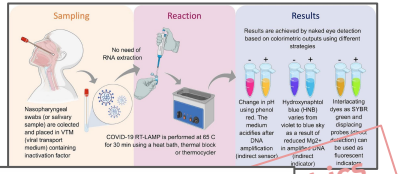

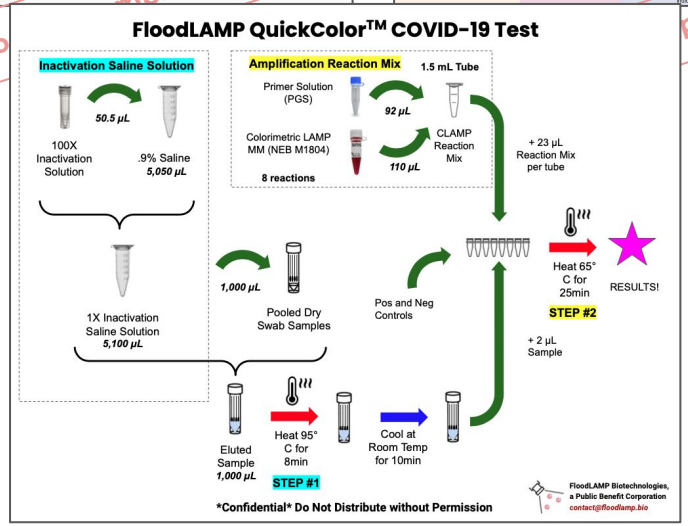

- **Interactive Video in EdPuzzle**
- **Voiceover of screencast graphic that builds with markup**
- **2 minutes**

Overview of the Amplification Reaction Process: Video 1.03

- This overview will not have all the details but it will get you oriented to the overall process.
- You'll have all the PPE on, and you'll have a clean and prepared environment.
- You'll dilute the Inactivation Solution first as the diluted version can only last a day so you have to make it every day.
- You'll take samples and you'll inactivate them in the solution on the heater.
- You'll combine the right amounts of the Primers (PGS) and the CLAMP MASTER MIX and 23ul of that will go into each reaction tube in the plate..
- From the inactivated samples you'll take 2ul of each one and add that to the 23ul of the PGS and Master Mix.
- The plate will be heated and you'll record the results.
- Embedded Question: Based on this overview, how confident are you right now about your ability to run this?
- Feedback for low confidence: Don't worry! There is more training to come.
- Feedback for high confidence: Fantastic. Review the rest of the videos and complete the questions to cement your confidence and hone your skills.
- - Other possible "go-by" for a process graphic

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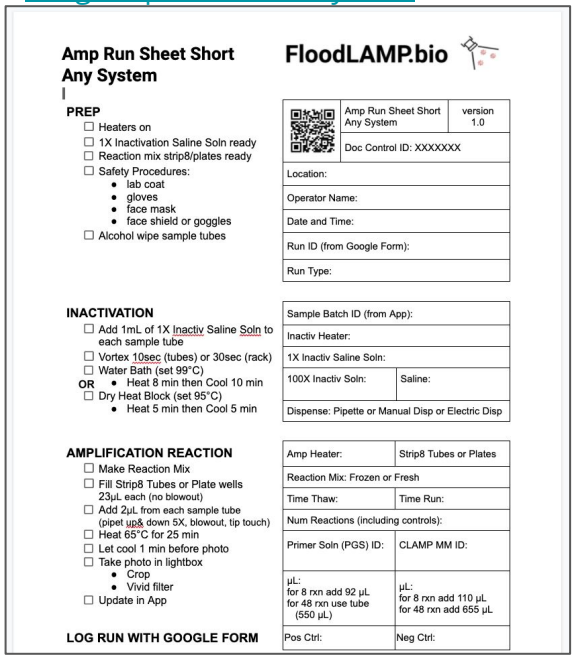
The Amp Run Sheet

- Review the process for completing and the need for data recording, standards and compliance
- Embedded Questions: TBD from Randy.

