### Week 2

## 4.Cellular Organelles

Grade: 7th-8th		Subject: Science	
Materials: cellular art materials, homework worksheet		Technology Needed: PowerPoint system, computer,	
		projector	
Instructional Strategies:		Guided Practices and Concrete Application:	
*Direct inst	ruction * Peer teaching/collaboration/	*Large group activity *Hands-on	
*Loorning (	Cooperative learning	*Independent activity *Technology integration	
*Lecture	*Discussion/Debate	*Pairing/collaboration	
*Technolog	v integration	*Simulations/Scenarios	
<b>(</b>			
Standard(	s)	Differentiation	
Standard	4: Students understand the basic	Below Proficiency: If a student identifies as below	
concepts	and principles of life science	proficiency I would put them into groups or with a	
Objective	(s)	partner to aid them.	
7 4 1 Evr	lain the functions of the cell (e.g.	About Dusfisionen lás student identifica og skous	
	notabolism reproduction	Above Proficiency: If a student identifies as above	
giowin, i	thesis response)	topic by researching on the computer cellular	
photosyn	thesis, response)	organelles.	
		Approaching/Emerging Proficiency: If students are	
Bloom's <sup>·</sup>	Faxonomy Cognitive Level: Application.	emerging proficiency they should be able to complete	
Analysis	, , , , , , , , , , , , , , , , , , ,	and understand the homework.	
, anaryono		Modalities / Learning Dreferences: Lencourage students	
		to move around the classroom, interact with students.	
		and ask guestions.	
Classroom	Management- (grouping(s),	Behavior Expectations- (systems, strategies, procedures	
movement	/transitions, etc.)	specific to the lesson, rules and expectations, etc.)   expect	
During the	lecture students will be arranged in tables with 3	students to sit through the lecture and ask questions as we	
to 4 studen	ts. It's the students' responsibility to take notes	go through the content. I will regain students' attention and	
auring the lecture and participate in group activities. I will create a positive environment by engaging the students in		assign nomework for the evening.	
an activity.	I will provide instruction for moving around the		
room durin	g transition times.		
Minutes	Procedure	S	
30	Set-up/Prep:		
5	Create PowerPoint Notes/group activity/worksneet. Set up PowerPoint before class. Print worksheets.		
5	etc.)		
	I will start class by accessing student's prior knowl	edge to cells and their functions. I will ask questions regarding	
	cell organelles, cell appendages. I will start the lesson by showing an interesting cell video from YouTube to		
	engage the students.		
	https://youtu.be/B_zD3NxSsD8		
20	Explain: (concepts, procedures, vocabulary, etc.)		
	I ne main concepts and components of cells, their functions, and the individual organelies will be explained. I will use the RewarReint lecture to guide and build on the cell. Important terms are discussed deaply and are		
	relevant to students' prior knowledge. I will ask questions to promote student engagement and provide real		
	world examples to help students connect with the content. I will make sure to explain all pictures.		
	P		

20	Explore: (independent, concreate practice/application with relevant learning task -connections from contentto real-life experiences, reflective questions- probing or clarifying questions)After the lesson I will assign a worksheet for students to complete. Students must attempt each problem andcome to class ready to ask questions. The following day after homework is assigned I will answer questions andhave a class discussion about the content. I also have a cellular art project prepared so students can exploretheir creative sides later in the unit.		
5	Review (wrap up and transition to next activity):		
	I will ask students if they have any remaining ques	tions and have them cleanup/pack up for their next class. If I	
	feel the students need more practice I will have the	ne come in after school to see where the confusion is.	
Formative	Assessment: (linked to objectives)	Summative Assessment (linked back to objectives)	
Progress	monitoring throughout lesson- clarifying	End of lesson: As you all can see cells are very small. They	
questions,	, check-	are made of a smaller monomer that come together to	
in strate	gies, etc.	create macromolecules. Each organelle has a specific	
Why do you think it's important that cells are very small?		function that helps the cell to survive.	
Why does moving something from lower concentration to			
higher concentration require energy?			
		If applicable- overall unit, chapter, concept, etc.:	
		Unit 1: Chapter 2, Cellular structures and functions.	
Consideration for Back-up Plan: I have prepared an			
additional worksheet for the students. I also have a recent			
biology art	biology article from the internet, so students can read.		
Reflection (What went well? What did the students learn? How do you know? What changes would you make?):			
This lesson went well. I prepared enough material to keep the students busy and engaged. Next time, I will put PowerPoint			
questions	questions into the lecture slides to check for understanding.		

