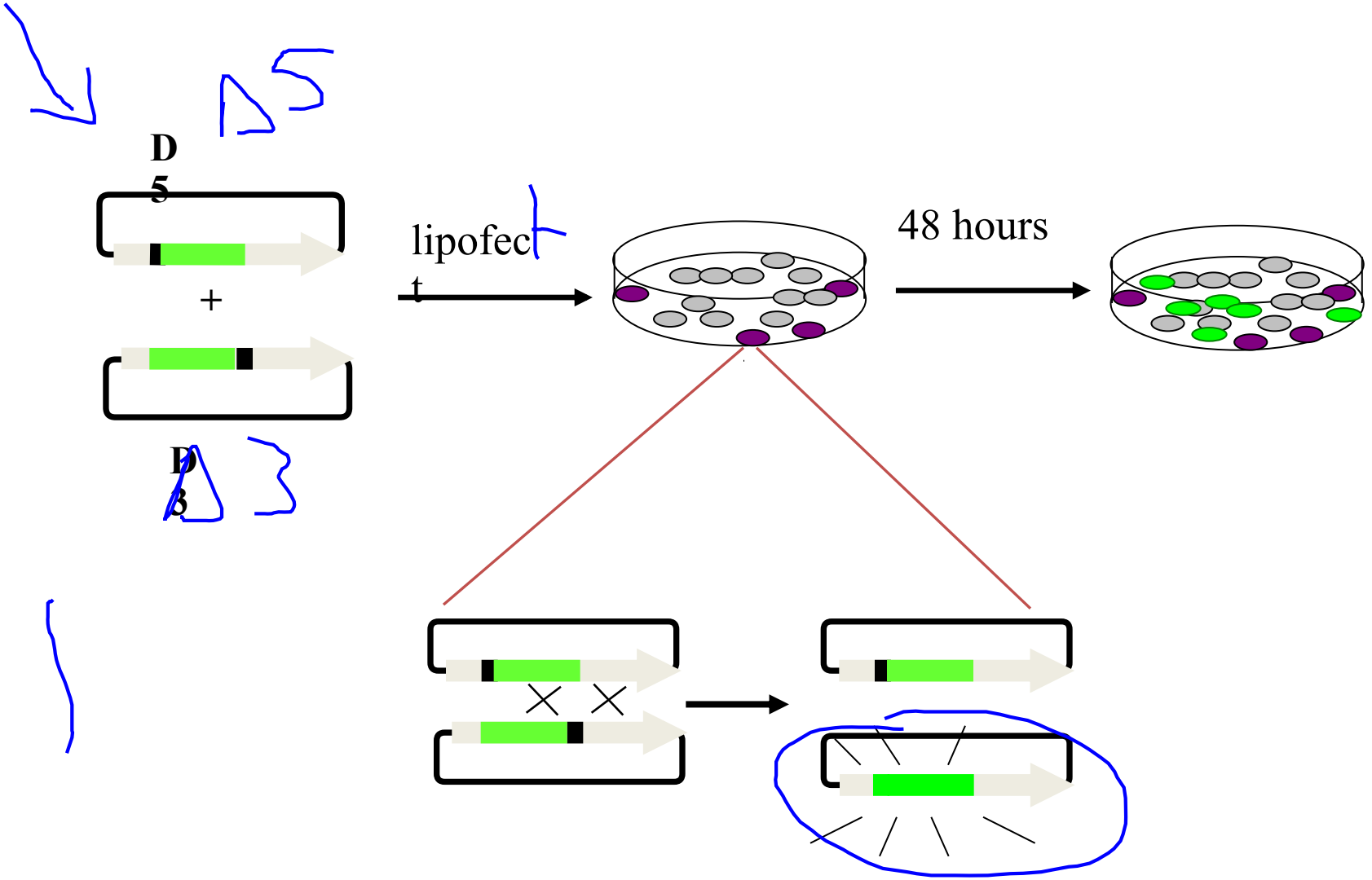
DNA Engineering: M1D1 Lab Talk

