## **Lesson Plan Template**

Grade: 8th		Subject: Life Science- Evolution	
Materials: Phylogenic Tree Duzzle, scissors, glup, paper		Technology Needed:	
Instructional	Stratogios:	Guided Practices and Concrete Application:	
Direct instruction Peer teaching/collaboration/		Guided Fractices and concrete Application.	
Guided n	practice cooperative learning	Large group activity Hands-on	
Socratic Seminar Visuals/Graphic organizers		Independent activity Technology integration	
Learning Centers PBL		Pairing/collaboration Imitation/Repeat/Mimic	
Lecture Discussion/Debate		Simulations/Scenarios	
Technology integration Modeling		Other (list)	
Other (list)		Explain:	
Standard/a)		Differentiation	
Stanuaru(s)		Below Proficiency:	
Ap	ply scientific ideas to construct an	Students will be able to apply scientific ideas to describe the	
exr	planation for the anatomical	anatomical differences and similarities between modern	
MS-	ailarities and differences are and	organisms and fossil organisms and sort them correspondingly.	
LS4- SIII	martues and unterences among		
mo	odern organisms and between	Above Proficiency:	
$ ^2$ mo	odern and fossil organisms to infer	Students will be able to apply scientific ideas to construct an	
		explanation for the anatomical similarities and differences among	
evo	olutionary relationships.	modern organisms and between modern fossil organisms to infer	
		evolutionary relationships using phylogenetic trees. They will be	
		able to construct new connections between organisms not used	
Objective(s)		III IdD.	
Students will b	he able to apply scientific ideas to construct ap	Approaching/Emerging Proficiency:	
Students will a	be able to apply scientific ideas to construct an	Students will be able to identify the differences and similarities	
modern organ	bi the anatomical similarities and unreferices among	between modern organisms and fossil organisms, sort them	
a nhylogeneti	is the to infer evolutionary relationships	correspondingly and make scientific inferences on how they are	
a phylogenetic	e liee to finel evolutionally relationships.	connected.	
Bloom's Taxo	nomy Cognitive Level:		
Evaluate and Create		Modalities/Learning Preferences:	
		Problem solving, visual, critical thinking skills	
Classroom Managoment (groupingle) movement (transitions at )		Behavior Expectations, (systems, strategies, procedures specific to	
classroom wanagement- (grouping(s), movement/transitions, etc.)		the lesson, rules and expectations, etc.)	
Students will l	be working in their lab groups at their lab stations. I will		
be walking around the classroom to make sure everyone is on topic		The behavior expectations will be the same as they are in every class.	
and understanding the content.		Responsibility and respect are expected from every student in my	
		classroom.	
Minutes	Procedures		
5 S	et-up/Prep:		
P	Print off enough copies of the model organisms for each lab	p group. Provide a large piece of paper, glue, and scissors for each lab	
g	roup.		
	nonce (energing estivity ( enticipatery Cat - econor rying )	opening (stimulate interest (senerate substitute etc.)	
<b>5</b> C	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)		
Т	Talk about family trees. I would draw one of my own family or have a student volunteer to draw their own family tree on the board for the class to see. Then I will show them the "Tree of Life" diagram so that they can visually see how all life connects.		
fc			
10 E	Explain: (concepts, procedures, vocabulary, etc.)		
1	I will explain what a phylogenetic tree/cladogram is and how to create and read them. We will practice with a very simple example		
0	on the board to make sure the students understand what is going on. (Hopefully we will have already gone over this topic in the		
p	nevious class, so this is more of a review)		
25 F	explore: (independent, concreate practice/application wit	h relevant learning task -connections from content to real-life	
e 23	experiences, reflective questions- probing or clarifying que	estions)	

## **Lesson Plan Template**

Students will work together in lab groups to construct their own phylogenetic tree with pretend organisms printed on paper. I will provide the position/organism that is the common ancestor and the modern organisms. Students will sort through the organisms, analyzing the importance of the similar and different structures they have and placing them in an order that shows how the organisms have changed over time. During this time, I will be walking around the room to listen and watch students' progress, answer questions, and ask formative questions.

Here is an image of what the completed phylogenetic tree may look like. I would edit it to make it simpler (with less organisms) and possibly shorten the amount of time (seen on the y axis).



10

After the students have completed their phylogenetic trees, we will discuss what they were supposed to look like and why. We will tie together important vocab such as homologous and vestigial structures. We will also talk about how this relates to modern organisms and modern fossils.

Lesson Plan Template			
Formative Assessment: (linked to objectives) Progress monitoring throughout lesson- clarifying questions, check- in strategies, etc.	Summative Assessment (linked back to objectives) End of lesson: Students will turn in their phylogenetic tree and explain the process that they used to create it.		
I will be walking around the room to ask questions and redirect learning.	If applicable- overall unit, chapter, concept, etc.:		
Consideration for Back-up Plan:			
If students are struggling to move forward in the phylogenetic "puzzle" I may combine groups, or we could do a portion of it together as a large group discussion.			
Reflection (What went well? What did the students learn? How do you	J know? What changes would you make?):		

## . ы