पुना International School

Shree Swaminarayan Gurukul, Zundal

Knowing our learning Process
Teaching methodology
of September and October 2019
Class IX

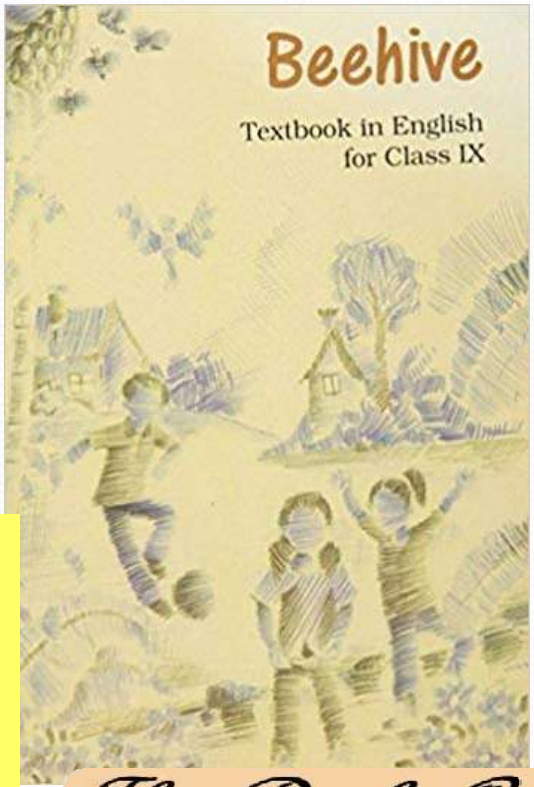
Subjects

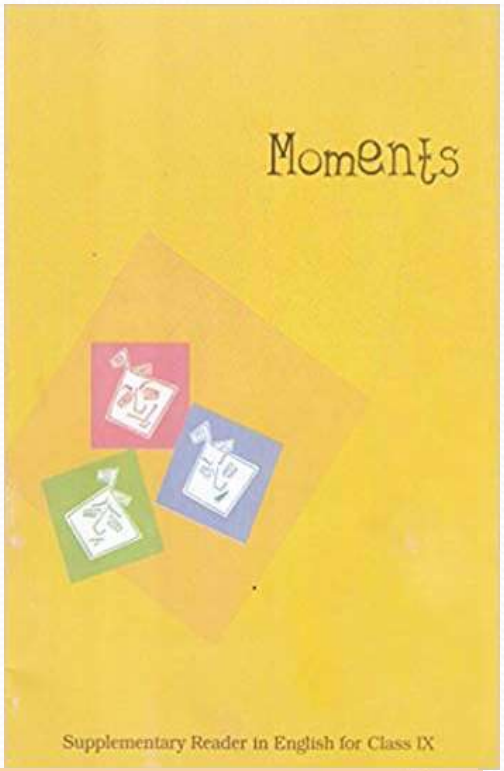
•Subject	Code
•English	184
•Hindi	085
•Mathematics	*041*
•Social studies	087
•Science	086

Glance at English lessons of September & October2019

se
Packing
Reach For the Top

etry
No Men Are Foreign
he Duck and The
Kangroo





Supplementary

L6 Weathering the Storm
in Ersama
L7 The Last Leaf

Teaching Methodology

1)Direct method

2)Skills involved

Listening

Reading

writing

Speaking

3)Steps involved

4)Group Activity
1) Spin-a-yarn
2) Debate
3) Reading

st of the
sson

otable work of
vriter/Poet

Word meanings
Vocabulary words

Sight
words

5) Writing work

6) Answer in 30-40 words

7) Answer in 100-150 words

8) Answer in 100-150 words

9) Correction work

10) Recapitulation

10) Weekly test

11) Remedial wo

12) Remedial

13) PA I &
assessm

14) Half Yearl
assessment

15) Yearly
assessment

Teaching Aids

Packing

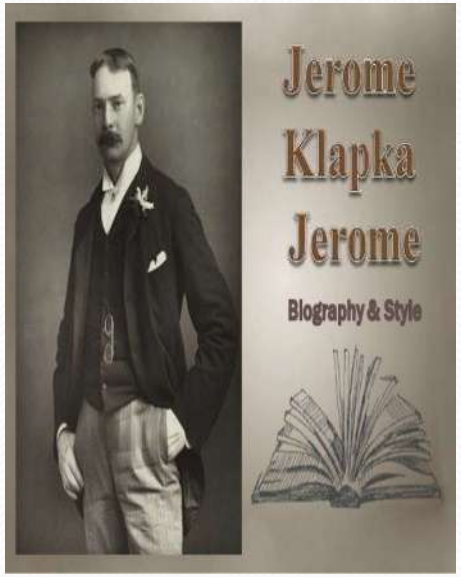
Flow chart

me
ook pride in
packing

s decided to go
y

were
essed because
he would pack

me intended to
over them



He packed but was informed that he forgot his boots

He started searching for tooth brush

George and Harry Finds cups broken

Harris packed strawberry Jam on top of tomato, squashed it

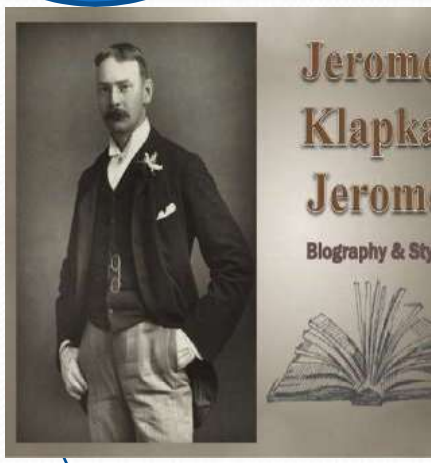
George and Harry upset Every thing. Montmorency Addede to the confusion,sat on things to be packed

Finally things packed

**utube
deo**

https://www.youtube.com/watch?v=RN65pKPUIsw

Flash Cards



Sight words

Pronunciation & Sentences

Argue Eventually
Curse Irritated
Intended Hilarious

PAPER STYLE

A Section	Reading skills	20 Marks
B Section	Writing with grammar	30 Marks
C Section	Literature TB & Extended Reading	30 Marks

Section A Reading **20 Marks**

Q1 : A factual passage 300-350 words 8 Marks

Q2 :A discursive passage 350-400 words with 4 short answer type to test vocabulary. 12 marks

Section B Writing and Grammar **30 marks**

Q3 : Writig an article/ descriptive paragraph(person place event /diary entry) in about 100-150 words 8 Marks

Q4: Writing a short story based on given outline 10 Marks

Q5 : Gap filling with one or two words to test preposition, articles, conjunctions and tenses 4 Marks

Q6 : Editing / Omission 4 Marks

Q7 : Sentence reordering / sentence transformation in context 4 marks

Paper style

Section C	**30 Marks**
Q8 : One out of two extract from prose/ poetry/ play . Four very short answer qs	**4 Marks**
Q9: Five short answer type qs. From Beehive and Moments (3 from Beehive 2 from moments) 30-40 words.	**10 Marks**
Q 10: One out of 2 long answer type qs from Beehive to assess creativity , imagination beyond the text book (100 – 150 words)	**8 Marks**
Q11: One out of two long answer qs . From Moments on theme or plot interpretation beyond the text or character sketch	**8 Marks**

स्पर्श


अग्निपथ

कवि परिचय – नवंबर में उत्तर प्रदेश के इलाहाबाद शहर में हरिवंशराय बच्चन का जन्म हुआ । कुछ समय तक विश्वविद्यालय में प्राध्यापक के पद पर कार्यरत रहने के बाद वे भारतीय विदेश सेवा में चले गए थे ।

कविता का मूल भाव

कवी हमें यह बताना चाहते है कि हमारा जीवन एक अग्निपथ है अर्थात बहुत कठिन है । इस कठिन मार्ग में भी हमें दूसरों की मदद नही मांगनी चाहिए और कायरों की तरह पीछे मुड़कर नहीं देखना चाहिए । इस कठिन मार्ग में आँसू, पसीना और कभी – कभी रक्त भी बह सकता है पर हमें हिम्मत न हारकर आगे बढ़ते रहना चाहिए ।

व्याख्या /आशय

हरिवंशराय बच्चन कहते हैं यह जीवन अग्नि भरे रास्ते के समान है। इसमें कठिनाइयाँ ही कठिनाइयाँ हैं,संघर्ष ही संघर्ष है।हे मनुष्य! तुम्हारे रास्ते में अनेक ही वृक्ष खड़े हैं।वे वृक्ष घने और बड़े हैं,किन्तु तुम्हें उनसे एक पत्ता अरु छाँह भी नहीं माँगनी चाहिए।तुम्हें कठिनाइयाँ अरे रास्ते पर निरंतर संघर्ष करते हुए चलते चले जाना चाहिए।यह जीवन अग्नि पथ के समान है।इसकी कठिनाइयों को स्वीकार करना चाहिए।

खन विधि -

काव्यांशों की विस्तृत व्याख्या –

- शब्दार्थ
- सन्दर्भ
- व्याख्या
- निष्कर्ष

लघु उत्तरीय प्रश्नोत्तर

निबंधात्मक प्रश्नोत्तर

CHAPTER 14
STATISTICS
What is in this chapter?

Introduction

Collection of data

Presentation of data

Geographical representation

Measures of control tendency

ne three measure of central tendency for ungrouped data are:

ean : It is found by adding all the value of the observations and viding it by the total number of observation .

Mean= Sum of observation/Number of bservation

edian : It is the value of middle most observations

Mode : The mode is the most frequency occurring observation.

CHAPTER 8

QUADRILATERAL

What is in this chapter?

- Introduction
- Angle sum property
- Properties
- Mid point theorem
- Type of quadrilateral

m of the angles of a quadrilateral is 360°.

diagonal of a parallelogram divides it into two congruent triangle.

parallelogram (i)opposite sides are equal (ii) opposite angle are equal
(iii)diagonals bisect each other
quadrilateral is a parallelogram , if
(i) opposite sides are equal (ii) opposite angle are equal
(iii)diagonals bisect each other

gonal of a rectangle bisect each other and equal and vice- versa.
gonal of a rhombus bisect each other at right angle and vice- versa.
gonal of a square bisect each other at right angle and are equal vice- versa.
e line segment joining the mid point of any two sides of a triangle is parallel to the third side a
alf of it.

