

HEALTHY & SUSTAINABLE LIFESTYLE (LEVEL 3)


Description	Learners will be introduced to recommendations on how to maintain physical and mental health, and then will be asked to implement those and monitor along the way
Leading Question	Is my family leading a healthy and sustainable lifestyle?
Subjects	Math and Science (Health)
Total Time Required	~7 hours over 8 days
Supplies Required	Paper and pencil.
Learning Outcomes	Learners should be able to: <ol style="list-style-type: none"> 1. Recognize the importance of maintaining physical and mental health. 2. Demonstrate the ability to record and analyze data in tables and graphs. 3. Effectively communicate their findings and discussions to their family 4. Illustrate the skill of calculating averages from collected data. 5. Apply the knowledge of key elements of a healthy lifestyle, including sleep, diet, exercise, and emotional well-being. 6. Comprehend the concept of balanced and healthy meals, including food groups and proportions. 7. Understand the importance of gratitude and emotional expression in mental health. 8. Understand and correctly finding out the Median, Mean, Range and Mode of a data sets
Previous Learning	Arithmetic operations with decimals and fractions
Supervision	Self guided for the first three days

DAY 1

Today you will learn about how to keep a healthy body and mind!

Suggested Duration	Activity and Description
10 minutes	<p>In this project, we will look at the various aspects of a health nourishing lifestyle, which helps to maintain physical health and mental health.</p> <p>Physical health is maintained through a balance of: eating, working out, and sleeping.</p> <p>Mental and psychological health can be maintained by having self-esteem, optimism, gratefulness, expressing feelings to people we trust, and having a life purpose and goals.</p>

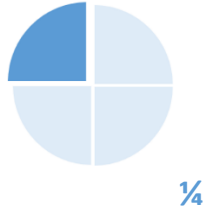
	<p>Suggested mental health activities:</p> <ul style="list-style-type: none"> • Express feelings, to those you trust, without hurting others. • Try to be optimistic during hard times by focusing on the big picture and on positive aspects, as lessons learned. • Regularly recall what you are grateful for. • Always check on and review your purpose and goal in life: <ul style="list-style-type: none"> - What do I want to do when I grow up? - How will that help other people, or our planet? 																																
<p>15 minutes</p>	<ul style="list-style-type: none"> • Sleeping habits: <ul style="list-style-type: none"> - Hours of sleep (recommended 9 to 11 hours for this age) • How many hours did you sleep last night? Is the duration within the recommended range? • On a piece of paper, draw a weekly log as shown below and hang it on the wall in your bedroom to note down the data on it everyday. <table border="1"> <thead> <tr> <th>Day</th> <th>time I went to bed</th> <th>time I woke up</th> <th>Sleep duration</th> </tr> </thead> <tbody> <tr> <td>Monday</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Tuesday</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Wednesday</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Thursday</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Friday</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Saturday</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Sunday</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>*Once you have the data filled for 1 whole week, calculate the Mean (average) and Median of your daily sleep duration:</p> <p>Mean = $\frac{\text{Sum of sleep duration for 7 days}}{7}$</p> <p>Median: is the middle value after organizing the values in an ascending order.</p>	Day	time I went to bed	time I woke up	Sleep duration	Monday				Tuesday				Wednesday				Thursday				Friday				Saturday				Sunday			
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	<p>Reflection</p> <p>Once you have the data filled for 1 whole week, you will reflect on the following questions:</p> <ul style="list-style-type: none"> - Are you having enough sleep every night (between 9 and 11 hours)? - Are you going to sleep before 9 pm every night? - What do you need to do to make sure you go to bed before 9 pm and have 9-11 hours every night? <p>In case some of the reasons for you not going to bed before 8 pm are beyond your control e.g late supper time, you should discuss with the responsible family member giving reasons why you need to sleep before 8 pm.</p>
<p>20 minutes</p>	<p>Eating habits</p> <p>My Healthy Plate is a friendly easy-to-understand visual guide for creating balanced and healthy meals. It shows you what to eat in the right amounts for each meal, so that you can practice good eating habits.</p> <p>The Healthy Plate below was created by nutrition experts at Harvard School of Public Health. The My Healthy Plate should be accompanied by water</p> <div style="text-align: center;">  </div> <p>Source: https://www.gasolfoundation.org/en/downloadable-healthy-plate/</p> <ul style="list-style-type: none"> ● Reflect on the food you ate yesterday and categorize it under the four food types below: grains, vegetables (veggies), fruits and proteins. ● Record your findings in the table below

