

# Lesson Plan 3

# Nutrition

## CRITICAL OUTCOMES

**CO#7:** Demonstrate an understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.

## LEARNING OUTCOMES

**LO#2:** The learner will know and be able to interpret and apply scientific, technological and environmental knowledge.

**Sub-Skills:**

Translating knowledge into a new context

Observation and recall of knowledge

Predicting

**LO#3:** The learner will be able to demonstrate an understanding of the interrelationships between science and technology, society and the environment

Utilization and management of resources

## ASSESSMENT STANDARDS

Recalls meaningful information

Interprets information

## TEACHING THE LESSON

Review the Nutrition section from Grade Five Lessons on page 29 using the terms omnivore, herbivore and carnivore.

Explain to learners that there are different values of different diets: herbivore versus omnivore versus carnivore. (1kg meat does not equal 1 kg of grass)



### ACTIVITY 1 - the rabbit and the cheetah (adapted from PROJECTS WILDs deadly links activity)

This is to introduce students to the concept that different foods have different nutritional / energy values.

Divide the class into three groups to represent grass, rabbits and cheetah. In a group of 30 students there should be 20 pieces of grass, 8 rabbits and two cheetah. Give the students a piece of paper labeling them as grass, rabbit or cheetah. Go out onto the school field and pace out an area of 30meters by 30 meters. Have the rabbits line up, evenly spaced along one edge of this area facing away from the area. The two cheetah should stand on the sidelines and watch for the meantime. Have those students representing grass, sit down in a random pattern over the area of 30 meters by 30 meters.



Each rabbit should mark the spot where they were sitting with their names on a piece of paper. These spots represent the rabbits' stomachs. On the count of three ask them to turn round and give them 10 seconds to tag as much grass as possible. On being tagged the "grass" should move off the field and sit in a line behind the marker of the student that tagged them. After ten seconds the rabbits must return to their "stomachs" and count how much grass they have. The grass must stay seated where they are.

Next the rabbits must randomly stand on the area demarcated, while the cheetah choose a spot opposite to where the grass is sitting. Each cheetah should mark their spot with their names. Give the cheetah 20 seconds to tag the rabbits. During this time the rabbits do not need to stand still, but are allowed to try to avoid the cheetah while staying within the demarcated area. Once tagged the rabbits need to move off the field and sit at the marker with the cheetah's name. Once the time is up the cheetahs leave the field and count how many rabbits they have caught.

As a class write down these numbers on the board as a table:

	Amount grass (consumed)	Amount rabbits (consumed)
Rabbits		
Cheetahs		

From this the learners should be able to see that while a cheetah may have caught two rabbits, those rabbits represent a lot of grass. Therefore an equal amount of meat does not have a same nutritional value as an equal amount of grass. A predator therefore needs to eat less in terms of kg than a herbivore.

Have the class write a paragraph predicting the following:

How this will affect the behavior of an animal. (A herbivore will need to spend more time browsing for food to get an equal amount of energy / nutrition as compared to a predator / carnivore.)

How this affects agriculture. (Cattle farming will take up less land than crop farming as the farmer will need to produce far more crops to equal nutritional / energy value of meat.)



## ASSESSMENT

1	2	3	4
The learner was unable to understand the concept of differing food nutritional values.	The learner understood the differing nutritional values of foods, but showed no logical reasoning behind their predictions on how this might affect animal behavior.	The learner showed an understanding of the different nutritional values of vegetation and meat. They could predict the effect on animal behavior and agriculture with logical reasoning.	The learner exceeded expectations, showing a deeper understanding of the effect of different nutritional values on agriculture and animal behavior.