BIOLOGY

ter 7 **Biological Diversity**

Diversity In Animals

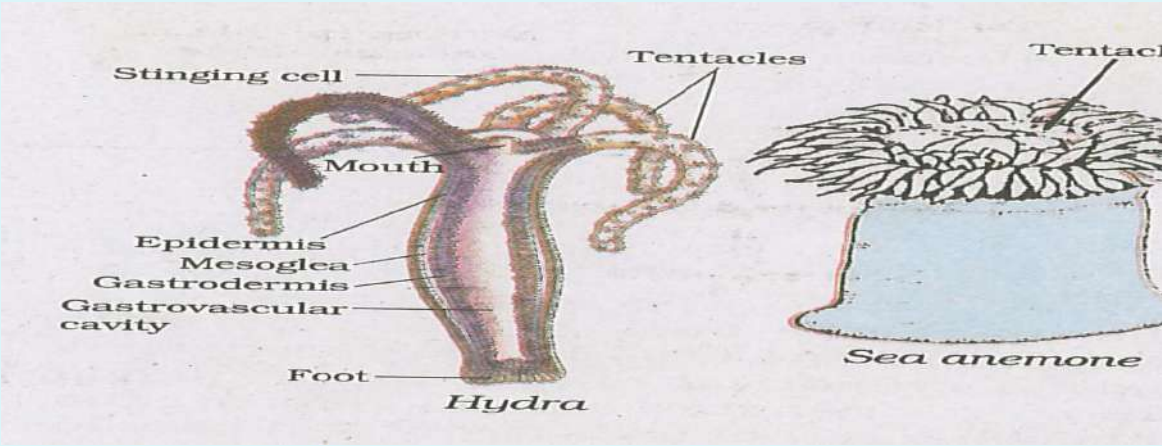
Issues in Scientific naming

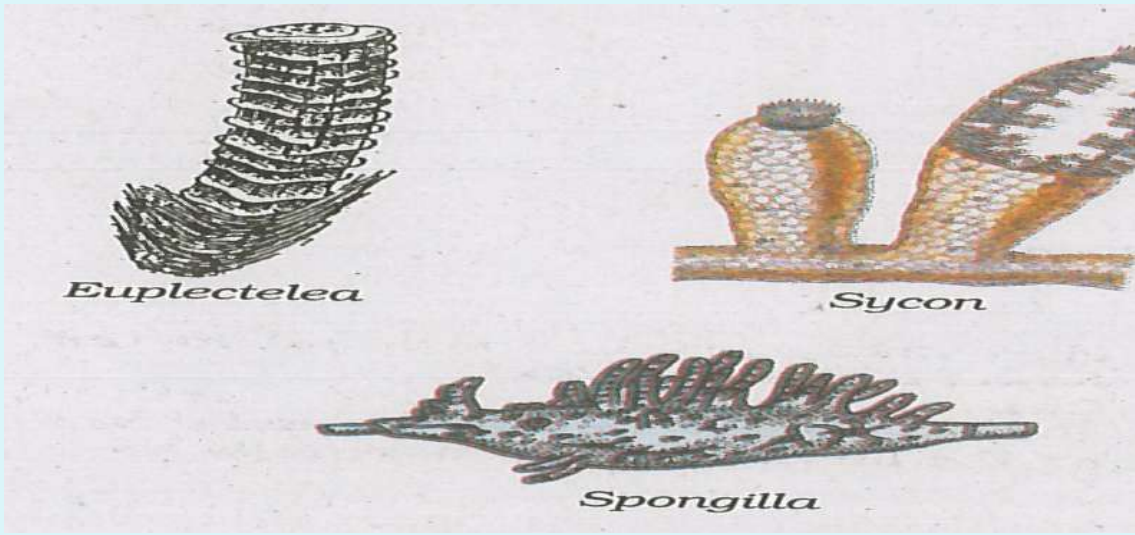
Animalia

Major Groups of Animals

ter 13

2) Why Do we Fall Ill



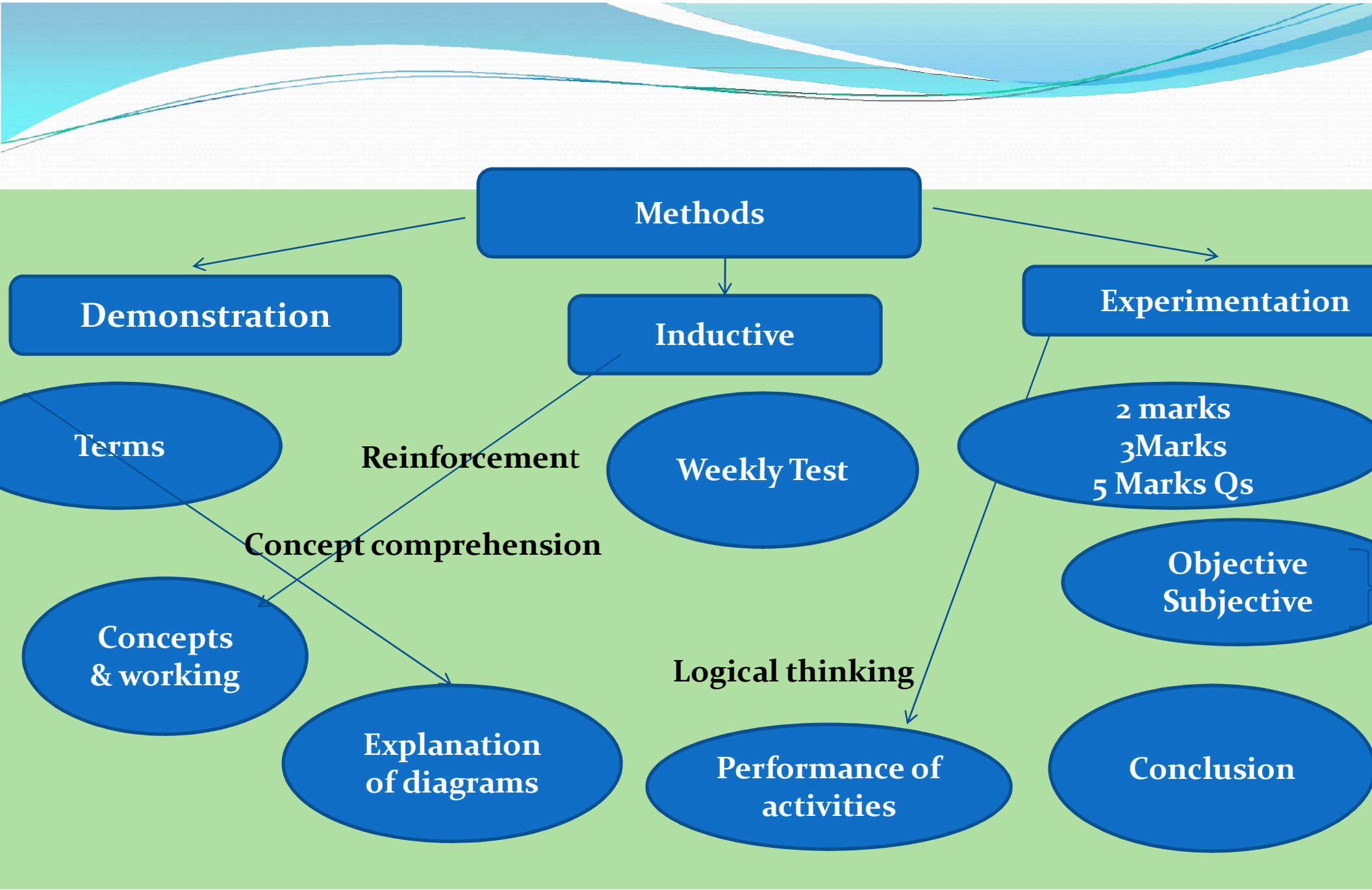


Classification as per body design

) Porifera Eg. Sycon
) Coelenterata Hydra
) Platyhelmenthese
Planaria

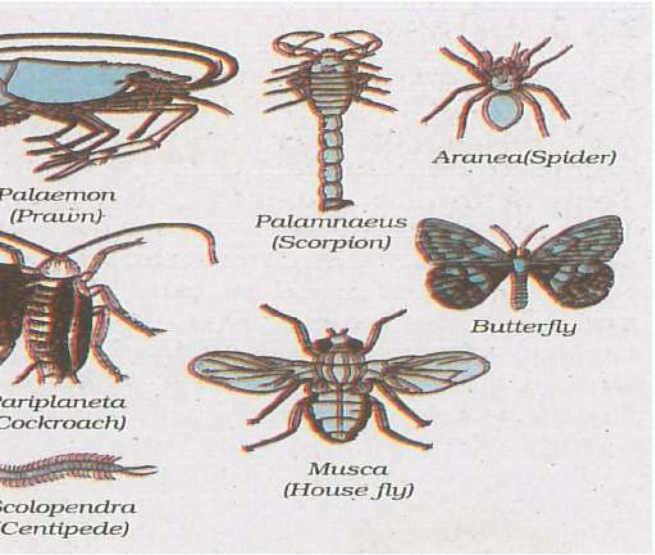
) Nematoda Ascaris
) Annelida Leech
) Arthripoda Octopus
) Mollusca Pila

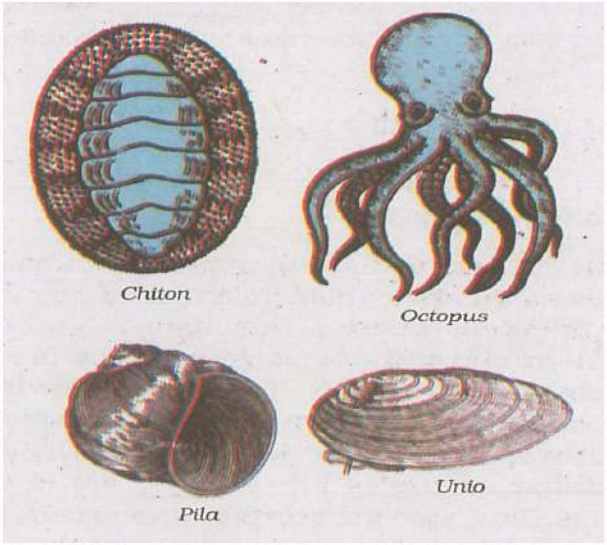
8) Echinodermata Antedon
9) Protochordata Balanoglossus
10) Vertebrata
1) Pisces Angler Fish
2) Amphibia Hyla, Toad
3) Reptilia Turtle, Salaman
4) Aves Sparrow , Pige
5) Mammalia Cat, Bat, Huma


Methods
Demonstration
Inductive
Experimentation
Terms
Reinforcement
Weekly Test
2 marks
3Marks
5 Marks Qs
Concept comprehension
Objective
Subjective
Concepts
& working
Logical thinking
Explanation
of diagrams
Performance of
activities
Conclusion

