Model of Teaching: Inquiry

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Grade Level(s): 5th Grade	Subject Area(s): Physical Education	Duration: 1 hour
Content Standard(s): Content Standard(s): 5th Grade Health: 4.1 Record and analyze food consumption for one day and make a plan to replace foods with healthier choices and adjust quantities to enhance performance in physical activity. Supporting Standard(s): **5th Grade Health:** 4.6 Record water intake before, during, and after physical activity. 3.2 Plan a day of healthful balanced meals and snacks designed to enhance the performance of physical activities. **5th Grade Physical Education:** 4.2 Explain why dehydration impairs temperature regulation and physical and mental performance. CCSS.ELA-LITERACY.W.4.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information. CCSS.ELA-LITERACY.RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.		
Learning Objective: 1. SWBAT investigate and identify why healthy foods and hydration enhance performance in physical activity. 2. SWBAT write a summative paragraph of their findings supported by evidence from their research. 3. SWBAT present their new nutrition plan based on their research findings by creating a Flipgrid video.		
Materials: Pen/pencil, paper, computer, internet.		

LESSON PLAN SYNTAX

	Teacher/Student Script Script what you will say, ask, and do. Include anticipated student responses and actions.	**Student Engagement** Note the following: ● Differentiation & Grouping ● Explicit Language Instruction ● Instructional Strategies/Materials ● Technology Integration ● Connections to Theory
Anticipatory Set	T: Hi scholars! What do you eat before doing	**Explicit Language Instruction:**

	physical activity? Please write it down on a piece of paper. What type of physical activity do you do? Write that down as well. S: Write down some of their favorite foods. (Expected answers: protein bar, banana, peanut butter and jelly sandwich, cookies, carrots with hummus,chips, protein shake etc.) Write down their favorite physical activity. (Expected answers: (playing basketball, football, baseball, soccer, riding bikes, skateboarding, surfing)	Teacher is repeating and rephrasing student responses so they are heard multiple times and with academic terminology.
Present/Pose Question	T: Today, we'll be investigating a question. "What is the best food to eat and the right amount of water to drink before a workout to optimize performance?" Like a car, the body needs adequate food and water consumption to perform to the best of its ability. There is no "one right answer'' per say, but there are many options.Please write that question in your notebook. S: Write inquiry question in their notebooks. T: Let's now talk about some key words that will help us better understand why we are asking this question. These words are hydrated and healthy. To be hydrated means to absorb water and to be healthy means to be in good health or fit. Write both of these words in your notebook (Teacher gives 30 seconds). Now, above the word healthy, write "fit". This will help you remember the meaning. S: Write "fit" above "healthy." T: Now that we have examined both of those words and wrote down a key word for healthy, let's think about a way we can look more closely at hydration and how that plays a key role in nutrition and performance. Please take some time to think about what that word means. You may want to write some notes and helpful tips and hints.	**Instructional Strategy:** Teacher gives students a specific amount of time that ensures each student will be able to share their findings without leaving too much time for students to get off topic.
Make Hypotheses	T: Scholars, now I'd like for you to give some explanations about what you think might be the	**Differentiation & Grouping:** Giving students time to gather

	answer to our question. When I say go (WISG), you will have five minutes to independently think and jot your thoughts. Then, I'm going to split you into groups of 4 to share your thoughts. CFU: What are you doing silently? (jotting answers to the question) How many minutes will you have? (5) What will you do after thinking silently? (Think/Pair/Share answers to the question) Five minutes starts now Go! (following think time) T: Scholars, now that you've had time to jot your thoughts, WISG, you'll have three minutes to share with your partner. Driver's start. CFU Raise your hand if you're starting. (teacher scans room) How many minutes do you have? Everyone hold up the number (2). Go! S: Students discuss with their partners and share with the whole class at the end of 2 minutes. Expected answers: water, meat, vegetables, carbs. T: Charts hypotheses on question slide.	their thoughts helps students who may not be ready on the spot. This decreases anxiety and gives every student a chance to prepare to participate. Grouping students together. **Instructional Strategy:** Asking each group to come up with targeted questions allows students who are confused about the assignment to ask questions without feeling embarrassed or shy. This also gets more participation than asking "are there any questions" in which students can opt out and remain quiet even if they are confused.
Gather Data	T: To help us with our investigation today, I have a few reading materials as well as a video about nutrition. These will help you answer your questions and guide you throughout your research. I'd like you to please look at all of these resources and keep the question we are asking in mind. I would like you to research when is the best time and amount to eat and drink before performing a physical activity. You are encouraged to do further research, but must include information collected from these 3 sources in your findings.	**Differentiation & Grouping:** Giving students access to the Scholastic News and Newsela articles. Grouping students together to allow students to ask each other questions and work together. **Instructional Strategy:** Asking each group to come up with targeted questions allows students who are confused about the assignment to ask questions without feeling embarrassed or

