

## Dobbins CTE High School Lesson Plan

**Teacher:** Ms. Kai Flowers

**Grade:** 10

**Subject:** Biotechnology I

**Week of**

**CTE Standards Addressed (list):**

**100 Good Work Habits**

**101 Demonstrate Professional Work Habits**

**302 Use Computer applications to present data**

<b>Planning Elements</b>					<b>Day 5</b>
<b>Objective</b> Performance based objectives are composed in the know and do format. The “know” refers to the content whereas the “do” is always linked to a common core standard and/or a higher order thinking school.	<b>Objective:</b> <b>I will be able to use Python to analyze Absorbance Data IOT utilize computer applications to present Data</b>	<b>Objective:</b> <b>I will be able to discuss the benefits and drawbacks of changing the DNA of an organism</b>	<b>Objective:</b> <b>I will be able to discuss the benefits and drawbacks of changing the DNA of an organism</b>	<b>Objective:</b> <b>I will detect Genetically Modified Foods using PCR</b>	<b>Objective:</b> <b>I will detect Genetically Modified Foods using PCR acquisition process</b>
<b>The HOW.....</b>	<b>Activities:</b>	<b>Activities:</b>	<b>Activities:</b>		<b>Activities:</b>

<p><b>How will I teach the objectives?</b> What activities will I use? How will I involve the students? (Teacher Model/Guided Practice/Cooperative Practice/Independent Practice) What materials or text references will be needed?</p>	<p><b>Do Now:</b>  <b>Explain why do you think we would want to use a computer program to analyze our Lab Data?</b></p> <p><b>Utilize CoLab with Student Absorbance data values imported from Sheets to manipulate.</b></p> <pre>wavelengths = np.arange(400, 621) absorbance = np.array(absorbance_values) plt.plot(wavelengths, absorbance) plt.xlabel('Wavelength (nm)')</pre>	<p><b>Do Now: There are _____ types of nitrogen bases that make up the “rungs” of the DNA molecule?</b></p> <p><b>Temple HCC</b></p> <p><b>Breakout rooms and work on Short Answer questions. Students will work on questions with their partners and report out when we rejoin the main room.</b></p>	<p>Nearpod Lesson on Scientific Methodology in research</p> <p><b>Materials:</b>  Zoom Platform  Google Classroom  Nearpod  YouTube video</p>	<p><b>Soft Skills-Activity 1</b></p> <p><b>Materials:</b>  slide presentation and charts to complete</p>
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	<pre>plt.ylabel('Absorbance') plt.title('Absorbance Spectrum of the Green Solution') plt.show()</pre>				
<b>The WHAT...</b> What will tell me that my students have mastered this objective? What assessments will I use?	exit Ticket-	Answer Exit Ticket with 70 % accuracy	Answer Exit Ticket with 70 % accuracy		
<b>Daily Homework Assignments</b>			Review Vocabulary Terms Answer Section 1.4 review Questions for homework.		