# Assessment for Cellular Organelles:

	Animal Cell Organelles Quiz 1. Each cell has a protective, semi-permeable, outer layer called the
	2. Inside the cell, the watery medium in which all the organelles floa is called
	3. Little grains floating around inside the cell involved in proteins
	production are called
<i>[</i> ]	4. The cell contains our DNA
	with all our genetic information found on 23 paired structures called
	5. It is is surrounded by a protective
Jan_	
	0 is a solide of folds
EUS	is a series of folde
100.000	membrane pathways spotted with ribosomes. Together they make
500 C	new proteins and membranes.
	<u> </u>
	has no
	ribosomes on it and forms containers called transport vesicles that
~	are used to move things around inside the cell.
6	
000110	are package things to be transported out and around the cell.
°	9 are vesicles with digestiv
$\frown$	enzymes inside to break down the things the cell no longer needs.
$\bigcirc$	10. are membrane large
~ 0	membranous sacs for storing things. Vesicles are smaller sacs.
	11 have a doub/
AQ	membrane with finger-like and
	break down sugars to make energy for the cell.
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Grade: 7 <sup>th</sup>	-9 <sup>th</sup>		Subject: Science	
Materials: Computer, student emails		ident emails	Technology Needed: PowerPoint, laptops, access	
			credentials	
Instructional			Guided Practices and Concrete Application:	
Strategies:	1	*Peer teaching/collaboration/	*Independent activity *Hands-on	
*Direct ins	truction	cooperative learning	*Simulations/Scenarios *Technology integration	
*Guided pr	ractice	*Visuals/Graphic organizers	Simulations, secharios	
*Technolog	gy	*PBL	Explain: Students will use	
integration	1	*Modeling	Canva software to create	
			and infographic	
Standard(s	5)		Differentiation	
Standard	4: Students	s understand the basic	Below Proficiency: If a student identifies as below	
concepts	and princip	les of life science.	proficiency I would put them into groups or with a	
Standard	l 6: Students	sunderstand relations	partner to aid them.	
botwoon	ccionco and	t toch pology		
nerween	science and	i technology.	Above Proficiency: If a student identifies as above	
Objectivel	c)		proficiency I would have them look further into the topic	
		viate technologies and	by researching new software techniques that could be used in the science field	
9-10.0.1.	Use approp		used in the science neid.	
techniqu	es to solve a	a problem (e.g., computer-	Approaching/Emerging Proficiency: If students are	
assisted	tools, Intern	et, research skills)	emerging proficiency they should be able to complete	
7.4.1. Ex	plain the fur	nctions of the cell (e.g.,	and understand the homework.	
growth, I	metabolism,	reproduction,		
photosyr	nthesis, resp	onse)	Modalities/Learning Preferences: I encourage students	
Bloom's Ta	axonomy Cogn	itive Level:	to move around the classroom, interact with students,	
Applicati	on, Analysis		and ask questions.	
Classroom	Management-	- (grouping(s),	Behavior Expectations- (systems, strategies, procedures	
movement	t/transitions, e	etc.)	specific to the lesson, rules and expectations, etc.)	
Students a	re required to s	sit in their desks with their	As I lecture for a few short minutes I expect students to	
laptops. Th	ley must work	individually and can ask me for	be attentive and participate in discussion. During the activity,	
questions.	Student must o	demonstrate proper	I encourage students to maintain an inside voice and be	
Minutos	inputer use.	Drocodur	respectrui while everyone works.	
15	Sot-un/Pron	. Procedur		
15	Login in to C	anva. Find a few examples for stude	ents to view. Become familiar with the software.	
5	Engage: (ope	ening activity/ anticipatory Set – acc	cess prior learning / stimulate interest /generate questions,	
	etc.)	•		
	Hello class, y	esterday we talk about the cellular o	organelles that are required to keep a cell functioning. Can	
	anyone tell me the function of the mitochondria? So today we are going to be using our laptops to create an		? So today we are going to be using our laptops to create an	
	infographic u	ising the software Canva. The purpo	ose of creating the infographic is to organize the organelles in a	
	creative way and to help students remember the content.			
10	Explain: (concepts, procedures, vocabulary, etc.)		)	
	I am going to explain the guidelines and how to access the canvas software. So, I need everyone to go get a			
	them how to pavigate the site and create a new infographic. The infographic must contain at least 10 errors			
	from the notes. The organelle needs to be listed and its function. The infographic must have at least 5 pictures			
	of organelles. The infographic must be neat and organized to receive full credit. No grammar mistakes.			
30	Explore: (independent, concreate practice/application with relevant learning task -connections from content			
-	to real-life experiences, reflective questions- probing or clarifying questions)			
	Students will have the remaining time of class to work on creating their infographic and exploring the Canva			
	site. The requirements for the infographics are posted below and handed to the students before they start			
	working.			
5	Review (wra	p up and transition to next activity)		

