



# Radiation Hazardous

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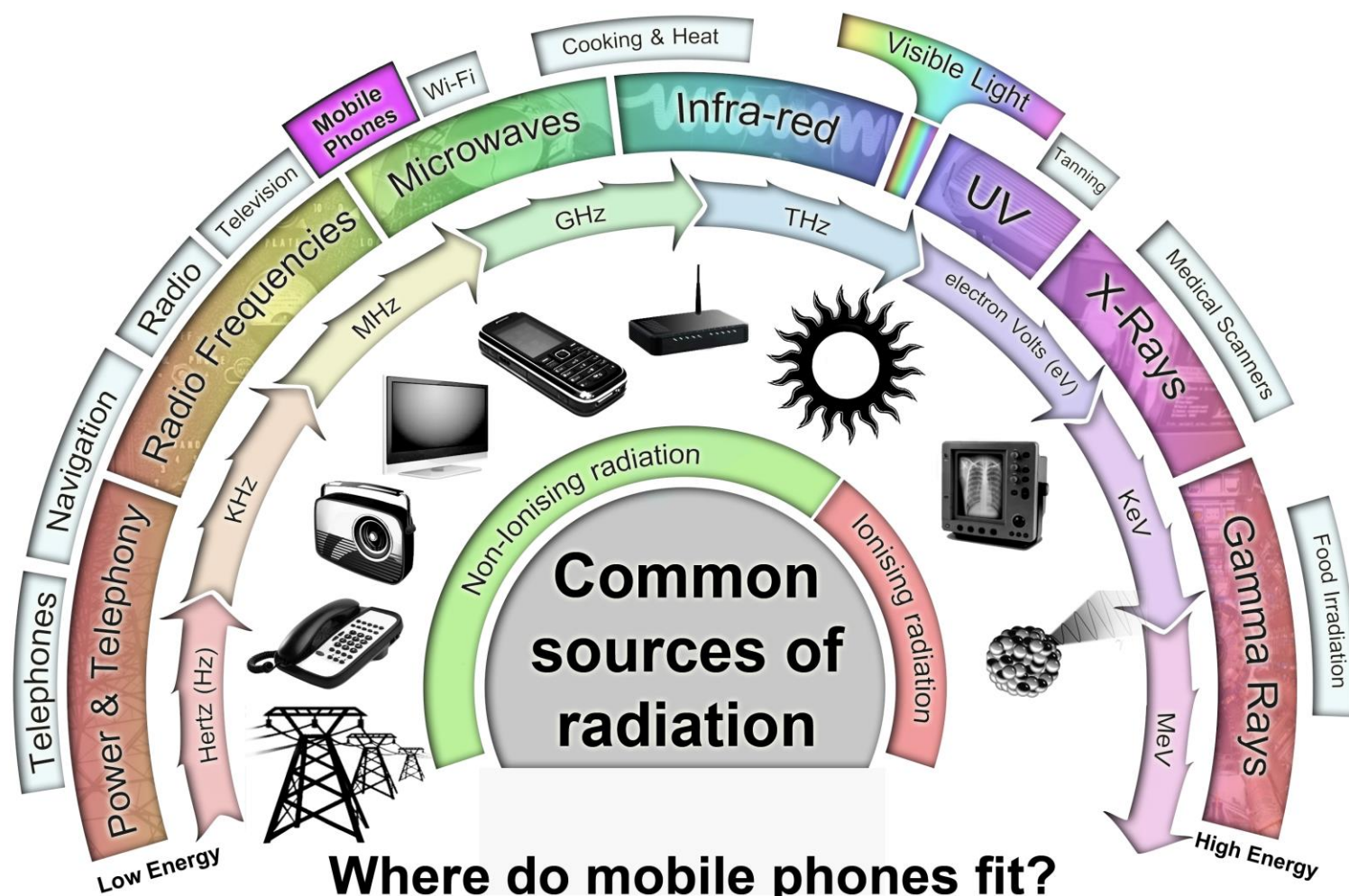


# Introduction

- **Radiation** is the emission of energy as electromagnetic waves or moving subatomic particles.
- Natural radiation comes from many naturally occurring radioactive materials found in soil, water, air and in the body. Every day, people inhale and ingest forms of radiation from air, food and water.



# Radiation Sources



Source: Science Media Centre



# Radiation Sources

1-**Natural** Sources of Radiation : it include

- ☐Cosmic Radiation
- ☐Radioactive Minerals
- ☐Radon and Thoron

2- **Man-Made** Sources of Radiation : it include

- ☐Medical Procedures
- ☐Military Activities
- ☐Industrial Applications









# Radiation test strategies for a manufacturer using third party dice



Pierre-Xiao WANG  
Match, 2016  
RADECS Workshop



# How Radiation Affects our Body?

1-Radiation can damage the DNA in our cells.

2-High doses of radiation can cause Acute Radiation Syndrome (ARS) or Cutaneous Radiation Injuries (CRI).

3-High doses of radiation could also lead to cancer later in life.



# Types of Radiation

1-Alpha Particles ( $\alpha$ )

2-Beta Particles ( $\beta$ )

3- Neutrons

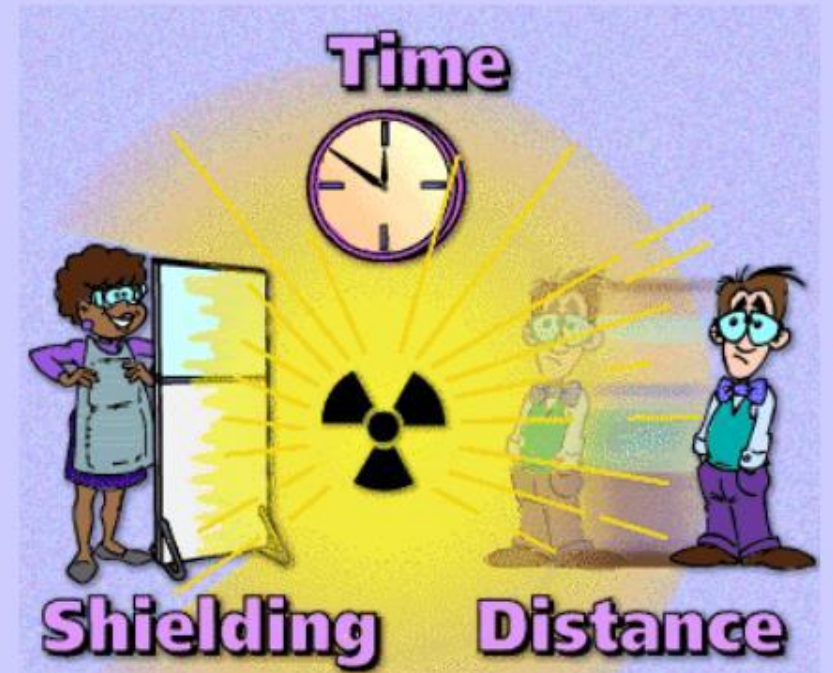
4-Electromagnetic Radiation (Gamma Rays and X-rays)





# CARDINAL RULES OF RADIATION PROTECTION

- TIME
- DISTANCE
- SHIELDING



# تذكر... السلامة أولاً!