Food type	Food you ate yesterday
Grains	
Fruits	
Proteins	
Vegetables	

- Compare the type of food you ate yesterday (indicated in the table) to the proportions shown in the My Healthy Plate*:

- $\frac{1}{4}$ Grains (bread, rice, pasta, ...)
- $\frac{1}{4}$ Protein (beans, fish, eggs, meat)
- A little more than $\frac{1}{4}$ Vegetables
- A little less than a $\frac{1}{4}$ fruits
- Use healthy oils with the food



$\frac{1}{4}$

one quarter is one of 4 similar parts

- *It is worth mentioning that traditional ways of eating are the ideal guide to good food and good health. The above is just a modern universal suggestion of a healthy diet. See examples of [Traditional Diets](https://oldwayspt.org/) adapted from <https://oldwayspt.org/>


Drinking water

The human body is about 60% water. The body constantly loses water throughout the day mostly through urine, sweat and from regular body functions like breathing. To prevent dehydration, you need to drink a lot of water even if you are not thirsty.

Health experts recommend:

- 8 glasses (1.5 liters) for 9 to12 year olds
- 10 glasses (2 liters) for 13+ years (assuming 200 ml /glass)
- **Do you usually drink as much as recommended daily?**
- Draw a table like the one below to monitor your daily eating habits.
- In the first column, answer with a Yes or No.

- In the second column, draw a glass of water every time you drink one.



Day	Was my food intake balanced as in the Healthy Plate diagram?	Number of glasses of water per day
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Sunday		

Then calculate the mean, median, range and mode of the number of water glasses you drink per day.

The range = Highest – Lowest

Mode: is the most frequent number.

- At the end of the week, present the compiled results to the family and discuss the below questions:
 - What was the total number of Yes, versus No answers?
 - Did you drink enough water every day?
 - What do you need to do to improve your eating and drinking water habits to make them more health nourishing?
 - Should you change the time of your meals, cooking patterns, or ingredients?

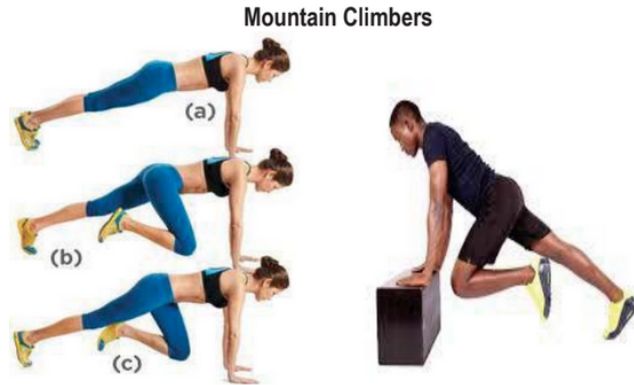
20 minutes

Physical workout

- From the World Health Organization (WHO):
 - Children and youth aged 5–17 should accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity daily.
 - Amounts of physical activity greater than 60 minutes provide additional health benefits.
 - Most of the daily physical activity should be aerobic. Vigorous-intensity activities should be incorporated, including those that strengthen muscle and bone, at least 3 times per week.

Source: <https://www.who.int/dietphysicalactivity/global-PA-recs-2010.pdf>

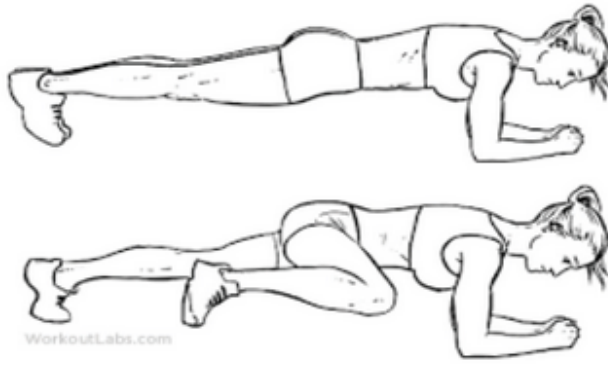
- As mentioned above, you are required to do physical activity daily, and to show your daily exercise time on a bar graph like the one below:
- Aerobic activity examples that can be done indoors.