# 5.Canva-Cellular Organelles Technology

Student will use this time to put away laptops and ask me any questions about the software or the content.			
Formative Assessment: (linked to objectives)	Summative Assessment (linked back to objectives)		
Progress monitoring throughout lesson- clarifying	End of lesson: Cellular organelles are essential for healthy		
questions, check-	cells; therefore it is important to know their function and		
in strategies, etc.	how they help the cell survive.		
Does everyone have at least 10 organelles listed with their	If applicable- overall unit, chapter, concept, etc.:		
functions? Is anyone having trouble navigating Canva?	NA		
Consideration for Back-up Plan			
If the internet is not working I will ask the students to			
croate a small poster describing the function of the			
organollos			
organenes.			
Reflection (What went well? What did the students learn? How do you know? What changes would you make?):			
To be reflected after lesson is taught.			

**Canva Assessment:** Students will be assessed based on quality and number of requirements met, based off the above guidelines. Examples of infographics are shown below.





#### 1. Cellular Movements

	oth		
Grade: / <sup>III</sup> -8 <sup>III</sup>		Subject: Science	
Materials: homework worksheet, textbook, lab materials		Technology Needed: PowerPoint system, computer,	
		projector	
Instructional Strategies:		Guided Practices and Concrete Application:	
*Direct inst	ruction * Peer teaching/collaboration/	*Large group activity *Hands-on	
*Guided pr	actice cooperative learning	*Independent activity *Technology integration	
*Learning (	Centers *Visuals/Graphic organizers	*Pairing/collaboration	
*Lecture	*Discussion/Debate	*Simulations/Scenarios	
*Technolog	gy integration		
Standard(	s)	Differentiation	
Standard	4: Students understand the basic	Below Proficiency: If a student identifies as below	
concents	and principles of life science	proficiency I would put them into groups or with a	
concepts	and principles of the science.	partner to aid them.	
		Above Proficiency: If a student identifies as above	
Objective	(s)	proficiency I would have them look further into the	
7.4.1 Fxr	blain the functions of the cell (e.g.	topic by researching on the computer the functions of	
growth r	netabolism, reproduction.	different cell types.	
photosyn	thesis, response)		
0 10 / 1	Polato coll function to coll structure (i.e.	Approaching/Emerging Proficiency: If students are	
9-10.4.1.	Relate cell function to cell structure (i.e.,	emerging proficiency they should be able to complete	
cell wall,	cell membrane, nucleus, mitochondria,	and understand the homework.	
chloropla	ist)	Modalities / earning Proferences: Lencourage students	
		to move around the classroom interact with students	
		and ask guestions.	
Analysis	axonomy cognitive Level. Application,		
Analysis		Debasia Francisco (antenno etasterio antendo	
Classroom	(transitions, etc.)	Benavior Expectations- (systems, strategies, procedures	
movement	/transitions, etc.)	specific to the lesson, rules and expectations, etc.) I expect	
During the	tecture students will be arranged in tables with 3	students to sit through the lecture and ask questions as we	
to 4 studen	ts. It's the students responsibility to take hotes	go through the content. I will provide a group worksheet the	
croate a po	sitive environment by engaging the students in	students can work on together at their table and around the	
create a po	suive environment by engaging the students in	for the evening	
room durin	a transition times	for the evening.	
	g transition times.		
Minutes	Procedure	S	
30	Set-up/Prep:		
	Create PowerPoint notes/group activity/workshee	et. Set up PowerPoint before class. Print worksheets.	
5	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions,		
		adre to photosynthesis. Livill ask questions regarding collular	
	movement and how cells move molecules between	n their membranes I will start the lesson by showing an	
	interesting video of exostosis from VouTubo to on	are the student https://youtu.be/yHVbM_pLRYk	
20	Interesting video of exostosis from routube to engage the student.         https://youtu.be/yHVnivi-pLKXK           D         Explain: (concents, procedures, vocabulary, etc.)		
20	The main concepts and passive and active transport will be evplained 1 will use the PowerPoint lecture to guide		
	and build on the process. I will break down the steps of each process, so students are able to grasp the		
	information. The important terms will be discussed deenly and relevant to students' prior knowledge. Lytill ask		
	nuormation. The important terms will be discussed deeping and relevant to students prior knowledge. I will ask questions to promote student engagement and provide real world examples to bein students connect with the		
	content. I will make sure to explain all the pictures. I also will incorporate clickers to keep the students involved		
	during the lecture		

