

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

AGRICULTURAL SCIENCES

REVISION ACTIVITIES

2020

This document consists of 55 pages.

1. ANIMAL NUTRITION

1.1 UNSCRAMBLE THE LETTERS TO MAKE AGRICULTURAL SCIENCES TERMS

Scrabble	Concepts
miinVsat	
Vllii	
areU	
Sailge	
santnumiR	
munRe	
ghguRaoes	
ertRo-iitssprlase	
tmluRcuie	
nnRnie	
oPiotdunrc ntraio	
litisPrsaes	
maOsmu	
tvuieritN tairo	
onN-narmtuisn	
ettN gynree	
esnIrmAi	
caoetibMI eygnre	
iecnMhcala oinigsetd	
tcnnineMaae ntoiar	
epsiaL	
setlls of nnehsLraga	
srGso geyren	
Froe chotsmas	
ektnEreanosi iicfmanulEisot	
yrD trmtae	
ioeDgsnit	
eeigDtsbil reygne	
ybtisieigiDIt	
eduCr efbir	

Scrabble	Concepts
eirvncsuPlurot	
azdGzir	
scltiuuenrV	
lusuMcra oStcham	
Cumcea	
aorPens Sueqar	

ANIMAL NUTRITION

1.1 UNSCRAMBLE THE LETTERS TO MAKE AGRICULTURAL SCIENCES TERMS

MEMO

Scrabble	Concepts
miinVsat	Vitamins
Vllii	Villi
areU	Urea
Sailge	Silage
santnumiR	Ruminants
munRe	Rumen
ghguRaoes	Roughages
ertRo-iitssprlase	Retro-peristalsis
tmluRcuie	Reticulum
nnRnie	Rennin
oPiotdunrc ntraio	Production ration
litisPrsaes	Peristalsis
maOsmu	Omasum
tvuieritN tairo	Nutritive ratio
onN-narmtuish	Non-ruminants
ettN gynree	Nett energy
esnIrrMai	Minerals
caoetibMl eygnre	Metabolic energy
iecnMhcala oinigsetd	Mechanical digestion
tcnnineMaae ntoiar	Maintenance ration
epsiaL	Lipase
setlls of nnehsLraga	Islets of Langerhans
srGso geyren	Gross energy
Froe chotsmas	Fore stomachs
ektnEreanosi iicfmanulEisot	Enterokinase Emulsification
yrD trmtae	Dry matter
ioeDgsnit	Digestion
eeigDtsbil reygnre	Digestible energy
ybtisieigiDlt	Digestibility

eduCr efbir	Crude fibre
Scrabble	Concepts
eirvncsuPlurot	Proventriculus
azdGzir	Gizzard
scltiuuenrV	Ventriculus
lusuMcra oStcham	Muscular Stomach
Cumcea	Caecum
aorPens Sueqar	Pearson Square

ACTIVITY 1.2

WORD SEARCH

Find and circle the following Agricultural Sciences Terms in the word search grid below

The terms can be in ANY DIRECTION – diagonal, horizontal upwards, downwards, backwards etc. **RULE OUT EACH TERM YOU HAVE FOUND**

Caecum Crude fibre Digestibility Digestible energy Digestion Dry matter
Emulsification Enterokinase Fore stomachs Gizzard Gross energy
Nutritive ratio Islets of Langerhans Maintenance ration Mechanical digestion
Metabolic energy Minerals Nett energy Muscular Stomach Non-ruminants Omasum
Roughages Pearson Square Peristalsis Production ration Proventriculus Rennin
Reticulum Rumen Ruminants Silage Urea Ventriculus Villi
Vitamins

A	L	Y	G	R	E	N	E		E	L	B	I	T	S	E	G	I	D	I	P	K	C	X	N
U	G	M	E	C	H	A	N	I	C	A	L		D	I	G	E	S	T	I	O	N	Q	S	Z
N	E	Y	Q	D	Y	U	M	H	C	A	M	O	T	S		R	A	L	U	C	S	U	M	S
O	I	G	J	E	R	A	U	Q	S		N	O	S	R	A	E	P	S	F	W	J	W	I	T
I	S	R	N	O	N	-	R	U	M	I	N	A	N	T	S	D	M	E	Y	K	Q	Y	S	N
T	L	E	P	R	O	D	U	C	T	I	O	N		R	A	T	I	O	N	J	C	L	R	A
A	E	N	S	S	U	L	U	C	I	R	T	N	E	V	O	R	P	G	B	G	A	O	K	N
R	T	E	S	A	W	D	I	G	E	S	T	I	B	I	L	I	T	Y	E	R	J	W	L	I
	S		P	D	N	M	S	V	Q	O	M	A	S	U	M	O	H	I	E	S	H	S	V	M
E		S	P	Z	T	I	L	B	P	S	P	J	P	S	I	X	M	N	P	X	T	K	K	U
C	O	S	T	N	I	I	K	J	S	N	I	M	A	T	I	V	I	K	U	S	W	I	T	R
N	F	O	J	I	P	W	J	O	P	C	J	V	L	H	V	M	J	C	D	T	M	W	O	W
A		R	U	A	O	G	F	S	R	E	W	Y	G	R	E	N	E		T	T	E	N	O	N
N	L	G	S	U	J	M	E	F	A	E	S	I	S	L	A	T	S	I	R	E	P	E	W	I
E	A	E	G	M	F	N	U	T	R	I	T	I	V	E		R	A	T	I	O	C	G	O	D
T	N	R	D	Q	O	B	Q	K	O	V	E	N	T	R	I	C	U	L	U	S	W	O	R	X
N	G	X	R	U	M	E	N	H	N	E	Q	R	E	M	B	H	M	Z	I	H	B	A	V	E
I	E	G	M	U	L	U	C	I	T	E	R	U	N	Z	Q	T	A	O	A	P	Z	C	B	P
A	R	V	E	R	B	I	F		E	D	U	R	C	Y	K	U	C	Q	P	Z	H	C	X	E
M	H	N	O	I	T	A	C	I	F	I	S	L	U	M	E	I	E	E	I	U	Q	U	S	G
B	A	Y	O	I	N	I	N	N	E	R	W	O	T	X	K	P	A	G	B	W	R	Y	D	A
J	N	H	Y	S	E	G	A	H	G	U	O	R	B	O	C	R	C	D	X	F	S	E	R	L
U	S	S	G	X	P	W	M	E	T	A	B	O	L	I	C		E	N	E	R	G	Y	A	I
F	X	S	Q	M	G	S	H	C	A	M	O	T	S		E	R	O	F	G	N	W	X	N	S
V	I	L	L	I	U	T	U	D	R	Y		M	A	T	T	E	R	R	E	T	P	K	D	C

ACTIVITY 1.2

WORD SEARCH

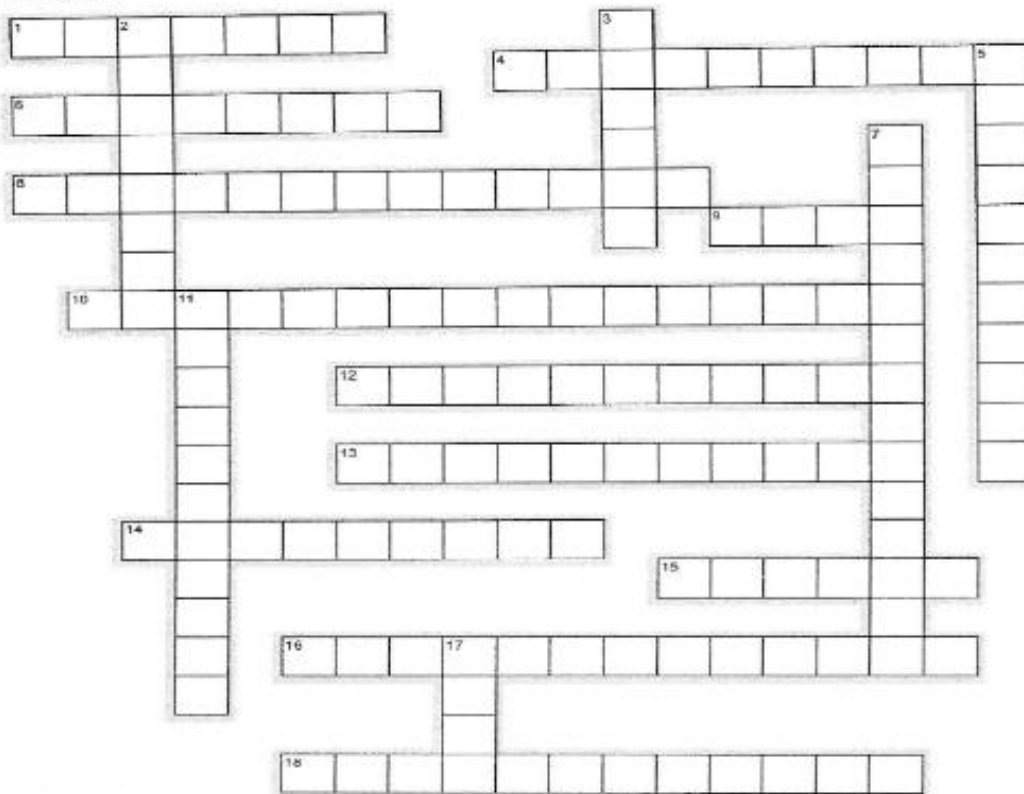
SOLUTION

A	L	Y	G	R	E	N	E	E	L	B	I	T	S	E	G	I	D	I	P	K	C	X	N	
U	G	M	E	C	H	A	N	I	C	A	L	D	I	G	E	S	T	I	O	N	Q	S	Z	
N	E	Y	Q	D	Y	U	M	H	C	A	M	O	T	S	R	A	L	U	C	S	U	M	S	
O	I	G	J	E	R	A	U	Q	S	N	O	S	R	A	E	P	S	F	W	J	W	I	T	
I	S	R	N	O	N	-	R	U	M	I	N	A	N	T	S	D	M	E	Y	K	Q	Y	S	
T	L	E	P	R	O	D	U	C	T	I	O	N	R	A	T	I	O	N	J	C	L	R	A	
A	E	N	S	S	U	L	U	C	I	R	T	N	E	V	O	R	P	G	B	G	A	O	K	N
R	T	E	S	A	W	O	I	G	E	S	T	I	B	I	L	I	T	Y	E	R	J	W	L	I
S	P	D	N	M	S	V	Q	O	M	A	S	U	M	O	H	I	E	S	H	S	V	M		
E	S	P	Z	T	I	L	B	P	S	P	J	P	S	I	X	M	N	P	X	T	K	K	U	
C	O	S	T	N	I	K	J	S	N	I	M	A	T	I	V	I	K	U	S	W	I	T	R	
N	F	O	J	I	P	W	J	O	P	C	J	V	L	H	V	M	J	C	D	T	M	W	O	W
A	R	U	A	O	G	F	S	R	E	W	Y	G	R	E	N	E	T	T	E	N	O	N		
N	L	G	S	U	J	M	E	F	A	E	S	I	S	L	A	T	S	I	R	E	P	E	W	I
E	A	E	G	M	F	N	U	T	R	I	T	I	V	E	R	A	T	I	O	C	G	O	D	
T	N	R	D	Q	O	B	Q	K	O	V	E	N	T	R	I	C	U	L	U	S	W	O	R	X
N	G	X	R	U	M	E	N	H	N	E	Q	R	E	M	B	H	M	Z	I	H	B	A	V	E
I	E	G	M	U	L	U	C	I	T	E	R	U	N	Z	Q	T	A	O	A	P	Z	C	B	P
A	R	V	E	R	B	I	F	E	D	U	R	C	Y	K	U	C	Q	P	Z	H	C	X	E	
M	H	N	O	I	T	A	C	I	F	I	S	L	U	M	E	I	E	E	I	U	Q	U	S	G
B	A	Y	O	I	N	I	N	N	E	R	W	O	T	X	K	P	A	G	B	W	R	Y	D	A
J	N	H	Y	S	E	G	A	H	G	U	O	R	B	O	C	R	C	D	X	F	S	E	R	L
U	S	S	G	X	P	W	M	E	T	A	B	O	L	I	C	E	N	E	R	G	Y	A	I	
F	X	S	Q	M	G	S	H	C	A	M	O	T	S	E	R	O	F	G	N	W	X	N	S	
V	I	L	L	I	U	T	U	D	R	Y	M	A	T	T	E	R	R	E	T	P	K	D	C	