	Some things to look for while conducting your research: necessary water intake/electrolytes/ high protein/health foods,pre and post workout recovery, appropriate exercises/activities, macronutrients and micronutrients. Some questions to consider while conducting your research: Why is it important to fuel your body before and after a workout? Why is it important to replenish electrolytes, water and sodium consumption before and after a workout? Why is it important to choose good food for fuel for your body? How does this affect athletic performance? https://www.scholastic.com/teachers/sponsored-content/farmtotable/17-18/nutrition-plan-writing-informational-texts/ https://www.scholastic.com/teachers/sponsored-content/farmtotable/17-18/super-nutrients-how-human-body-uses-nutrients/ https://www.flocabulary.com/unit/nutrition/ S: Get into groups of 4 and begin looking at resources as well as conducting further research and discussing their findings.	shy. This also gets more participation than asking "are there any questions" in which students can opt out and remain quiet even if they are confused.
Assess Hypotheses (by analyzing data)	T: Alright, everyone, welcome back! I heard some great thoughts as I looped around the room. I'd like to call on each group individually and have you share one-by-one your findings and example of a "healthy and hydrating" meal. I am going to be writing down your findings as you present to keep track of each group's data. I would also like you to take notes of what other group's gathered to help us later on in today's activity. S: Share data/notes. T acts as scribe.	**Instructional Strategy:** Asking each group to come up with targeted questions allows students who are confused about the assignment to ask questions without feeling embarrassed or shy. This also gets more participation than asking "are there any questions" in which students can opt out and remain quiet even if they are confused.

	T: Now, let's compare and contrast each group's findings to see how your research differed and what, if any, similarities they had. I'd like you to please regroup and write down something you could have added or changed to your presentation. S: Share revised explanations about what are "healthy" and "hydrating" foods to have before a workout. Expected answers: Bananas, apples with PB, celery with PB, oatmeal, rice cake with almond butter, hard boiled eggs, hummus and veggies, protein shake, water with electrolytes, and branch chain amino acids (BCAA's) T: Acts as scribe and gives verbal feedback to each group as well as one compliment to each group and highlight what you enjoyed about their presentation.	
Generalize about Findings	T: Scholars, now I would like for you to write a paragraph explaining your findings supported by evidence from your research in detail. In your paragraph I want you to include the answer to this question and WHY those foods help enhance physical activity? You will have about 10 minutes to work on your paragraph. After 10 minutes, one person from each group will read the paragraph. S: In groups, students will compose a paragraph of 5 sentences answering the inquiry question and providing reasons. T: Times up! Please share the paragraph you composed in your groups. S: Share their paragraphs with the class. T: Based on your finding, you will now independently create a Flipgrid explaining your new nutrition plan based on your research findings.	**Instructional Strategy:** Asking each group to come up with targeted questions allows students who are confused about the assignment to ask questions without feeling embarrassed or shy. This also gets more participation than asking "are there any questions" in which students can opt out and remain quiet even if they are confused.

Analyze the Process	T: Scholars, let's talk about our research process today. How did we start? S: You asked a question. T: That's right, we started with an overarching question. What next? S: We listed answers to the question and shared our responses in pairs. After the think-pair-share, what did you do in groups of four? T: That's right! You answered the question and supported your findings with evidence from the text. How did this confirm or change your thinking from the beginning of the lesson? S: We edited our original answers because we got more specific based on the evidence or supportive details from the text. T: That's fantastic researchers! You initially thought one way, but after researching and hearing what your classmates presented, some may have revised or modified their answers based on new findings. Do you think this same process may happen in other situations? Why or why not? S: Some students share that after further research their answers and hypotheses may change.	**Connection to theory:** Students are working in small groups to construct ideas. They will practice respectful listening and collaboration, exposing them to a variety of ideas other than their own. This activity also engages metacognition as they explain why certain groupings make sense to them and how they arrived at those conclusions.
Assessment	***Formative Assessment*** *-Students will be gathering data about "healthy" and "hydrating" foods and beverages to enhance physical performance.* ***Summative Assessment*** *- Present findings by writing a paragraph about data collected and presenting this in the form of a flipgrid video*	