20	Explore: (independent, concreate practice/application with relevant learning task -connections from content		
	to real-life experiences, reflective questions- probing or clarifying questions)		
	After this lesson I will assign an exit slip asking students to explain the different between active and passive		
	transport. Students will be required to read the lab the night before for homework. Student can also use this		
	time to start thinking about how they want to complete their cell model.		
5	Review (wrap up and transition to next activity):		
	I will ask students if they have any remaining que	stions and have them clean up/pack up for their next class.	
Formative Assessment: (linked to objectives) Summative Assessment (linked back to objectives)			
Progress	monitoring throughout lesson- clarifying	End of lesson: As you can see diffusion is a form of passive	
questions,	check-	transport and that new energy is required. While energy is	
in strategies, etc.		required for active transport.	
Does active transport require energy? What about passive?			
		If applicable- overall unit, chapter, concept, etc.:	
Considera	ation for Back-up Plan: I have prepared an	NA	
additional worksheet for the students. I also have created			
vocabulary games to help study for the test.			
Reflection (What went well? What did the students learn? How do you know? What changes would you make?):			
To be com	To be completed after lesson is taught.		

Assessment: Exit slip

HW: read lab for tomorrow

#### 2. Osmosis Lab

Materials: eggs. vinegar, corn start, distilled water, beakers         Technology Needed:           Instructional Strategies:         *Peer teaching/collaboration/ "Guided practice         *Independent activity         *Hands-on           *Earning Centers         *Technology integration         *Technology integration         *Technology integration           Standard(s)         Standard(s)         Explain: Students will work with lab partners to complete the lab procedure           Standard(s)         Standard(s)         Differentiation         Below Proficiency: If a student identifies as below proficiency i would put them into groups or with a partner to aid them.           Objective(s)         .1.1. Explain how models can be used to illustrate scientific principles (e.g., osmosis, cell division)         Differentiation         Above Proficiency: If a student identifies as above proficiency though due them inok further into the topic by researching on the computer real world examples of diffusion and somosis.           Bloom's Taxonomy Cognitive Level: Analyze and Apply         Above Proficiency: If students are emerging proficiency, they should be able to complete and understand the homework.           Students will be roken up into lab groups of 2 or 3. They will complete the lab procedure following the directions. They will transition between tasks effortlessly and be aware of other groups materials.         Behavier Expectations - (tystems, strategies, procedures specific to be lesson, rules and expectations, etc.)           Students will be roken up into lab groups of 2 or 3. They will complete the lab procedure following the	Grade:7-8th	1	Subject: Science	
Instructional Strategies: *Direct instruction *Uract instruction *Learning Centers       *Peer teaching/collaboration/ *Technology integration       Suided Practices and Concrete Application: *Technology integration         *Learning Centers       *Technology integration       *Technology integration         *Simulations/Scenarios       Explain: Students will work with lab partners to complete the lab procedure       Explain: Students will work with lab partners to complete the lab procedure         Objective(s)       Offerentiation       Below Proficiency: if a student identifies as below proficiency if a student identifies as above proficiency if a student identifies as above proficiency: if a student identifies as and ask questions.         Bloom's Taxonomy Cognitive Level: Analyze and Apply       Approaching/merging Proficiency: if students are emerging Proficiency: if a student identifies and ask questions.         Classroom Maagement- (grouping(s), movemen	Materials: eggs, vinegar, corn start, distilled water, beakers		Technology Needed:	
* Direct instruction **Peer teaching/collaboration/ * Guided practice cooperative learning * Learning Centers ** *Technology integration ** Technology integration ** Standard(s) Standard 1: Students understand the unifying concepts and processes of science. Objective(s) 7.1.1. Explain how models can be used to illustrate scientific principles (e.g., osmosis, cell division) 6.2.4. Use appropriate tools and techniques to gather and analyze data. Bloom's Taxonomy Cognitive Level: Analyze and Apply Classroom Management (grouping(s), movement/transition, etc.) Students will be broken up into lab groups of 2 or 3. They will complete the lab procedures Minutes Procedures Minutes Procedures Minutes Procedures Minutes Procedures Minutes Procedures Minutes Procedures, strategies, procedures specific to the lesson, rules and expectations, etc.) Students will be maken to into lab groups of 2 or 3. They will complete the lab procedure following the directions. They will transition between tasks effortlessly and be aware of other groups materials. Minutes Procedures Students will be roken up into lab groups of 2 or 3. They will complete the lab procedure following the directions. They will transition between tasks effortlessly and be aware of other groups materials such as eggs, vinegar, distilled water, corn starch, graduated cylinders, and beakers. 5 Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.) 10 Explore: (Independent, concreate practice/application which was taught in class the day before. I will start of the lab by briefly stating what is expected of the students will heave to make observations while the eggs sit in the solution for approximately 100 minutes each. 10 Explore: (Independent, concreate practice/application with relevant learning task-connections from content to real-life experimence, reflective questions, procedures, soch are dirivid and learly lab partners and enswe proper units. Each student	Instructional Strategies:		Guided Practices and Concrete Application:	