ACTIVITY 1.3

ANIMAL NUTRITION CROSSWORD1

TEBELLO



EclipseCrossword.com

Across

1. Deficiency symptom of iron.
2. The only compartment of a ruminant calf's stomach that is functional while it is still suckling
3. Deficiency symptom of iodine
4. Narrow ration is used for
5. Type of an animal with simple stomach
6. One of the microbes in the rumen
7. A method used to mix two feeds to obtain a DP needed
8. Chemical substances added to the feed of farm animals so that they become calmer and eat more
9. In ruminants the required protein value for a ration is supplemented by adding....to make the feed mixture more costly
10. Part of the digestive system of a pig where the most absorption of digested nutrients takes place
11. Proteins are broken down into....during digestion
12. Ration used for maintenance
13. The process when food moves down the oesophagus
14. Strategic plan for livestock farmers to ensure that there is enough feed on the farm to meet all the requirements of animals
15. Main absorption of water takes place in...
16. The component of a feed that serves as the most important source of heat & energy for an animal
17. An alkaline liquid that is produced by the liver and released into the small intestines to assist in the digestion of fats
18. Deficiency symptom of Vitamin D

ACTIVITY 1.3

ANIMAL NUTRITION CROSSWORD1

TEBELLO

1 A N A E M I A

2 B

3 G

4 P R O D U C T I O N

5 O N

6 P R O T O Z O A

7 P

8 T R A N Q U I L I Z E R S

9 U R E A

10 S M A L L I N T E S T I N E S

11 M

12 W I D E R A T I O N

13 P E R I S T A L S I S

14 C A F E T E R I A

15 C A E C A M

16 C A R B O H Y D R A T E S

17 I

18 O S T E O M A L A C I A

EclipseCrossword.com

ACTIVITY 1.4

GAME OF SQUARES IN THE PEARSON SQUARE

RULES, MARKS AND MARKS ALLOCATION

Divide learners in any number of controllable groups and supply each with Pearson Square questions set in any format. The square is to be drawn on an A3 paper or directly on the board for visibility. Each group starts by solving question given to them first to have their memo.

They then cut small pieces of papers (or boards) with the correct answers to be pasted on the Pearson Square that is on the board. **DON'T FORGET TO MIX THEM**

Each group to cut few more squares (about 2 or 3) to add any missing information due to space

First group to finish its memo has an advantage to choose any member of any other group to go and paste one or two pieces of those cut papers and place it on the correct position.

MARKS FOR EARLY SOLUTION OF THE QUESTION (MARKS TO BE AWARDED BY THE TEACHER)

1. The first group is awarded 10 marks if correct. If not -5 (negative five)
2. The second group obtains 7 marks if correct. If not -3 (minus negative 3)
3. The third is awarded 4 marks if correct. If not -1 (minus 1)
4. All others, nothing

MARKS FOR EACH PIECE PUT ON THE RIGHT POSITION OF THE SQUARE

1. FEED A AND FEED B (1 MARKS EACH)
2. CORRECT DP (1 MARK)
3. CORRECT RATIO (1)
4. CORRECT PARTS (1 MARK EACH)

TO GIVE MARKS

PROBLEM #.....	CRITERIA	GROUP NAME		GROUP NAME		GROUP NAME		GROUP NAME		GROUP NAME	
		P.M.	M.O.	P.M.	M.O.	P.M.	M.O.	P.M.	M.O.	P.M.	M.O.
	FINISHING	10/7/4/ 1/ 3/ 5 /0			10/7/4/ 1 3/ 5 /0		10/7/4/ 1 3/ 5 /0		10/7/4/ 1 3/ 5 /0		10/7/4/ -1/-1-5 /0
FEEDS	1/0		1/0		1/0		1/0		1/0		1/0
DP	1/0		1/0		1/0		1/0		1/0		1/0
RATIO	1/0		1/0		1/0		1/0		1/0		1/0
PARTS	1/0		1/0		1/0		1/0		1/0		1/0
TOTAL	14			14		14		14		14	

PROBLEM #.....	CRITERIA	GROUP NAME		GROUP NAME		GROUP NAME		GROUP NAME		GROUP NAME	
		P.M.	M.O.	P.M.	M.O.	P.M.	M.O.	P.M.	M.O.	P.M.	M.O.
	FINISHING	10/7/4/ 1/ -1/-5 /0			10/7/4/ 1 /-3/-5 /0		10/7/4/ 1 -1/-5 /0		10/7/4/ 1 -1/-5 /0		10/7/4/ 1 -1/-5 /0
FEEDS	1/0		1/0		1/0		1/0		1/0		1/0
DP	1/0		1/0		1/0		1/0		1/0		1/0
RATIO	1/0		1/0		1/0		1/0		1/0		1/0
PARTS	1/0		1/0		1/0		1/0		1/0		1/0
TOTAL	14			14		14		14		14	

Can make as many as needed

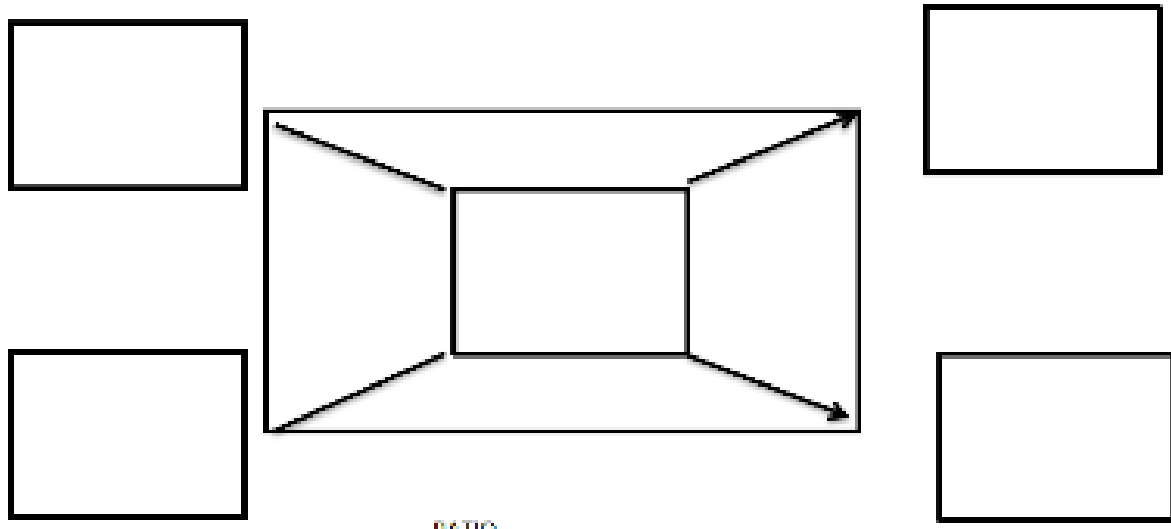
GROUP 1

FEED A:10.... FEED B:27.... REQUIRED DP:

PARTS OF FEED A: PARTS OF FEED B:6.....

FEED A: 10	FEED B: 15	FEED B	29
4	11	FEED A	17

The group choose anyone from other groups to the small pieces on the correct spots



RATIO

$$\square : \square \rightarrow \square : \square$$

TOTAL PARTS

$$\square + \square = \square$$

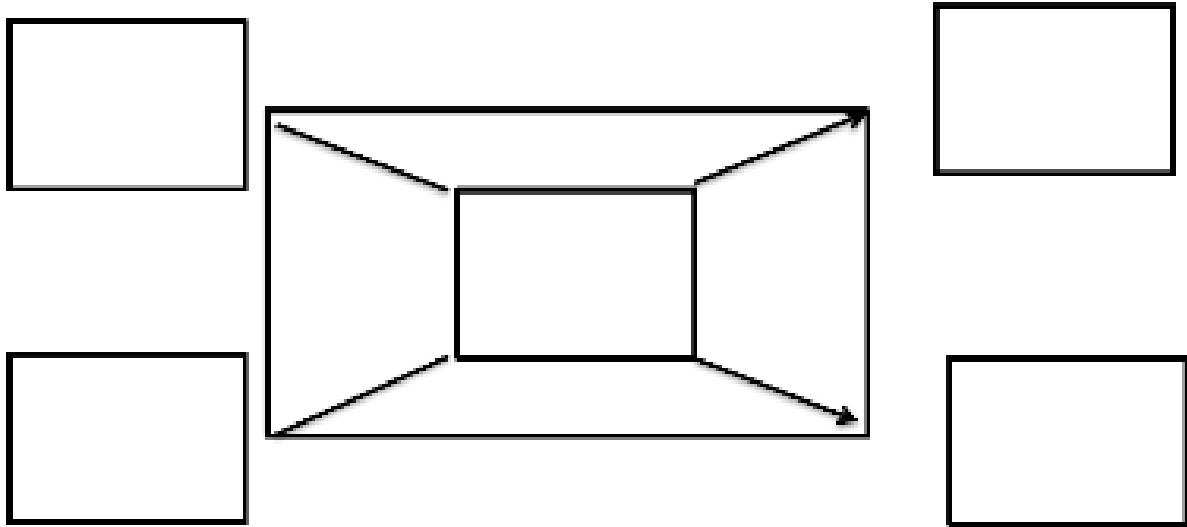
GROUP 2

A farmer wanted to prepare a concentrate mixture with a digestible protein content of 25% for sows on a farm. The farmer had 1 000 kg of ground soya beans and 5 000 kg of mealie meal having digestible protein contents of 45% and 8% respectively.

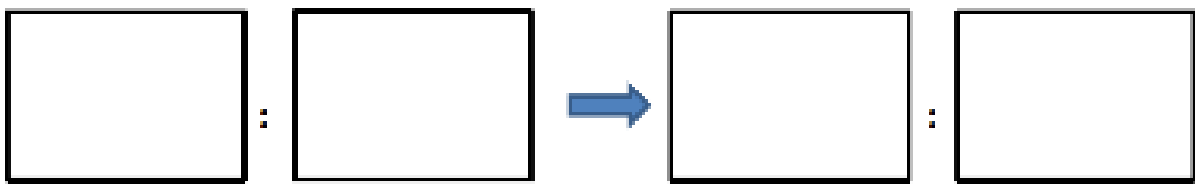
SOYA BEANS: 45%	MEALIE MEAL: 8%	25%	37
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SOYA BEANS	20	MEALIE MEAL	17
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The group choose anyone from other groups to the small pieces on the correct spots



RATIO



TOTAL PARTS



GROUP 3

Two feeds (Maize meal and Sunflower oilcake meal) are mixed to obtain a ration with a desired protein content of 17%. Feed A has a DP of 37% and Feed B has that of 9%. After the calculations, the farmer needs 8 parts of feed A and 20 parts of Feed B

FEED A: 37%	FEED B: 9%	17%	SUNFLOWER OILCAKE MEAL
28	20	MAIZE MEAL	8

The group choose anyone from other groups to the small pieces on the correct spots

*RATIO

:→:

TOTAL PARTS

+=

GROUP 4

The table below indicates the feeds available to a dairy farmer to compose a ration.