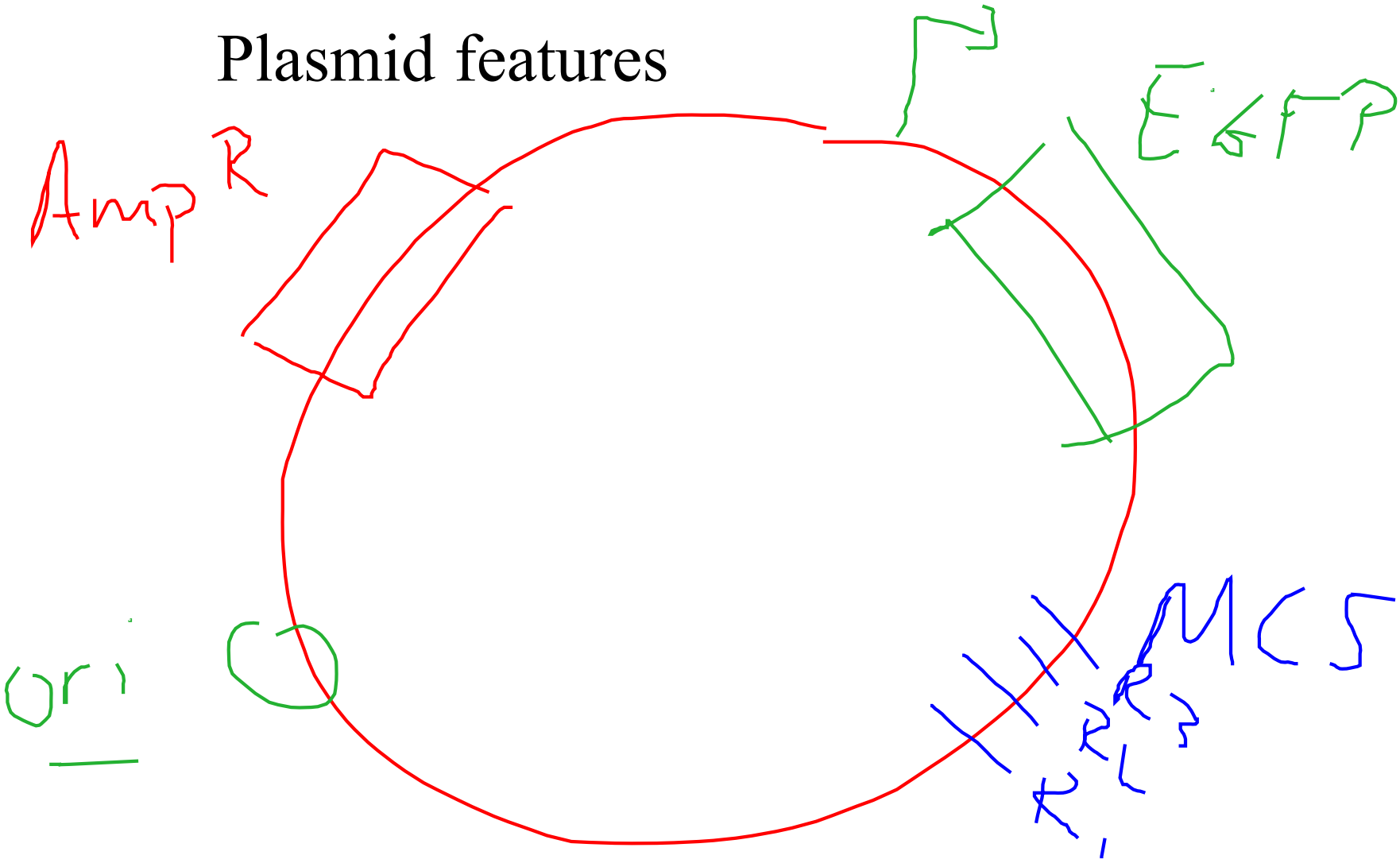
20.109 (F11)

