



K.C.COLLEGE
DEPT OF LIFE SCIENCES
UNDER STAR DBT SCHEME
DEPARMENTAL NEWSLETTER



VOLUME XV ISSUE 1

BIOLOGY TODAY



**“BIOLOGY GIVES YOU A
BRAIN,
LIFE TURNS IT INTO A
MIND”**

WOMEN IN SCIENCE

“BEHIND EVERY
SUCCESSFUL
WOMEN IS A TRIBE
OF OTHER
SUCCESSFUL
WOMEN, WHO HAVE
HER BACK”.



I. MARIE CURIE- CONDUCTED PIONEER RESEARCH ON RADIOACTIVE DECAY, FIRST WOMEN TO RECEIVE THE NOBLE PRIZE.

II. EDA VALET KAKKAT JANAKI AMMAL-CREATE A HIGH YIELDING STRAIN OF SUGARCANE THAT WOULD THRIVE IN INDIAN CONDITION, FIRST WOMEN TO RECEIVE PADMA SHRI.

III. ROSALIND FRANKLIN- FOUND OUT X-RAY IMAGE OF DNA.





WHAT IS

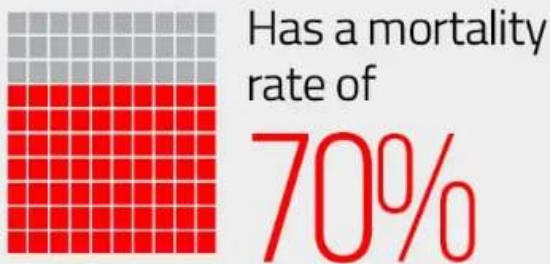
NIPAH VIRUS?

HOW SEVERE IS IT?



A disease-causing virus affecting both **animals & humans**

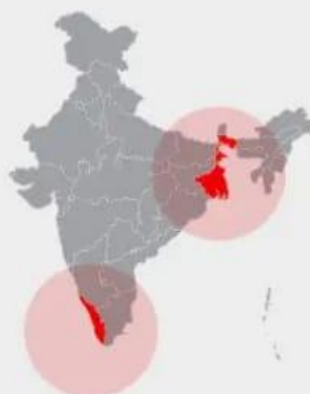
First broke out in Malaysia and Singapore in 1998 and 1999



PREVIOUS OUTBREAKS IN INDIA

17
Deaths

Kozhikode, Malappuram (Kerala, 2018)



45
Deaths
Siliguri, WB (2001)

05
Deaths
Nadia, WB (2007)

*1 case confirmed, 80+ people under observation
Ernakulum (Kerala, 2019)*

SYMPTOMS



Fever

Headache

Coma



Drowsiness

Confusion

Disorientation

SPREADS THROUGH

Fruit bats, human-to-human transmission also likely

(Source: WHO, news reports)

TREATMENT

Intensive supportive care for humans

NO VACCINATION AVAILABLE



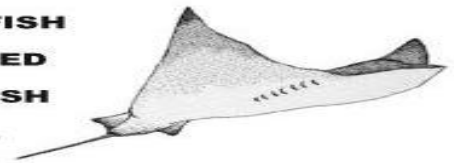
Ocean Animal Word Search

S L S E Y S S S X V Z E E C Q
 M E B U Q N T H J H S N R Z R
 C E E U P I S A Y A E O N J S
 S S I R N O B R L I S M N R T
 J D E G O Z T K J C Y E L I A
 G E R M A L C C Y T B N B D R
 M A L N I H P L O D X A E R F
 Y V S L O B S T E R T E R T I
 X U D B Y Y C F E Y W G M C S
 P W F Z Y F J N L A O U U P H
 U N H Q W L I B E R H B B M L
 Y L J A D E F S Z Y F Y I G F
 J F M G L C L M H F V Z F K M
 P T W B J E N T D B Q X H A T
 S W O R D F I S H U D C W Q C