REQUIRED DIGESTIBLE PROTEIN VALUE (DP) %	FEED	DIGESTIBLE PROTEIN VALUE (DP) %
17%	Maize	9%
	Peanut oilcake	44%

MAIZE: 9%

PEANUT OILCAKE MEAL: 44

PEANUT OILCAKE MEAL

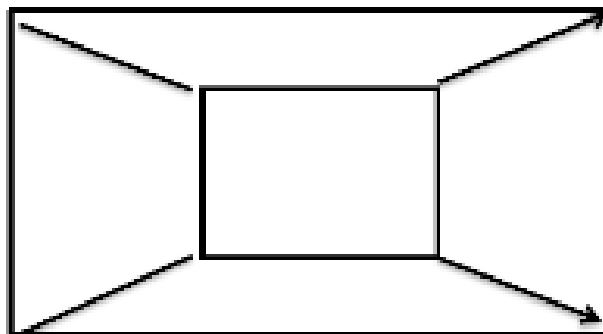
6

MAIZE

17

27

The group choose anyone from other groups to the small pieces on the correct spots



RATIO

:



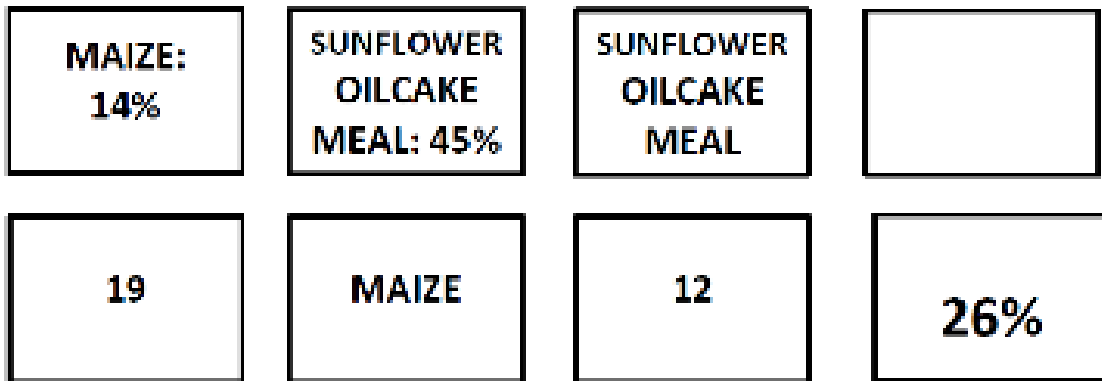
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TOTAL PARTS

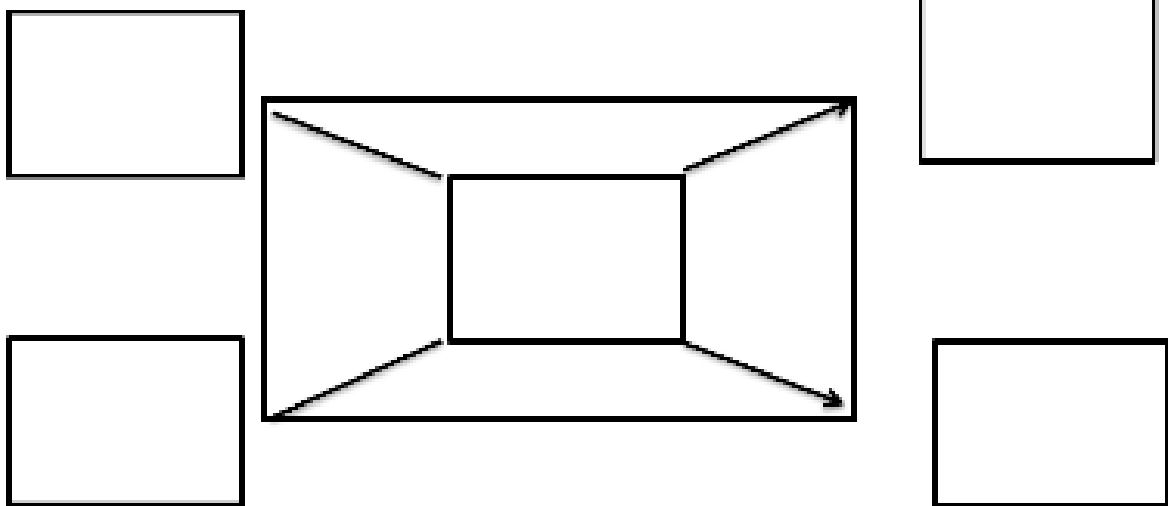
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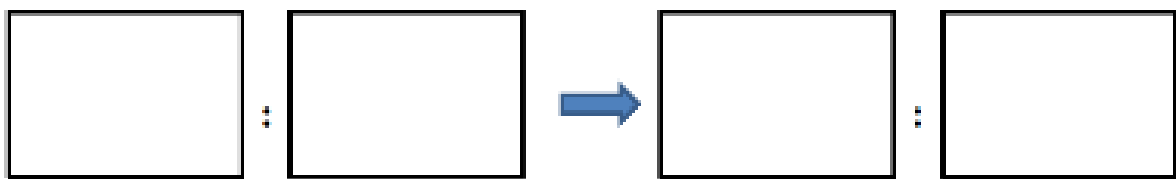
A balanced ration of maize meal with 14% DP and sunflower oilcake meal with 45% DP was prepared for a dairy herd. The feeds were mixed at a ratio of 12 : 19. The animals' digestible protein requirement is 26%.



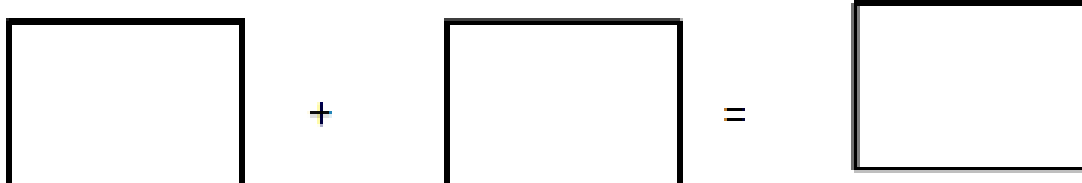
The group choose anyone from other groups to the small pieces on the correct spots



RATIO



TOTAL PARTS



This game can help learners to place all the Pearson Square numbers and information in the correct positions.

An educator can create more problems if he/she is having more than these six groups

One can change or correct any information misrepresented and informs the group if any.

Errors & omissions expected

Group's Marking or checking guidelines

Each group to make their own marking guidelines here

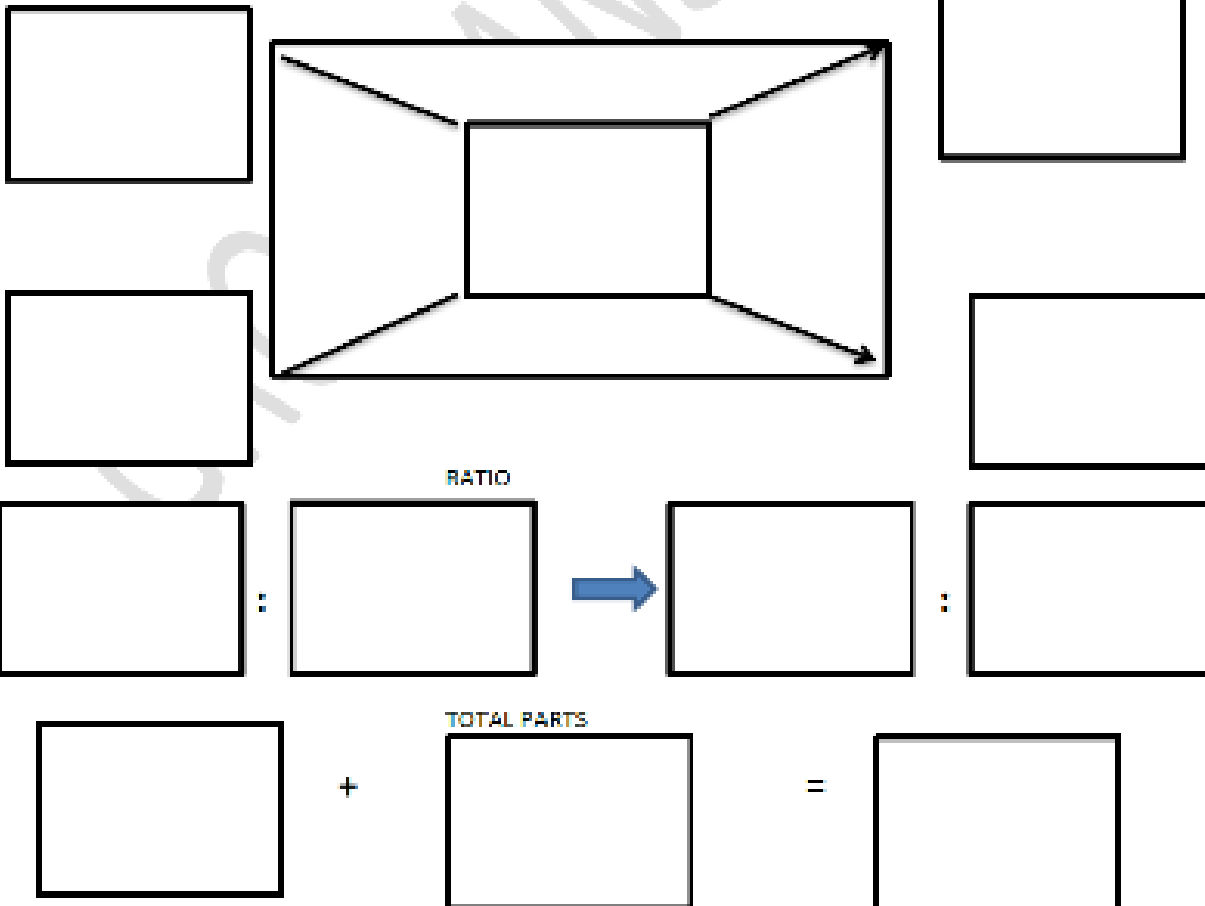
GROUP 1

FEED A:10...	FEED B:27...	REQUIRED DP:
PARTS OF FEED A:	PARTS OF FEED B:6.....	

FEED A: 10	FEED B: 15	FEED B	29
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4	11	FEED A	17
---	----	--------	----

The group choose anyone from other groups to the small pieces on the correct spots



GROUP 2

A farmer wanted to prepare a concentrate mixture with a digestible protein content of 25% for sows on a farm. The farmer had 1 000 kg of ground soya beans and 5 000 kg of mealie meal having digestible protein contents of 45% and 8% respectively.