[Short Amy Run - Any System]
[Long Amp Run - Mini System]



Amp Run Sheet Short Any System

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PREP

- ☐ Heaters on
- ☐ 1X Inactivation Saline Soln ready
- ☐ Reaction mix strip8/plates ready
- ☐ Safety Procedures:
  - lab coat
  - gloves
  - face mask
  - face shield or goggles
- ☐ Alcohol wipe sample tubes

	Amp Run Sheet Short Any System	version 1.0
	Doc Control ID: XXXXXXX	
Location:		
Operator Name:		
Date and Time:		
Run ID (from Google Form):		
Run Type:		

INACTIVATION

- ☐ Add 1mL of 1X Inactiv Saline Soln to each sample tube
- ☐ Vortex 10sec (tubes) or 30sec (rack)
- ☐ Water Bath (set 99°C)

OR

- ☐ Dry Heat Block (set 95°C)
  - Heat 8 min then Cool 10 min
  - Heat 5 min then Cool 5 min

Sample Batch ID (from App):	
Inactiv Heater:	
1X Inactiv Saline Soln:	
100X Inactiv Soln:	Saline:
Dispense: Pipette or Manual Disp or Electric Disp	

AMPLIFICATION REACTION

- ☐ Make Reaction Mix
- ☐ Fill Strip8 Tubes or Plate wells 23µL each (no blowout)
- ☐ Add 2µL from each sample tube (pipet up& down 5X, blowout, tip touch)
- ☐ Heat 65°C for 25 min
- ☐ Let cool 1 min before photo
- ☐ Take photo in lightbox
  - Crop
  - Vivid filter
- ☐ Update in App

Amp Heater:	Strip8 Tubes or Plates
Reaction Mix: Frozen or Fresh	
Time Thaw:	Time Run:
Num Reactions (including controls):	
Primer Soln (PGS) ID:	CLAMP MM ID:
µL: for 8 rxn add 92 µL for 48 rxn use tube (550 µL)	µL: for 8 rxn add 110 µL for 48 rxn add 655 µL
Pos Ctrl:	Neg Ctrl:

LOG RUN WITH GOOGLE FORM

- **Interactive Video in EdPuzzle**
- **Voiceover screencast document w/ markup**
- **2 minutes**

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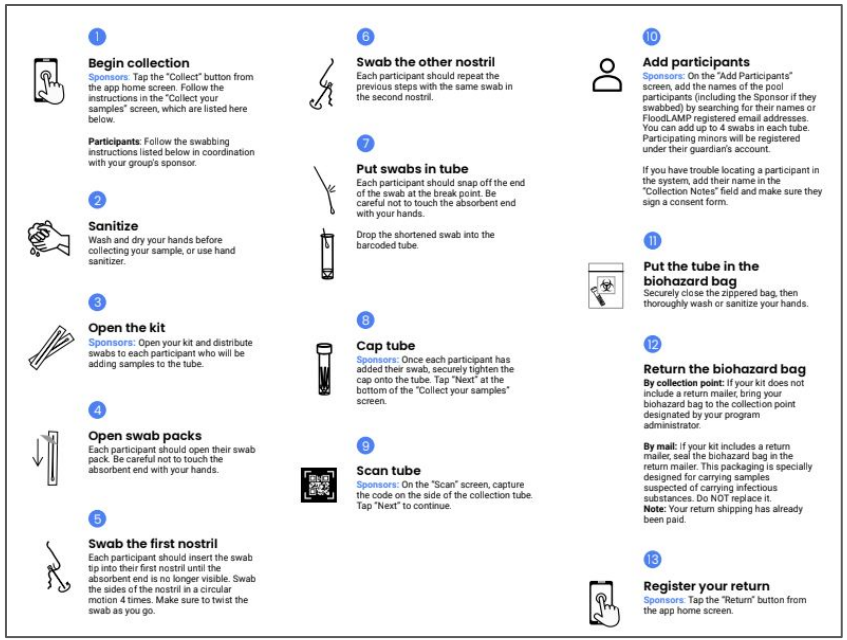
The Collection Process

- Review the document
- Embedded Questions: TBD from Randy.

Collection Kit PDF



1 **Begin collection**
Sponsors: Tap the "Collect" button from the app home screen. Follow the instructions in the "Collect your samples" screen, which are listed here below.

