NGSS & Common Core Standards	Lesson Title	Materials
 RST.6-8.7: Integrate quantitative or technical information expressed in words in a text with a version of that information expressed through visuals (model, graph, diagram). SL.8.4: Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence and sound valid reasoning. MP.2: Reason abstractly and quantitatively. MS.PS.3.1: Construct and interpret graphical displays of data to build an animal's diet. 	ANIMALS ARE PICKY EATERS TOO?	 Breakfast cereal Several kinds, but a minimum of three Containers with lids that hold more than 4 cups (one per group) Cups (two per group) Sandwich bags Zoom YouTube (Dr. Lisa Hoopes' videos) <u>https://</u>www.georgiaaquarium.org/educators/steam-forward/steam-forward/steam-forward-episode-10/ Calculator
	 Warmup Questions 1. What is the role of an animal nutritionist? 2. Why is it important to feed animals a balanced and nutritious diet? 3. How do you balance an animal's diet? 4. How do you make sure animals that are picky eaters get the nutrients they need? 	
 Metabolism; Animal Nutritionist; Zoology; Energetics; Vitamins; Particle Size; Metabolic rate 		
	Activity Instructions	
 Give the student a larg more than 4 cups of ce Have the student add 1 type of cereal). Have a thoroughly mix all the Once the cereals are m emphasizing that this i are fairly easy to sort. Have a student take th fist or book). Once the container. Ask the students to aga increasingly difficult w students can pick out, 	e container to be the mixer. The container need real. Large Tupperware containers with lids wo l cup of each cereal to the mixing container, for student act as the mixer by physically shaking to cereals. ixed, have a student sort the cereals back into the s what animals do if allowed to pick and choose e same cereal and smash it into fine particles (ea cereal is smashed, have the students mix the cer ain sort the cereals back into the original separa hen the cereals are of similar size. There still ma- but overall, the smaller-sized cereals mix better	s to have a lid and be able to hold rk well. a total of 3 to 4 cups (one cup for each the container for about 15 seconds to he original separate cereals, what they want to eat. The cereals asily done in a sandwich bag with a reals back together again in the large the cereals. This sorting process is ay be a few large pieces that the and, thus, are more difficult to sort.

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Activity Instructions contd.			
1. Now it's time for you to design a diet and take on the role of a nutritionist, just like Dr. Lisa Hoopes. Factors such as being warm- or cold-blooded impact metabolic rate. Find your favorite animals, both warm- and cold-blooded, research how much food they eat per day and how much an adult of that species weighs. Then calculate percentage of body weight consumed daily to design your diet.			
2. Now that you're familiar with calculatin Hoopes feed and take of the Georgia Aqu	g animal nutrition, let's see the process in action! Watch Dr. Lisa Jarium's animals in these videos:		
1. https://www.georgiaaquarium.org	g/educators/steam-forward/steam-forward-episode-10/		
3. After watching the videos, calculate and	design a diet for one of the Georgia Aquarium's animals:		
1. https://www.georgiaaquarium.org Version.pdf	z/wp-content/uploads/2018/10/Energetics-and-Nutrition-Student-		
4. Calculate and explain the factors that in	pact the Georgia Aquarium's animal's metabolism.		
5. How do I calculate % body weight cons	umed per day?		
1. Calculate the ratio of how man weight:	y pounds of food per day an animal eats compared to its body		
1. Weight of food per day / animal weight = ratio of food consumption to body weight:			
2. For example: whale shark = 40 lbs. of food eaten per day / $2,000$ lbs. = $.02$			
2. Multiply that figure by 100 to c	alculate a percentage:		
1. Ratio of food consumption to body weight x 100 = percent of body weight consumed daily = 2%			
2. The higher the percentage of body weight consumed per day, the higher an animal's energetic requirements!			
What did we learn?	Why am I learning this?		
 Understand that, by grinding the food, animals are less likely to pick out the things they like most and more likely to get a well-balanced diet. 	 Discover how the world around you works. Provide you with inspiration for a career in science. Compare the requirements of STEM professions. Understand you could be the next scientist to solve unknowns! 		
2. The nutrients and energy must be properly balanced and in the correct form to accommodate particular tastes, digestive systems, and feeding methods of each individual animal.	Share Your Skills		
	• Share with a friend or family member one new fact you learned about nutritional science and animal diets because the more we share, the more we care!		
	• Connect with us on Flipgrid (<u>https://flipgrid.com/seatrek</u>) to share		
	your findings or submit any questions!		
Rea	your findings or submit any questions!		

- 2. What factors influence metabolic rates in animals?
- 3. Why do animals have different metabolic rates?