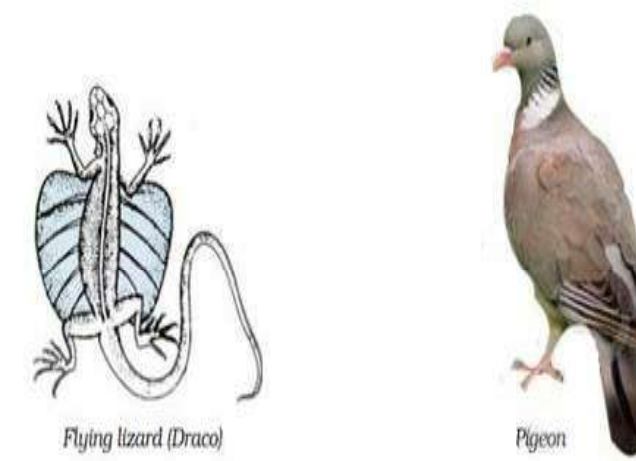
Teaching Aids

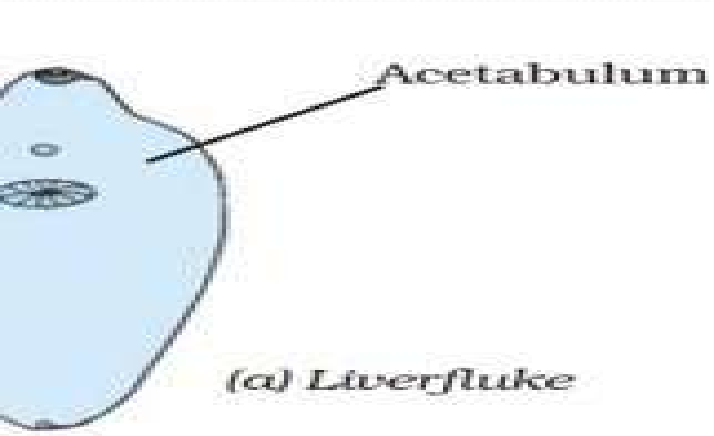
Diagrams

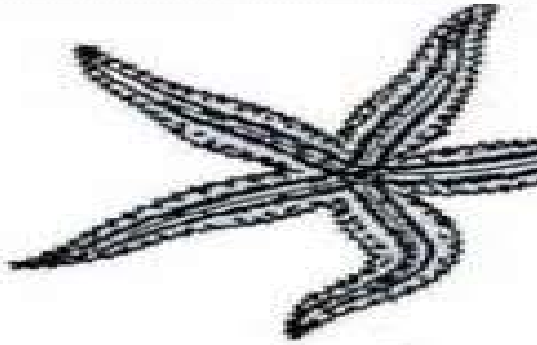




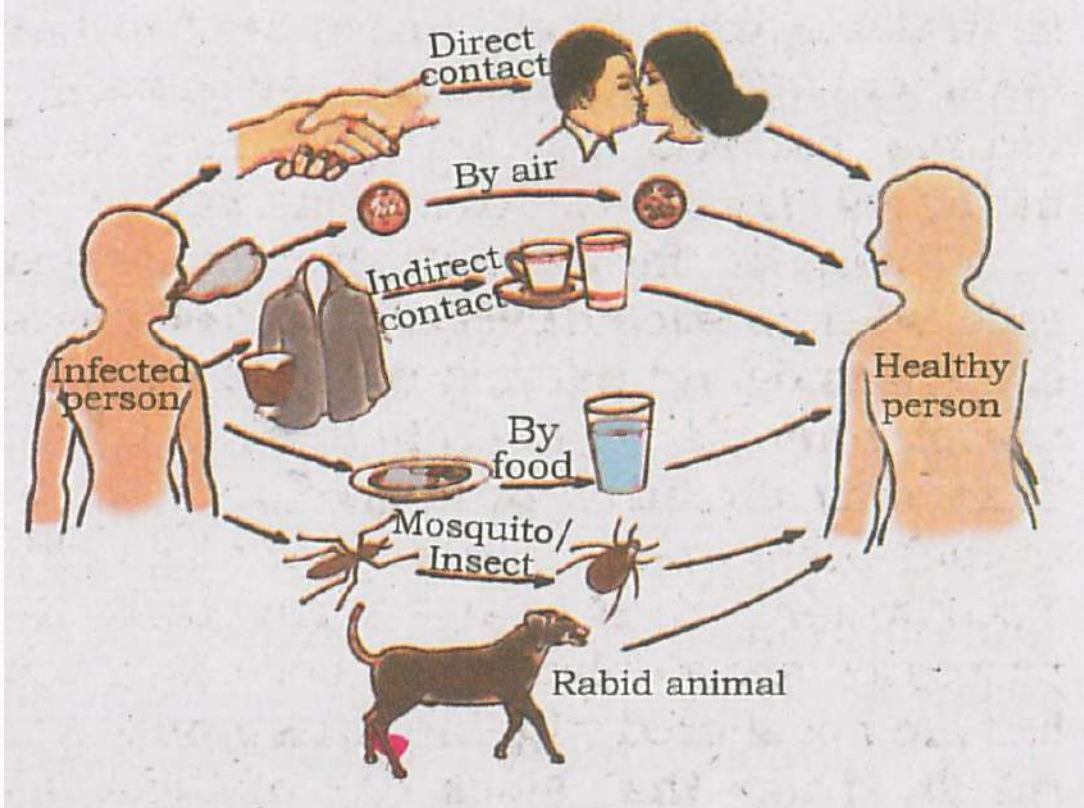
Flash cards

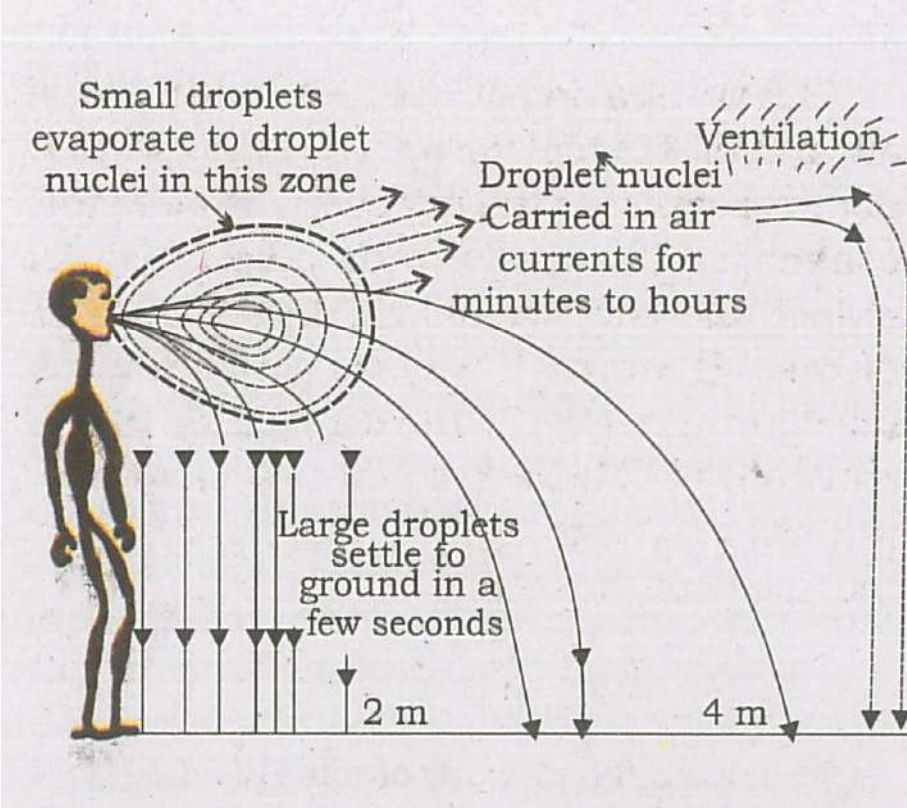






Teaching Aid L 13 Why Do We Fall Ill





Continued Teaching aids

Youtube videos

https://www.youtube.com/watch?v=nmWtyFfzEyo

https://www.youtube.com/watch?v=uvOlA9r-Fbk

https://www.youtube.com/watch?v=Gro5rKd5mvA

Science Paper style

- **GENERAL INSTRUCTIONS**

The question paper comprises of five sections

A,B,C,D and E

All question are compulsory

Internal choice is given in Sections B, C,D and E

Sec.A Q no 1 and 2 in this section are 1 mark each.

Q. No 3-5 in Section B are 2 marks each to be answered in 30 words

Q. No 6-15 in section C are 3 marks each. They are to be answered in 50 words.

Q. No 16- 21 in Section D are 5 marks each .they are to be answered in 70 words

Q. No 22-27 in Section E are based on practical skills . Each questions is of 2 marks each

xperiment To study Morphological Character

Demonstration of Morphological Characters

(a) Earthworm (b) Starfish

To record observations and draw their labelled diagrams

CHAPTER 7
TRIANGLES

What is in this chapter?

- Introduction
- Congreuence of triangle
- Criteria for congreunce triangle
- Properties for congreunce triangle
- Inequalities in triangle

Gravitation
Forces in the Universe

Gravity

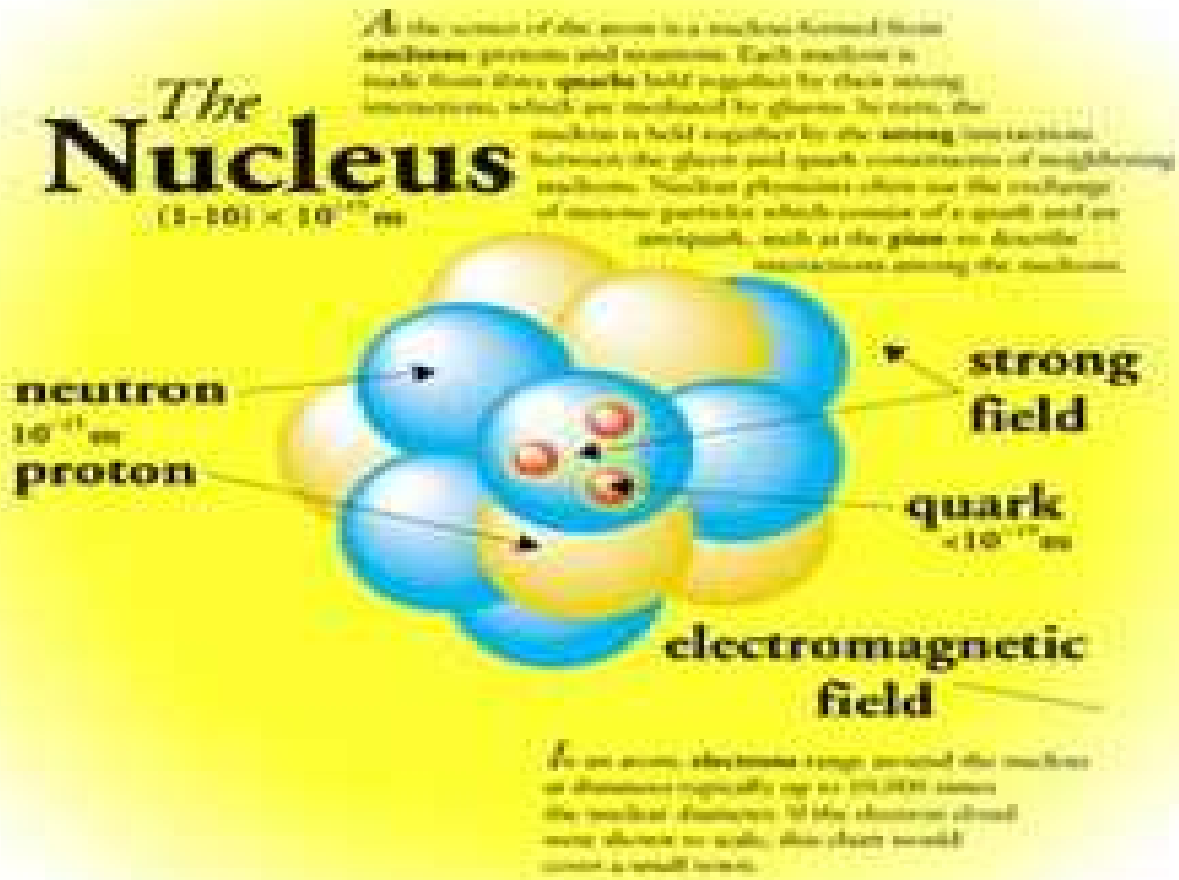
Electromagnetism

Magnetism

Electrostatic forces

Weak Nuclear Force

Strong Nuclear Force



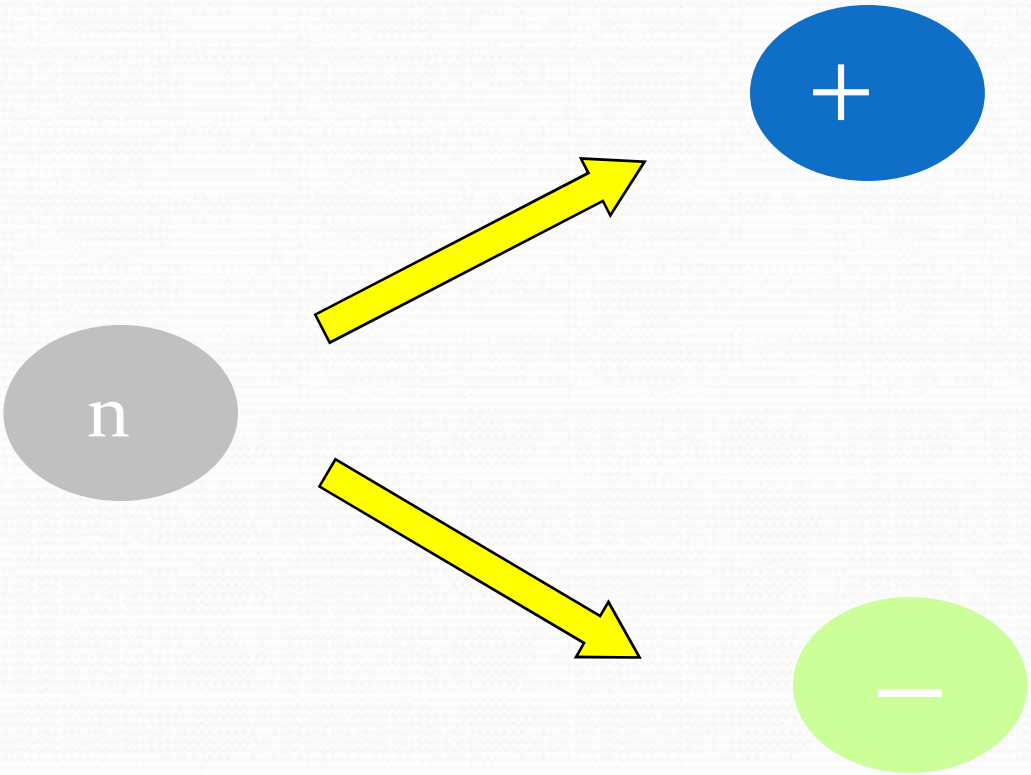
Strong Force binds together

protons

neutron

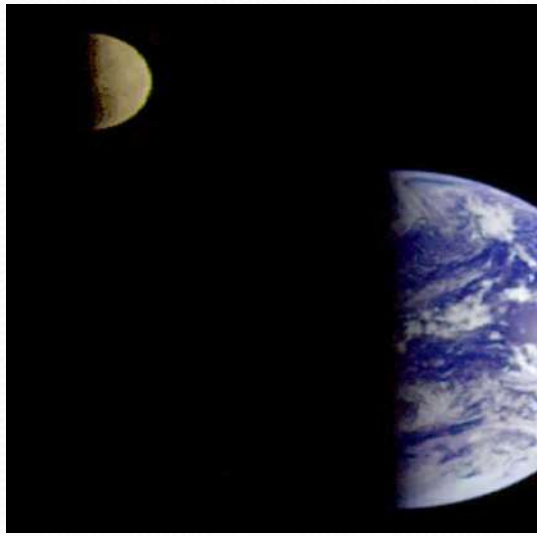
in atomic nuclei

Decay of t
Neutron

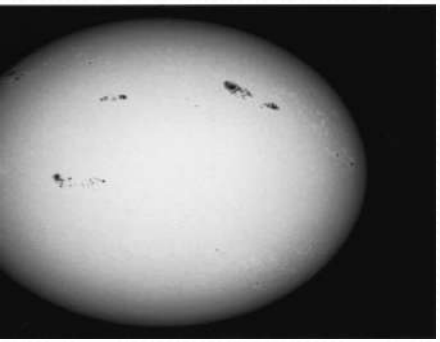


GRAVITATION

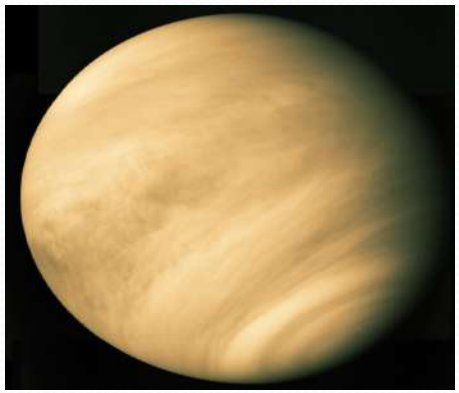
GRAVITY keeps the moon orbiting Earth . . . and Dactyl orbiting Ida . . .



olds stars ether . . .