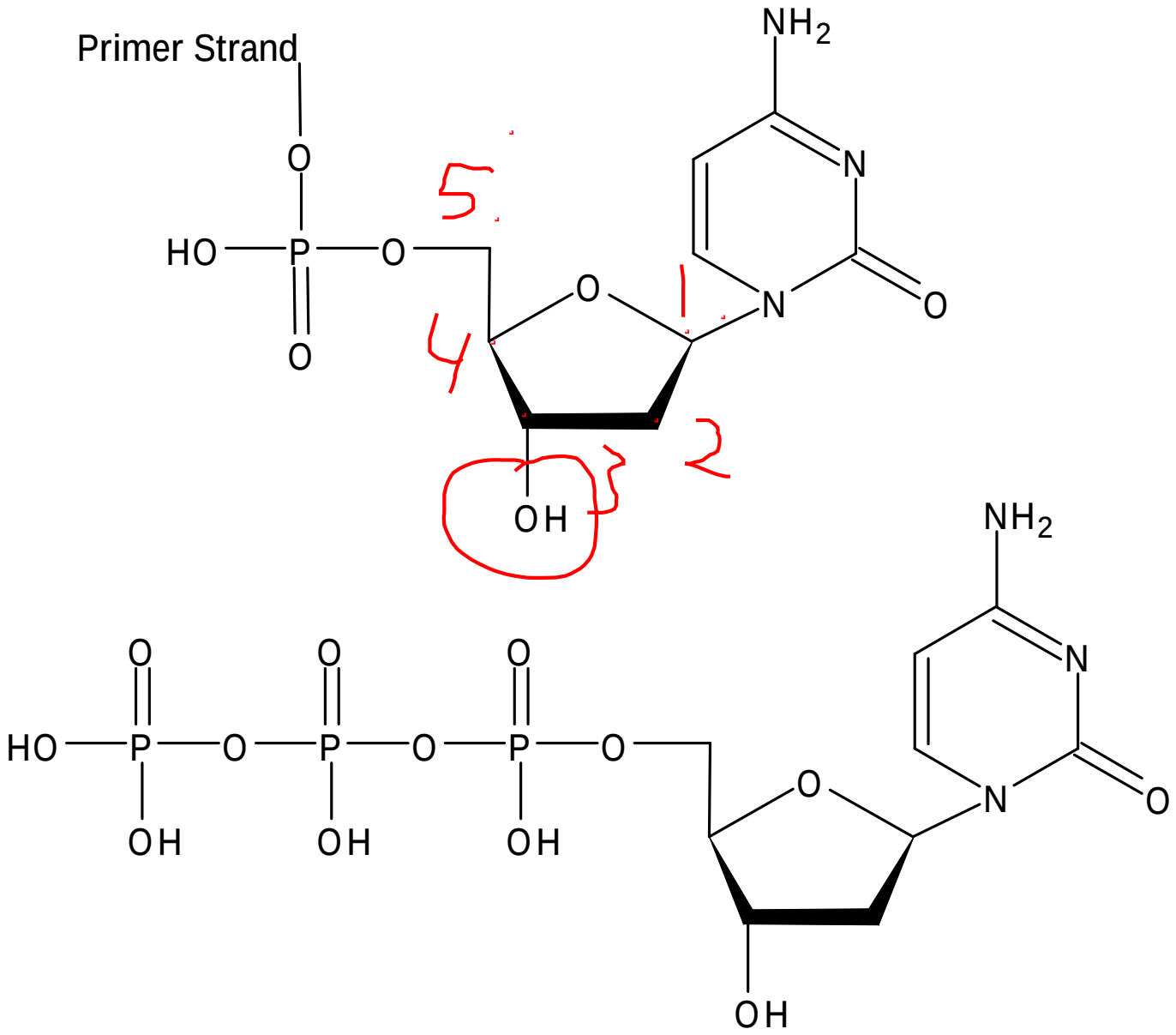
09.13.11

Module 1 overview