SOYA BEANS: 45%	MEALIE MEAL: 8%	25%	37
SOYA BEANS	20	MEALIE MEAL	17

The group choose anyone from other groups to the small pieces on the correct spots

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RATIO

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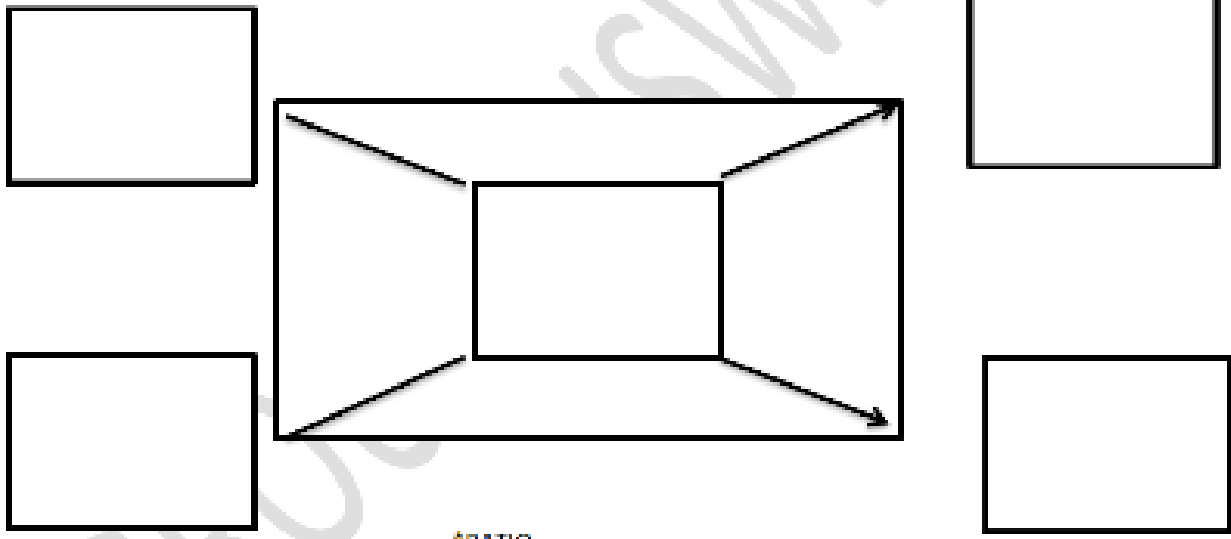
TOTAL PARTS

GROUP 3

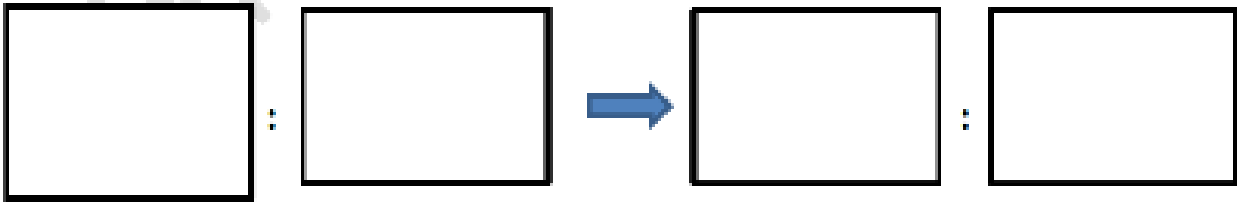
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28	20	MAIZE MEAL	8

The group choose anyone from other groups to the small pieces on the correct spots



*RATIO



TOTAL PARTS



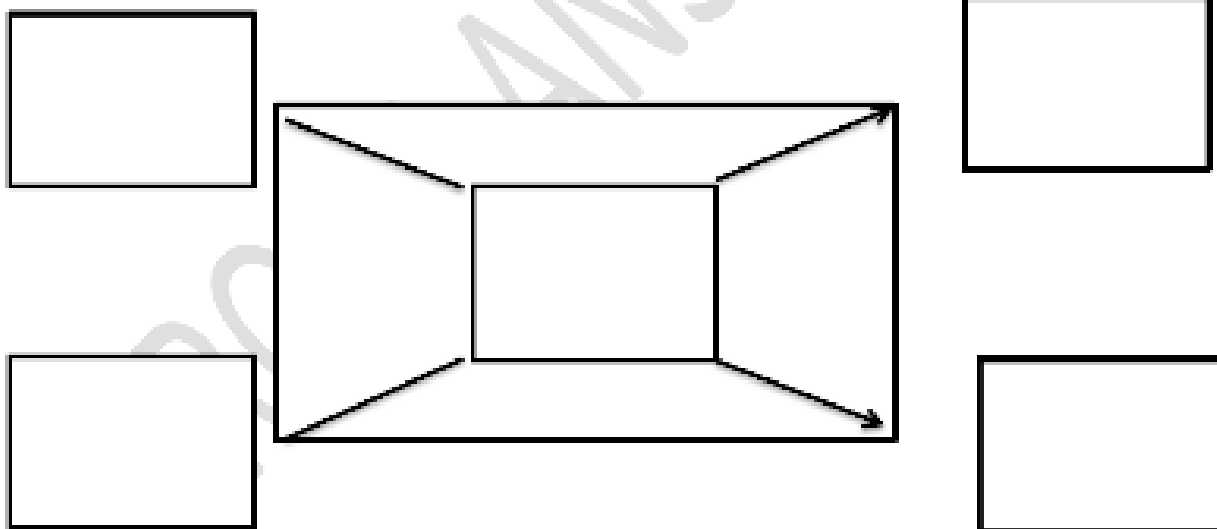
GROUP 4

The table below indicates the feeds available to a dairy farmer to compose a ration.

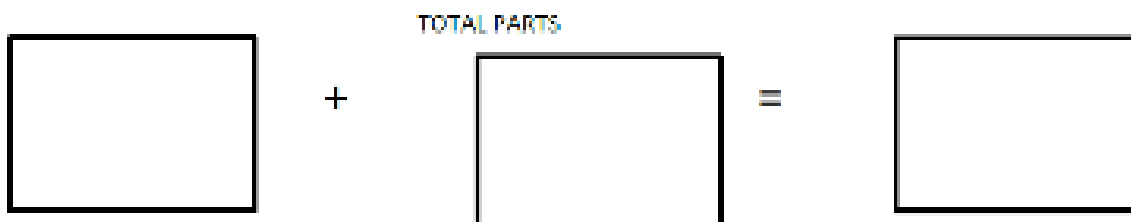
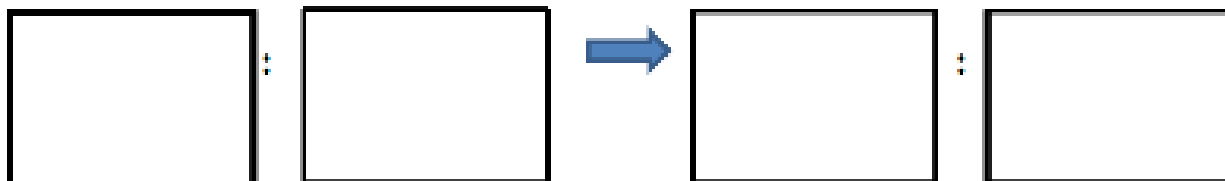
REQUIRED DIGESTIBLE PROTEIN VALUE (DP) %	FEED	DIGESTIBLE PROTEIN VALUE (DP) %
17%	Maize	9%
	Peanut oilcake	44%

MAIZE: 9%	PEANUT OILCAKE MEAL: 44	PEANUT OILCAKE MEAL	
6	MAIZE	17	27

The group choose anyone from other groups to the small places on the correct spots



RATIO

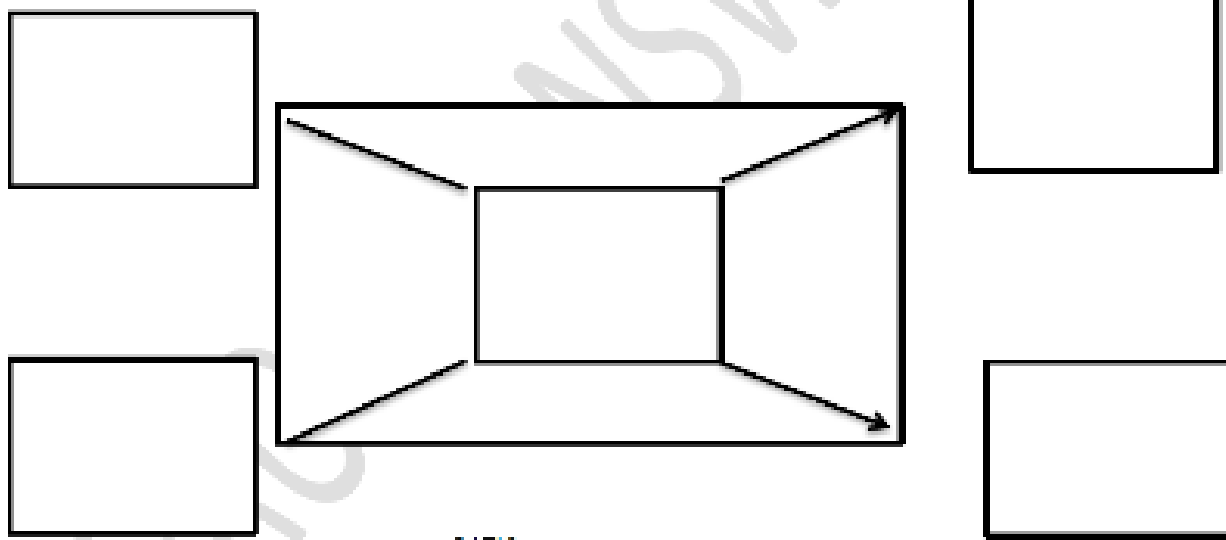


GROUP 5

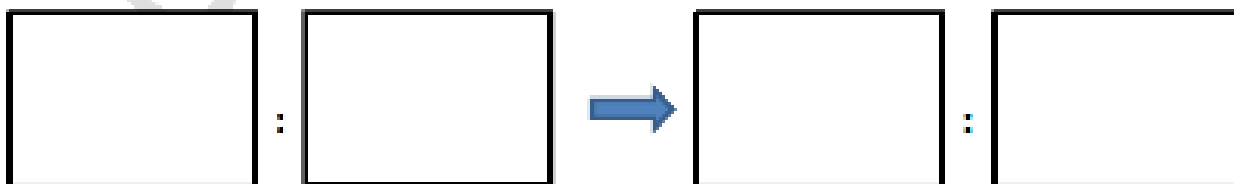
A balanced ration of maize meal with 14% DP and sunflower oilcake meal with 45% DP was prepared for a dairy herd. The feeds were mixed at a ratio of 12 : 19. The animals' digestible protein requirement is 26%.

MAIZE: 14%	SUNFLOWER OILCAKE MEAL: 45%	SUNFLOWER OILCAKE MEAL	
19	MAIZE	12	26%

The group choose anyone from other groups to the small pieces on the correct spots



RATIO



TOTAL PARTS



GROUP 6

The table below shows the nutritional composition of two feeds.

NUTRIENT COMPOSITION	FEED A	FEED B
Total digestible nutrients (TDN)	80%	55%
Digestible protein	18%	5%
Nutritive ratio (NR)	1 : 3.4	1 : 10
Crude fibre content	9%	17%

Animals require a DP of 9%

FEED A: 18%	FEED B: 5%	FEED B	
9	9%	FEED A	4

The group choose anyone from other groups to the small places on the correct spots

RATIO

:➔:

TOTAL PARTS

+=

2. ANIMAL PRODUCTION

2.1 WORD SEARCH



Created with Word Search Creator from WordSearchCreator.com

2. ANIMAL PRODUCTION

2.1 MARKING GUIDELINE

B	i	o	p	s	y	q	H	y	p	e	r	t	h	e	r	m	i	a	w	w	n	n	S	y		
e	c	t	o	p	a	r	a	s	i	t	e	s	s	T	a	p	e	w	o	r	m	s	h	k		
r	n	s	u	b	s	i	s	t	e	n	c	e	a	f	a	r	m	i	n	g	m	f	e	h		
R	o	e	k	R	e	s	p	i	r	a	t	o	r	y	n	r	a	t	e	n	t	g	l	h		
o	y	w	z	T	h	e	r	m	o	r	e	r	e	g	u	l	a	t	e	m	x	g	n	C	t	h
o	i	k	a	L	a	r	g	e	-	s	c	a	l	e	H	C	M	V	H	l	t	o	e	S		
s	A	n	t	i	b	i	o	t	i	c	s	f	p	d	o	l	i	i	a	R	e	m	r	u		
t	E	n	d	e	m	i	o	z	R	a	d	u	v	t	p	i	n	r	n	o	n	m	j	s		
E	x	t	e	n	s	i	v	e	o	e	o	n	a	n	p	n	e	u	d	u	s	e	l	t		
o	x	F	e	r	t	i	l	i	t	y	P	g	c	s	e	i	r	s	l	n	i	r	y	a		
g	H	e	a	t	e	r	s	r	a	e	a	i	c	u	r	c	a	e	i	d	v	c	W	i		
V	e	c	t	o	r	s	v	a	t	y	n	c	i	l	s	a	l	s	n	i	e	i	a	n		
y	j	S	h	e	l	t	e	r	i	i	o	S	n	a	e	l	s	u	g	n	v	a	t	e		
e	I	n	s	u	l	a	t	i	o	n	r	m	a	t	e	r	i	a	l	g	A	l	e	d		
L	e	p	E	B	g	P	V	F	n	d	a	a	t	i	p	e	b	H	r	h	n	z	r	o		
a	D	d	p	o	r	Q	o	e	l	a	A	m	l	i	o	q	x	C	y	B	o	i	f	i	t	
r	i	B	i	o	u	s	n	g	l	n	i	l	i	n	P	a	o	p	r	f	m	a	r	r		
g	a	d	d	o	a	t	t	h	j	t	c	i	n	P	a	m	n	o	o	f	a	r	g	e		
e	g	c	e	d	r	t	i	t	g	i	c	s	M	r	t	i	t	t	i	o	l	m	n	a		
-	n	t	r	i	a	m	l	z	r	b	v	c	i	o	h	n	a	h	l	y	w	i	p	t		
s	o	e	m	n	n	o	a	z	a	o	i	a	d	t	o	a	g	e	e	s	p	n	o	m		
c	s	r	i	e	f	r	t	o	z	d	s	i	g	g	g	t	i	r	z	e	g	i	e	n		
a	i	i	c	s	i	t	i	n	i	i	e	e	z	e	i	o	m	o	a	s	m	n	n	t		
l	s	a	i	s	n	e	o	e	n	e	o	i	s	a	n	o	u	i	k	q	t	f	t	t		
e	v	x	y	o	e	m	n	w	g	s	n	r	w	a	s	n	s	a	v	p	s	c	s	w		

Created with Word Search Creator from [WordSearchCreator.com](http://www.WordSearchCreator.com)

3. ANIMAL REPRODUCTION

ACTIVITY 3.1

The following reproductive terms are scrambled. Unscramble them so that they become valid and make sense.

1. Smidptorychicr.
2. Tempoince.
3. Rmspeatzooa.
4. Amegates.
5. Osterus.
6. Ebmroyinc.
7. Ermahhrpitismd.
8. Rogesptoner.
9. Dzyougsi.
10. Eerfartnsim.
11. Irthb.
12. Artupirtoin.
13. Esomermd
14. Atirfciilanseimnaiiotn.
15. Ubmliiclacrod
16. Clootrsum
17. Rydpriode.
18. Retfisalitoin.
19. Variaonycsts.
20. Naouvaaltroy.

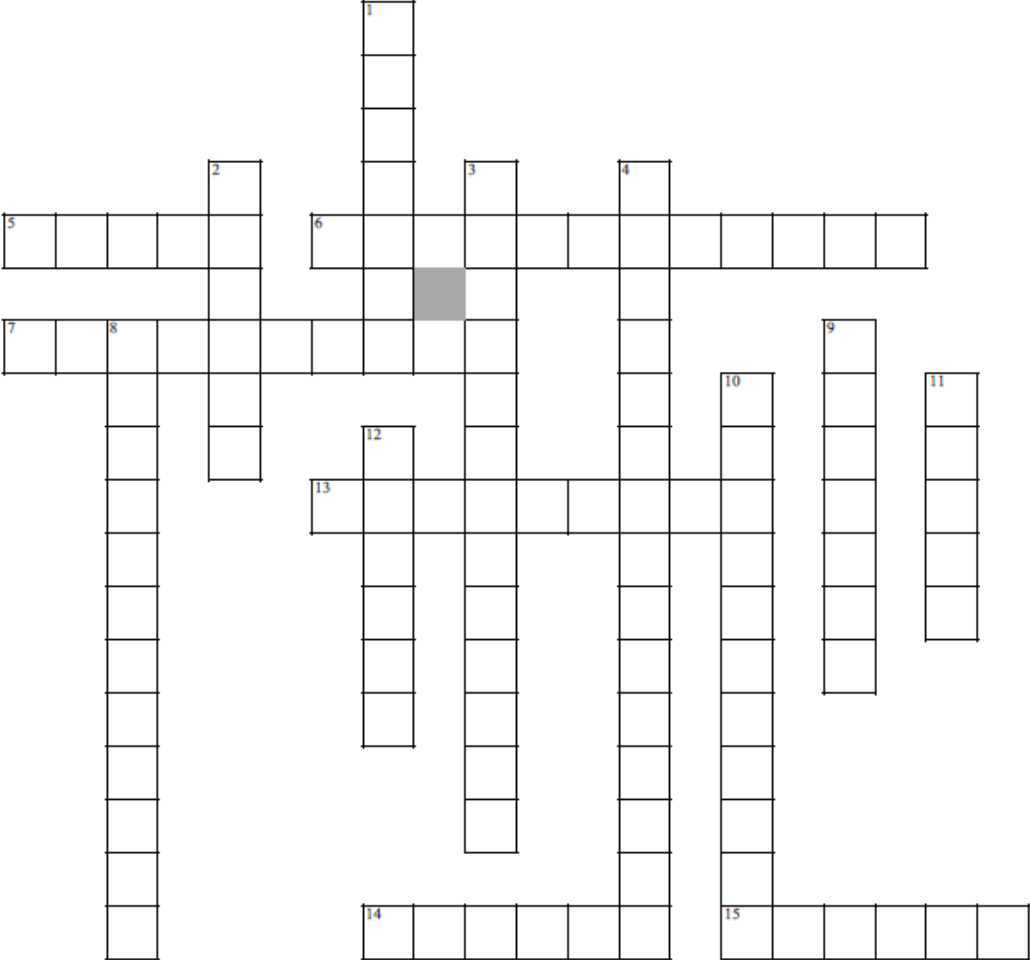
ACTIVITY 3.2

Use the following definitions to find reproductive terms in the word box below. Highlight them by circling them. NB: These words may either be diagonally, horizontally, or vertically aligned. However, they have to make a meaning.

N	Y	P	H	O	M	A	N	I	A	O	V	A
E	M	E	T	R	I	T	A	P	O	V	E	N
P	M	A	T	I	N	G	C	R	P	U	V	O
T	E	B	E	M	O	O	N	E	S	L	C	E
A	C	R	O	S	O	M	E	G	E	A	A	S
C	A	R		Y	O	A	G	N	E	T	E	T
A	P	P	C	A	O	A	O	A	A	I	O	R
S	E	M	E	N	O	A	R	N	E	O	V	U
M	E	T	R	I	T	A	T	C	A	N	U	S
D	I	O	E	S	T	A	S	Y	D	I	M	S
O	E	S	T	R	O	G	E	N	E	A	E	E
E		G	O	N	A	D	O	T	R	O	P	S

1. Many ovum cells.
2. Rupturing of a Graafian wall to release matured follicle.
3. Female sex hormone (**NB: This one is duplicated but in different locations**).
4. Fluid and sperm cell.
5. Contains enzyme that breaks the wall of the ovum cell.
6. Stage of oestrus where Corpus luteum is fully functional.
7. Process whereby a bull mounts and inserts its penis on the vagina of the cow.
8. Female gamete.
9. Failure of a cow to show signs of oestrus.
10. A phenomenon whereby a female cow exhibit intense mounting.

ACTIVITY 3.3



Animal Reproduction

Marking Guideline

ACTIVITY 3.1

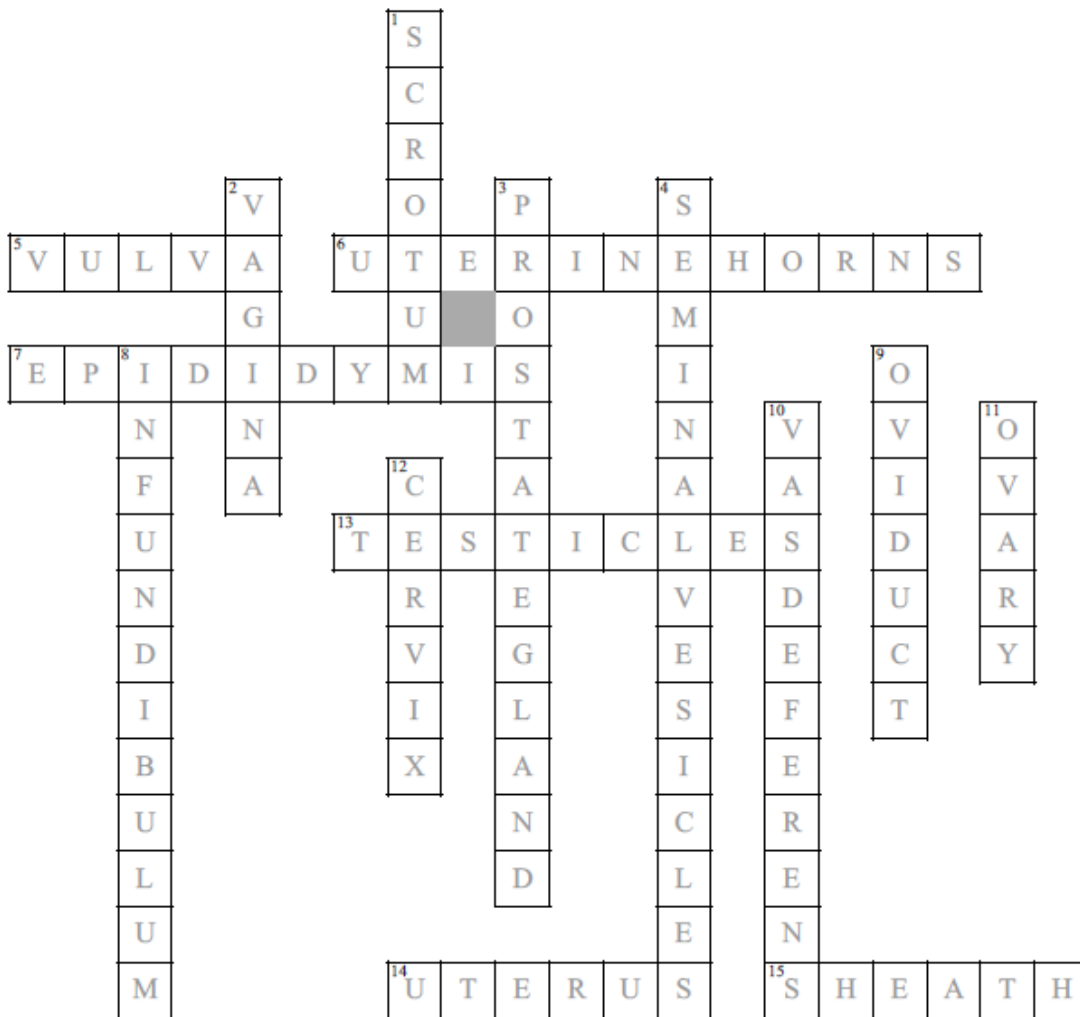
1. Cryptorchidism.
2. Impotence.
3. Spermatozoa.
4. Gametes.
5. Oestrus.
6. Embryonic.
7. Hermaphroditism.
8. Progesterone.
9. Dizygous.
10. Freemartins.
11. Birth.
12. Parturition.
13. Mesoderm.
14. Artificial Insemination.
15. Umbilical Cord.
16. Colostrum.
17. Dry period.
18. Fertilisation.
19. Ovarian cysts.
20. An ovulatory

ACTIVITY 3.2

N	Y	P	H	O	M	A	N	I	A	O	V	A
E	M	E	T	R	I	T	A	P	O	V	E	N
P	M	A	T	I	N	G	C	R	P	U	V	O
T	E	B	E	M	O	O	N	E	S	L	C	E
A	C	R	O	S	O	M	E	G	E	A	A	S
C	A	R		Y	O	A	G	N	E	T	E	T
A	P	P	C	A	O	A	O	A	A	I	O	R
S	E	M	E	N	O	A	R	N	E	O	V	U
M	E	T	R	I	T	A	T	C	A	N	U	S
D	I	O	E	S	T	A	S	Y	D	I	M	S
O	E	S	T	R	O	G	E	N	E	A	E	E
E		G	O	N	A	D	O	T	R	O	P	S

- 1) Many ovum cells.
- 2) Rupturing of a Graafian wall to release matured follicle.
- 3) Female sex hormone (**NB: This one is duplicated but in different locations**).
- 4) Fluid and sperm cell.
- 5) Contains enzyme that breaks the wall of the ovum cell.
- 6) Stage of oestrus where Corpus luteum is fully functional.
- 7) Process whereby a bull mounts and inserts its penis on the vagina of the cow.
- 8) Female gamete.
- 9) Failure of a cow to show signs of oestrus.
- 10) A phenomenon whereby a female cow exhibit intense mounting.