Prevents planets om losing their ospheres . . .



And binds galaxies togetl for billions of years . . .

FALLING BODIES

ling objects accelerate at a
nstant rate (*Galileo*):

Speed is gained at a *constant rate*:

Ball

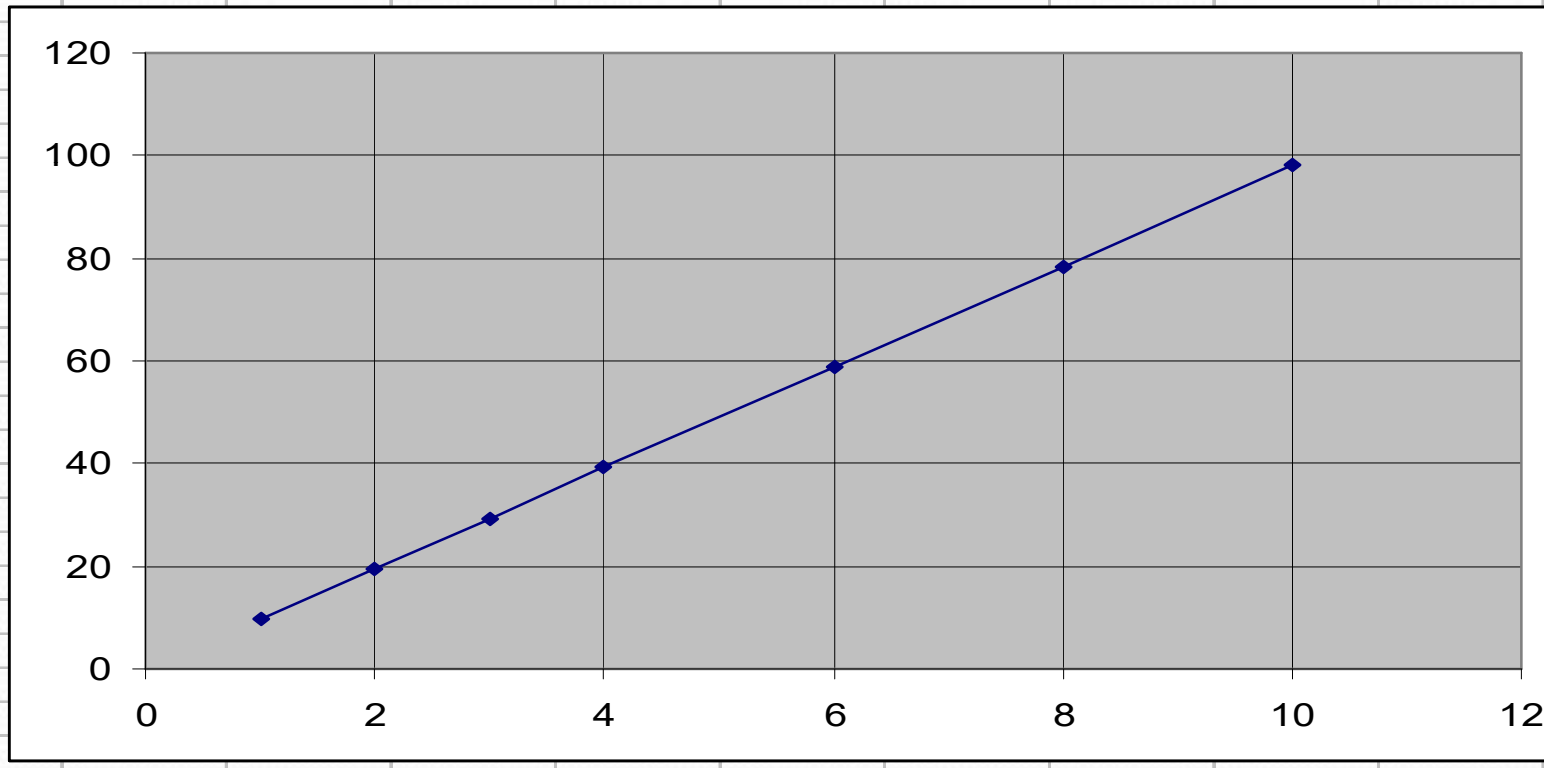
<u>9.8 m/sec/sec</u>

"Acceleration due to gravity"

Earth

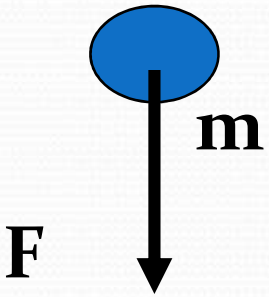
e (sec)	Speed (m/sec)
1	9.8
2	19.6
3	29.4
4	39.2
6	58.8
8	78.4
10	98

Acceleration is same for ALL OBJECTS regardless of mass!



- **Newton's 2nd law ⇒ force (F) is acting on falling ball (mass = m)**

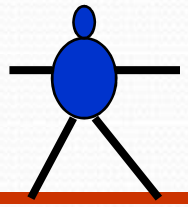
ll



- **All masses have same acceleration**

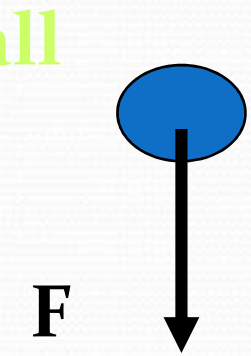
. . . <u>so more mass means</u> *more force needed*:

$$F \propto m$$



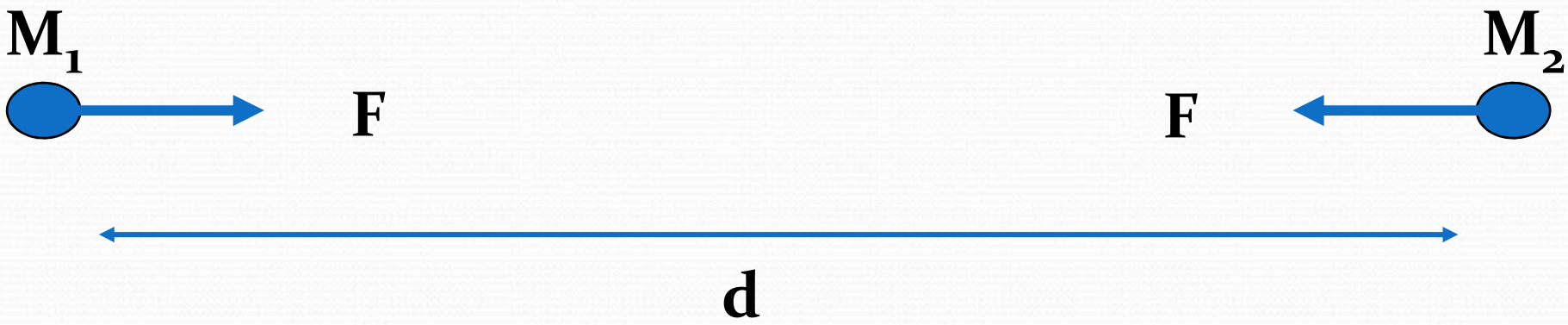
Earth

- Newton's 3rd law $\Rightarrow$ ball pulls on *Earth*



→ **Does Earth accelerate?**

All bits of matter attract all other bits of matter . . .



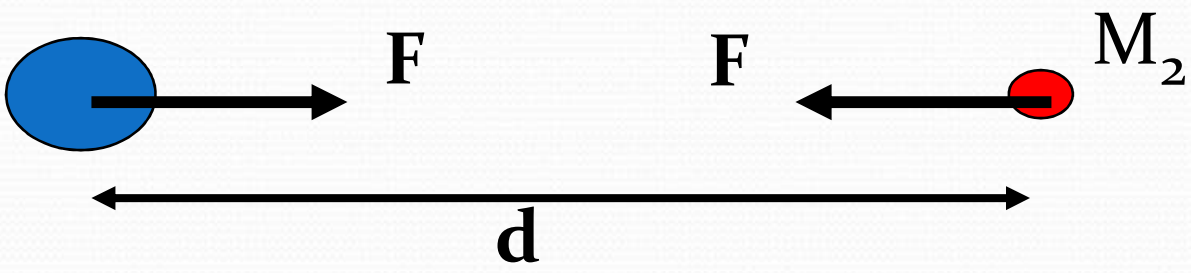
$$F \propto M_1 M_2$$

2. $$F \propto \frac{1}{d^2}$$

"Inverse square law

⇒ **Increase one or both masses, and force increases.**

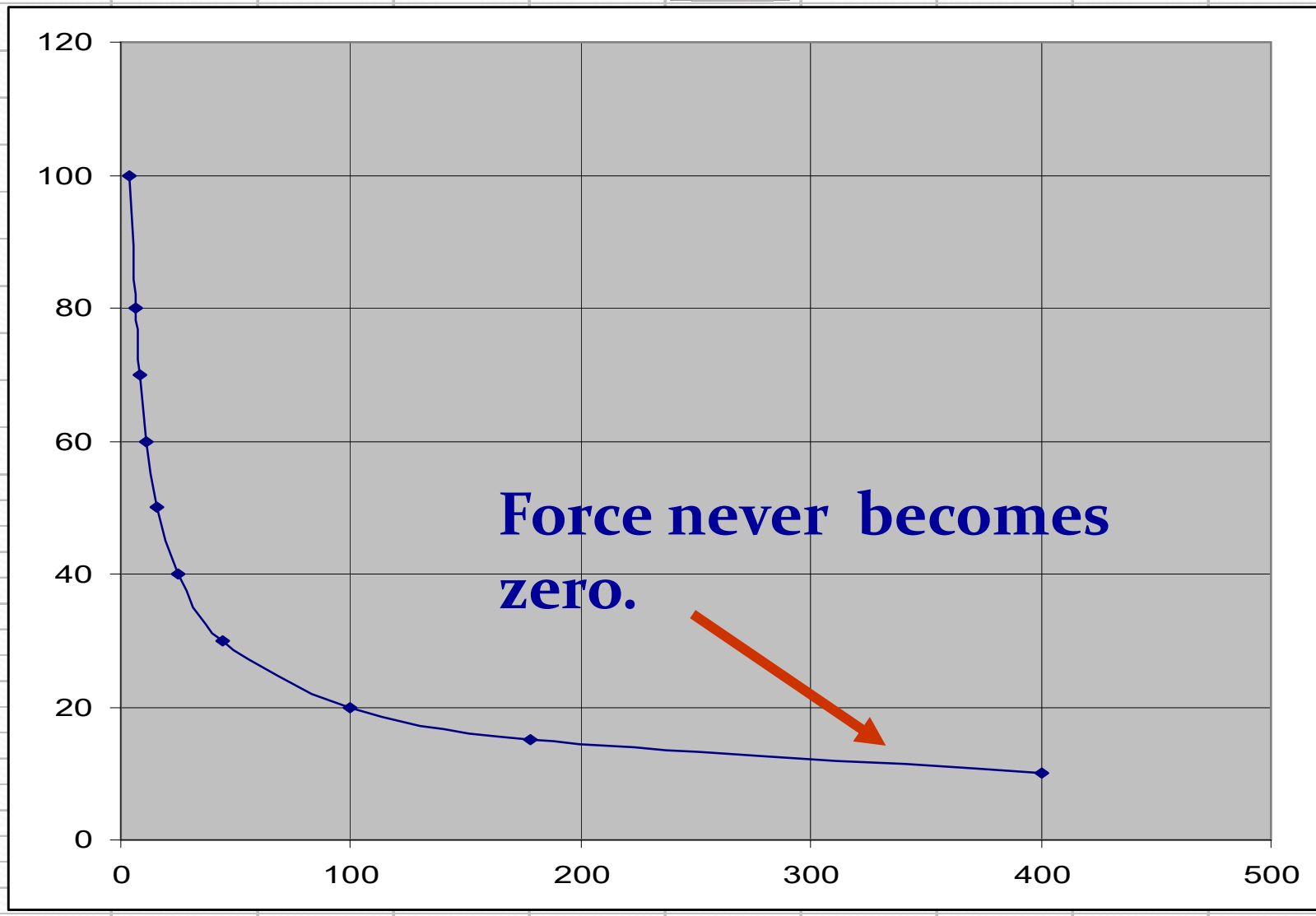
⇒ **Force decreases as distance increases.**



$$00 = \frac{400}{2^2} = \frac{400}{4}$$

Force	Distanc
400 N	10 m
100 N	20 m
25 N	40 m
16 N	50 m
4 N	100 m

Force	Distance
400	10
178	15
100	20
44.4	30
25	40
16	50
11.1	60
8.2	70
6.25	80
4	100



Putting the two parts of the force law together . . .

