

Tuesday 14 April

Hello my awesome grade 11's!!! I miss you all so very much – I hope you are keeping well and staying safe!! With the extended lock-down, I have decided to send you summaries of our next section. Chapter 7: Nutrition and Nutrients. (page 67 in your textbooks).

If you have left your workbook and your textbook at school, do not panic!! 😊 (The summaries cover everything!!) I am going to form a WhatsApp group for the grade 11 Consumer Studies learners. **Note: This is NOT a social platform – it is for me to send voice messages with short explanations and for you to ask content-related questions only.** Please check with your parents before sending me your cell number – they have to give their approval. Please load this number: Mrs Thorne: 082 558 7404. This number is exclusively for the grade 11 Consumer Studies learners to use and may not be passed on to anyone else. Please send through your contacts ASAP, so we can get going.

I will set up the group ASAP. **(Please note: you may not send me someone else's number without their and their parent's permission)**

Here is a time line that I suggest you follow for our subject. (I have done this because I do not want you to feel overwhelmed – we have to help you balance all your subjects)

Note: please do not be lazy: write out the summaries – you need to know these nutrients well for grade 11 and 12 – the only way to learn them is to REPEAT, REPEAT, REPEAT until you remember them. So, writing them out is the first step to conquering the nutrients. (Also, you will not need to do your own summaries if you have mine written into your books)

I tried to make the vitamins a little more fun by writing the info into the letters.

If you prefer a table format, then by all means, feel free to use a table format when copying down the information. Do what works for YOU!!!

On the summaries, note the following:

The **green F** = Functions

The **pink S** = Sources (foods that contain the nutrient)

The **blue D** = Deficiency (what happens if you have too little of the nutrient)

The **orange E** = Excess (what happens if you have too much of the nutrient)

Wed 15 April:	Make a heading: "Nutrients" in your book. Write the date too. Copy summary pages: 1,2, 3 and 4 into your theory books. (Vitamins A, D and E) <i>If you have left your book at school, please write it onto paper (keep the papers safe so you can stick them into your book when we go back to school)</i>
Thurs 16 April:	Copy pages: 5, 6, 7 and 8 into your theory books. (vitamins K, B1 and B2)
Fri 17 April	Copy pages 9, 10, 11 and 12 into your theory books. (vitamins B3, B9, B12 and C)
Mon 20 April	Voice note will be sent to explain Vitamins A, D and E
Tues 21 April	Voice note will be sent to explain Vitamins K, B1 and B2
Wed 22 April	Voice note will be sent to explain Vitamins B3, B9 and B12
Thurs 23 April	Voice note will be sent to explain Vitamin C New summaries will be posted onto the website for the next nutrients along with further instructions.

I imagine you are all a little worried about your grade 11 year, and I can understand that, but for now, let's not worry about the unknown and things we can't control. Let's rather focus on what we CAN do. We can conquer our next section together. You are not facing this alone – we will get through it together!!

(The summaries follow after this letter.)

Please look after yourselves and stay safe.

Much love,

Mrs Thorne

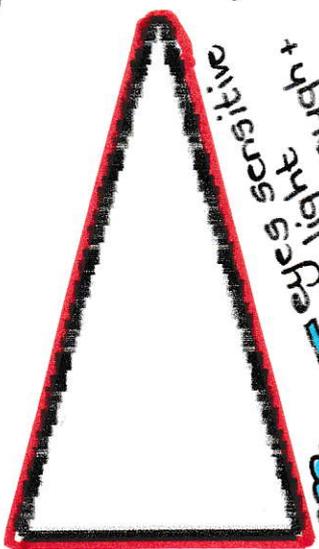
①
Fat - Soluble

Vitamins

RETINOL (F.S.)



- ▲ protect retina
- ▲ ≠ night blindness
- ▲ lining $\left\{ \begin{array}{l} \text{eyes} \\ \text{lungs} \end{array} \right.$
- ▲ growth + reproduction



retinal sensitive
+ dry rough
cracked
= low resistance



- liver
- cod liver oil
- cheese
- butter
- retinol $\left\{ \begin{array}{l} \text{carrots} \\ \text{apricot} \\ \text{butternut} \end{array} \right.$



✦ yellow skin
✦ nausea + vomit

CALCIFEROL (F.S.)



▲ absorption: calcium
▲ strong bones/teeth
 ↓
 + calcium
 + phosphorus



- Animal:
 - cod liver oil
 - egg yolk
 - liver
- Sunlight:
 - ergosterol (fat): UV → Vit D



- ≠ absorb calcium.
- Rickets (child)
- Osteomalacia (adult)



- + Nausea
- + Diarrhoea
- + Loss appetite
- + Kidney Stones

TOCOPHEROL (F.S.)