*Guide practice cooperative learning *Learning Centers * *Technology integration *Technology integration *Technology integration * *Technology integration *Technology integration * Simulations/Scenarios * Simulations/Scenarios * Explain: Students will work with lab partners to complete the lab procedure * Differentiation Below Proficiency: If a student identifies as below proficiency I would put them into groups or with a partner to aid them. Above Proficiency: If a student identifies as above proficiency I would put them into groups or with a partner to aid them. Above Proficiency I would put them into groups or with a partner to aid them. Above Proficiency I would put them into groups or with a partner to aid them. Above Proficiency I would put them into groups or with a partner to aid them. Above Proficiency: If a student identifies as above proficiency: If students are demograph proficiency with students, and ak questions. They will transition between tasks effortlessly and be aware: I will gather materials be asks effortlessly and be aware: I will review the topic of osmosis and diffusion which was taught in cla	*Direct inst	ruction *Peer teaching/collaboration/	*Independent activity *Hands-on	
*Learning Centers *Technology integration *Technology integration *Technology integration *Technology integration *Simulations/Scenarios	*Guided pr	actice cooperative learning	*Pairing/collaboration *Technology integration	
<ul> <li>*Technology integration</li> <li>*Technology integration</li> <li>*Technology integration</li> <li>Explain: Students will work with lab partners to complete the lab procedure</li> <li>Standard 1: Students understand the unifying concepts and processes of science.</li> <li>Differentiation</li> <li>Below Proficiency: If a student identifies as below proficiency I would put them into groups or with a partner to aid them.</li> <li>Above Proficiency: If a student identifies as above proficiency I would put them into groups or with a partner to aid them.</li> <li>Above Proficiency: If a student identifies as above proficiency I would have them look further into the topic by researching on the computer real world examples of diffusion and osmosis.</li> <li>Approaching/Emerging Proficiency: If students are emerging proficiency they should be able to complete and understand the homework.</li> <li>Modalities/Learning Preferences: I encourage students to move around the classroom, interact with students, and ask questions.</li> <li>Behavior Expectations. etc.)</li> <li>Students will transition between tasks effortlessly and be aware of other groups materials.</li> <li>Set_up/Prep: I will gather materials such as eggs, vinegar, distilled water, corn starch, graduated cylinders, and beakers.</li> <li>Engage: (opening activity/ anticipatory St – access prior learning / stimulate interest / generate questions, etc.)</li> <li>I will gather materials such as eggs, vinegar, distilled water, corn starch, graduated cylinders, and beakers.</li> <li>Engage: (opening activity/ anticipatory St – access prior learning / stimulate interest / generate questions, etc.)</li> <li>I will gather materials such as eggs, vinegar, distilled water, corn starch, graduated cylinders, and beakers.</li> <li>Engage: (opening activity/ anticipatory St – access prior learning / stimulate interest / generate questions, etc.)</li> <li>I will gather materials such as e</li></ul>	*Learning (	Centers	*Simulations/Scenarios	
Explain: Students will work with lab partners to complete the lab procedure         Standard 1: Students understand the unifying concepts and processes of science.         Objective(s)         7.1.1: Explain how models can be used to illustrate scientific principles (e.g., osmosis, cell division)         6.2.4. Use appropriate tools and techniques to gather and analyze data.         Bloom's Taxonomy Cognitive Level: Analyze and Apply         Anangement: (grouping(s), movement/transition, etc.)         Students will be broken up into lab groups of 2 or 3. They will complete the lab procedures for the lab procedure following the directions. They will transition between tasks effortlessly and be aware of other groups materials.         80       Set-up/Prep: I will gather materials such as eggs, vinegar, distilled water, corn starch, graduated cylinders, and beakers.         5       Engage: (opening activity/ anticipatory Set - access prior learning / stimulate interest / generate questions, etc.)         5       Engage: (opening activity/ anticipatory Set - access prior learning / stimulate interest / generate questions, etc.)         30       Set-up/Prep: I will review the topic of somosis and diffusion which was taught in class the day before. I will divident sit age to groups will be given 1 egg to put into 3 different solutions. The students will neves to do the students to get started.         30       Set-up/Prep: I will review the topic of somosis and diffusion which was taught in class the day before. I will divide the lab groups up heterogeneously and allow the students to get started.         30 <th>*Technolog</th> <th>gy integration</th> <th></th>	*Technolog	gy integration		
