

3.2 AKTIVITI PERBINCANGAN

Kepentingan nutrien
Importance of nutrients

PBD
Kontekstual

Buku teks m/s 46 – 50

1 Complete the table below by stating the nutrients based on their functions. **TP2**

Nutrien/Nutrients	Fungsi/Functions
(a)	<i>Builds haemoglobin in the red blood cells</i>
(b)	<i>Hardens the enamel of teeth</i>
(c)	<i>Production of hormones by the thyroid gland</i>
(d)	<i>Needed for blood-clotting</i>
(e)	<i>Maintains the functions of the nervous system</i>
(f)	<i>Build strong bones and teeth</i>

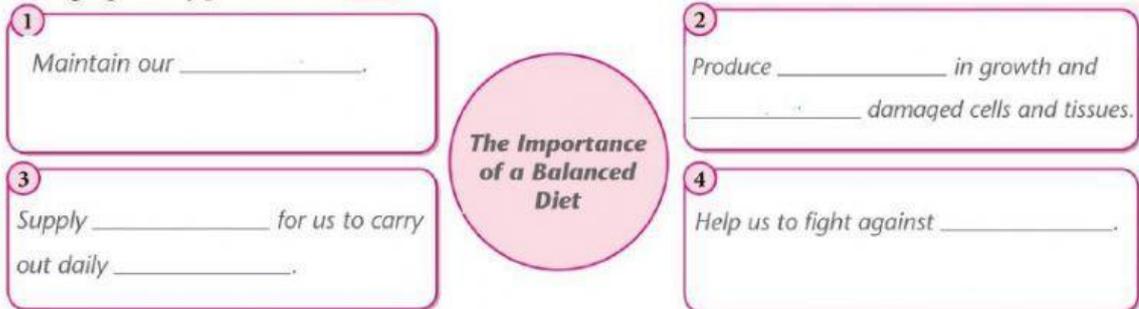
3.4 AKTIVITI PERBINCANGAN
KBAT STEM

Gizi seimbang
Balanced diet

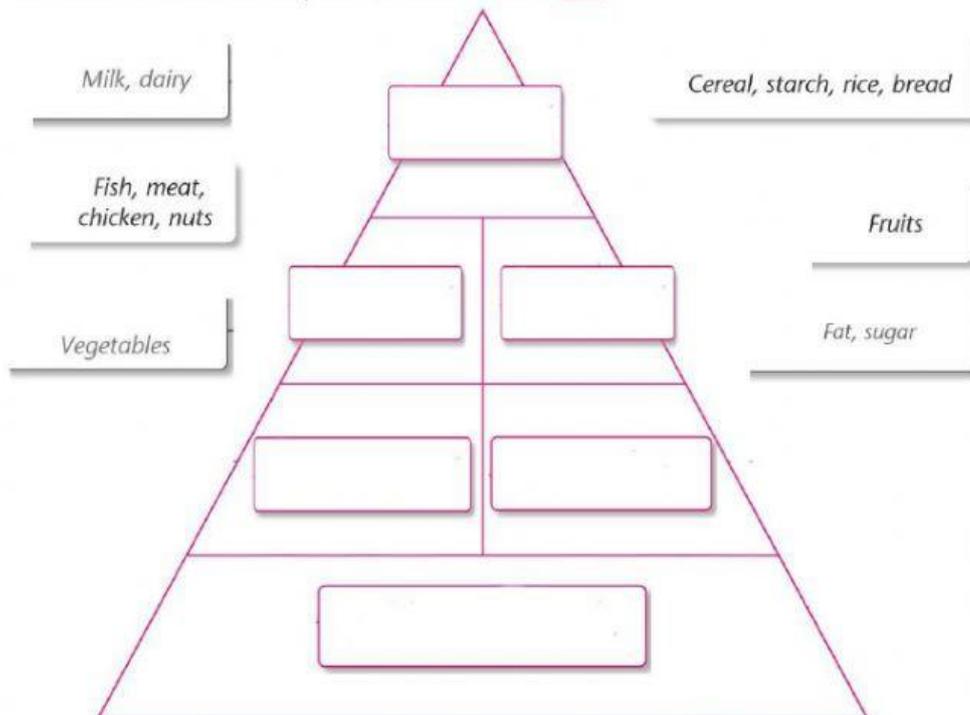
PBD
Kontekstual

Buku teks m/s 53 – 59

2 Complete the diagram below. **TP2**



3 The diagram below shows a food pyramid. Fill in the blank with the examples of food at each level. **TP1**



Factors that affect the Balanced Diet TP2



Age

At infant stage, protein calcium and phosphorus are needed in big quantity for the growth of new cells, bones and teeth.