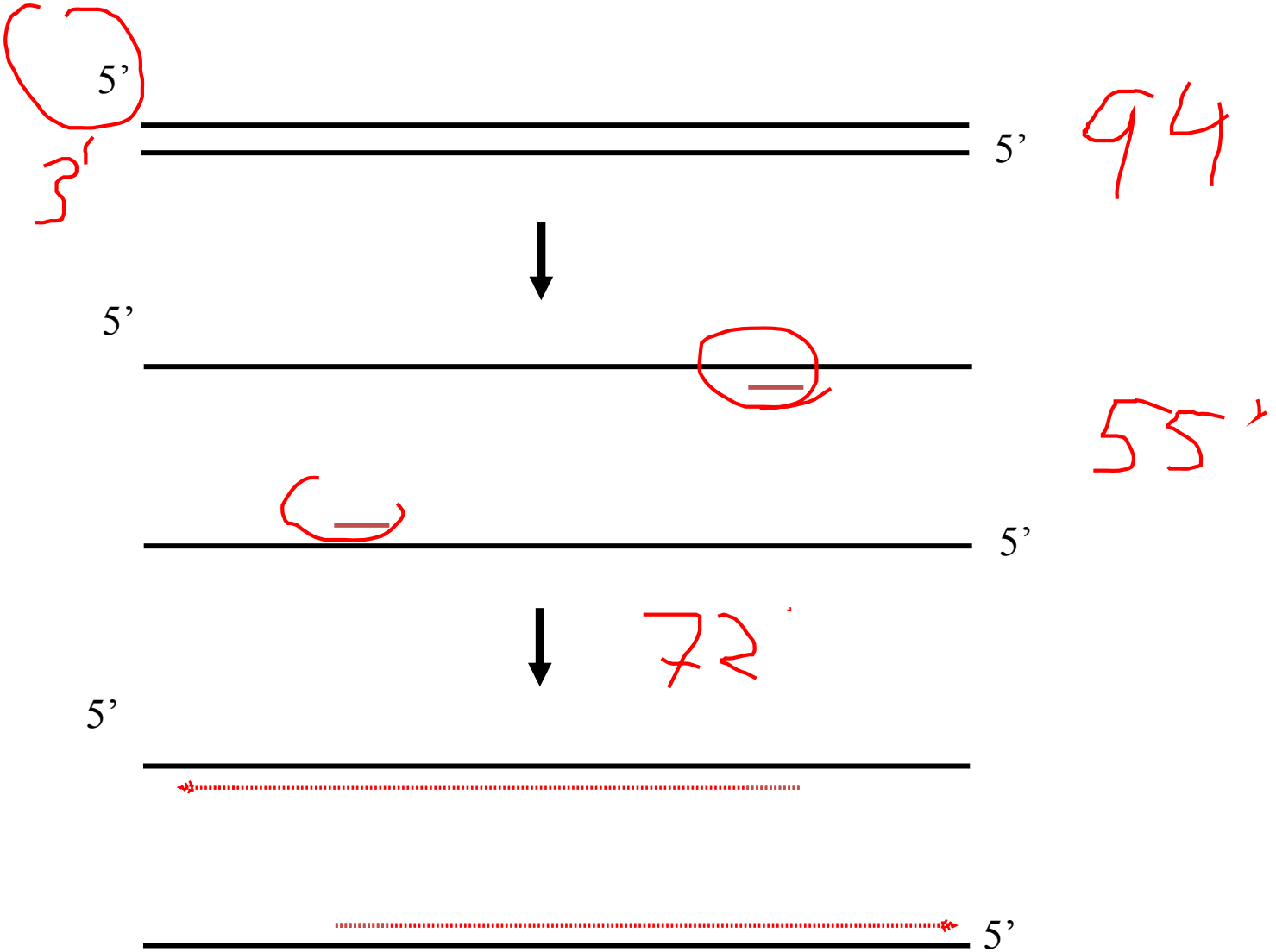


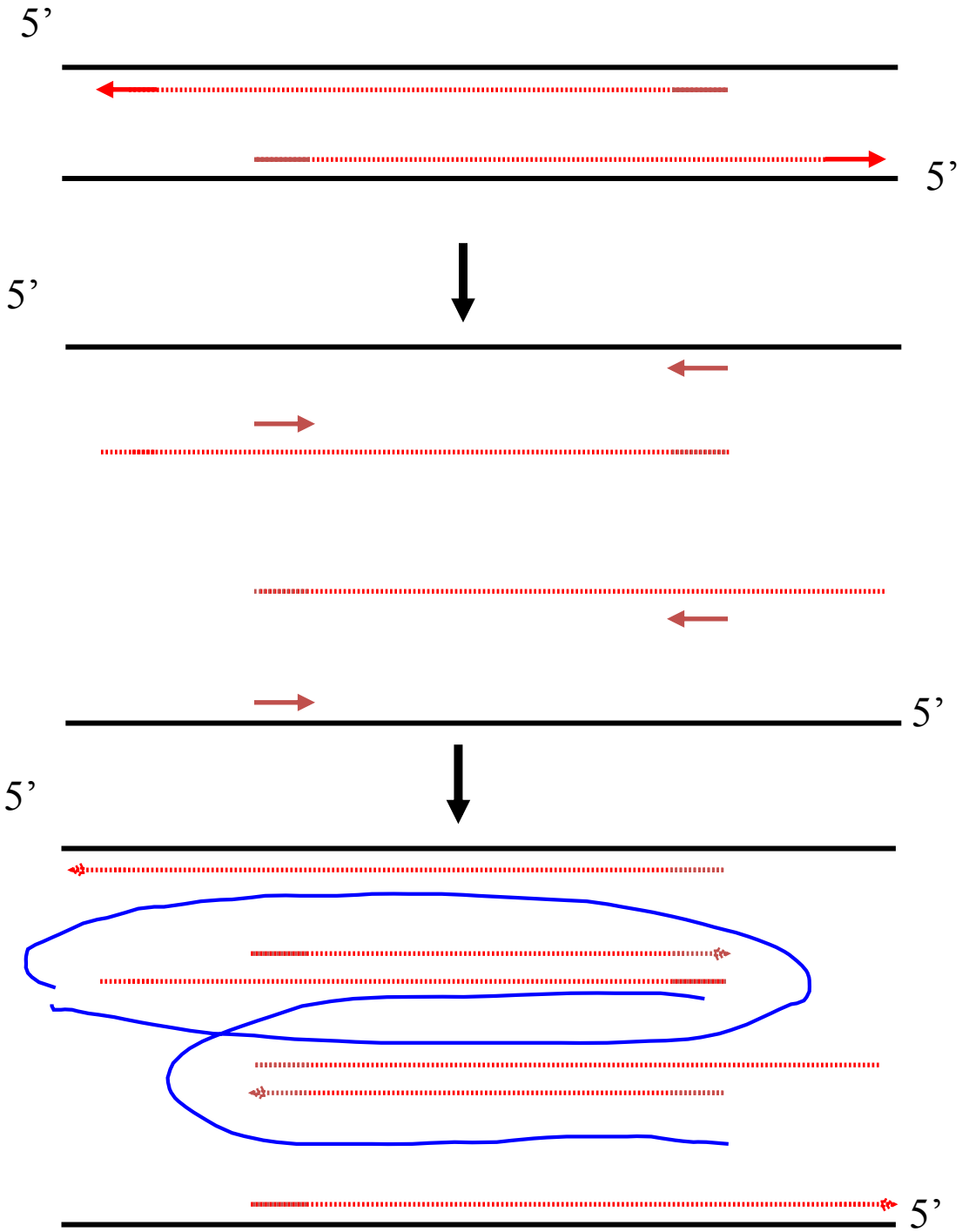