Standard(s)       with lab partners to complete the lab procedure         Standard 1: Students understand the unifying concepts and processes of science.       Differentiation         Objective(s)       The partner to aid them.         Above Proficiency: If a student identifies as above proficiency if a student identifies as above and understand the homework.         Bloom's Taxonomy Cognitive Level:       Analyze and Apply         Classroom Management- (grouping(s), movement/transitions, etc.)       Behavior Expectations. (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)         Minutes       Procedures         Set-up/Prep:       I will gather materials such as eggs, vinegar, distilled wa			Explain: Students will work	
Standard(s)         Complete the lab procedure           Standard 1: Students understand the unifying concepts and processes of science.         Differentiation           Objective(s)         The second partner to aid them.           7.1.1. Explain how models can be used to illustrate scientific principles (e.g., osmosis, cell division)         Above Proficiency: If a student identifies as above proficiency I would have them look further into the topic by researching on the computer real world examples of diffusion and osmosis.           8.2.4. Use appropriate tools and techniques to gather and analyze data.         Approaching/Emerging Proficiency: If students are emerging proficiency they should be able to complete and understand the homework.           Bloom's Taxonomy Cognitive Level: Analyze and Apply         Modalites/Learning Preferences: 1 encourage students to move around the classroom, interact with students, and ask questions.           Classroom Management- (grouping(s), movement/transition between tasks effortlessly and be aware of other groups materials.         Behavior Expectations- (systems, strategies, procedures specific to the lessor, rules and expectations, etc.)           30         Set-up/Prep: 1 will gather materials such as eggs, vinegar, distilled water, corn starch, graduated cylinders, and beakers.           30         Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)           30         Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)           30         Engage: (opening acti			with lab partners to	
Standards         procedure           Standards         Differentiation           Standards         Differentiation           Standards         Differentiation           Coperts and processes of science.         Differentiation           Objective(s)         Anove Proficiency: If a student identifies as above proficiency I would put them into groups or with a partner to aid them.           Above Proficiency: If a student identifies as above proficiency I would put them into groups or with a partner to aid them.           Above Proficiency: If a student identifies as above proficiency I would put them into groups or with a partner to aid them.           Above Proficiency I would put them into groups or with a partner to aid them.           Above Proficiency I would put them into groups or with a partner to aid them.           Above Proficiency I would put them into groups or with a partner to aid them.           Above Proficiency I would put them into groups or with a partner to aid them.           Above Proficiency I would put them into groups or with a groups of 2 or 3. They will complete the lab procedure following the directions.           Classroom Management- (grouping(s), movement/transition between tasks effortlessly and be aware of other groups materials.           Students will be broken up into lab groups of 2 or 3. They will transition between tasks effortlessly and be aware of other groups materials.           Students will be broken up into lab groups of 2 or 3. They will transtito betweentasks effortlessly and be aware of other groups mate			complete the lab	
Standard(s)       Differentiation         Standard 1: Students understand the unifying concepts and processes of science.       Blow Proficiency: If a student identifies as below proficiency i would put them into groups or with a partner to aid them.         Objective(s)       Above Proficiency: If a student identifies as above proficiency i would put them into groups or with a partner to aid them.         Above Proficiency: If a student identifies as above proficiency i would have them look further into the topic by researching on the computer real world examples of diffusion and osmosis.         6.2.4. Use appropriate tools and techniques to gather and analyze data.       Approaching/Emerging Proficiency: If students are emerging proficiency they should be able to complete and understand the homework.         Bloom's Taxonomy Cognitive Level: Analyze and Apply       Modalities/Learning Preferences: I encourage students will be broken up into lab groups of 2 or 3. They will complete the lab procedure following the directions. They will transition between tasks effortiessly and be aware of other groups materials.       Behavior Expectations. (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)         Minutes       Procedures         30       Set-up/Prep: I will gather materials such as eggs, vinegar, distiled water, corn starch, graduated cylinders, and beakers. Ergage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)         30       Explain: (concepts, procedures, yocabulary, etc.)         30       Explain: (concepts, procedures), yocabulary, etc.)      <			procedure	
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5 Review (wran up and transition to next activity):	5			