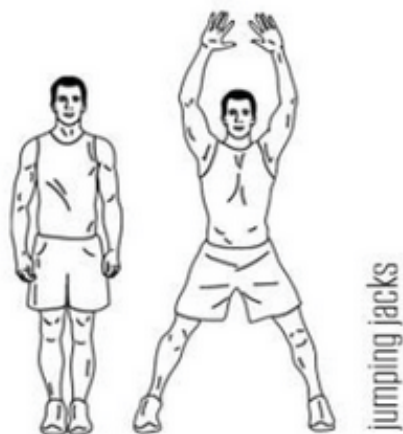
Full Burpee OR Half Burpee



Plank Knee to Elbow

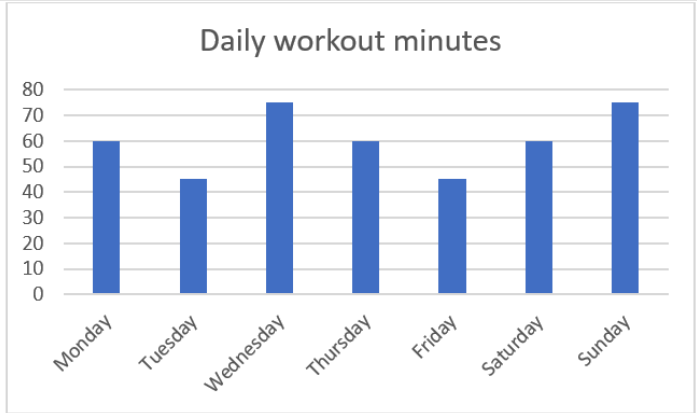


Jumping Jacks



15 minutes You are required to workout daily at home, or outside keeping a far distance from others, and to note down the time of your daily workout minutes in a table like the one below, in order for it to be shown on a graph like the one below:


Day	Workout minutes
Monday	60
Tuesday	45
Wednesday	75
Thursday	60
Friday	45
Saturday	60
Sunday	75



DAY 2

Today you will learn about physical exercise you can do at home.

Suggested Duration	Activity and Description
15 minutes	<ul style="list-style-type: none"> Let's start today with a mental health check <ul style="list-style-type: none"> Recall at least 3 things that you are grateful for. Express each in one or more words. You may also draw a representation of it. Being Grateful means being highly appreciative and showing kindness.

<p>45 minutes</p>	<ul style="list-style-type: none"> Observe 3 family members and note down how many times they touch their face in 15 minutes. You must tell them and get their consent that you will be observing them for an experiment that is beneficial for them. Then wait for some time before you start the 15-minute observation time to ensure that they do it naturally as usual. <ul style="list-style-type: none"> Observe one family member at a time. Note down the times they touch their face using a tally chart and write it in the below table. When collecting the information, for every touch of the face, a line would be drawn in the correct box. When you get to five lines, the fifth line needs to be crossed through the first four. (This makes counting the lines at the end easier!). See below how after reaching 4 counts, the fifth is concluded with a crossed line. See the examples below for a 4 followed by a 5. <div style="text-align: center;">  </div> <table border="1"> <thead> <tr> <th>Family member</th> <th>No. of times they touch their face in 15 minutes</th> <th>Estimate for 1 hour</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table> <ul style="list-style-type: none"> In the above table, you must multiply by 4 the Number you counted in 15 minutes, and the answer will be the estimate for 1 hour. 	Family member	No. of times they touch their face in 15 minutes	Estimate for 1 hour									
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<p>15 minutes</p>	<ul style="list-style-type: none"> Show the results to family members. Ask them if they expected this? Now knowing the estimate of how much they touch their face in an hour, what will they do the next time they go out? They must be careful not to touch their face when their hands are not washed in order to eliminate the chances of catching the Covid19 infection 												
<p>All day long</p>	<ul style="list-style-type: none"> Remember to: <ul style="list-style-type: none"> Record data on the daily eating habits table Fill in the Sleeping log Conduct your daily workout and note down the time in the table Did you record the data from yesterday? Have you faced any difficulties doing that? 												

DAY 3

Today you will continue your healthy and sustainable lifestyle with a mental health check.

