



**Food**

**Science – Junior Cert**

**Quick Notes**

# Food

## Food

- *Food is one of the basic human needs and the digestive system enables the body to convert it into a form that is more suitable for use.*

## Food is

- A necessary **source of energy**
- A **growth material** for the body

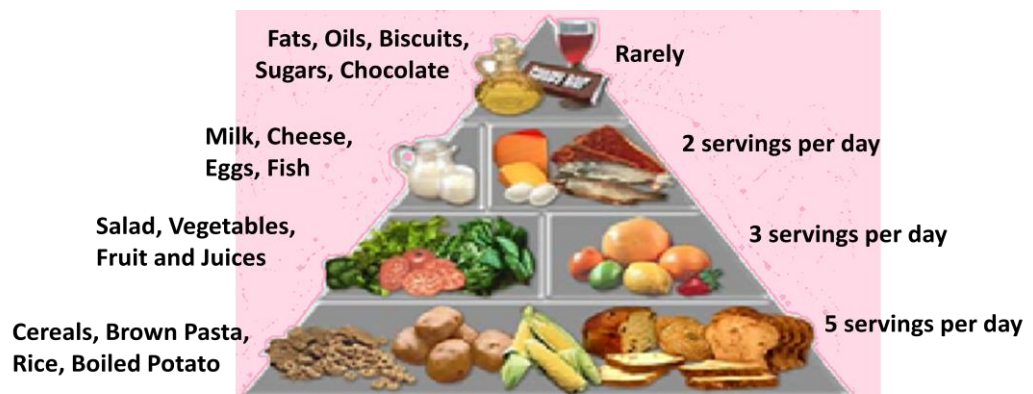
**Balanced Diet:** **the correct proportion of each food type** in your daily diet

## Constituents of a Balanced Diet:

Food Type	Function	Source
1. Carbohydrates	Sugars – quick energy source Starch – slower longer lasting source of energy Fibre – absorbs water, aids peristalsis, prevents constipation	Fruit, jam Bread, pasta, Vegetables, brown bread
2. Proteins	Growth and Repair	Lean meat, fish
3. Fats	Energy Store, insulation	Butter, oils,
4. Vitamins	C – prevents scurvy (bleeding gums) D – prevents rickets (soft bones)	Oranges Dairy products
5. Minerals	Iron – used to make haemoglobin for red blood cells Calcium – strong teeth and bones	Red meat, green veg.
6. Water	Solvent – carries glucose and other substances around the body – Medium for chemical reactions to take place in	Water

## Food Pyramid

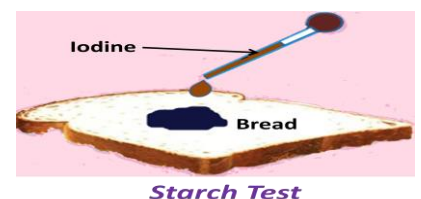
- The food pyramid shows us the relative amounts of each kind of food that we should eat
- At each level there are a number of examples of typical foods of that type



**Food Pyramid for a Balanced Diet**

## Food Tests

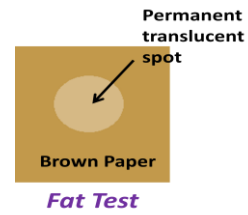
- **Starch:** e.g. **potato**, bread and pasta.
  - Add **iodine** solution
  - If **starch present it turns blue black**



- If **no starch present it stays brown.**

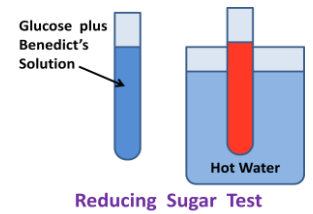
- **Lipid [Fat or Oil]:** e.g. **butter** or vegetable oil

- Rub on **brown paper**,
- If **lipid present** brown paper **remains translucent**



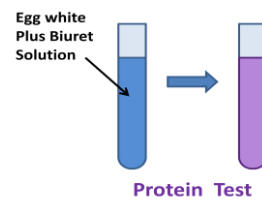
- **Reducing Sugar:** e.g. **glucose**

- Mix with **Benedict's Solution** and **heat gently (do not boil)**
- If **reducing sugar present** turns from **blue to red**



- **Protein:** e.g. **egg white**

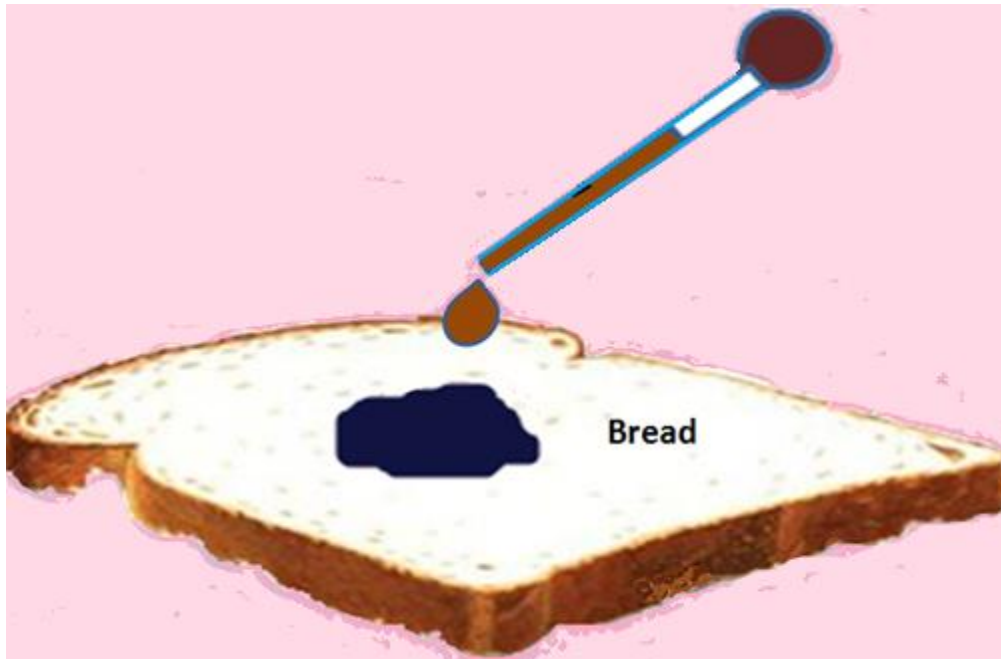
- Add **Biuret Solution** and shake
- If **protein present** turns from **blue to violet**



## Food Labels

- Energy values are given in **kilojoules (kJ)** or **kilocalories (kcal)** for each food group
- They are given **per 100g** (or as a %) and often per typical serving
- This enables one to **compare different foods**
- Women need 2000 kcal and men 2500 kcal per day

Typical Values	Amount per 100g	Amount per serving (202g)
Energy	300kJ/72kcal	606kJ/145kcal
Protein	1.4g	2.7g
Carbohydrates (of which sugars)	8.4g (6.5g)	16.9g 13.1g
Fat (of which saturates)	3.6g (0.3g)	7.3g (0.5g)
Fibre	0.6g	1.2g
Sodium	0.3g	0.9g



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