Participants: Follow the swabbing instructions listed below in coordination with your group's sponsor.

2 **Sanitize**
Wash and dry your hands before collecting your sample, or use hand sanitizer.

3 **Open the kit**
Sponsors: Open your kit and distribute swabs to each participant who will be adding samples to the tube.

4 **Open swab packs**
Each participant should open their swab pack. Be careful not to touch the absorbent end with your hands.

5 **Swab the first nostril**
Each participant should insert the swab tip into their first nostril until the absorbent end is no longer visible. Swab the sides of the nostril in a circular motion 4 times. Make sure to twist the swab as you go.

6 **Swab the other nostril**
Each participant should repeat the previous steps with the same swab in the second nostril.

7 **Put swabs in tube**
Each participant should snap off the end of the swab at the break point. Be careful not to touch the absorbent end with your hands.

Drop the shortened swab into the barcoded tube.

8 **Cap tube**
Sponsors: Once each participant has added their swab, securely tighten the cap onto the tube. Tap "Next" at the bottom of the "Collect your samples" screen.

9 **Scan tube**
Sponsors: On the "Scan" screen, capture the code on the side of the collection tube. Tap "Next" to continue.

10 **Add participants**
Sponsors: On the "Add Participants" screen, add the names of the pool participants (including the Sponsor if they swabbed) by searching for their names or FloodLAMP registered email addresses. You can add up to 4 swabs in each tube. Participating minors will be registered under their guardian's account.

If you have trouble locating a participant in the system, add their name in the "Collection Notes" field and make sure they sign a consent form.

11 **Put the tube in the biohazard bag**
Securely close the zippered bag, then thoroughly wash or sanitize your hands.

12 **Return the biohazard bag**
By collection point: If your kit does not include a return mailer, bring your biohazard bag to the collection point designated by your program administrator.

By mail: If your kit includes a return mailer, seal the biohazard bag in the return mailer. This packaging is specially designed for carrying samples suspected of carrying infectious substances. Do NOT replace it.
Note: Your return shipping has already been paid.

13 **Register your return**
Sponsors: Tap the "Return" button from the app home screen.

- **Interactive Video in EdPuzzle**
- **Voiceover screencast document w/ markup**
- **2 minutes**

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Module 2 - Preparing for & Running the Reaction

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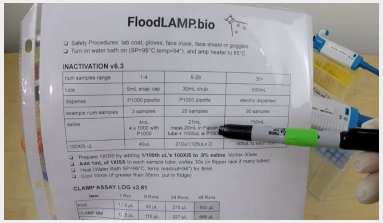
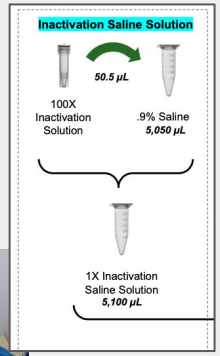
https://vimeo.com/602040532





Existing video of making inactivation solution

- **Interactive Video in EdPuzzle**
- **1 minute**

Making Diluted Inactivation Solution

- Adding 5mL of Saline Solution to 50uL of the Inactivation Solution (100XSS)
- Embedded Questions: TBD from Randy

For all tools, parts and pieces of the lab that we see for the first time, we introduce the same way: Note with text and voiceover explaining the item in less than 20 sec.

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https://vimeo.com/602040532 Around 6 minute mark

Existing video of inactivating samples

- **Interactive Video in EdPuzzle**
- **4 minute**

Inactivating the Samples

- Adding 1mL of the 1XISS inactivation solution to each sample and heating them
- Embedded Questions: TBD from Randy

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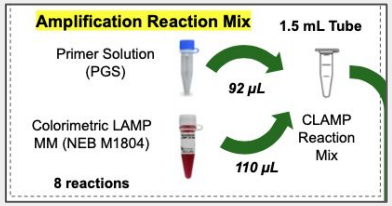
https://vimeo.com/602040683