- ▲ anti-oxidant
- ▲ protects cell membranes



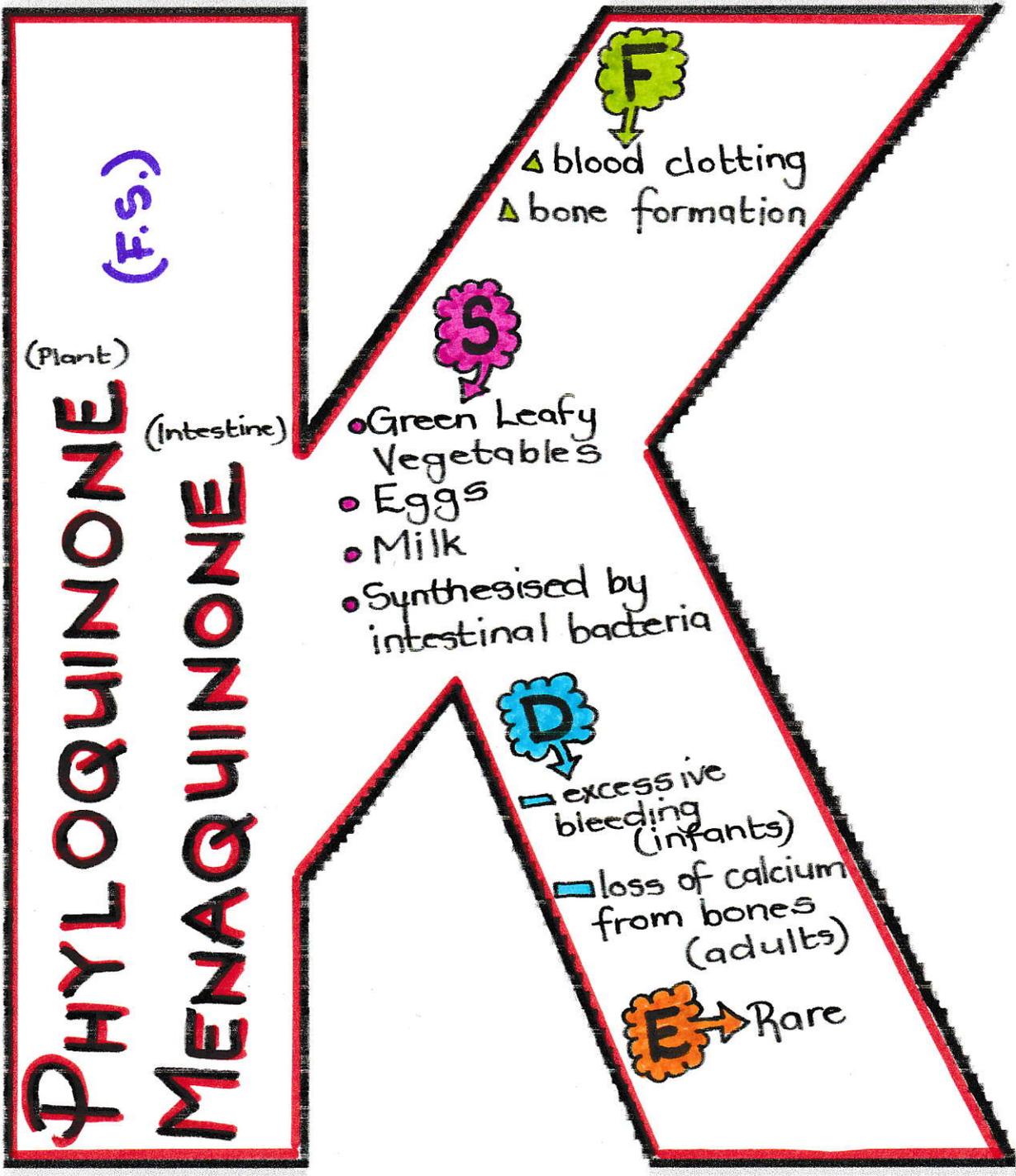
- Plant Oils
- Margarine
- Nuts
- Wheat Germ



— blood cells may rupture



+ rare: relatively non-toxic



Water - Soluble Vitamins



Δ metabolism {protein, carbohydrates, fats} +

Δ growth

Δ nervous system

(w.s)