Suggested Duration	Activity and Description
15 minutes	<ul style="list-style-type: none"> Mental health check <ul style="list-style-type: none"> We must always check on and review our purpose and goal in life: What do you want to be when you grow up? How will that help other people, or our planet?
30 minutes	<ul style="list-style-type: none"> Solve the Data handling Worksheet without using a calculator, then share your work and answers with your parent. Criteria: logically following the formulas and reaching correct answers.
10 minutes	<ul style="list-style-type: none"> Present your work and answers to parents. <p>Answer Key</p> <p>1.c 8.86 or $8\frac{6}{7}$ °C</p> <p>2.a 1</p> <p>b 4</p> <p>3. 13.7 seconds</p> <p>4. a 50.89 or $50\frac{8}{9}$ matches</p> <p>b. 49</p> <p>c. 5</p> <p>d. 52</p>
All day long	<ul style="list-style-type: none"> Reminder to: <ul style="list-style-type: none"> Record data on the daily eating habits table Fill in the Sleeping log Conduct your daily workout and note down the time in the table

DAY 4

Today you will continue your healthy and sustainable lifestyle with a mental health check, physical exercise and monitoring your eating habits.

Suggested Duration	Activity and Description

20 minutes	<ul style="list-style-type: none"> ● Mental health check <ul style="list-style-type: none"> - Do you sometimes have strong feelings that you like to tell someone about? Feelings like fears, worries, sadness, pride...? - To whom do you usually express your feelings? - Is there anything you want to talk about today?
60-70 minutes	<ul style="list-style-type: none"> ● Do a 1-hour workout at home ● Monitor daily eating habits and record scores in the respective table ● Write their sleeping hours in the sleeping log

DAY 5-7

Today you will continue your healthy and sustainable lifestyle with a mental health check, physical exercise and monitoring your eating habits.

Suggested Duration	Activity and Description																																											
60-70 minutes	<ul style="list-style-type: none"> ● Do a 1-hour workout at home ● Monitor daily eating habits and record scores in the respective table ● Write their sleeping hours in the sleeping log <p>Weekly food menu</p> <p>Develop a weekly food menu for the family using locally available affordable foods which can enable you and the family members to select a My Healthy plate</p> <table border="1"> <thead> <tr> <th>Day of week</th> <th>Fruits options</th> <th>Vegetables options</th> <th>Proteins options</th> <th>Grains options</th> </tr> </thead> <tbody> <tr> <td>Monday</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Tuesday</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Wednesday</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Thursday</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Friday</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Saturday</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Sunday</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Day of week	Fruits options	Vegetables options	Proteins options	Grains options	Monday					Tuesday					Wednesday					Thursday					Friday					Saturday					Sunday				
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Note: You can make use of Appendix 1: Building blocks of a healthy diet when developing the options for the weekly food menu.

DAY 8

Today you will show your parents what you've learned in the last week.

Suggested Duration	Activity and Description
15 minutes	<ul style="list-style-type: none"> Present to the family the sleeping log and the average sleeping hours that were calculated. <ul style="list-style-type: none"> Is the average duration within the recommended range? If not, what can be done to get your sleep within the recommended range?
15 minutes	<ul style="list-style-type: none"> Present to the family the Eating habits table, followed by a discussion. <ul style="list-style-type: none"> What was the total number of Yes versus No answers for the eating habits? What were the mean, median, range and mode of glasses of water you drank everyday? How can we improve our eating and drinking water habits to make them more health nourishing? Should we change the time of our meals, cooking patterns, or ingredients?
15 minutes	<ul style="list-style-type: none"> Present your workout table along with the graph showing the daily work out duration Calculate the average of your daily workout. Is the average close to 60 minutes? What can be done for you to complete 60 or more minutes of daily workout?
15 minutes	<ul style="list-style-type: none"> Reflection: <ul style="list-style-type: none"> What did you appreciate the most about this project? Do you think you can lead a lifestyle that helps you maintain mental and physical health? What were the family members willing to change and what were they reluctant to change? How can you help or teach someone else to maintain a healthy lifestyle?

Additional enrichment activities:	<ul style="list-style-type: none"> Create a journal of daily practices to be shared with friends. Lead daily workout sessions for the family Write down a suggested meal schedule for a week following the Healthy Plate model rations.
Modifications for simplification	The project can be reduced to the Healthy Eating plate, sleeping log and daily workout graph.