ANEMONE
DOLPHIN
LOBSTER
SHARK
STINGRAY

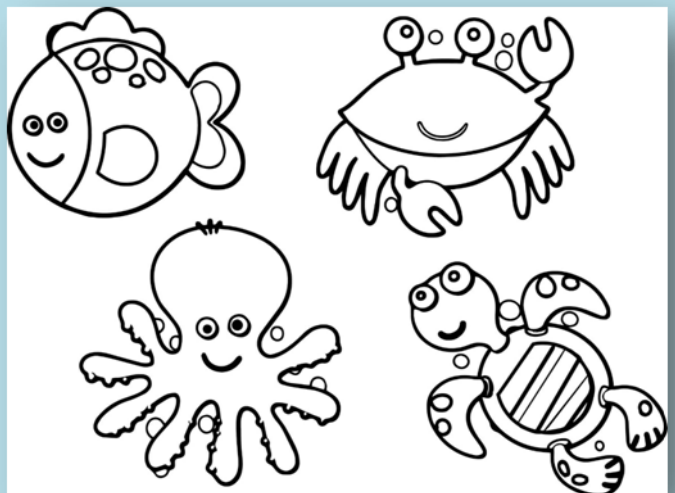
CLAM
EEL
OCTOPUS
SQUID
SWORDFISH

CRAB
JELLYFISH
SEAWEED
STARFISH
WHALE



"They say the sea is cold, but it contains the hottest blood of all."
 -D.H Lawrence

WITHOUT BIODIVERSITY OUR EARTH WOULD BE SO COLOURLESS!!!

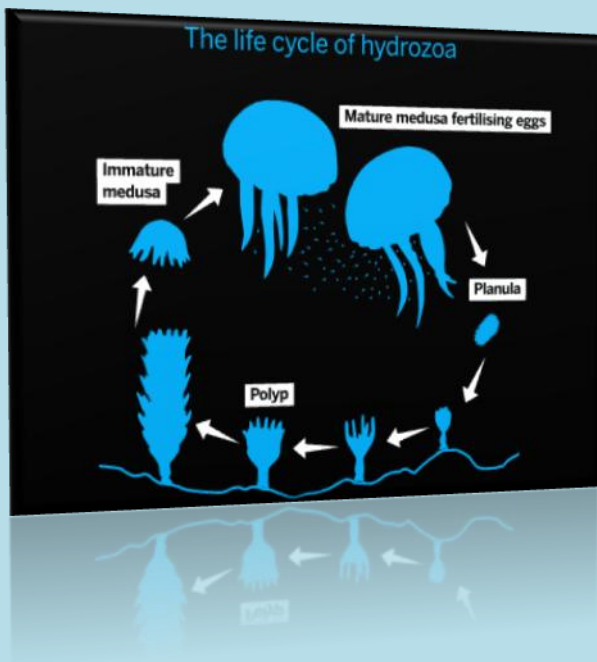
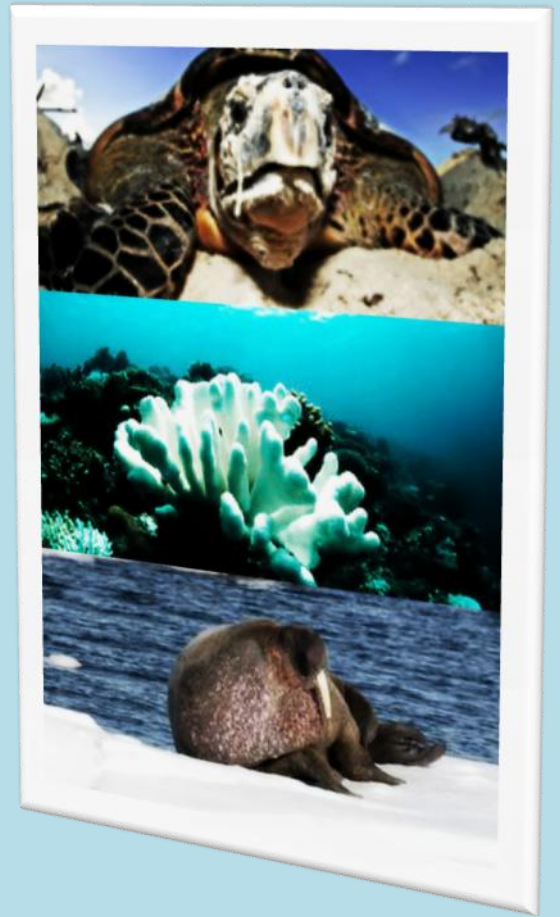


OCEAN: WHERE LIFE BEGAN

The marine environment is already registering the impacts of climate change. The current increase in global temperature of 0.7°C since pre-industrial times is disrupting life in the oceans, from the tropics to the poles.