Students will use this time to clean up their lab stations, wash materials, and pack up their supplies. They will be excused when the bell rings.		
Formative Assessment: (linked to objectives)	Summative Assessment (linked back to objectives)	
Progress monitoring throughout lesson- clarifying questions, check- in strategies, etc. Compare and construct a hypertonic and a hypotonic solution. Where do we see diffusion in the real world?	<b>End of lesson:</b> Osmosis is the diffusion of water from areas of higher concentration to areas of lower concentration. The vinegar removed the outer shell of the egg, exposing the egg to osmosis.	
<b>Consideration for Back-up Plan:</b> If the students are having a hard time understanding the lab, I would regroup the students back into the whole class and demonstrate how to complete one the first set of steps. Then I would tell students to go back into their groups	If applicable- overall unit, chapter, concept, etc.: NA	
Reflection (What went well? What did the students learn? How do you know? What changes would you make?):		
kenection to be made after taught.		

### **Osmosis Lab Procedure**

- 1. Fill one 500 mL beaker ¾ full of Vinegar. Set the egg in the beakers and start the time for 10 minutes.
- 2. After 10 minutes record observations such as change in color and change in size.
- 3. Remove the vinegar carefully from the beaker while leaving the egg in the beakers.
- 4. Add corn syrup to the beaker making it ¾ full and set the timer for 10 minutes.
- 5. Remove the corn syrup and record new observations.
- 6. Repeat steps 1-3 for distilled water.
- 7. Pay close attention to the size and membrane of the egg.

#### **Post Questions:**

- 1. What is the definition of osmosis?
- 2. After which solution bath did the egg expand? Contract?
- 3. Which solution bath represents a hypertonic solution?
- 4. What was the purpose to the vinegar solution?