ASSESSMENT CRITERIA

A majority of my students were able to:

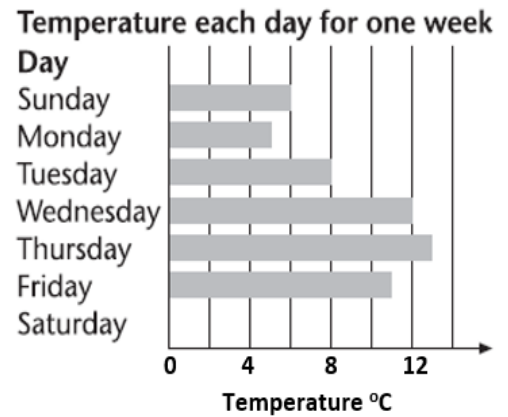
- Collect and record data accurately in tables and graphs.
- Calculate and understand averages from collected data
- Successfully created a balanced weekly food menu that aligns with the Healthy Plate model.
- Display a sense of ownership over their health and lifestyle choices and remained motivated throughout the project.
- Demonstrate a good understanding of healthy habits related to sleep, diet, exercise, gratitude, and emotional expression.
- Reflect on their habits, identified areas for improvement, and demonstrated a willingness to make positive lifestyle changes.

APPENDIX

DATA HANDLING WORKSHEET

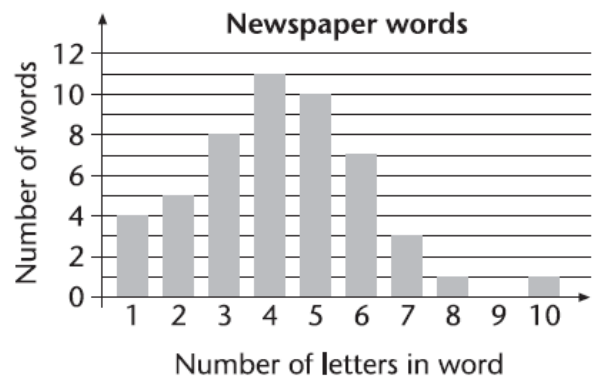
1. Here is a chart of the maximum temperature each day for a week in a Mediterranean city in January.

- The temperature on Saturday was 7°C. Draw in the bar for Saturday.
- Make a table showing the same information as on the bar chart.
- Calculate the Mean temperature for the week.



2. An article from the Gulf Times has 50 words in it.
Here is a bar chart of the number of letters in each word.

- What is the range of the number of letters in the words used?



b. What is the mode (most common number) of letters used in a word?

3. Bashir runs 100 metres ten times.

These are his times in seconds.

13.4	13.0	13.9	13.7	13.3
13.5	14.0	14.4	13.8	14.0

What is his mean time?

4. Alia counts the matches in nine matchboxes.

Here are her results for the nine boxes:

Number of matches in a box						
48	49	50	51	52	53	54
	✓	✓	✓	✓		✓
	✓	✓				✓
	✓					

- a. What is the median number of matches in a box?
- b. What is the mode for the number of matches in a box?
- c. What is the range of the number of matches in a box?
- d. Alia counts the matches in one more box.

She works out that the mean number of matches in all ten boxes is 51.
Calculate how many matches are in the tenth box.