THIAMINE



- Whole wheat products
- Legumes
- liver
- meat



- Beriberi
- Fatigue
- Depression/Irritability
- Nerve problems



N/A



RIBOFLAVIN (w.s)

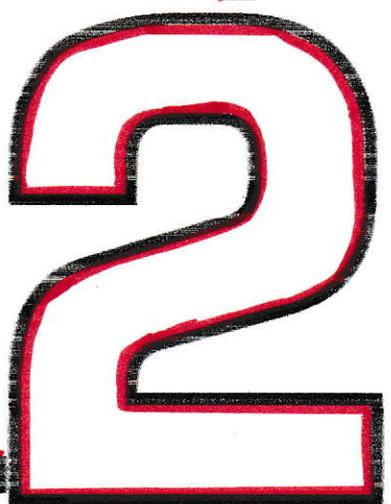
R → metabolism ← protein
carbohydrates } et
fats

- ▲ growth
- ▲ skin (nose/mouth) health

- S** →
- Meat / Poultry / Fish
 - Eggs
 - Green Leafy Vegetables
 - Milk
 - Dairy

- D** →
- cracked skin ← mouth
 - eyes: sensitive: light
 - growth hindered

E → N/A



NICOTINIC ACID

(W.S.)

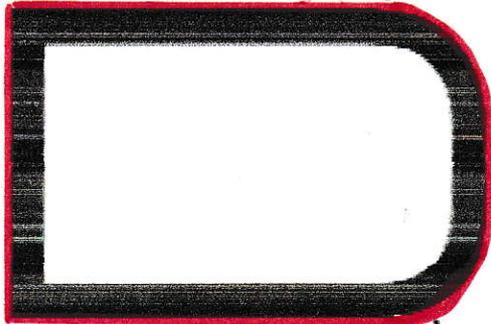
NIACIN



- △ metabolism ← protein, carbohydrate, fats
- △ growth
- △ skin health
- △ normal ← digestive systems, nervous



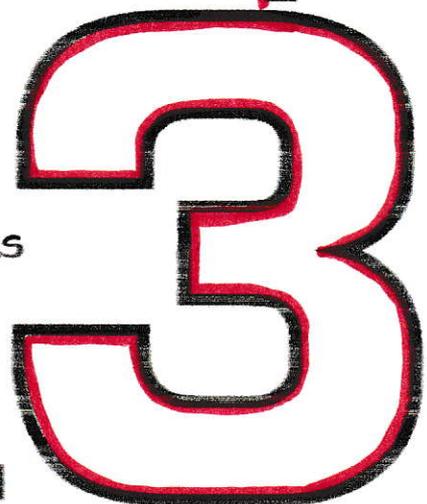
- meat / poultry / fish
- yeast
- peanuts
- legumes
- whole wheat products



- Pellagra ← diarrhoea, dermatitis, dementia



→ N/A



(FOLACIN)
(FOLATE)

(W.S.)

FOLIC ACID



- ▲ Production: red blood cells
- ▲ DNA development
- ▲ Cell growth
- ▲ Tissue formation



- liver
- green leafy vegetables
- whole grain
- oranges



N/A



- = anaemia
- = pregnancy: fetus

↓
Spina Bifida
(brain & spinal cord } ≠ develop properly)



COBALAMIN (VIT. B12)



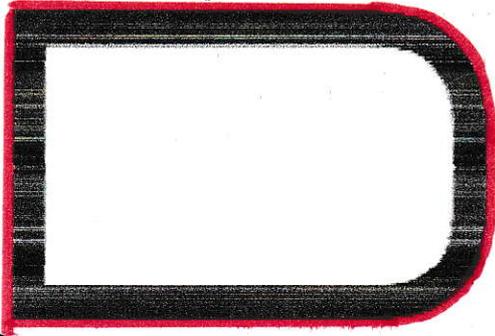
- ▲ Red blood cell formation
- ▲ Normal function
 - nervous system
 - digestive



NO ANIMAL SOURCES



- liver
- kidney
- meat/poultry/fish
- milk
- dairy



— Anaemia



N/A



ASCORBIC ACID

(V.C)



- ▲ connective tissue ← form
- ▲ wound healing ← maintain
- ▲ resistance to infection
- ▲ absorption of iron
- ▲ anti-oxidant



- guava
- berries
- citrus
- cabbage
- strawberry
- tomato
- peppers



- scurvy ←
 - bleeding gums
 - skin lesions
 - weight loss
- poor wound healing
- low resistance to infection



+ diarrhoea (low risk)