Marine species affected by climate change include plankton - which forms the basis of marine food chains - corals, fish, polar bears, walrus, seals, sea lions, penguins, and seabirds.

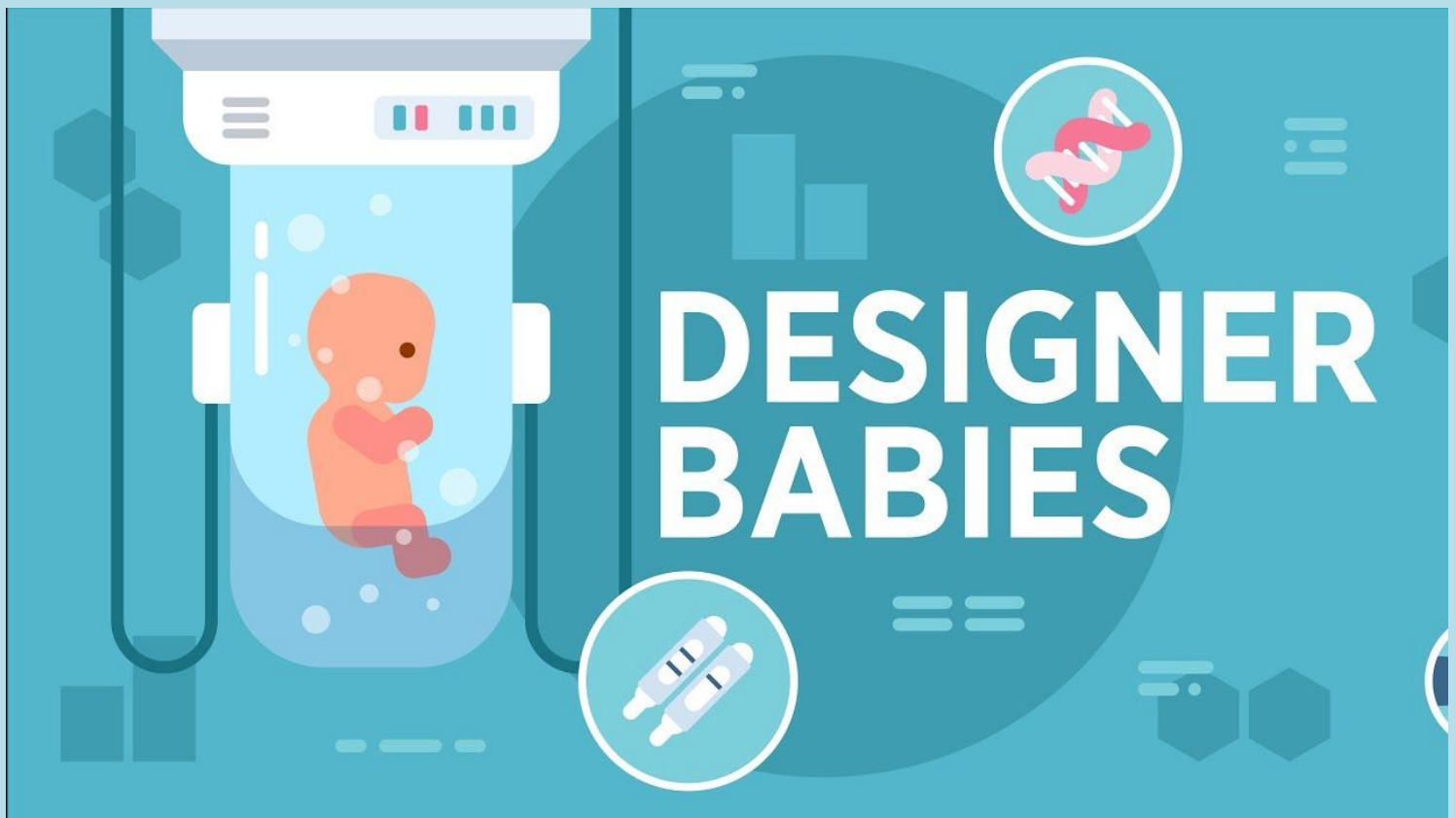
The Intergovernmental Panel on Climate Change predicts a further rise of between 1.4°C and 5.8°C by the end of the century. Climate change could therefore well be the knock-out punch for many species which are already under stress from overfishing and habitat loss.