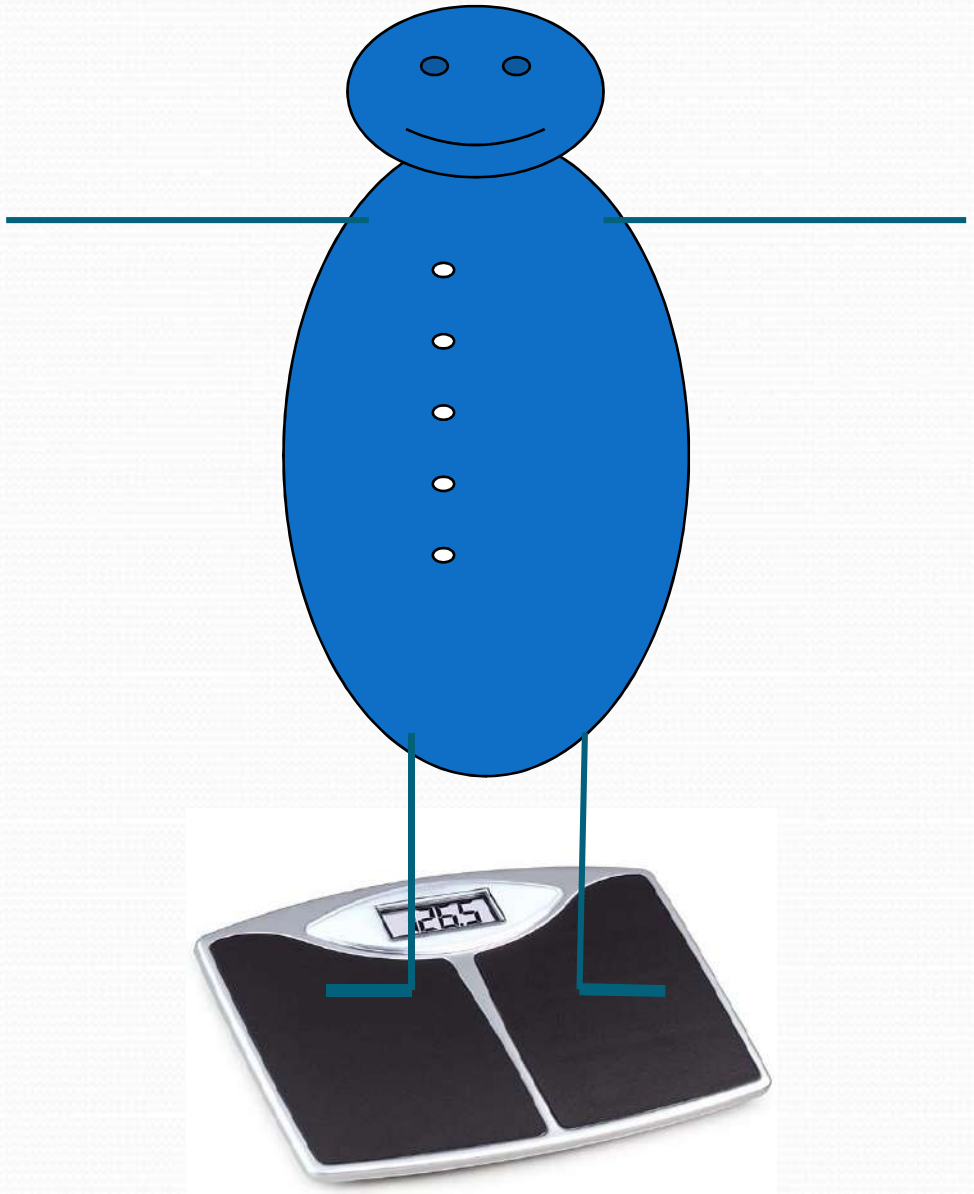
$$F = \frac{GM_1M_2}{d^2}$$

(G = gravitational constant)

- **Acts through empty space**
  "action at a distance"

- **Explains how gravity behaves – but not why**

WEIGHT



Other planets: M and R change, so your weight must change

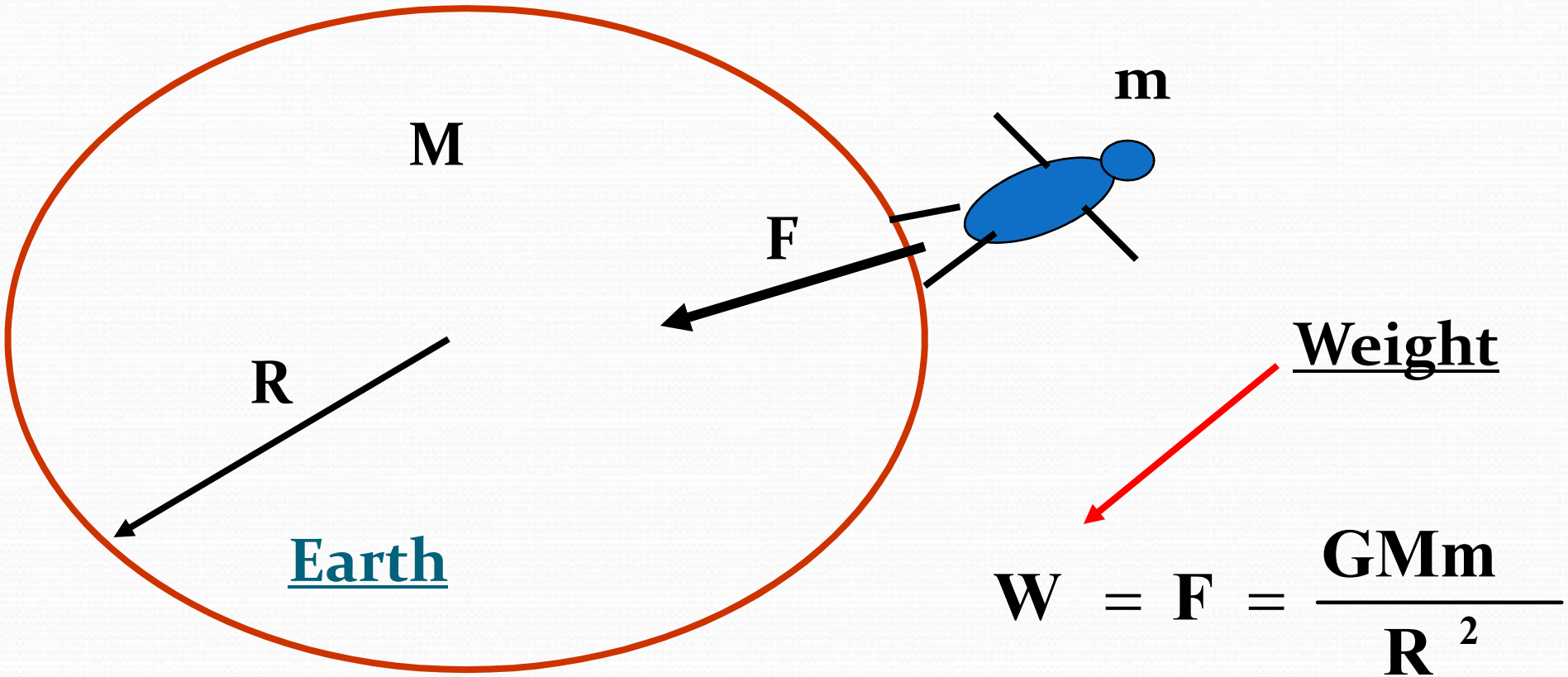
A real planet . . .

Mars: R = 0.53 x Earth's radius
M = 0.11 x Earth's mass

	Earth	Mars
Weight	150 lbs	59 lbs

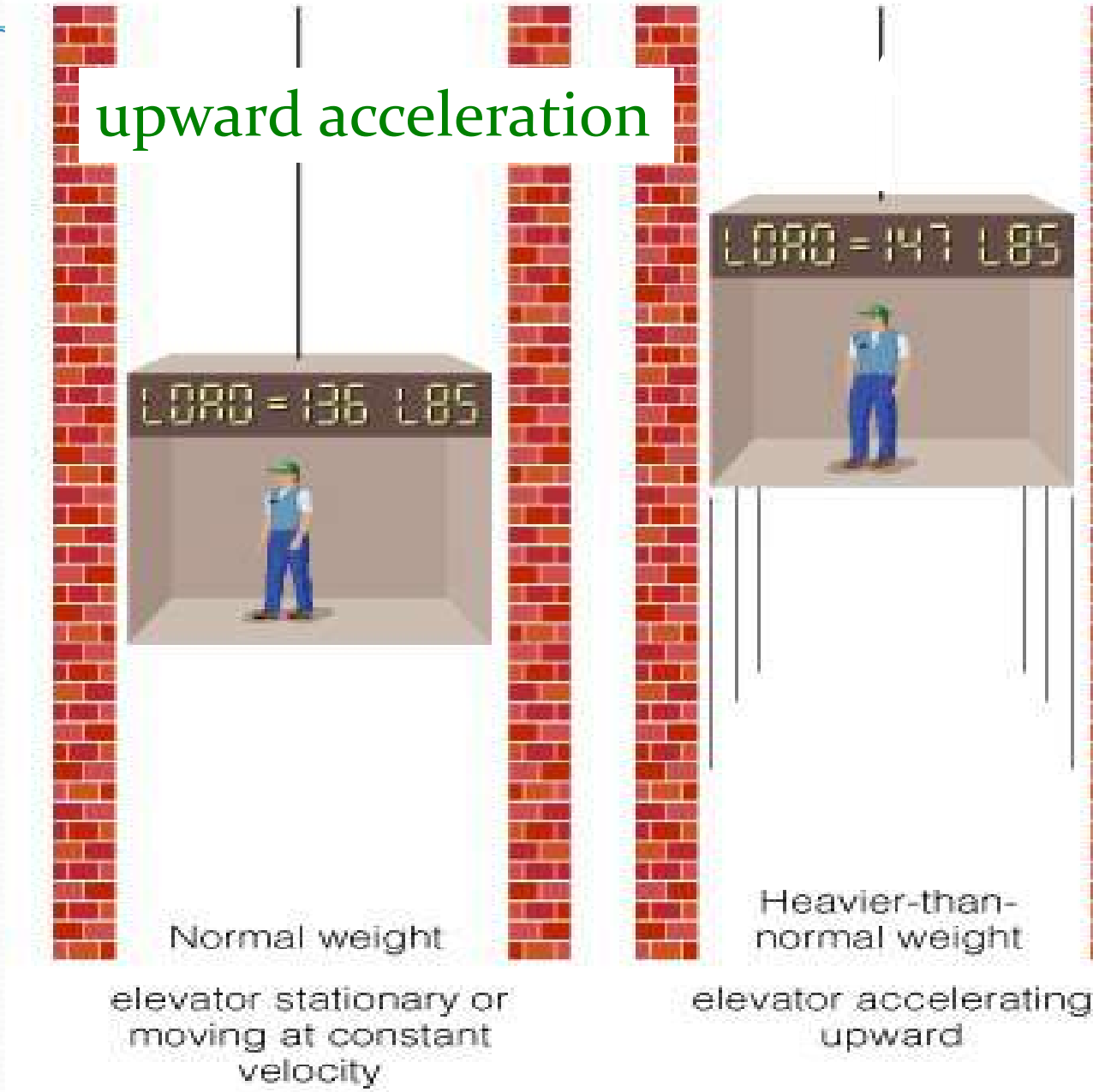
Weight

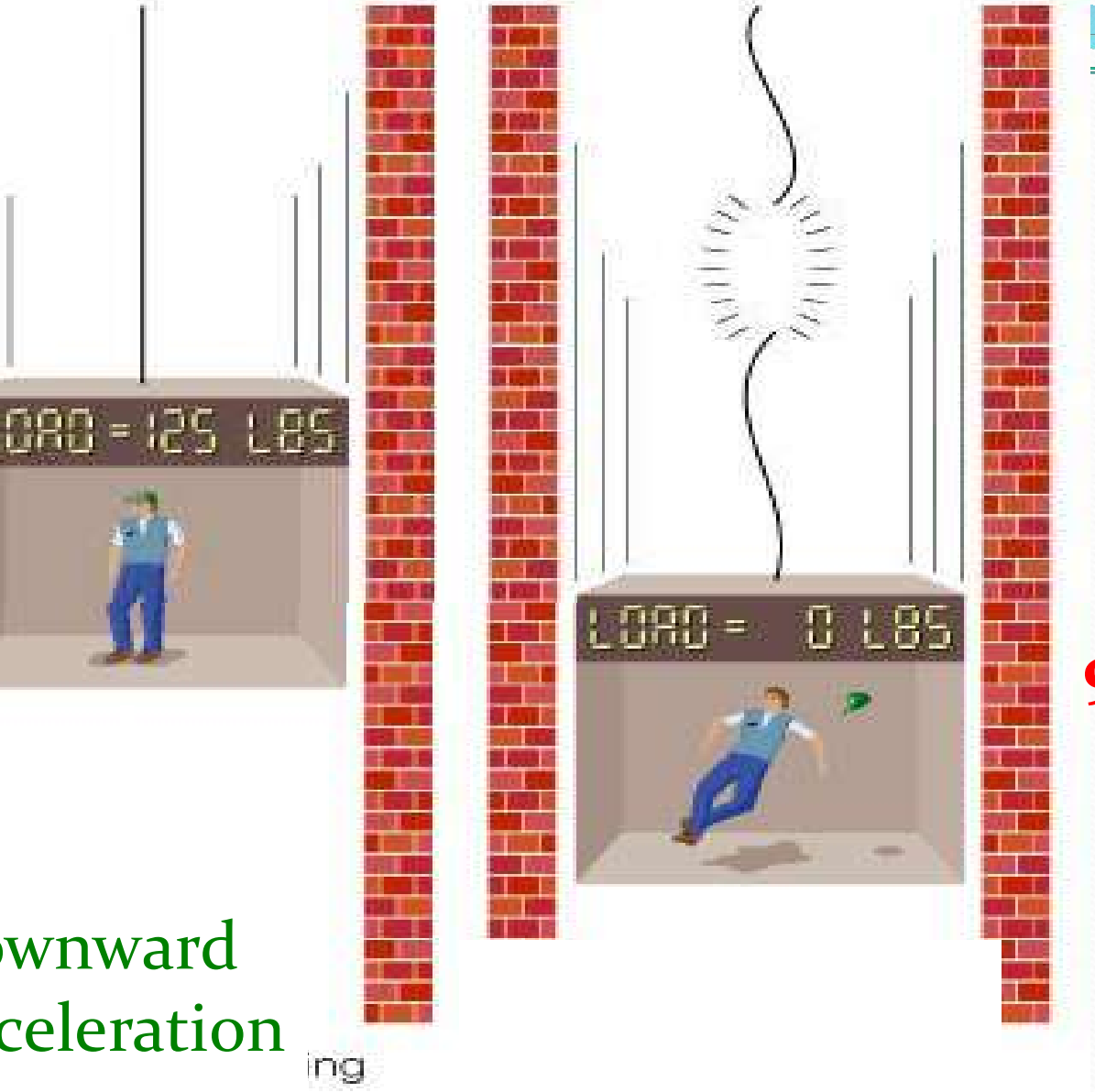
- **Measure of gravitational attraction of Earth (or any other planet) for you.**



$$W = F = \frac{GMm}{R^2}$$

Weight" can be
nade to apparently
***ncrease* .**





. . . or *decrease*!

9.8 m/s/s

Free-fall

ownward
celeration

ng

EARTH'S MASS

Earth's mass

your mass

$$W = \frac{GMm}{R^2}$$

your weight

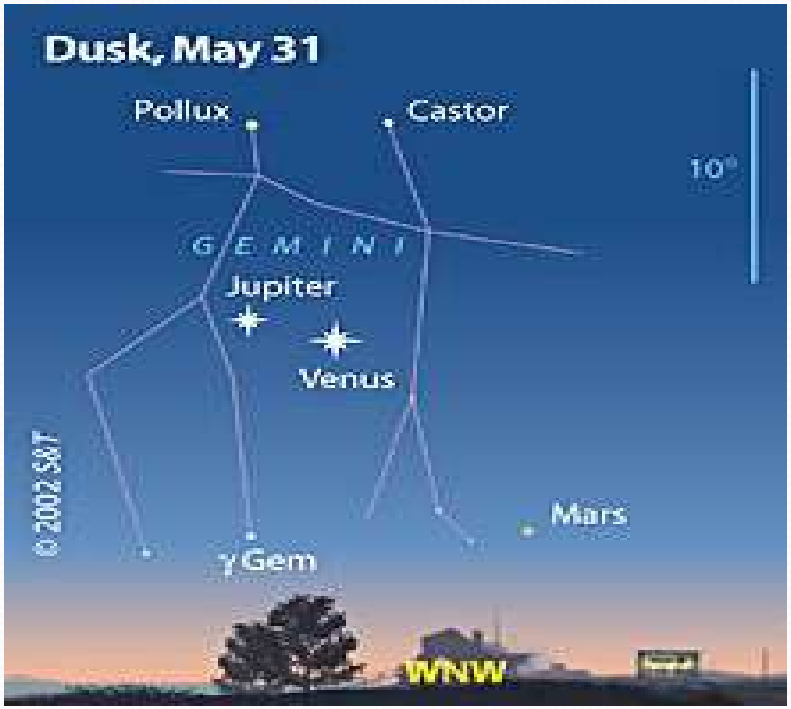
Earth's radius

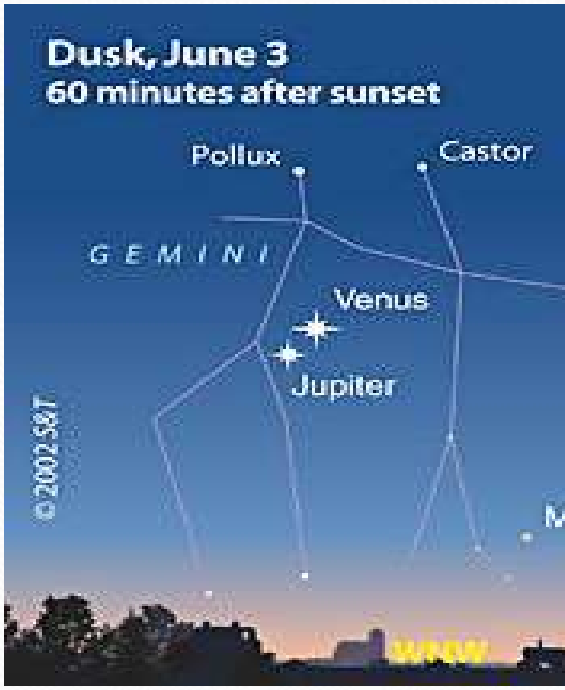
M = 6 x 10^{24} kg

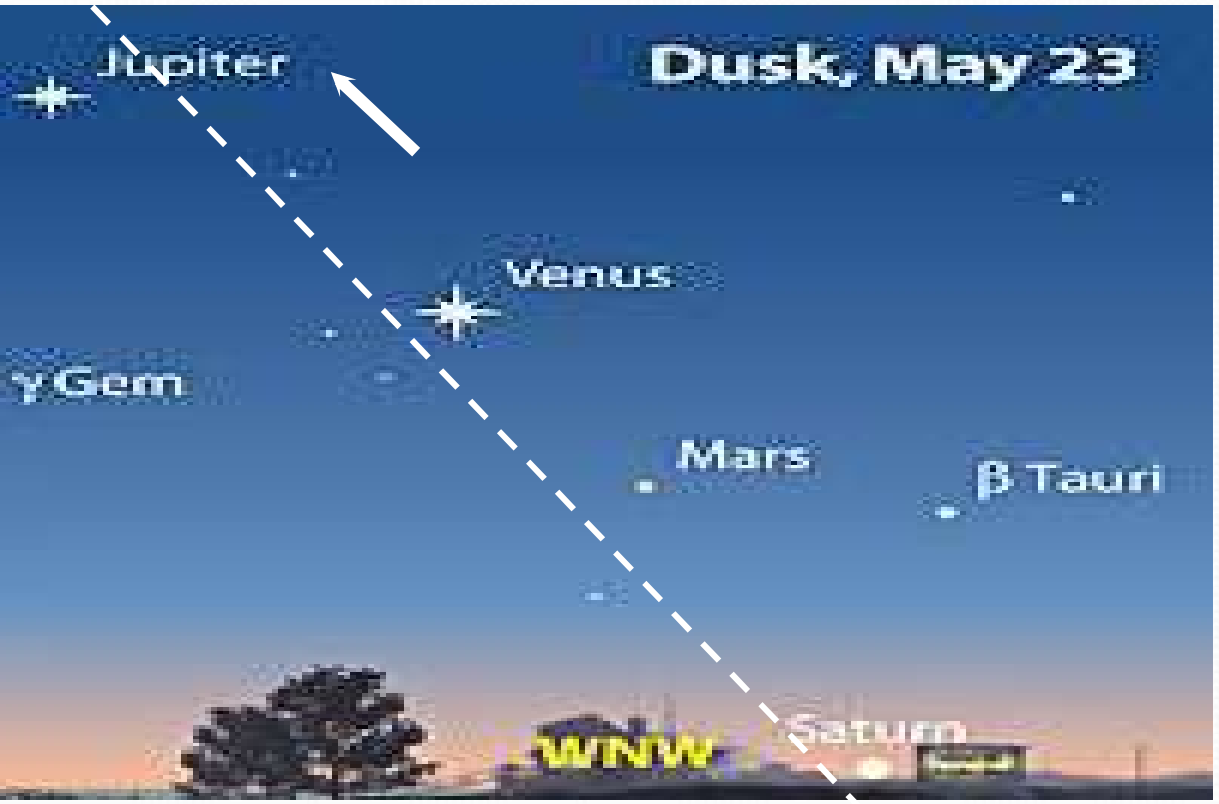
HOW TO DO THE PLANET'S GO?

Planets app
'star-like'

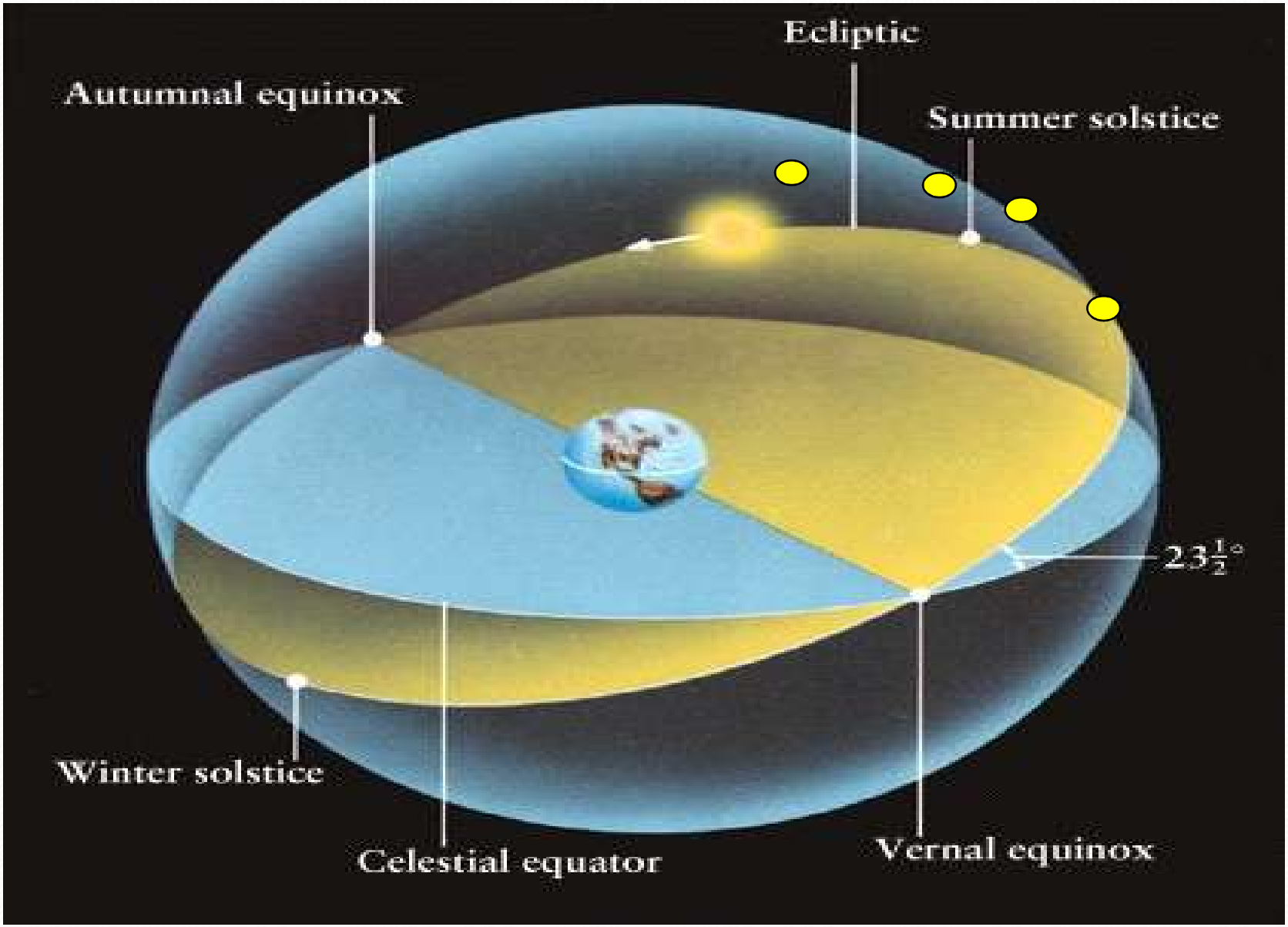
Planets move, relative to the stars.



