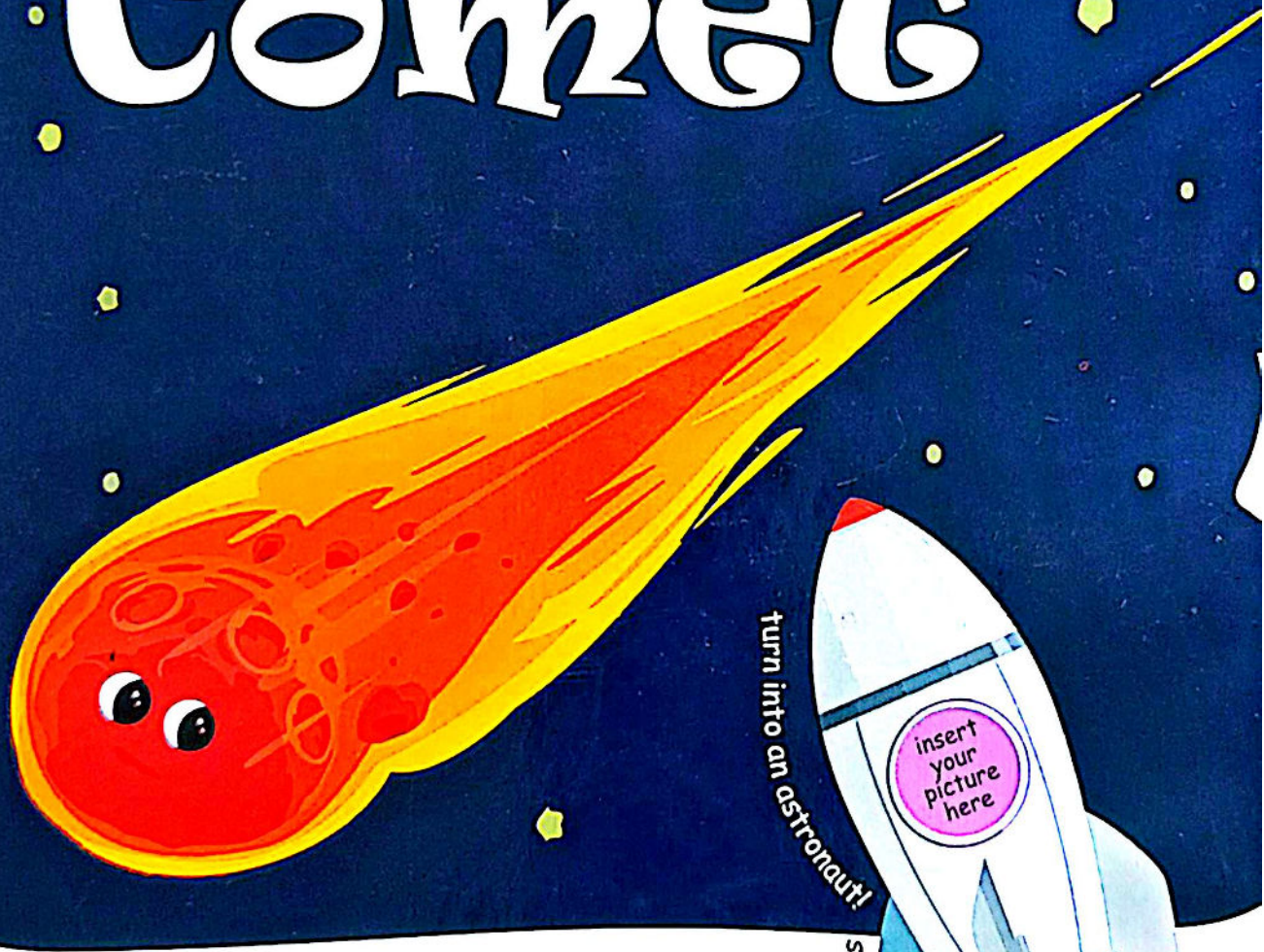


Astronomy
series-2

age:
6 to 10 years

Hello Comet



written & arranged by
Nasrin Mustafa

translated by
Naziba Sayem

turn into an astronaut!

insert
your
picture
here

start your rocket!!

FLY

into the kingdom of
COMETS... HOH HOH!!!