Plasmid features

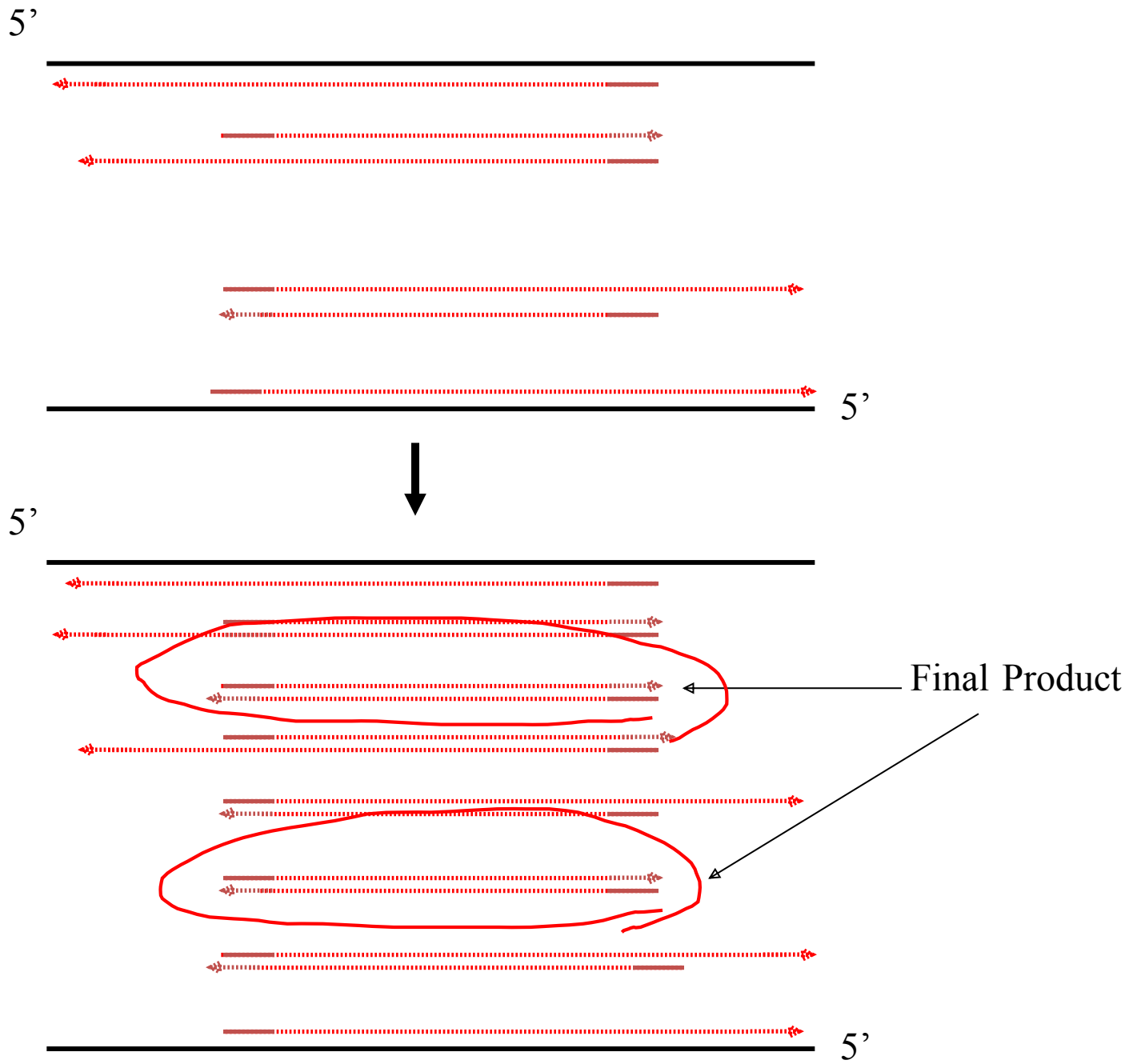



Primer Strand
NH2
O
HO
P
O
O
5'
4'
O
1'
N
N
O
OH
3'
2'
NH2
O
HO
P
O
P
O
P
O
O
OH
OH
OH
N
N
O
OH