ACTIVITY 3.3



Across

5. External opening of the reproductive and urinary systems.
6. The fertilized egg attaches to the uterine walls and develops here?
7. Sperm is stored here until maturation.
13. Produce hormones associated with reproduction and male gametes.
14. Location where the fertilized egg develops.
15. Protects the penis when relaxed.

Down

1. Carries the testicles and regulates their temperature.
2. Semen is deposited into the reproductive system through here?
3. Releases fluid that mixes with the seminal fluid and nourishes sperm.
4. Produce fluid that transport and protect sperm.
8. Receives the egg from the ovary.
9. A tube-like structure that carries the egg from the ovary to the uterus.
10. Transports sperm from the epididymis to the urethra.
11. Produce the female sex cells called eggs.
12. Functions as a passageway for sperm and keeps bacteria/foreign material out of the uterus during pregnancy.

4. ANIMAL PROTECTION

Find the word or term used to describe the statements below. A clue has been provided on how to find the word or term.

T	I	S	O	L	A	T	I	O	N	C	O	W	Y
N	E	A	U	A	S	P	R	E	A	D	H	G	E
E	T	N	P	P	E	B	I	T	E	P	O	N	M
M	A	I	O	A	S	D	D	O	G	L	S	O	E
T	T	T	I	R	A	E	O	P	O	A	T	I	R
A	S	A	S	A	E	A	S	I	A	N	T	T	T
E	U	T	O	S	S	D	M	C	O	T	U	A	X
R	R	I	N	I	I	E	D	A	Q	E	D	C	E
T	V	O	M	T	D	N	I	L	N	W	I	I	H
V	E	N	T	I	L	A	T	I	O	N	P	D	A
C	I	Y	P	C	M	A	C	I	D	M	P	A	N
O	L	E	C	Q	X	C	O	N	T	R	I	R	D
N	L	M	Q	U	A	R	A	N	T	I	N	E	L
F	A	L	I	V	E	S	T	O	C	K	G	R	I
I	N	U	T	R	I	T	I	O	U	S	M	S	N
N	C	U	R	E	D	S	P	R	A	Y	I	N	G
E	E	X	P	O	S	E	S	Y	R	I	N	G	E
H	E	A	D	T	H	C	A	T	H	E	T	E	R

4.1 Use a puzzle above to give a correct term that matches with the statements below

- 4.1.1 To supply with fresh air (across)
- 4.1.2 A healthy diet or a balance diet (across)
- 4.1.3 To slaughter infected animals in order to prevent the further spread of the disease (vertical)
- 4.1.4 To put livestock under surface of a liquid and lift them quickly out again (horizontal)
- 4.1.5 The confinement of animals that may be carrying an infectious disease (across)
- 4.1.6 A biological preparation that improves immunity to a particular disease (vertical)
- 4.1.7 Application of a dipping solution direct to the animal's body (across)
- 4.1.8 A process in which data on the occurrence and distribution health or disease in a particular population is collected, organised, analysed and disseminated (horizontal)
- 4.1.9 Application of a treatment on a specific area of a body surface (horizontal)
- 4.1.10 A science of disease control and prevention in a population (vertical)

ANIMAL PROTECTION

Marking guideline

T	I	S	O	L	A	T	I	O	N	C	O	W	Y
N	E	A	U	A	S	P	R	E	A	D	H	G	E
E	T	N	P	P	E	B	I	T	E	P	O	N	M
M	A		O	A	S	D	D	O	G	L	S	O	E
T	T	T	I	R	A	E	O	P	O	A	T	I	R
A	S	A	S	A	E	A	S		A	N	T	T	T
E	U	T	O	S	S	D	M	C	O	T	U	A	X
R	R		N	I	I	E	D	A	Q	E	D	C	E
T	V	O	M	T	D	N	I	L	N	W		I	H
V	E	N	T	I	L	A	T	I	O	N	P	D	A
C	I	Y	P	C	M	A	C	I	D	M	P	A	N
O	L	E	C	Q	X	C	O	N	T	R		R	D
N	L	M	Q	U	A	R	A	N	T	I	N	E	L
F	A	L	I	V	E	S	T	O	C	K	G	R	I
I	N	U	T	R	I	T	I	O	U	S	M	S	N
N	C	U	R	E	D	S	P	R	A	Y	I	N	G
E	E	X	P	O	S	E	S	Y	R	I	N	G	E
H	E	A	D	T	H	C	A	T	H	E	T	E	R

4.1.1 Ventilation ✓

4.1.2 Nutritious ✓

4.1.3 Eradication ✓

4.1.4 Dipping ✓

4.1.5 Quarantine/isolation ✓

4.1.6 Vaccine ✓

4.1.7 Spraying ✓

4.1.8 Surveillance ✓

4.1.9 Topical ✓

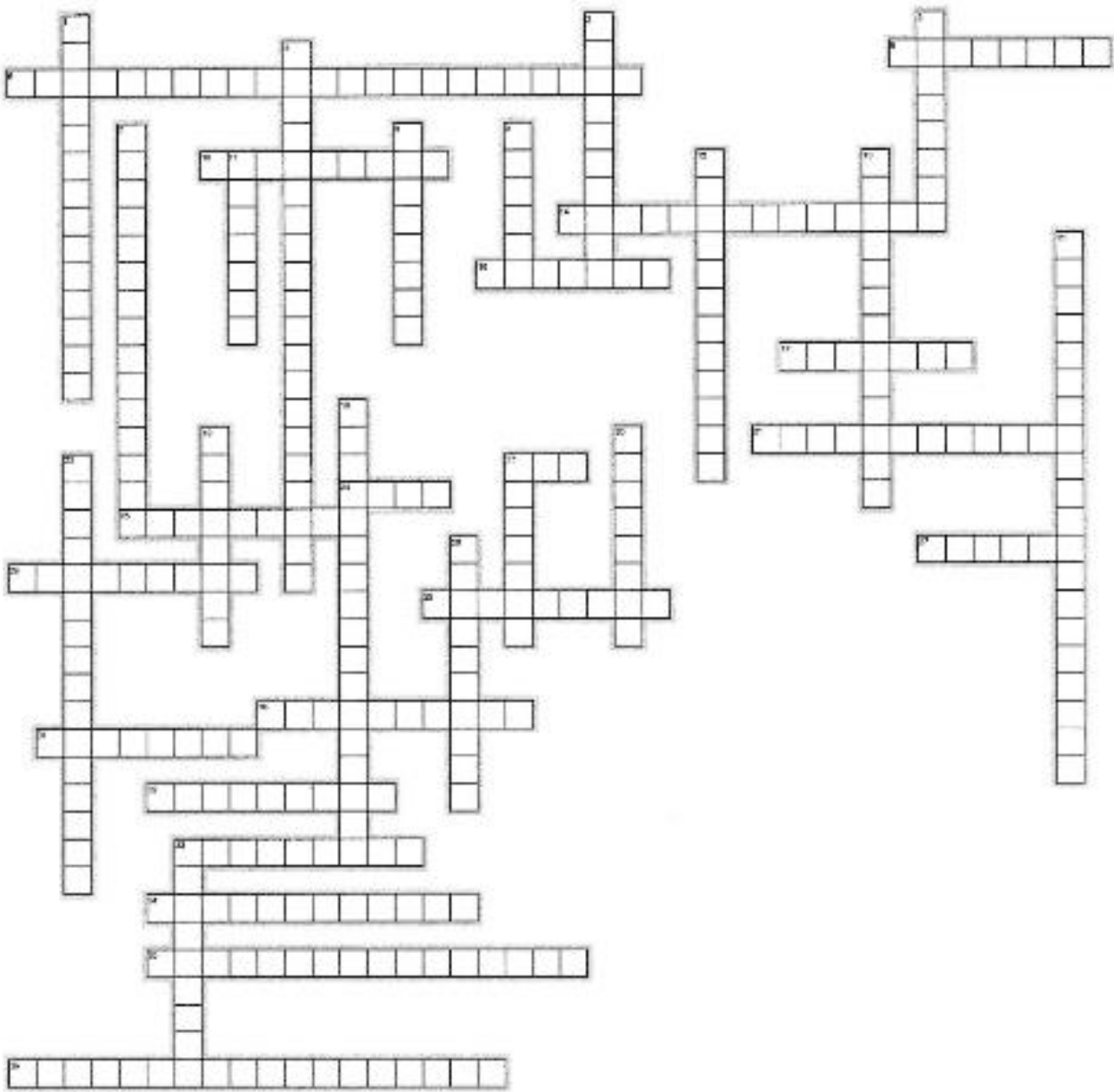
4.1.10 Epidemiology ✓

4.1.11 Sanitation ✓

5 BASIC GENETICS

Puzzle on genetics

Zamile



EclipseCrosswords.com

Puzzle on genetics

Zsolt

Across

5. genetic makeup of an organism
6. type of variation that has a few clear cut forms with no forms in between
10. differences between individuals of the same species
14. a genetic cross which involves 2 pairs of contrasting characteristics
16. reduction division of sex cells that gives rise to 4 haploid daughter cells
17. a research activity that creates a copy of some biological entity
21. type of inheritance where both alleles are dominant and fully expressed in the phenotype
23. an organism whose genetic characteristics have been changed by inserting genes of another organism into its DNA
24. unit of heredity that carries information for each characteristic of an organism
25. an allele that is masked by the presence of a dominant allele and only appears in the phenotype if the organism is homozygous
27. an organism resulting from a cross between genetically different individuals of the same or different species
28. an organism with more than 2 sets of chromosomes
29. the choice of individuals to be used for breeding
30. an organism that is homozygous for a genetic trait and therefore continually gives rise to offspring with the same trait
31. transfer of genetic factors from one individual to the next
32. masking of the phenotypic effect of alleles at one gene by alleles of another gene
33. trait controlled by many genes
34. having different alleles of a gene e.g. Tt
36. genetic cross which involves 1 characteristic with 2 alleles
38. type of selection that is based on the quality of the animal's ancestor
8. an allele that masks the effect of another & is expressed in the appearance of an individual
9. variations of the same gene
11. reappearance of a characteristic in an organism after a period of absence
12. a degree to which genetics determines a characteristic
13. the use of organisms to produce useful substances
15. type of inheritance where both alleles are partially expressed, often producing an intermediate characteristic.
18. type of selection that is based on the quality of the animal's offspring
19. process of producing plants or animals by sexual reproduction
20. sudden/random change in the structure of DNA
22. type of selection that is based on the quality of the animal's relatives of its generation (full/half siblings)
23. a reproductive cell having haploid number of chromosomes
26. ability of one parent to transmit more characteristics to its offspring than the other parent
33. physical appearance of an individual due to genetic makeup

