Lesson Plan Template

Grade: 10th	Subject: Biology
Materials: Nutrition Labels	**Technology Needed: Students will have their Chromebooks**

Instructional Strategies:		**Guided Practices and Concrete Application:**	
☑ Direct instruction	☑ Peer teaching/collaboration/ cooperative learning	☐ Large group activity	☑ Hands-on
☐ Guided practice		☐ Independent activity	☐ Technology integration
☐ Socratic Seminar	☐ Visuals/Graphic organizers	☑ Pairing/collaboration	☐ Imitation/Repeat/Mimic
☐ Learning Centers	☐ PBL	☐ Simulations/Scenarios	
☐ Lecture	☑ Discussion/Debate	☐ Other (list)	
☐ Technology integration	☐ Modeling	Explain:	
☐ Other (list)			

Standard(s)	**Differentiation**
Performance Standard HS-LS1-6: Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen may combine with other elements to form large carbon-based molecules.	**Below Proficiency:** Give an example graph for students to model their graph after. **Above Proficiency:** Challenge students with questions about what macromolecules they believe might be in their lunches and the functions that those macromolecules will play in their bodies.
Objective(s) Students will be able to distinguish between carbohydrates, lipids, proteins, and nucleic acids. Students will be able to explain the function of the different macromolecules in the body and connect that to the nutrition from their food. **Bloom's Taxonomy Cognitive Level:** Comprehension and Application	**Approaching/Emerging Proficiency:** Give support with leading questions and refer them back to their notes **Modalities/Learning Preferences:** Visual: lots of pictures and diagrams on my presentation that they will draw in their notes Auditory: Analogies, examples, and explanations given via direct instruction

Classroom Management- (grouping(s), movement/transitions, etc.)	**Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)**
Students will work with their table partners again to finish up on the Nutrition Labels Activity and then on the McDonalds Lab. When moving from Nutrition labels activity to Lab, give explicit instructions before moving onto lab.	Everyone is working together on the assignment. Everyone has their own worksheet to write their answers down that they have discussed as a table group.

Minutes	Procedures
	Set-up/Prep: Set up lab: 4 test tubes per person, indicators, dixy cups for everyone, blender, McDonalds meal, and work sheet
	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.) **Why should your students care or want to know about this topic?** **Welcome everyone to class and remind them of my name** **Go over the agenda on the board** **Bell ringer: 10 questions about the 4 macromolecules**
	Explain: (concepts, procedures, vocabulary, etc.) **What do you want students to know and be able to do?** **Finish notes and go over commonly missed questions from day one**
	Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions) Finish Nutrition labels activity **McDonalds Lab** What macromolecules are found in a McDonalds meal? We will blend up a McDonalds meal and then each group will get some of the mixture to put into 4 test tubes. Then the students will put different indicators (Benedict's solution, iodine solution, Biuret's reagent) in three different test tubes to test for monosaccharides, polysaccharides, and proteins. With the third one we will perform an alcohol emulsion test and the translucency test.
	Review (wrap up and transition to next activity): Students will complete a Google slides presentation about their findings in the lab At the end of class students will wrap it up with a summative assessment that has been modified from the bell ringer

Formative Assessment: (linked to objectives)	**Summative Assessment (linked back to objectives)**
Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc. Nutrition Labels Activity: I looked over them at the end of day one and gave them feedback and then gave them time to make improvements and finish the activity up on day two. **Consideration for Back-up Plan:** In case the lab does not work out we could to the Hank Green Sandwich video.	**End of lesson:** Quiz (modified from bellringer quiz) **If applicable- overall unit, chapter, concept, etc.:**

| If there is not enough time students can do the summative assessment quiz as an assignment for the next class period. | |

Reflection (What went well? What did the students learn? How do you know? What changes would you make?):
Students enjoyed the lab activity and did well in their groups. One thing to remember is to test the different reactions before hand to ensure that they work. Turn and talks went well during the lesson to ensure class participation and making sure to give them a time limit on how long they talked.