

## SAMPLE LESSON PLAN - UNMOUNTED - NUTRITION #4

TOPIC: Which Feeds Provide the Six Classes of Nutrients?

Level: C2 or C3

Time: 30 minutes

Class Size: 5

Age: 12 – 14

EQUIPMENT: 1 box with enclosed feeds and nutrients

2 bags M&M

5 clear plastic cups labeled with students' names

PERSONNEL: Instructor

REFERENCES: New Zealand Manual of Horsemanship 2, 198-207;  
Top Form, 87-102; Nutrition, 6-14

I. OBJECTIVES: To understand which feeds contain which nutrients.

### II. ACTIVITY

- Each student is asked to name a class of nutrients.
- When complete, post enclosed sheet where it can be seen.
- In turn, each student pulls a nutrient or feed name from the box.
- The student is asked to identify its nutrient from the six classes.
- Each correct answer is worth one M&M (to be collected in the clear cup).
- If the item falls into more than one nutrient, the student gets an M&M for each correct answer. (See instructor guide sheet.)
- If the item contains protein, and the student can identify the percentage of usable protein, the correct answer (within 3%) wins three M&M's.

### III. DISCUSSION

- A. How did horsemen living 100 years ago decide what to feed their horses?
- B. How do most horsemen you know decide what to feed?
- C. Do you think that feeding is a science or an art?

### IV. FURTHER INQUIRY

- A. What might happen if a horse is fed more vitamins and minerals than he needs?
- B. What might happen to a brood mare fed double the recommended protein during the last four months she is in foal?
- C. Could protein over-feeding affect the foal after it is born?

## SCORING NUTRITION GAME

Classify Vitamins and minerals correctly:	1
Classify feeds, each nutrient correct:	1
Identify percentage of usable protein within 3% of average:	3

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### Classes of Nutrients

- Water
  - Minerals
  - Carbohydrates
  - Proteins
  - Fatty Acids
  - Vitamins
- 

### Feed List and sources of Nutrients

- |                  |                     |                    |                   |
|------------------|---------------------|--------------------|-------------------|
| ➤ Barley         | ➤ Oats              | ➤ Corn             | ➤ Sweet Feed      |
| ➤ Grass Pasture  | ➤ Pellets           | ➤ Water            | ➤ Orchard grass   |
| ➤ Alfalfa        | ➤ Mixed hay         | ➤ Clover           | ➤ Timothy         |
| ➤ Bran           | ➤ Carrots           | ➤ Salt             | ➤ Soybean Meal    |
| ➤ Linseed Oil    | ➤ Corn Oil          | ➤ Safflower Oil    | ➤ Cottonseed Meal |
| ➤ Wheat Germ Oil | ➤ Sunflower Oil     | ➤ Molasses         | ➤ Iodine          |
| ➤ Cobalt         | ➤ Zinc              | ➤ Selenium         | ➤ Biotin          |
| ➤ Choline        | ➤ Vitamins: A D E K | ➤ Vitamins: B6 B12 |                   |
| ➤ Thiamine       | ➤ Riboflavin        | ➤ Folic acid       | ➤ Panthenic Acid  |
| ➤ Niacin         | ➤ Phosphorus        | ➤ Sodium           | ➤ Magnesium       |
| ➤ Calcium        | ➤ Sulphur           | ➤ Copper           | ➤ Manganese       |
| ➤ Potassium Iron | ➤ Chlorine          | ➤ Paba             | ➤ Myo-inostol     |

Instructor's Guide Sheet      Feeds/Vitamins, Minerals

<b>Name</b>	<b>Protein</b>	<b>Carbo</b>	<b>Vitamins</b>	<b>Minerals</b>	<b>Fats</b>	<b>Water</b>
<b>Alfalfa</b>	12.8%	X	X	X	O	O
<b>Barley</b>	10.1%	X	X	X	TR	O
<b>Bran</b>	13.3%	X	X	X	O	O
<b>Calf Manna</b>	VARIABLES	X	X	X	X	O
<b>Carrots</b>	Trace	TR	X	O	O	O
<b>Clover</b>	9.2%	X	X	X	TR	O
<b>Corn</b>	6.7%	X	X	X	TR	O
<b>Corn Oil</b>	35.0%	O	O	O	X	O
<b>Cottonseed Meal</b>	34.0%	O	O	O	X	O
<b>Grass Pasture</b>	VARIABLES	X	X	X	O	O
<b>Linseed Oil Meal</b>	31.0%	O	O	O	X	O
<b>Milo</b>	11.0%	X	X	X	TR	O
<b>Mixed hay</b>	7.2%	X	X	X	O	O
<b>Molasses</b>	0.0%	O	O	O	O	O
<b>Oats</b>	9.4%	X	X	X	TR	O
<b>Orchard grass</b>	3.7%	X	X	X	O	O
<b>Pellets</b>	VAR	X	X	X	TR	O
<b>Safflower Oil</b>	30.0%	O	O	O	X	O
<b>Salt</b>	0.0%	O	O	X	O	O
<b>Source</b>	0.0%	O	X	X	O	O
<b>Soybean Meal</b>	42.0%	O	O	O	X	O
<b>Sunflower Oil</b>	30.0%	O	O	O	X	O
<b>Sweet Feed</b>	VARIABLES	X	X	X	TR	O
<b>Timothy</b>	6.1%	X	X	X	O	O
<b>Water</b>	0.0%	O	O	O	O	X
<b>Wheat Germ Oil</b>	35%	O	O	O	X	O

**Vitamins**

A D E K	
B12 B6	
Biotin	
Choline	
Folacin	
Myo-Inositol	
Niacin	
PABA	
Panthenic Acid	
Riboflavin	
Thiamin	
<b>Minerals</b>	
Calcium	
Chlorine	
Cobalt	
Copper	
Iodine	
Iron	
Magnesium	
Manganese	
Phosphorus	
Potassium	
Selenium	
Sodium	
Sulphur	
Zinc	