BU! U!

'Comet' in English
came from the
Greek word
'Komet'.
It means-
'long-haired.'

Prehistoric
humans
were scared
of comets.

They would think,
what even is
this thing?



In 2342 B.C. (2342 years before the
birth of Jesus Christ), during the
time of Prophet Noah, there was a
huge flood on Earth. Some people
believe, a comet coming near Earth
every 575 years might be responsible
for the flood. However, modern
scientists deny this theory.

I come in every age, I come again
and again. Now I have come for
the great revolution. I am the
creator's deadly foe,
the devastating comet of all times

Our national poet
Kazi Nazrul Islam
wrote a poem about
a comet. He even
had a magazine
called 'Dhumketu'
(Bengali
for Comet)!



'Huixing'
-a naughty
star!

The Chinese
word huixing
means
'broom star'.
Does
the comet
look like a
broom?

Ancient
Chinese scientist
Li Chunfeng
(602-667 A.D.)

静夜思

He came quietly,
In a whirlwind,
carrying a cloud
like a flag.
Then he left,
Without saying goodbye.

Ascend from The
ninth heaven Calm
down the comet!

Ancient Chinese poet
Ku Yunan (340-278 BC)
wrote poems on Comet



Something
is about to
happen!

The Kung tribe of
Namibia are always happy to
encounter a comet.

Bengali
grandmas
always
say...

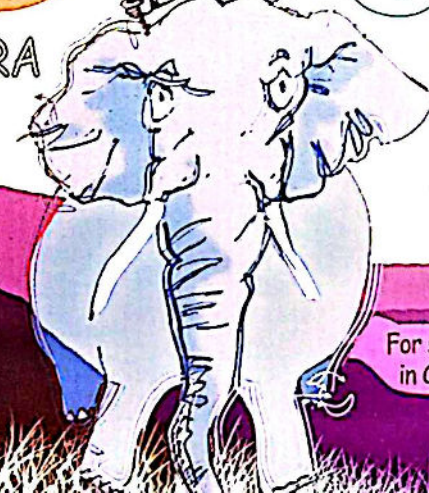
For the
African
Zulu tribe,
it signifies
'war'.

Listen, kid.
Trust me, it's not
right to eat rice
when the
Dhumtara is
in the sky.
You might get
sick. I heard
this from my
own grand-
mother. And
she heard
it from
her grand-
mother ...



I'm going
to war. The
Dhumtara
has risen
in the sky
and war
always happens
when it appears.
I do not like war,
still I must go.

It is
DHUMTARA
for Aztecs.



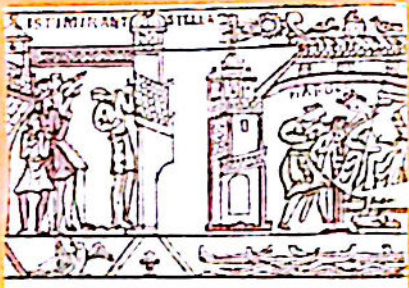
Such beliefs do not
have any scientific
proof to back them
up. So, they are just
superstitions.

For some tribes
in Congo, it means 'death'



Hello Comet-3

Scientists have been trying to observe comets for many, many years. There is evidence of this fact in multiple civilisations of the world.

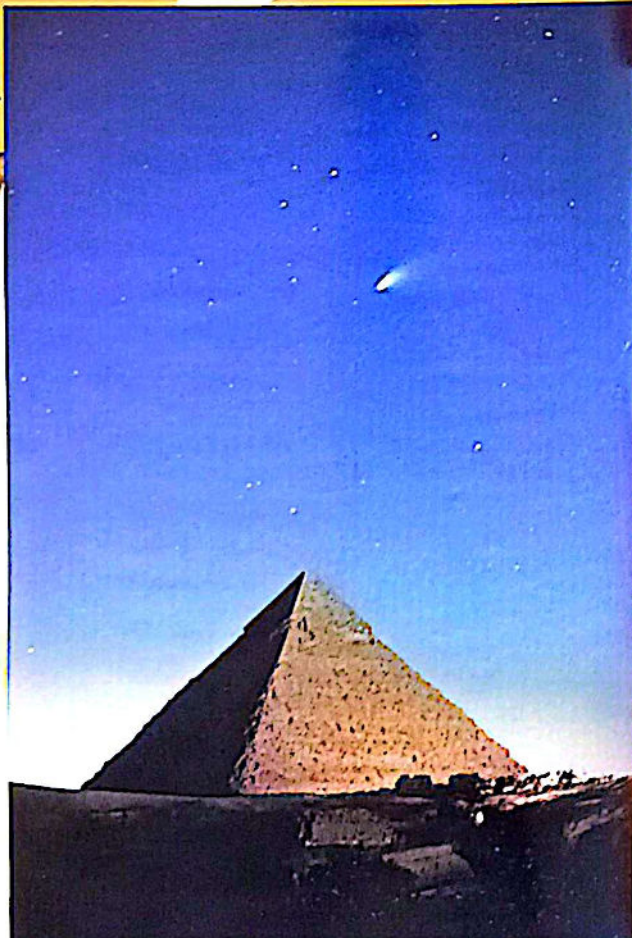


Actual scientifically accurate research on comets began in Greece. That was around 500 B.C.



Observers in Babylon wrote it down every time they saw one in the sky. In this way they created 'Comet Diary'

Hello Comet-4

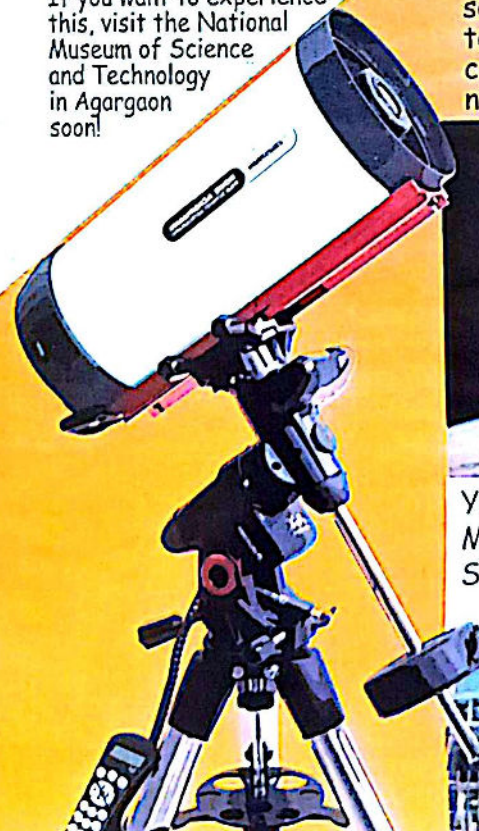


want to see

the comet?

There are several types of telescopes available to observe comets. A lot of them are cheaper, if you try, you can actually buy one! Otherwise there are telescopes placed in space observatory centres or novo theatres that can easily be used to fulfill your desires.

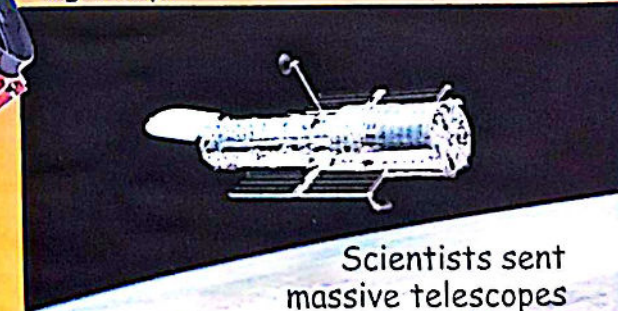
If you want to experience this, visit the National Museum of Science and Technology in Agargaon soon!



Scientists of our time have invented telescopes that let us see very magnified comets. We can learn a lot from those.



This green comet, 'Nishimura', was so bright that when it passed close to Earth in September of 2023, it could be seen with bare eyes in the night sky.



Scientists sent massive telescopes in space to watch comets.

You may go to Bangabandhu Sheikh Mujibur Rahman Novo Theater at Bijoy Soroni, Dhaka.



Hello Comet-5

During ancient Chinese astronomer Li Chunfeng's period, he researched on comets and wrote:

'The comet is a naughty star.'

'As long as comets can be seen, whales will keep dying.'

'When the comet approaches from the north.... If it is bowl-shaped, a prince will ascend the throne...'

When the comet will travel from south to north, disaster will strike the country.'

'Comet appearing in a virgo constellation will bring flood and pandemic in the country. Hungry people will kill each other.'

We, the old-timey scientists, took fear in comets. Because of us, ordinary people were even more fearful. Are comets really that scary?

Hello Comet-6



I did not do anything. It was all the comet's fault. Why did it show up?

A Chinese book from 1400 A.D. says:

'When Emperor Sui sentenced his trusted parliament members to death, a comet was present in the sky.'



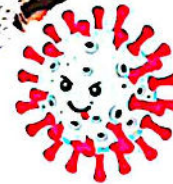
This Chinese book has descriptions of 29 observations of comets over a period of 3000 years! really!

Going through old books tells us that the Chinese have observed 338 comets between 1400 B.C. to 100 B.C..

They only had one failure.

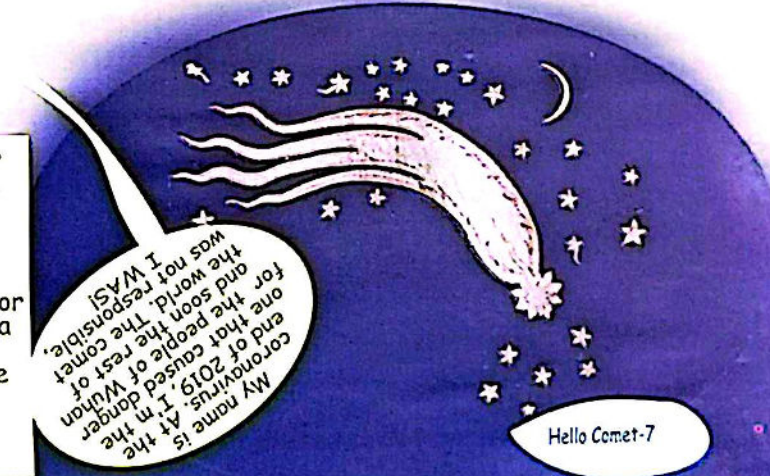
In 164 B.C. there was a comet that they hadn't seen.

Many, many years later, astronomer Edmond Halley discovered this comet. It visits Earth every 76 years. It did so even in ancient times.

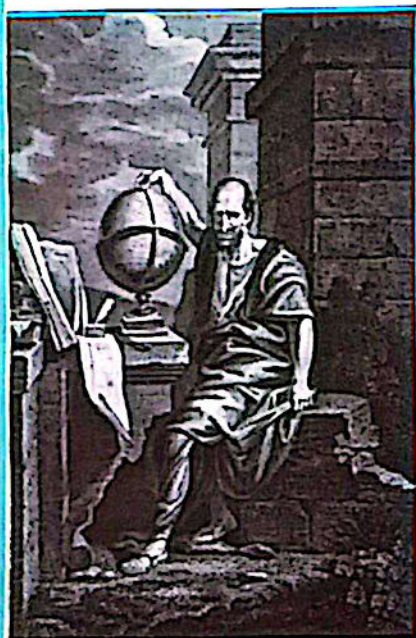


There was another Chinese book from 1300 A.D. that mentioned:
'When Emperor Wuwang declared war against Emperor Chu, a comet with a tail was pointing towards the people of Wuhan. They were in great danger.'

My name is coronavirus. At the end of 2019, I'm the one that caused danger for the people of Wuhan and soon the rest of the world. The comet was not responsible. I WAS!



Hello Comet-7



DEMOCRITUS
De la Culture & Du Palais Royal
 ÉCOLE NAPOLÉONNE.

Democritus was born in 460 B.C. He believed comets were born when one star brushed past another one.



Hello Comet-10

Democritus was the first person to finally come up with some accurate information about comets. That is- 'It is a luminous object and it is formed through a natural process.'

BUT,
 One person
 could not
 accept
 Democritus'
 opinion.

His
 name is
 Aristotle

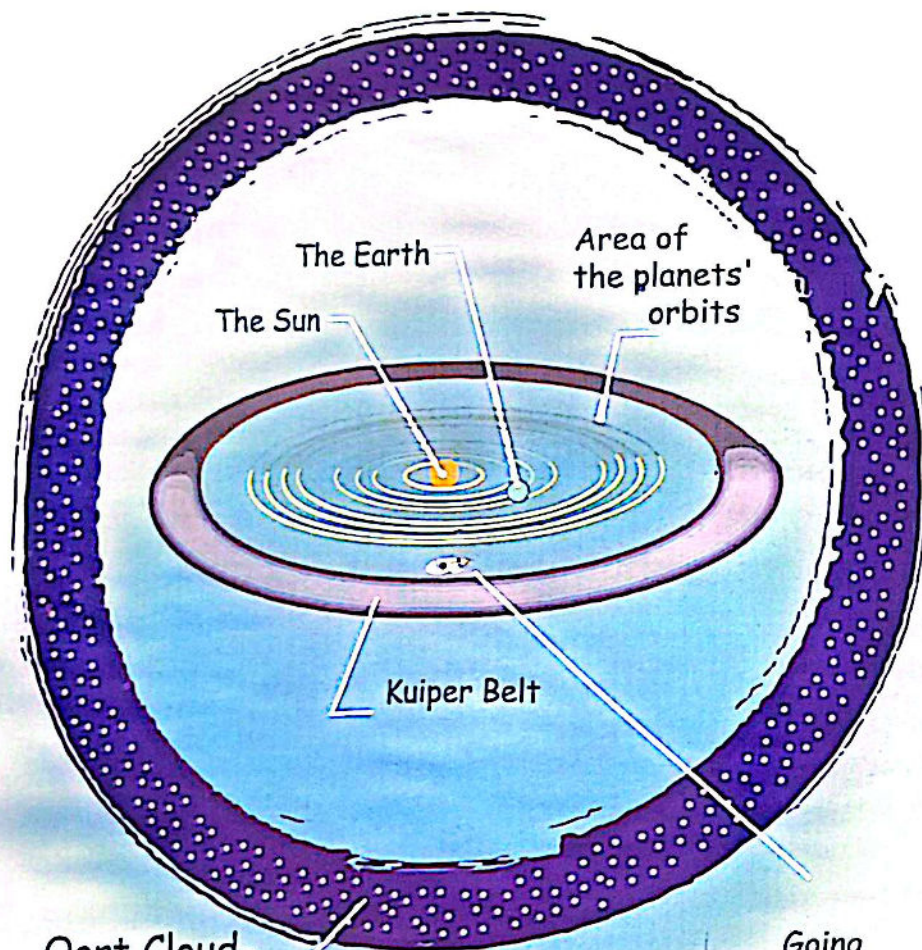
Aristotle (384-322 A.D.) used to think, the Earth's atmosphere had come very close to the moon.

He stated, Comets are not similar to the planets in any way. They will definitely keep in touch with Earth's atmosphere near the moon.



Aristotle explained,
 a Comet is a
 formation of
 the atmosphere

Hello Comet-11



Oort Cloud-
even further away.
One hundred thousand
astronomical units
away from the Sun.

Going
30 to 50

astronomical units away from

our Sun, we reach the rings of planet
Saturn from where the Kuiper Belt is
visible. Here lies two dwarf planets- Pluto
and Eris; along with them, there are
thousands of chunks of ice. This ice
is what transforms into comets!

How many days will it take us to reach the Kuiper Belt and Oort Cloud?

Once you've arrived
there, you can jump onto
this chunk of ice!

What will happen if
you take the ice from
a comet's back and
throw it into the
distance...?
A brand new, small
comet is born!



This icy object is the nucleus. Once it's racing towards the Sun
at full speed, the nearer it is the hotter it gets.
The ice starts melting and steam wraps around it.

A length that is the same
as the distance between Earth and
the Sun is called 1 Astronomical Unit.
That means, one hundred and fifty million
kilometres (150,000,000 kilometres) or
93 million miles (93,000,000 miles).

1 Astronomical Unit, or A.U. for short.

The spaceship Voyager-2
that left Earth in 1977 can travel
a million miles everyday. At this
speed, it reached Kuiper Belt
in 1989-TWELVE years later!
To reach the Oort Cloud it will
only take 300 years.

We're waiting...