PCR

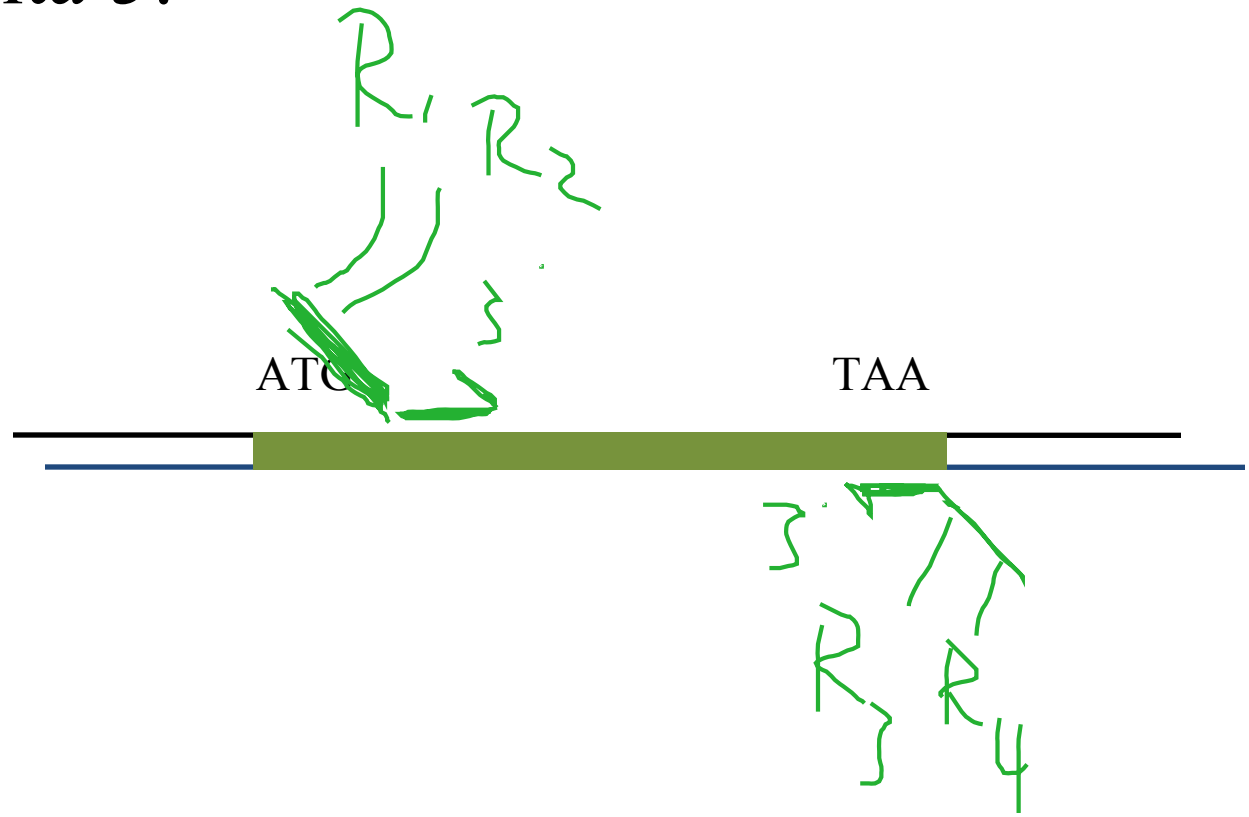



5’
5’
5’
5’
5’
5’


5’
5’
5’
Final Product
5’

Your primers

delta 5:



Primer Design

1. 17-28 bases

2. 50-60% (GC)

3. Melting Temps should be ~65-80^{o}

4. 3'-ends of primers should not be complementary to each other (why?)

5. Hairpins should be avoided (why?)

6. Check for 'accidental' annealing elsewhere in your target.

Your reactions

Component	Function
Primers	Amplify
Template	Source of DNA
dNTPs, Taq, MgCl	Master mix

This week in lab

T

LAB PRACTICAL

PRIMER Design

PCR

R

Clean PCR

Digest