Lesson Plan Template Date: <u>11/25/19</u>

Grade:4-5	Subject: Physical Education Science Integration		
Materials: bowling pins, hula hoops, cones, balls, scooters, floor	Technology Needed: n/a		
tape, floor dots			
Instructional Strategies:	Guided Practices and Concrete Application:		
□ Direct instruction □ Peer teaching/collaboration/cooperative learning □ Socratic Seminar □ Visuals/Graphic organizers □ Learning Centers □ PBL □ Lecture □ Discussion/Debate □ Other (list) □ Modeling	□ Large group activity □ Hands-on □ Independent activity □ Technology integration □ Pairing/collaboration □ Imitation/Repeat/Mimic □ Simulations/Scenarios □ Other (list) Explain:		
Chandards	Hairowel Design for Learning		
Physical Education: S3.E2.4 Engages in physical activity; Actively engages in the activities of physical education class, both teacher directed and independent. Science: PS3.A.4: Definitions of Energy -The faster a given object is moving, the more energy it possesses.	Universal Design for Learning Below Proficiency: Students who are below proficiency will show little to no effort in warmups and bowling. In order to challenge these students, we would pair them with a student who is proficient. This would help the below proficiency student become motivated and engaged. This would also help both the below proficiency student and the proficient student become more effective teammates. Above Proficiency: Students who are above proficiency will show maximum effort while also appearing unchallenged by the activity. In order to		
Objective	challenge these students, we would increase their bowling		
Physical Education: By the end of the lesson, students will demonstrate active engagement in the activities of physical education class by showing effort in warmups and in both bowling activities. Science: By the end of the lesson, students will identify and define potential and kinetic energy by participating in two different bowling games. Bloom's Taxonomy Cognitive Level: Remembering and Applying	distance. Modalities/Learning Preferences: Visual: Warmup and game instructions will be written on board. Auditory: Students will have a verbal explanation of the game. Kinesthetic: Students will be moving around, pushing others on scooters, and throwing "bowling" balls. Tactile: Students will experience "bowling" balls, scooters, and experimenting with force through pushing classmates on scooters.		
We will count off students to put them into four groups. Students will transition to their bowling station in 20 seconds or less.	Behavior Expectations- (procedures/expectations specific to the lesson, rules and expectations, etc.) After completing warmups, students will sit quietly in front of the white board and wait for further instruction. Students will raise their hands to answer questions. Students will respectfully listen to their peers without interrupting. Students will walk to their bowling stations. Students will be safe bowlers by pushing each other responsibly on the scooters, not running into others on their scooters, and transitioning safely.		
Minutes Procedures	'		
Set-up/Prep before lesson: Set up four sets of bowling pins along one sideling Place hula hoops and cones in the two center lant Have one hula hoop at the beginning of the outer Each outer lane needs one scooter. Place a strip of tape at the beginning of each lane			

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	 Have bowling balls ready for the center lanes. 	
	 Use cones to separate lanes. 	
	Engage: (opening activity/ anticipatory Set – access prior	earning / stimulate interest /generate questions, etc.)
	Warm up:	
	 Run for one song 	
	o 20 lunges	
	20 high tens	
	 Gather at the front 	
	Explain: (teacher-led)	
	Alright, we are going to be doing some bowling to	
	Before we start, we need to go over some science	
	Did anyone know that there is science in bowling	?
	It's energy!	
	The two types of energy used are potential and k	
	Potential energy is like "resting energy" and kine	
	, ,	be the top of your swing and the pins before they get hit.
		e your swing when you go to release the ball and the pins when they get
	knocked down.	
	Flahawata /aawawata wwatia /awaliatia wwith walawat	ing took
		earning task -connections from content to real-life experiences)
	We are going to have two types of bowling: obsta	•
	Obstacle bowling is just like normal bowling, but	
		e scooter, and your teammate push you to hit the pins.
	The class will rotate so everyone has an opportunity to attempt each type of bowling. Fach access will be at two times in our type (tile accessed by a line).	
	Each person will bowl two times in one turn (like	normal bowling).
	You will responsible for getting your own ball.	
	After your second throw, reset the pins and walk	the bowling ball back to your group.
	Go to the back of the line. From the constant was a life of the constant with a found house.	
	For the scooter way, it's the same thing, with a few changes.	
	Your teammate has two tries to push you to the pins.	
	Only one person is pushing the person on the scooter.	
	After two pushes, the person on the scooter resets the pins, and brings the scooter back to the group.	
	The person who was pushing now becomes the "ball."	
	What questions do you have?	
	Divide into four equal groups behind each dot.	
	Students will have roughly 10 minutes on each lane.	
	We will blow the whistle after 10 minutes to signal the lane changes.	
	Closure (wrap up and transition to next activity):	
	Blow the whistle.	
	 Scooters go in safety position. 	
	Reset your pins.	
	Line up to leave.	
	Give high fives.	
	Site ingli iives.	
Formative	Assessment: (linked to objective, during learning)	Summative Assessment (linked back to standard, END of learning)
	ess monitoring throughout lesson (document of student	(
	ng, data collection)	
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Teacher Reflection (What went well? What did the students learn? How do you know? What changes would you make?):

I enjoyed teaching this bowling lesson. It was great when the students were able to connect potential and kinetic energy to bowling concepts from previous knowledge. I thought that I did well explaining the game to students and managing behaviors during the explanation. I also feel I did well interacting with students, moving around the gym, and redirecting students when needed (not bouncing the bowling balls).

If I were to make any changes to this lesson, I would be sure to explain and demonstrate how to correctly reset the pins. This would have made the game more challenging and would have taken care of any safety concerns with scooters going too close to the wall.

Another thing I would change would be to speak in a louder voice so all students could hear me. I am used to the voice level needed in a typical classroom, and I did not think about how much harder it would be to hear me in such a large space.

I would also change this lesson to include more movement for the students waiting to bowl. This could have been accomplished in a few ways. The first way would have been to have more bowling lanes set up. This would have had more students bowling and may have eliminated the need for extra exercises. The second way would have been to have clearer requirements for movement while standing in line. I had students perform a variety of exercises based on how many pins were knocked down, but there was still quite a bit of wait time between bowls, which meant students were continuing to stand still. In addition to the exercises for each pin knocked down, I could have had students doing team exercises while one person bowled.