Down

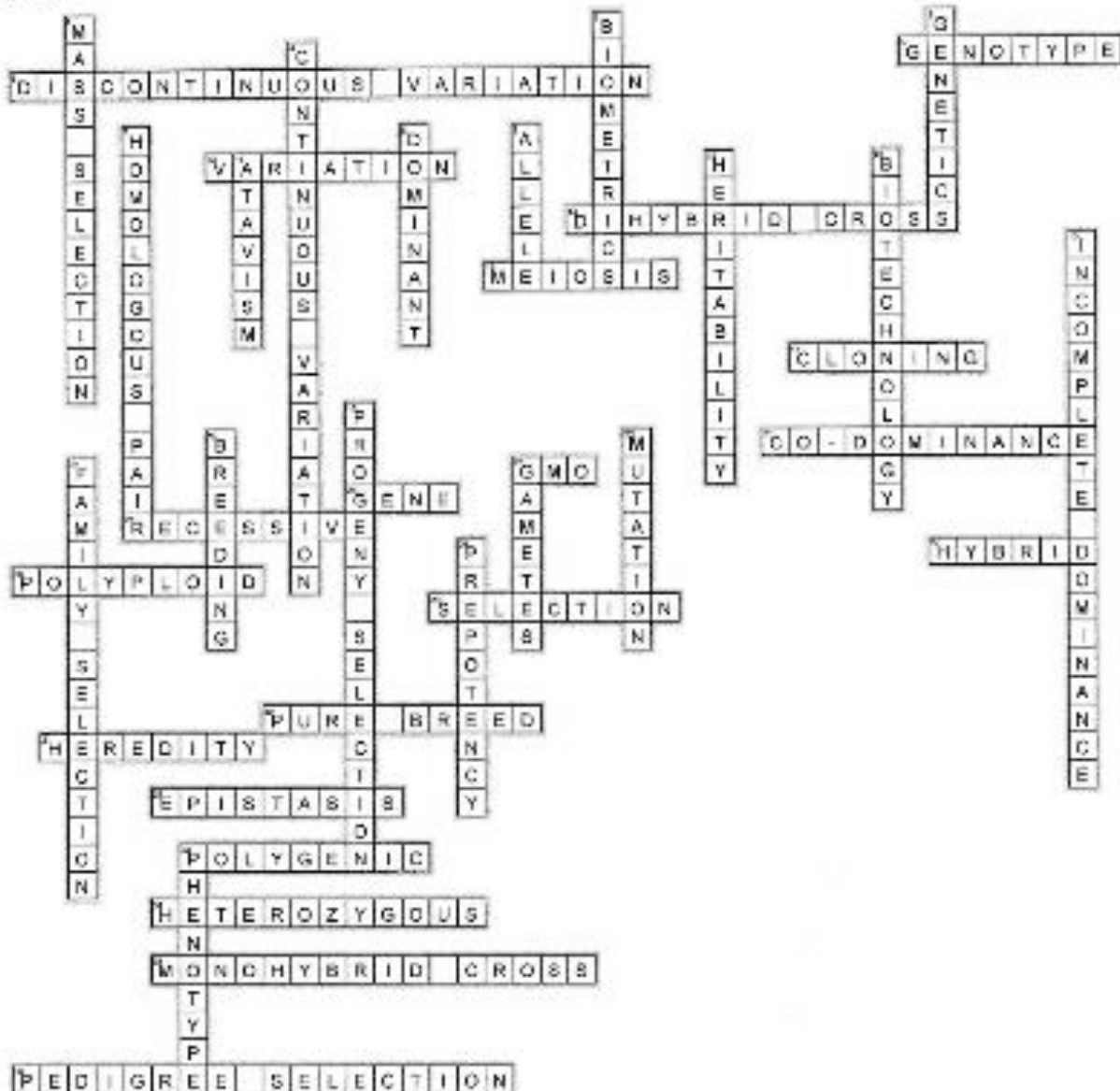
1. type of selection that is based on the individual animal's performance on the field
2. the use of statistics in biology
3. study of inheritance/ genes
4. type of variation in which the characteristic can take on a complete range of forms from one extreme to the other
7. chromosomes of the same shape & size from each parent

GENETICS

MARKING GUIDELINE

Puzzle on genetics

Zambe



ColgateCrossword.com

Across

5. GENOTYPE — genetic makeup of an organism
6. DISCONTINUOUS VARIATION — type of variation that has a few clear cut forms with no forms in between
10. VARIATION — differences between individuals of the same species
14. DIHYBRID CROSS — a genetic cross which involves 2 pairs of contrasting characteristics
16. MEIOSIS — reduction division of sex cells that gives rise to 4 haploid daughter cells
17. CLONING — a research activity that creates a copy of some biological entity
21. CO-DOMINANCE — type of inheritance where both alleles are dominant and fully expressed in the phenotype
23. GMO — an organism whose genetic characteristics have been changed by inserting genes of another organism into its DNA
24. GENE — unit of heredity that carries information for each characteristic of an organism
25. RECESSIVE — an allele that is masked by the presence of a dominant allele and only appears in the phenotype if the organism is homozygous
27. HYBRID — an organism resulting from a cross between genetically different individuals of the same or different species
28. POLYPLOID — an organism with more than 2 sets of chromosomes

Puzzle on genetics

Zamie

Across

29. **SELECTION** — the choice of individuals to be used for breeding
30. **PURE BREED** — an organism that is homozygous for a genetic trait and therefore continually gives rise to offspring with the same trait
31. **HEREDITY** — transfer of genetic factors from one individual to the next
32. **EPISTASIS** — masking of the phenotypic effect of alleles at one gene by alleles of another gene
33. **POLYGENIC** — trait controlled by many genes
34. **HETEROZYGOUS** — having different alleles of a gene e.g. Tt
35. **MONOHYBRID CROSS** — genetic cross which involves 1 characteristic with 2 alleles
36. **PEDIGREE SELECTION** — type of selection that is based on the quality of the animal's ancestor

Down

1. **MASS SELECTION** — type of selection that is based on the individual animal's performance on the field
2. **BIOMETRICS** — the use of statistics in biology
3. **GENETICS** — study of inheritance/genes
4. **CONTINUOUS VARIATION** — type of variation in which the characteristic can take on a complete range of forms from one extreme to the other
7. **HOMOLOGOUS PAIR** — chromosomes of the same shape & size from each parent
8. **DOMINANT** — an allele that masks the effect of another & is expressed in the appearance of an individual
9. **ALLELE** — variations of the same gene
11. **ATAVISM** — reappearance of a characteristic in an organism after a period of absence
12. **HERITABILITY** — a degree to which genetics determines a characteristic
13. **BIOTECHNOLOGY** — the use of organisms to produce useful substances
15. **INCOMPLETE DOMINANCE** — type of inheritance where both alleles are partially expressed, often producing an intermediate characteristic.
18. **PROGENY SELECTION** — type of selection that is based on the quality of the animal's offspring
19. **BREEDING** — process of producing plants or animals by sexual reproduction
20. **MUTATION** — sudden/random change in the structure of DNA
22. **FAMILY SELECTION** — type of selection that is based on the quality of the animal's relatives of

its generation (full/half siblings)

23. **GAMETES** — a reproductive cell having haploid number of chromosomes
25. **PREPOTENCY** — ability of one parent to transmit more characteristics to its offspring than the other parent
23. **PHENOTYPE** — physical appearance of an individual due to genetic makeup

6. PRODUCTION FACTORS

ACTIVITY 6.1

NB Teachers and learners

1. This activity is designed to improve learner's terminology, spelling, and most importantly paying attention to details (focus).
2. It is also a tool to stimulate learner's level of thinking and for discussion purposes.
3. Words can be formed from various directions e.g.
 - Horizontally (left to right vice versa)
 - Vertically (bottom to top vice versa)
 - Diagonally (top to bottom vice versa)

WORDSEARCH

NAME: _____

DATE: _____

F	O	K	B	D	P	L	A	N	N	I	N	G	C	B	F	S	G
H	R	F	U	F	H	L	S	A	Z	G	Q	R	O	D	Y	D	G
J	G	H	D	H	R	D	V	F	N	A	I	D	O	V	H	D	V
N	A	Y	G	F	O	G	T	I	F	O	N	C	R	E	D	I	T
O	N	J	E	F	E	C	G	G	J	V	T	T	D	V	Z	W	N
I	I	D	T	H	O	D	I	D	A	T	E	T	I	K	N	Q	D
T	S	S	P	J	E	N	T	R	E	P	R	E	N	E	U	R	A
A	A	D	N	H	D	T	U	S	Z	F	E	F	A	G	H	U	M
S	T	R	O	S	D	G	S	F	A	F	S	D	T	D	C	O	A
I	I	O	I	F	C	A	P	T	A	L	T	B	I	T	A	B	N
L	O	C	T	S	O	F	C	V	G	O	F	J	O	R	P	A	A
A	N	E	U	A	L	Z	S	T	G	R	G	L	N	H	I	L	G
T	H	R	T	J	L	A	N	D	Y	T	H	I	G	T	T	Y	E
I	F	L	I	O	A	C	S	R	Y	N	U	E	H	W	A	T	M
P	V	A	T	E	T	F	D	T	S	O	I	L	R	F	L	G	E
A	O	I	S	Z	E	U	R	F	E	C	A	P	A	X	D	H	N
C	I	C	E	O	R	G	A	N	I	S	A	T	I	O	N	F	T
R	N	N	R	C	A	A	C	R	E	W	O	L	F	H	S	A	C
E	T	A	T	H	L	I	A	B	I	L	I	T	I	E	S	L	Y
D	Y	N	E	Q	U	I	T	Y	S	C	H	E	M	E	F	O	V
N	O	I	T	A	S	I	L	A	T	I	P	A	C	R	E	V	O
U	A	F	A	M	O	T	I	V	A	T	I	O	N	P	M	P	S
Q	Z	F	D	E	C	I	S	I	O	N	M	A	K	I	N	G	U

Words:

BUDGET	CASH FLOW	ENTREPRENEUR
ASSETS	CAPITAL	COLLATERAL
CONTROL	COORDINATION	DECISION MAKING
EQUITY SCHEME	FINANCIAL RECORDS	HEDGING
INTEREST	LABOUR	LIABILITIES
ORGANISATION	OVERCAPITALISATION	PLANNING
RESTITUTION	SOIL	LAND
MANAGEMENT	UNDERCAPITALISATION	CREDIT
MOTIVATION		

TOTAL: [25]

PRODUCTION FACTORS

ACTIVITY 6.1

MARKING GUIDELINE

WORDSEARCH

	O		B		P	L	A	N	N	I	N	G	C				
	R		U							G			O				
	G		D						N		I		O				
N	A		G					I			N	C	R	E	D	I	T
O	N		E				G				T		D				
I	I		T			D				T	E		I				
T	S	S			E	N	T	R	E	P	R	E	N	E	U	R	
A	A	D	N	H				S			E		A			U	M
S	T	R	O				S				S		T		C	O	A
I	I	O	I		C	A				L	T		I		A	B	N
L	O	C	T		O					O			O		P	A	A
A	N	E	U		L					R			N		I	L	G
T		R	T		L	A	N	D		T		I			T		E
I		L	I		A					N					A		M
P		A	T		T				S	O	I	L			L		E
A		I	S		E					C							N
C		C	E	O	R	G	A	N	I	S	A	T	I	O	N		T
R		N	R		A					W	O	L	F	H	S	A	C
E		A			L	I	A	B	I	L	I	T	I	E	S		
D		N	E	Q	U	I	T	Y	S	C	H	E	M	E			
N	O	I	T	A	S	I	L	A	T	I	P	A	C	R	E	V	O
U		F		M	O	T	I	V	A	T	I	O	N				
			D	E	C	I	S	I	O	N	M	A	K	I	N	G	

BUDGET

CASH FLOW

ENTREPRENEUR

ASSETS

CAPITAL

COLLATERAL

CONTROL

COORDINATION

DECISION MAKING

EQUITY SCHEME

FINANCIAL RECORDS

HEDGING

INTEREST

LABOUR

LIABILITIES

ORGANISATION

OVERCAPITALISATION

PLANNING

RESTITUTION

SOIL

LAND

MANAGEMENT

UNDERCAPITALISATION

CREDIT

MOTIVATION

TOTAL: [25]

ACTIVITY 6.2

LABOUR LEGISLATION ACTS IN SA: QUIZ

NAME: _____

DATE: _____

The following pictures relate to labour legislation acts that affect agricultural businesses in South Africa. Write down the name of the act that corresponds with the picture.