TRADITIONAL DIETS



African Heritage Diet Pyramid



Illustration by George Middleton

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ASIAN HERITAGE DIET PYRAMID



Mediterranean Diet Pyramid

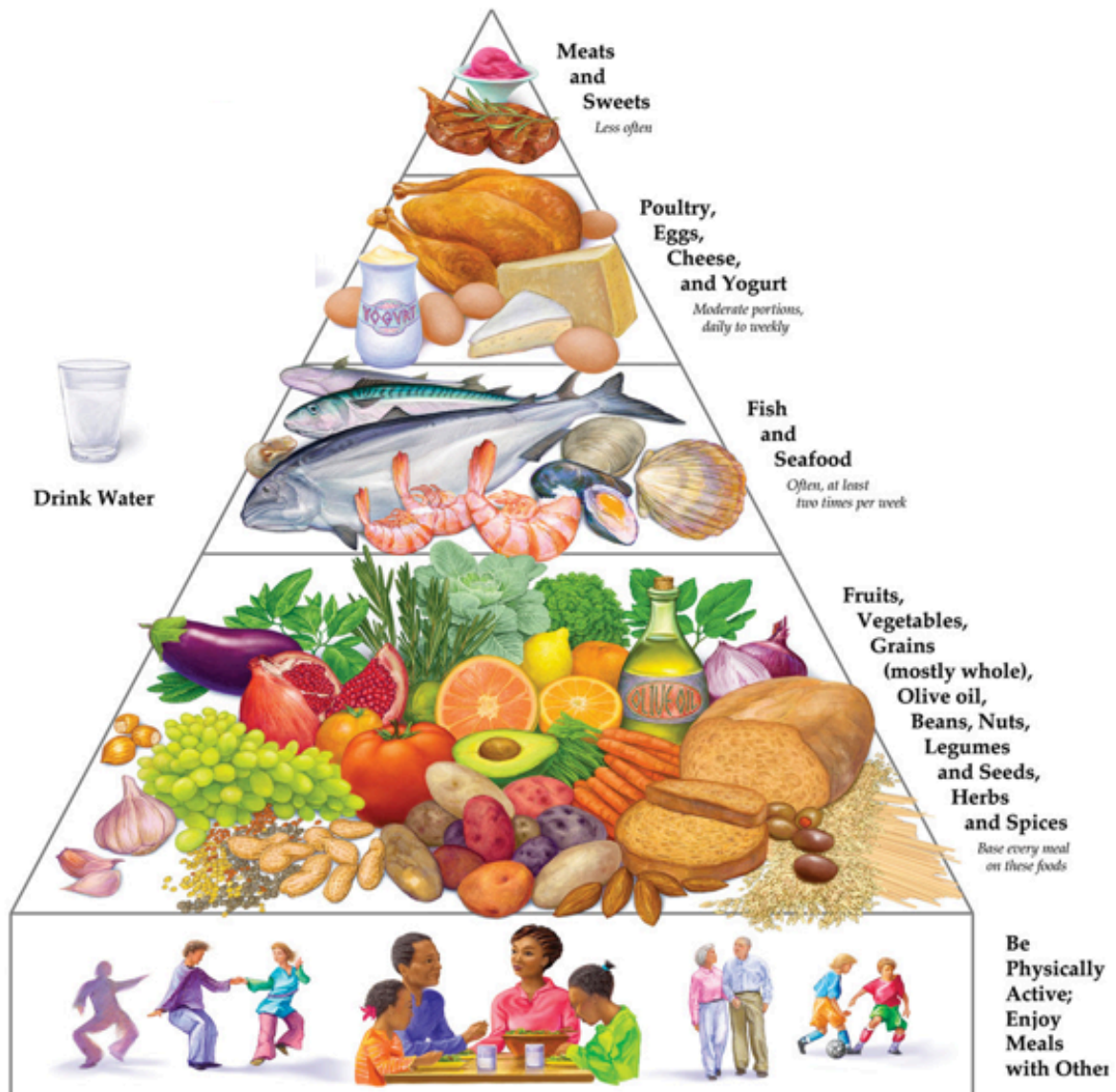




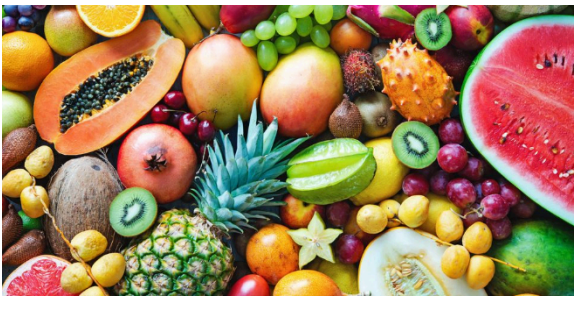
Illustration by George Middleton

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www.oldwayspt.org

<https://www.healthbeckon.com/healthy-vegetables/>

Appendix 1: Building blocks of a healthy diet

Food Type	Food type options
	<p>Vegetables: Vegetables protect us against heart disease and certain cancers</p> <p>Examples of vegetables: Cucumber, broccoli, cauliflower, asparagus, green beans, pepper, eggplant, spinach, tomatoes, banana, carrots, onions, squash, cabbage etc.</p>
	<p>Lean protein: Proteins help the body repair muscles and cartilage</p> <p>Lean protein sources: Chicken or turkey without skin, fish (salmon, tilapia) , lean cuts of beef or pork, beans, egg white, sea food, nuts, soy products, peanut butter etc.</p>
	<p>Fruits: Fruits provide important vitamins and minerals including potassium, vitamins A and C and folic acid. Vitamins help the body to fight diseases by boosting its immune system</p> <p>Examples of fruits include: Apples, bananas, blueberries, cherries, grapes, oranges, pears, strawberries etc.</p>



Whole grains: Whole grains are rich in carbohydrates (energy-giving), contain fiber and key nutrients such as iron, magnesium and folic acid.

Examples of whole grains include: brown rice, barley, millet, wheat, cereal, oatmeal, whole-grain bread etc.