Existing video of making th

- **Interactive Video in Ec**
- **4 minutes**

Making the Mix

- Making the reaction mix for 48 reactions by combining PGS and CLAMP Master Mix
- Add 655uL red MM to a PGS tube
- Get CLAMP MM, PGS, P1000 and Tips
- Set P1000 to 655 uL and dispense 655 uL of the red MM into the

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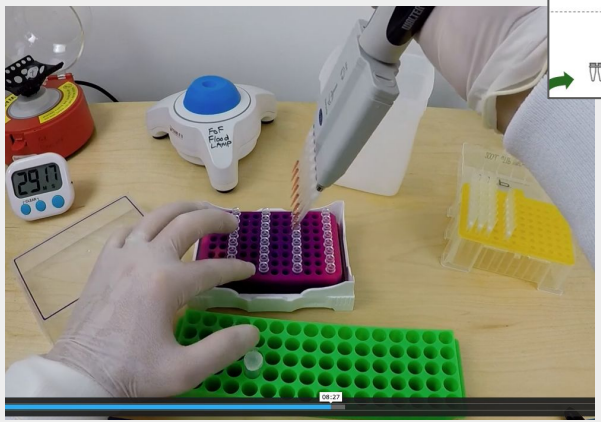

Existing video of distributing the mix to the reaction strips

- **Interactive Video in EdPuzzle**
- **4 minute**

Distributing the mix to the reaction plate

- Pipetting 23ul of the reaction mix to each reaction tube in the plate with the 8 point pipette
- Embedded Questions: TBD from Randy

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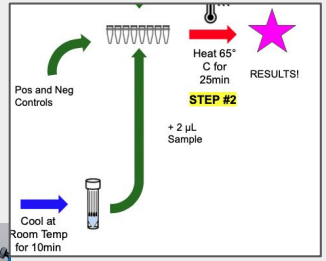

Existing video of distributing each sample to each reaction tube

- **Interactive Video in EdPuzzle**
- **3 minute**

Adding 2uL of each sample to each reaction tube

- Pipetting 2ul of each sample to each reaction tube in the plate with the 8 channel pipette
- Embedded Questions: TBD from Randy

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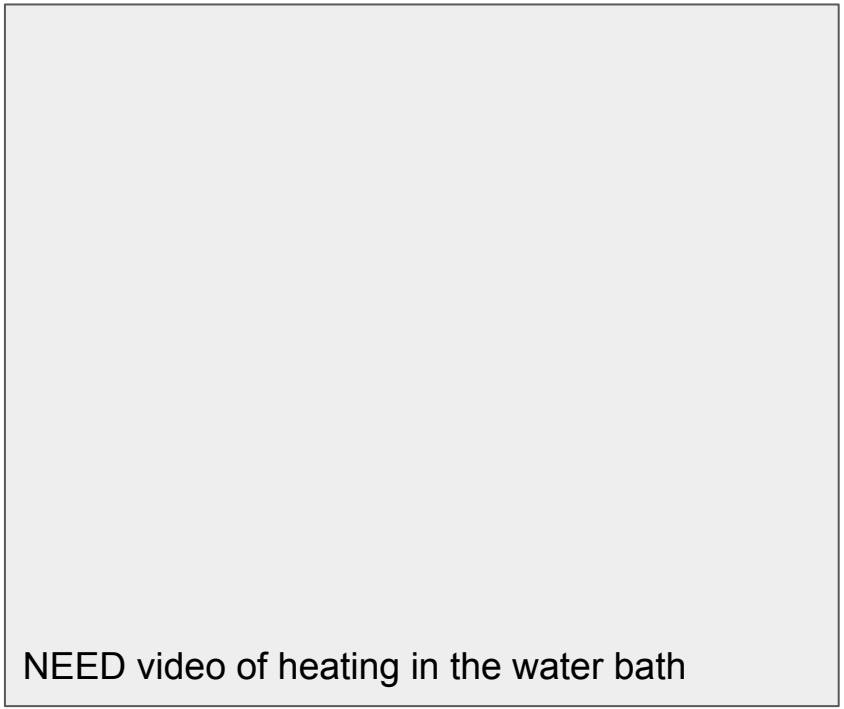
Heating the samples with the reaction mix

-
- Embedded Questions: TBD from Randy



- **Interactive Video in EdPuzzle**
- **2 minute**

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NEED new video of documenting the results with lookup rack etc.

- **Interactive Video in EdPuzzle**
- **6 minutes**

Documenting the Results

-
- Embedded Questions: TBD from Randy

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After this slide is only Reference or Archive materials

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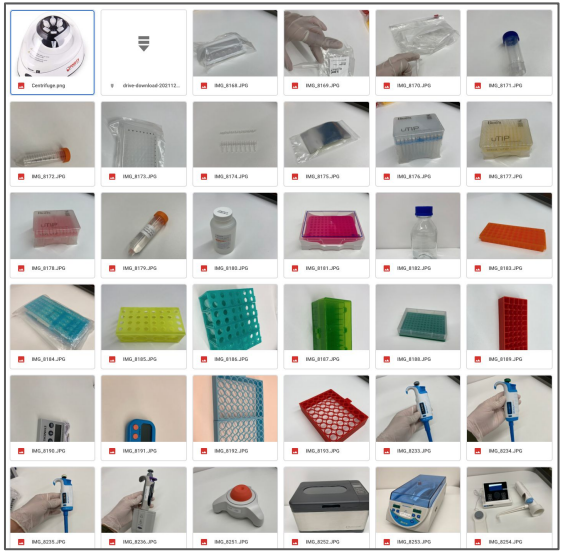
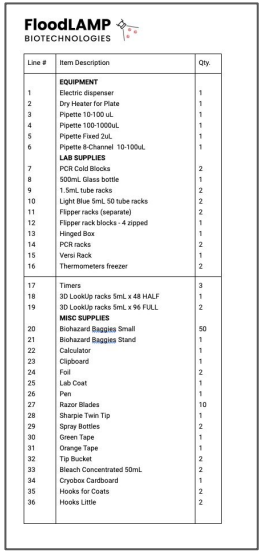
Phase 2 or FOR REFERENCE in PHASE 1

Standard Kit Checklist





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Line #	Item Description	Qty.
	EQUIPMENT	
1	Electric dispenser	1
2	Dry Heater for Plate	1
3	Pipette 10-100 uL	1
4	Pipette 100-1000uL	1
5	Pipette Fixed 2uL	1
6	Pipette 8-Channel 10-100uL	1
	LAB SUPPLIES	
7	PCR Cold Blocks	2
8	500mL Glass bottle	1
9	1.5mL tube racks	2
10	Light Blue 5mL 50 tube racks	2
11	Flipper racks (separate)	2
12	Flipper rack blocks - 4 zipped	1
13	Hinged Box	1
14	PCR racks	2
15	Versi Rack	1
16	Thermometers freezer	2
17	Timers	3
18	3D LookUp racks 5mL x 48 HALF	1
19	3D LookUp racks 5mL x 96 FULL	2
	MISC SUPPLIES	
20	Biohazard Baggies Small	50
21	Biohazard Baggies Stand	1
22	Calculator	1
23	Clipboard	1
24	Foil	2
25	Lab Coat	1
26	Pen	1
27	Razor Blades	10
28	Sharpie Twin Tip	1
29	Spray Bottles	2
30	Green Tape	1
31	Orange Tape	1
32	Tip Bucket	2
33	Bleach Concentrated 50mL	2
34	Cryobox Cardboard	1
35	Hooks for Coats	2
36	Hooks Little	2

- **Interactive Video in EdPuzzle**
- **Voiceover of screencast slides with pictures**
- **3 minutes**

Standard Kit Parts Checklist

- Show each part and learner confirms they have it
  - Picture with Description
  - Embedded Question: Do you have it? (Yes/No)
    - If No, some contact info or method to get it

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Remediation If Needed: Pipette Basics - Volumes

Include question: How many microliters equals 1 milliliter?

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2. Pipette Basics - How to Use a Pipette

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2. Pipette Basics- Pipetting Concerns

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2. The Basics- Tube Prep

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Pull questions from these

- Pipette Step-by-Step from Scratch
- What Ifs?