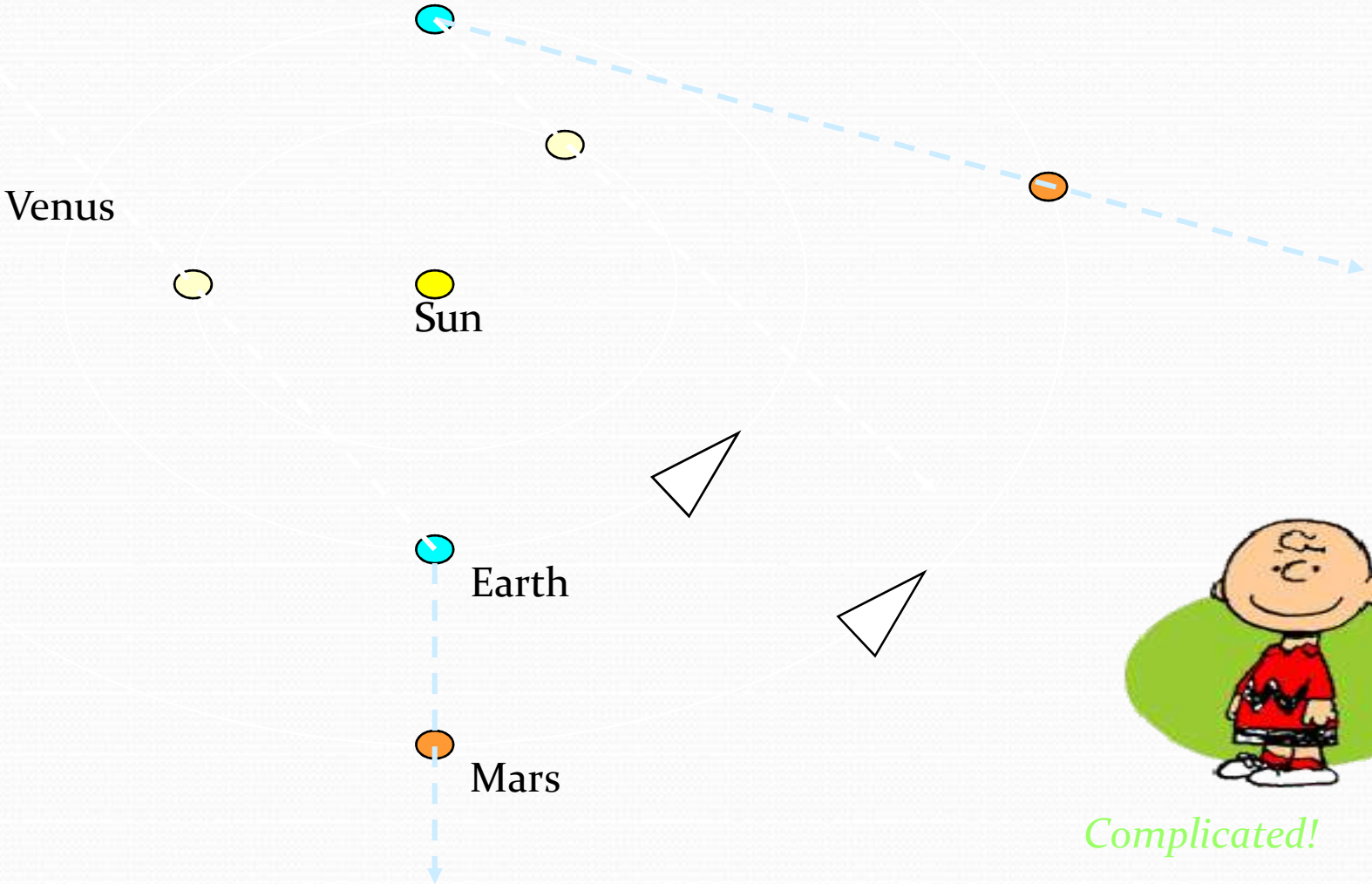




Planets resi
near ***Eclipti***

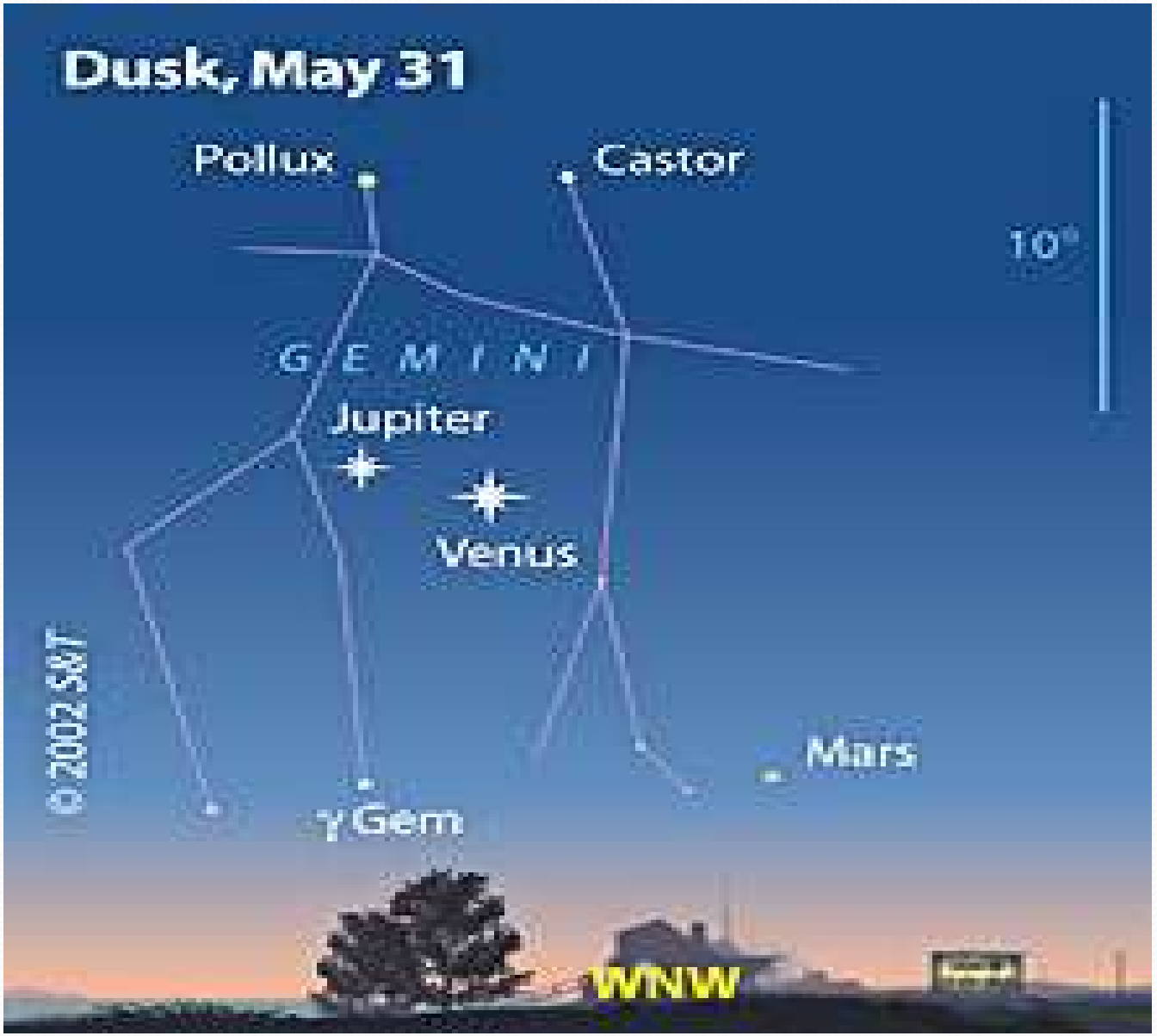

Ecliptic
Autumnal equinox
Summer solstice
$23\frac{1}{2}°$
Winter solstice
Celestial equator
Vernal equinox

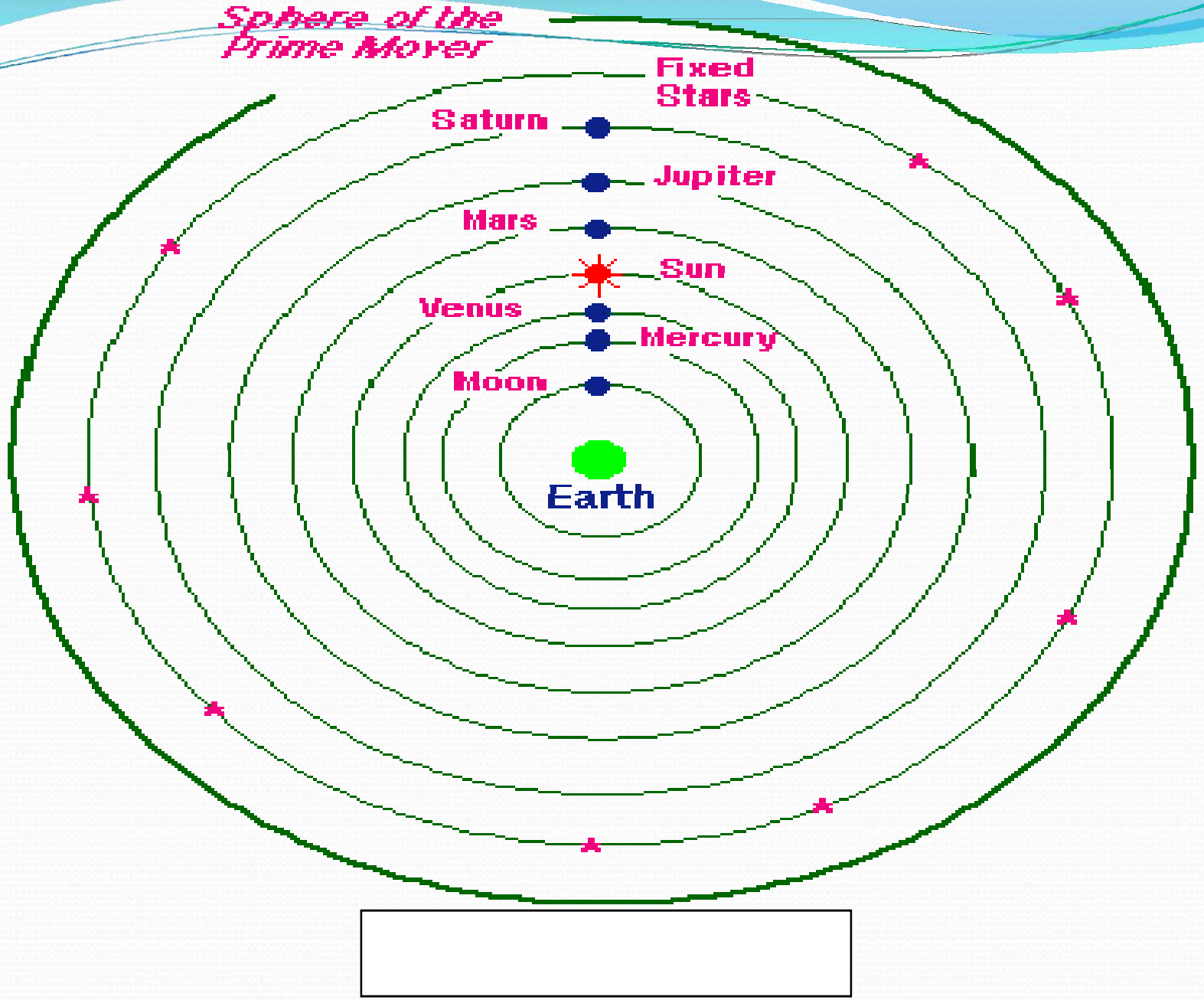
Alien's eye view . . .



Complicated!

Jupiter & Venus
are currently
"in"Gemini.





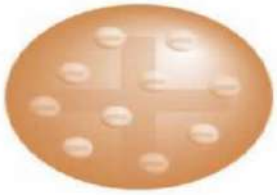
Ancie
Gree
geocen
sola
syste

CHAPTER-4 STRUCTURE OF THE ATOM

Electrons in 1897 showed us that the atom can be split into even smaller parts. **His discovery was the first step towards a detailed model of the atom .**

An atom is a uniform sphere of positive charges (due to presence of protons) well as negative charges (due to presence of electrons).

An electron is a negatively charged component of an atom which exists outsi the nucleus. Each electron carries one unit of negative charge and has a very small mass as compared with that of a neutron or proton.

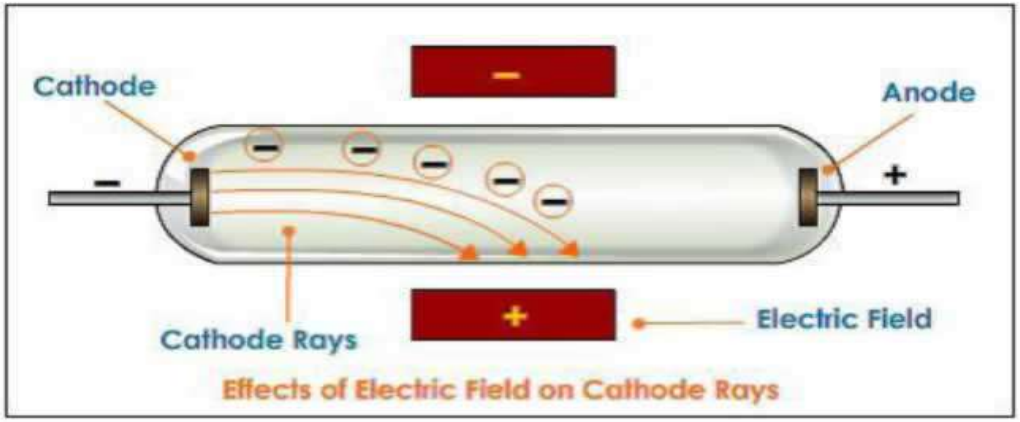
SCIENTIST	PROPOSED ATOMIC MODEL
Joseph John Thomson British Physicist and Nobel laureate 	PLUM –PUDDING MODEL 

homson used cathode ray tubes to demonstrate that the cathode ray responds to
h magnetic and electric fields.

the ray was attracted to a positive electric plate placed over the cathode ray tube (beam deflected toward th
ve plate) he determined that the ray must be composed of negatively charged particles. He called these nega
cles "electrons."

tation: Model failed to explain how protons and electrons were arranged in atom
e to each other.

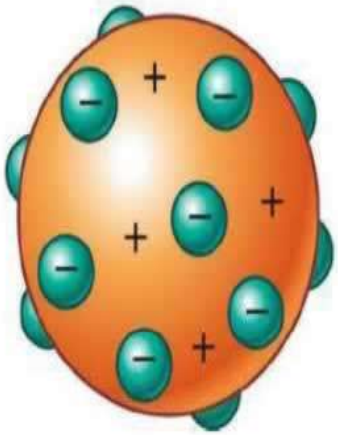
Eugene Goldstein:



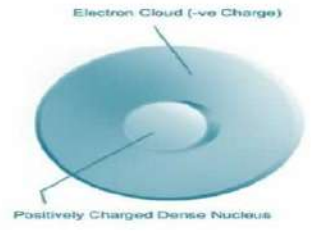
l rays" which had electrical and magnetic erties opposite of an electron.

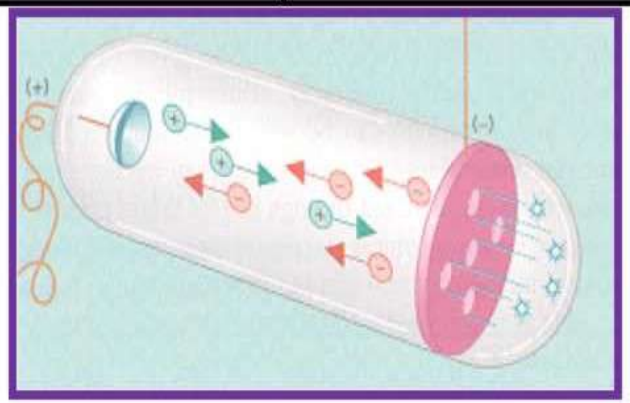
s:

nal rays have positively charged sub-atomic, es known as protons (p).

SCIENTIST	PROPOSED ATOMIC MODEL
Eugene Goldstein a German physicist 	

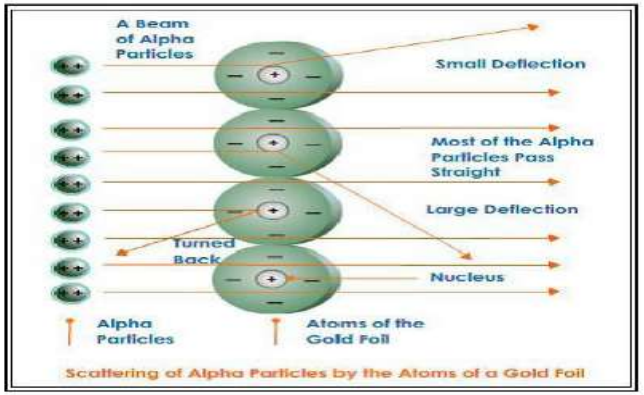
rford's Scattering Experiments:

SCIENTIST	PROPOSED ATOMIC MODEL
arnest Rutherford  Nobel prize 1908	 Rutherford's Nuclear Model of the Atom

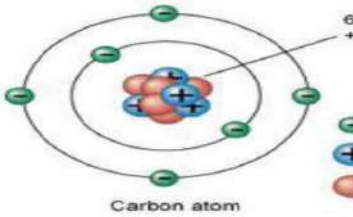


xperiment: Rutherford took a thin gold foil and made alpha particles , [He^{2+}] positively
rged Helium fall on it.

No	OBSERVATION	INFERENCE
.	Most of the a-particles passed through the gold foil without getting deflected. Very few particles were deflected.	Most of the space inside the atom is empty.
.	Very few particles were deflected.	Positive charge of the atom occupies very little space.
.	A very few alpha particles, 1 in 100000 completely rebound on hitting the gold foil.	Nucleus of an atom is very small as compared to the total size.



Limitation: In Rutherford's atomic model , Nucleus
electrons are held together by electrostatic force of
ttraction which would lead to the fusion between
hem. This does not happen in the atom.

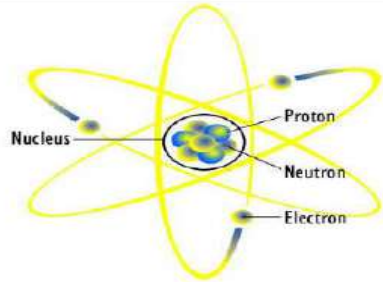
SCIENTIST	PROPOSED ATOMIC MODEL
James Chadwick  English Physicist & Nobel laureate	 Carbon atom

mass number
atomic number ***Symbol***

In 1932, James Chadwick proved that the atomic nucleus contained a neutral particle which had been
roposed more than a decade earlier by Ernest Rutherford officially discovered the neutron in 1932, Chad
eceived the Nobel Prize in 1935.

Niel Bohr Atomic Model:

$$^{31}_{15}P$$

SCIENTIST	PROPOSED ATOMIC MODEL
Danish physicist 	

Electronic configuration & Valency: Bohr and Bury Scheme - Important Rules

S.No	Electron Shell	$2n_2$ where n = shell number	Maximum Capacity
1	K Shell	2 x (1) 2	2 electrons
2	L Shell	2 x (2) 2	8 electrons
3	M shell	2 x (3) 2	18 electrons
4	N shell	2 x (4) 2	32 electrons

The outermost shell of an atom cannot accommodate more than 8 electrons, even if it has a capacity to accommodate more electrons. This is a very important rule and is also called the OCTET RULE. The presence45 of 8 electrons in the outermost shell makes the atom very stable.

Atomic Number & Mass Number:

tomic number of an element is defined as the number of unit positive charges on the ucleus (nuclear charge) of the atom of that element or as the number of protons present in e nucleus."

omic number, Z = Number of unit positive charge on the nucleus = Total number of unit positive arges carried by all protons present in thenucleus. = Number of protons in the nucleus (p) = umber of electrons revolving in the orbits (e)
g :- Hydrogen – Atomic number= 1 (1 proton)
elium - Atomic number = 2 (2 protons)
ass number[A] : It is defined as the sum of the number of protons & neutrons present in the cleus of an atom.
ass Number = Mass of protons + Mass of neutrons

g :- Carbon – Mass number = 12 (6 protons + 6 neutrons) Mass = 12u Aluminium – Mass umber = 27 (13 protons + 14 neutrons) Mass = 27

Social science
History, Civics, Geography & Economics

TEACHING METHOD :

POLITICAL SCIENCE

troduce a given topic by giving practical example. Use given content to interpret a situation, pro an example or solve a problem with he help of pictures and diagrams related o the topic.

TEACHING METHOD :

ECONOMICS

troduce a given topic by giving practical example. Use given content to interpret a situation, pro
an example or solve a problem with he help of pictures and diagrams related To the topic.

EANS OF TRANSPORT IN LLAGES

Bullock Cart

FARMING IN VILLAGES

TEACHING METHOD GEOGRAPHY

Introduce a given topic by giving practical example.
Use given content to interpret a situation, provide an example or solve a problem with he help of pictures and maps related to the topic.

HISTORY
CHAPTER 4
FOREST SOCIETY AND COLONIALISM

WHY DEFORESTATION?

Land to be improved

Sleepers on the track

HE RISE OF COMMERCIAL FORESTRY

TIVITY: If you are the government of India in 1862 what steps would you take to supply railways with sleepers and fuel on such a large scale?

How were the lives of people affected?

Collecting Mahua from the forests and drying tendu leaves.

How did forest rules affected cultivation?

Burning forest podu plot

Taungya cultivation

Shifting cultivation.

Who could hunt?

People who lived in and near forests.

New trades, New employment and New Services

REBELLION IN THE FOREST

THE PEOPLE OF BASTAR
Army camp in 1910 and
Bastar in 2000
THE FEARS OF PEOPLE
FOREST TRANSFORMAION IN JAVA
The woodcutters in java
Dutch Scientific Forestry
Samin's Challenge
War and Deforestation
New Developments in forestry.
TIVITY
ESTIONS
Why are forests affected by wars?
What are the similarities between colonial management of the forests in Bastar d in Java?

THE END

ECONOMICS
CHAPTER 4
FOOD SECURITY IN INDIA

OVERVIEW

WHAT IS FOOD SECURITY?

WHY FOOD SECURITY AND HOW IS FOOD SECURITY AFFECTED DURING NAURAI CALAMITY?

PRODUCTION OF RICE IN BENGAL

YEAR	PRODUCTION(LAKH TONNES)	IMPORTS(LAKH TONNES)	EXPORTS	TOTAL AVAILABILITY
1941	68	02	-	70
1942	93	-	01	92
1943	76	03	-	79

FOOD SECURITY IN INDIA

INDIA IS AIMING AT SELF SUFFICIENCY IN FOODGRAINS SINCE INDEPENDENCE

WHA IS BUFFER SOCK?

WHAT IS PUBLIC DISTRIBUTION SYSTEM?

VARIOUS SCHEMES

Anyodaya Anna Yojna

Annapurna Scheme

Activity

Questions:

How is food security ensured in India?

Which are the people more prone to food security?

Which states are more food insecure in India?

THE END

GEOGRAPHY

CHAPTER 4
CLIMATE

MEANING OF CLIMATE & WEATHER

CLIMATIC CONTROLS:

LATIUDE, ALTITUDES, PRESSURE AND WIND, DISTANCE FROM HE
SEA, OCEAN CURRENTS.

INDIAN TROPICAL CONVERGENCE ZONE

E1 NINO

THE SEASONS: Winter, Summer, Monsoon and Retreating Monsoon.

DISTRIBUTION OF RAINFALL

MONSOON AS A UNIFYING BOND

ACTIVITY AND QUESTIONS

MULTIPLE CHOICE QUESTIONS FROM EXERCISE.

ANSWER THE FOLLOWING IN BRIEF:

What are the controls affecting the climate in India?

Why does India have a common monsoon type climate?

Answer in detail:

Why does the rainfall decrease from east to the west in Northern India

Seasonal reversal of wind direction takes place over the Indian subcontinent?

THE END

THANK YOU