JELLYFISH: ALIVE FOREVER

WITH LIFE COMES DEATH...BUT BUT WHAT IF THINGS CAN BE CHANGED JUST BEFORE IT'S TIME TO DIE... NO IT'S NOT THE INFINITY STONE THAT DID IT... IT'S A SPECIES OF JELLYFISH THAT IS CALLED THE *Turritopsis dohrnii* OR THE **IMMORTAL JELLYFISH**, THAT LIVES IN THE MEDITERRANEAN SEA IN THE WATERS OF JAPAN. IT REVERSES IT'S LIFE CYCLE IF HURT OR UNDER STRESS. IT CONVERTS ITSELF INTO A CYST & THEN TO A POLYP BUT NEVER DIES....





Genetically enhancing human beings offers infinite potential benefits in health and medicine, but it could also cause significant harm in ways scientists cannot foresee. For instance, Chinese scientist **He Jiankui** used **CRISPR** to genetically edit the genes of twin girls Lulu and Nana in 2018 in a bid to protect them from HIV. Specifically, he modified a gene called **CCR5**. Now, new research reveals that he may have also shortened their lives in the process.

FUN FACT

The Palmar grasp reflex: when something touches a baby's palm, they reflexively grasp it with surprising strength. It might be actually strong enough to support their own body weight.



WHAT LIFE SCIENCES IS ALL ABOUT...

The Life Sciences comprise the branches of science that involve the scientific study of life and organisms, such as micro-organisms, plants, animals including human beings. Life sciences discoveries are helpful in improving the quality and standard of life, and have applications in health, agriculture, medicine and the pharmaceutical and food science industries.

LIFE SCIENCE CAREERS AND JOBS

anesthesiologist	medical assistant	biophysicist	optometrist
developmental biologist	reproductive biologist	biostatistician	oral surgeon
virologist	histologist	biotechnologist	osteopath
animal breeder	medical writer	botanist	park ranger
animal husbandry technician	microbiologist	brewmaster	patent agent
animal nutritionist	molecular biologist	broadcaster	pediatrician
animal pathologist	museum curator	cell biologist	pharmacologist
aquarium director	museum educational staff member	cell culture operator	physical therapist
aquatic ecologist	museum technician	chiropractor	physician
bacteriologist	natural resources manager	clinical technician	physiologist
biological illustrator	nature center director	communication/media	podiatrist
biological photographer	nuclear medicine technologist	consultant	public policy analyst
biologist	nurse	crime lab technician	public relations expert

NOW YOU KNOW, WHERE YOU WILL BE

AFTER 5 YEARS.....



Exploring the origins of the apple








Date: May 27, 2019

Source: Max Planck Institute for the Science of Human History

Summary: Apples originally evolved in the wild to entice ancient megafauna to disperse their seeds. More recently, humans began spreading the trees along the Silk Road with other familiar crops. Dispersing the apple trees led to their domestication.



ACTIVITIES OF THE DEPARTMENT..

-  Trip to Chavan Farm.
-  BCME
-  Bioinformatics workshop.
-  Session on Hydroponics.
-  Presentation on disease.
-  Surveying and Biostatistics applications.
-  Research Scholars Meet.



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**“ COMING TOGETHER IS A BEGINNING.
KEEPING TOGETHER IS PROGRESS.
WORKING TOGETHER IS
SUCCESS” ...**