For example: Picture 1: Labour Relations Act (LRA) No. 66 of 1995

- COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT (COIDA) NO. 85 OF 1993
- BROAD BASED BLACK ECONOMIC ACT
- UNEMPLOYMENT INSURANCE ACT (UIA) NO. 30 OF 2001
- BASIC CONDITIONS OF EMPLOYMENT ACT (BCEA) NO. 75 OF 1997
- OCCUPATIONAL HEALTH AND SAFETY ACT (OHSA) NO. 130 OF 1993
- EMPLOYMENT EQUITY ACT (EEA) NO. 46 OF 1998
- LABOUR RELATIONS ACT (LRA) NO. 66 OF 1995
- SKILLS DEVELOPMENT ACT (SDA) NO. 56 OF 1998

PICTURE 1



1. _____ (1)

PICTURE 2



2. _____ (1)

PICTURE 3



3. _____ (1)

PICTURE 4



4. _____ (1)

PICTURE 5



5. _____ (1)

PICTURE 6



6. _____ (1)

PICTURE 7



7. _____ (1)

PICTURE 8



8. _____ (1)

TOTAL: [8]

ACTIVITY 6.2

MARKING GUIDELINE

LABOUR LEGISLATION ACTS IN SA-QUIZ

1. BASIC CONDITIONS OF EMPLOYMENT ACT (BCEA) NO. 75 OF 1997
(1)
2. OCCUPATIONAL HEALTH AND SAFETY ACT (OHSA) NO. 130 OF 1993 (1)
3. COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT
(COIDA) NO. 85 OF 1993
(1)
4. LABOUR RELATIONS ACT (LRA) NO. 66 OF 1995
(1)
5. SKILLS DEVELOPMENT ACT (SDA) NO. 56 OF 1998
(1)
6. UNEMPLOYMENT INSURANCE ACT (UIA) NO. 30 OF 2001
(1)
7. EMPLOYMENT EQUITY ACT (EEA) NO. 46 OF 1998 (1)
8. BROAD BASED BLACK ECONOMIC ACT
(1)

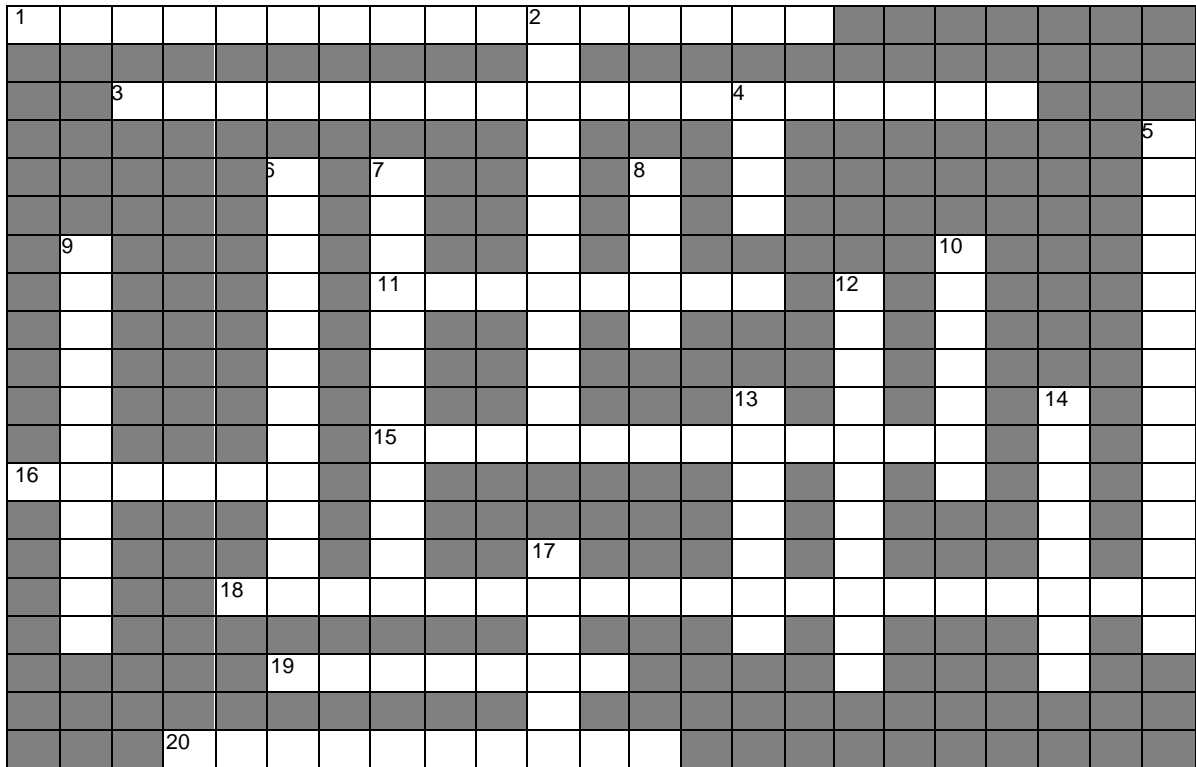
TOTAL: [8]

ACTIVITY 6.3

PRODUCTION FACTORS: CROSSWORD PUZZLE

NAME: _____

DATE: _____



ACROSS

1. Show money coming in and money spent in a business over a period of time.

(1)

3. When more than required capital is employed in a business.

(1)

11. Amount that the financial institution charges for lending capital.

(1)

15. Involves synchronising all parts of an activity for its smooth running.

(1)

16. Financial plan that shows how income will be generated and how it will be spent.

(1)

18. When less than required capital is employed in a business.

(1)

19. Involves checking if the plans are implemented correctly.

(1)

20. Form of security that a bank requires before giving one a loan.

(1)

DOWN

2. Person who is able to generate a business from a novel idea and becomes successful.

(1)

4. Area of land with its inherent characteristics, including its resources and characteristics.

(1)

5. Making a choice between different alternatives /solutions of a problem.

(1)

6. Bringing together of all parts of an activity for production.

(1)

7. Financial arrangement between the land reform beneficiaries and labourers to buy shares in a farm.

(1)

8. Things that the farmer owns which are of financial value.

(1)

Types of skills required include highly skilled/highly educated, skilled and unskilled.

1.1 PICTURE A



a) Type of labourer _____

b) Skill _____ (2)

1.2 PICTURE B



a) Type of labourer _____

(2)

b) Skill _____

1.3 PICTURE C



a) Type of labourer _____ b) Skill _____
(2)

1.4 PICTURE D



a) Type of labourer _____ b) Skill _____
(2)

1.5 PICTURE E



a) Type of labourer _____ b) Skill _____
(2)

ACTIVITY 6.4

MARKING GUIDELINE

TYPES OF LABOUR IN AGRICULTURE

1.1 PICTURE A

- | | | |
|-----------------------------|-----------------------------------|-----|
| a) Permanent/fixed labourer | b) Highly skilled/highly educated | (2) |
|-----------------------------|-----------------------------------|-----|

1.2 PICTURE B

- | | | |
|----------------------|--------------|-----|
| a) Seasonal labourer | b) Unskilled | (2) |
|----------------------|--------------|-----|

1.3 PICTURE C

- | | | |
|-----------------------------|------------|-----|
| a) Permanent/fixed labourer | b) Skilled | (2) |
|-----------------------------|------------|-----|

1.4 PICTURE D

- | | | |
|-----------------------------|------------|-----|
| a) Permanent/Fixed labourer | b) Skilled | (2) |
|-----------------------------|------------|-----|

1.5 PICTURE E

- | | | |
|---------------------|---------------------------|-----|
| a) Casual labourers | b) Unskilled/semi-skilled | (2) |
|---------------------|---------------------------|-----|

7. AGRICULTURAL MANAGEMENT

ACTIVITY 7.1

FIND THE WORD THAT IS SPELLED INCORECTLY IN EACH OF THE SENTENCES AND MAKE IT CORRECT

- 1) Accumulates is the process of bringing produce from different farms to a central point to facilitate marketing.
- 2) Standard the process is made easier if products are graded and ensures that consumer services the quality expert.
- 3) Some aspects will be the farmers 'direct responsibility while others might be insourced to a specialised business.
- 4) The higher the price, the less people will dimand a certain item.
- 5) The way the price changes a demand or supply is elastic.
- 6) This is called the equity price.
- 7) The process of moving the goods along this route is known as distributing.
- 8) Niech marketing focus is on selling to small segment of the market.
- 9) Eco-labels practice of putting labels onto product to promote them as environmentally friendly.
- 10)Price fitting is the artificial setting of prices.
- 11)The structures that control sales generally also control prices are stapple prices.
- 12)Lack of working capitec and finance to invest in infrastructure and equipment constrains marketing.
- 13)Providing storage facilities for agriculture produce to prevent oversuply.
- 14)Produssion costs are the first set of cost that the prices must cover.
- 15)Controlled marketing does not encourage inteprenurship.

ACTIVITY 7.1

Word search

Memo

- 1) Accumulation
- 2) Standardisation
- 3) Outsourced
- 4) Demand
- 5) Elasticity
- 6) Equilibrium
- 7) Distribution
- 8) Niche
- 9) Eco- labelling
- 10) Fixing
- 11) Stable
- 12) Capital
- 13) Oversupply
- 14) Production
- 15) Entrepreneurship

ACTIVITY 7.2

Choose one word from the box that matches each of the statements below

Storage, vision, selling, weakness, grading, processing, feasible, fluctuation, consolidation, mobilisation, threats, risk, Diversification, budget, supply, marketing mix, buying, political instability, competition

- 1) Management is sales –volume oriented.
- 2) Convert raw agricultural product into consumable commodities.
- 3) Holding raw product and supplies of finished product until they are needed.
- 4) Sorting agricultural products according to set standard.
- 5) The amount of a producer is willing to and able to give the market for a certain price.
- 6) Aspect such as civil wars, labour disputes can affect the supply of local and imported raw material.
- 7) The threat of a negative occurrence.
- 8) Combination of product, pricing, placement, and promotion.
- 9) Change in price with a change in supply or demand of a product.
- 10) Minimising risk by being involved in a number of different enterprises.
- 11) Combining small adjacent fields to make one large field.
- 12) Document that provides an estimate of expected income and expenditure for a certain period.
- 13) Acquiring goods for cash.
- 14) Products becoming unfashionable.
- 15) It is going to be possible to implement an idea successfully.

ACTIVITY 7.2

Memo

- 1) Selling
- 2) Processing
- 3) Storage
- 4) Grading
- 5) Supply
- 6) Political stability
- 7) Risk
- 8) Marketing mix
- 9) Fluctuation
- 10) Diversification
- 11) Consolidation
- 12) Budget
- 13) Buying
- 14) Threats
- 15) Feasible

GOOD LUCK!!!!