At childhood or teenage stage, a person needs a lot of carbohydrate as they are very active.

At old age, a person needs less protein and carbohydrate but needs more calcium to strengthen his bones.

Growing children and teenagers need _____ carbohydrates to provide _____ and protein for growth.



Gender

In general, _____ needs more carbohydrate and protein compared to _____.

Men usually do more heavy _____ activities compare women. _____ need _____ energy than women



Occupation or activity

People involved in occupations or activities which require physical strength (such as athletes and construction site workers) need more _____ to give them energy and also more _____ to build strong muscles.

People do _____ work need higher dietary compare to those who work in office.



Body size

_____ body size requires more carbohydrate as it needs to generate more energy to carry out activities.



Climate

People staying in _____ climate regions consume more fat and carbohydrate to keep their body warm.

They release more heat to environment. Therefore, they need more energy to maintain their body temperature



State of health

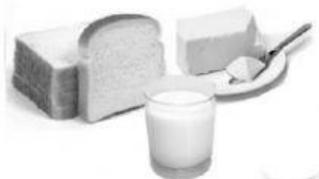
People who are sick need to adjust their diet so that the diseases will not be worsened. A diabetic patient cannot take too much starch as this will increase the blood sugar level. Patient need more nutritious food because they need more energy to heal

1 The table below shows the calorific values in one gram of carbohydrate, protein and fat.

Classes of food	Carbohydrate	Protein	Fat
Calorific values of the food per gram (kJ/g)	17.2	22.2	38.5

A boy took 100 g of carbohydrate, 60 g of protein and 5 g of fat as his breakfast.

Calculate the calorific value taken by the boy for his breakfast. TP3/KBAT



$$\begin{aligned} \text{Calorific value of carbohydrate} &= 17.2 \text{ kJ/g} \times 100\text{g} \\ &= 1720 \text{ kJ} \\ \text{Calorific value of protein} &= 22.2 \text{ kJ/g} \times 60 \text{ g} \\ &= 1332 \text{ kJ} \\ \text{Calorific value of fat} &= 38.5 \text{ kJ/g} \times 5\text{g} \\ &= 192.5 \text{ kJ} \end{aligned}$$

$$\begin{aligned} \text{Calorific value} &= 1720 + 1332 + 192.5 \\ &= 3244.5 \text{ kJ} \end{aligned}$$

2 The table below shows the calorific values in one gram of carbohydrate, protein and fat.

Classes of food	Carbohydrate	Protein	Fat
Calorific values of the food per gram (kJ/g)	17	17	37

Based on the table above, calculate the calorific value for each of these classes of food. TP3

Mentega kacang
Peanut butter

Nilai kalori untuk satu hidangan
Calorific value per serving

Satu hidangan
Per serving

Lemak / Fats	16 g
Karbohidrat / Carbohydrates	7 g
Protein / Proteins	8 g

Tenaga dalam: / Energy in:

(a) Lemak / Fat: _____

(b) Karbohidrat / Carbohydrate: _____

(c) Protein / Protein: _____

Jumlah tenaga satu hidangan: / Total energy in one serving:

Roti putih
White bread

Nilai kalori untuk satu hidangan
Calorific value per serving

Satu hidangan
Per serving

Lemak / Fats	4 g
Karbohidrat / Carbohydrates	49.7 g
Protein / Proteins	0.5 g

Tenaga dalam: / Energy in:

(a) Lemak / Fat: _____

(b) Karbohidrat / Carbohydrate: _____

(c) Protein / Protein: _____

Jumlah tenaga satu hidangan: / Total energy in one serving:
