A.S.D GOVT. DEGREE COLLEGE FOR WOMEN (A),

(Re- Accredited by NAAC with B Grade)

Jagannaickpur, Kakinada-533002, East Godavari, APS

DEPARTMENT OF ZOOLOGY & AQUACULTURE TECHNOLOGY

2020-2021

National Science Day

By the

Department of Aquaculture Technology

A.S.D GOVT. DEGREE COLLEGE FOR WOMEN (A)

(Re- Accredited by NAAC with 'B' Grade)

Jagannaickpur, Kakinada - 533002, East Godavari, AP.

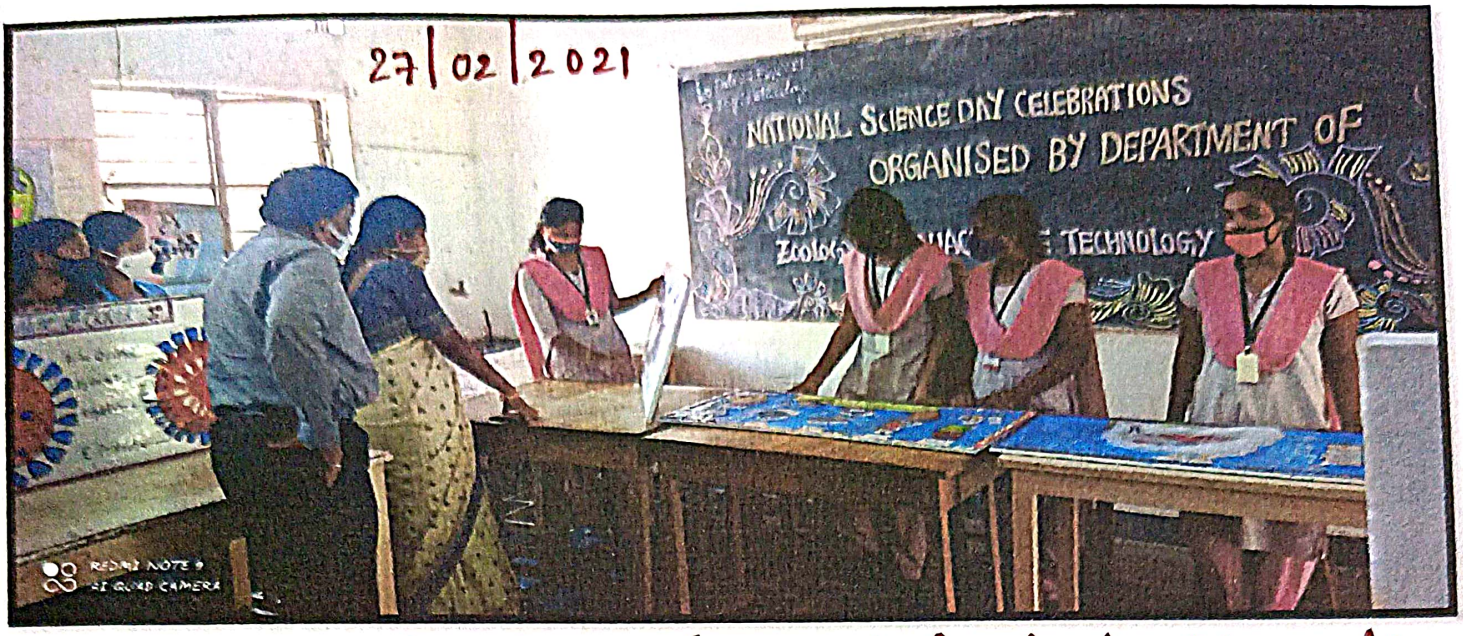
Activity Register 2020-2021

Date	27/02/2021
Conducted through (DRC/JKC/NCC/NSS/Department)	**Aquaculture Technology**
Nature of Activity (Seminar/Workshop/Extn. Lecturer ect.)	**National science day celebrations**
Title of the Activity	**Models and poster presentation**
Name of the Department/Committee	**Aquaculture Technology**
Details of Resource Persons (Name. Designation ect.)	**Dr. Y. Siva Prasad. Former scientist –ISRO Thiruvanthapuram.**
No. of Students Participated	**66**
Brief Report on the Activity	**Students certainly benefit by themselves when they are participated in. They can know how to gather information relevant to the topic**
Name of the Lecturers who Planned & Conducted the Activity	**U. Satyanarayana G/F in Zoology** **N. Veera Chanti G/F in Aquaculture In Technology** **B. Sonia G/F in Zoology**
Signature of the in Charge	
Signature of the Principal	
Remarks	

National Science Day Celebrations

Chief Guest :- Dr. Y. Siva Prasad. Former Scientist - ISRO Thiruvanthapuram.

Students Participants of & Winners of Models & Poster Presentation.



B. Mounika Explained Model Fish Meristic & Morphological characters to lectures.

Our Principal Sir Participated in this Program and appreciated to studants

II Czagt G.H.V.L Phanendra Explained Model Sympathetic and Parasympathetic nerv system to our Principal Sir.

National Science Day

National Science Day is celebrated in India on 28 February each year to mark the discovery of the Raman effect by Indian physicist Sir C. V. Raman on 28 February 1928.

For his discovery, Sir C.V. Raman was awarded the Nobel Prize in Physics in 1930.

History of National Science Day

In 1986, the National Council for Science and Technology Communication (NCSTC) asked the Government of India to designate February 28 as National Science Day. The event is now celebrated all over India in schools, colleges, universities and other academic, scientific, technical, medical and research institutions. On the occasion of the first NSD (National Science Day)(28 February 1987) NCSTC announced the institution of the National Science Popularization awards for recognizing outstanding efforts in the area of science and communication.

Celebration of National Science Day

National Science Day is celebrated in India every year on 28 February. The celebration also includes public speches, radio, TV, science movies, science exhibitions based on themes and concepts, debates, quiz competitions, lectures, science model exhibitions and many more activities.

Objectives of Celebrating National Science Day

National Science Day is celebrated to spread a message about the importance of science used in the daily life of the people. To display all the activities, efforts and achievements in the field of science for human welfare. It is celebrated to discuss all the issues and implement new technologies for the development in the field of science. To give an opportunity to the scientific minded citizens in India. To encourage the people as well as popularize science and technology.

Themes of National Science Day

Meenu Khare receiving the National Award from Kapil Sibal.

The theme of the year 1999 was "Our Changing Earth".

The theme of the year 2000 was "Recreating Interest in Basic Science".

The theme of the year 2001 was "Information Technology for Science Education".

The theme of the year 2002 was "Wealth From Waste".

The theme of the year 2003 was "50 years of DNA & 25 years of IVF – The Blue print of Life".

The theme of the year 2004 was "Encouraging Scientific Awareness in Community".

The theme of the year 2005 was "Celebrating Physics".

The theme of the year 2006 was "Nurture Nature for our future".

The theme of the year 2007 was "More Crop Per Drop".

The theme of the year 2008 was "Understanding the Planet Earth".

The theme of the year 2009 was "Expanding Horizons of Science".

The theme of the year 2010 was "Gender Equity, Science & Technology for Sustainable Development".

The theme of the year 2011 was "Chemistry in Daily Life".
The theme of the year 2012 was "Clean Energy Options and Nuclear Safety".
The theme of the year 2013 was "Genetically Modified Crops and Food Security".
The theme of the year 2014 was "Fostering Scientific Temper".
The theme of the year 2015 was "Science for Nation Building".[1]
The theme of the year 2016 was on "Scientific Issues for Development of the Nation".
The theme of the year 2017 was "Science and Technology for Specially Abled Persons"[2]
The theme of the year 2019 is "Science for the People, and the People for Science"[3]
The theme of the year 2020 is "Women in Science."[4]
The theme for NSD of the year 2021 is 'Future of STI: Impact on Education Skills and Work'. [5]

On 28 February 2009, five institutions in India were presented the 'National Award for Science Communication' by the Indian Department of Science and Technology (IDST). These awards are presented to recognize the efforts of individuals and government and non-government bodies for the popularization of science in India.

The highest award was given in 2009 to the Vikram Sarabhai Community Science Centre for its contribution to science-related learning material and conducting training programs on science education.[6]

A Festival of Measurement and Space Fair was held at the Nehru Planetarium, New Delhi.[7]

Dr. Pramod Kumar Mohapatra, G.S. Unnikrishnan Nair and Ms. Meenu Khare were awarded ₹1,00,000 for their individual contributions to the field.[6] Jidnyasa Trust of Thane also received ₹1,00,000 for setting up a science activity centre. It is to make people aware about the science and technology.

2012

The focal theme for 2012 National Science Day was "Clean Energy Options And Nuclear Safety" [8] As India observed National Science Day on 28 February, the citizens saw a slew of activities at Science City which had planned a five-day Science Carnival on theme of youth and science.

"The Science Carnival is going to be an event with a series of scientific activities and programs involving school and college students, eminent scientists and faculties of the state and country. We want to provide a real platform for budding scientists to make their career and profession in science," said a senior Science City official. Officials said that they are expecting nearly 1 Lakh students and science enthusiasts to visit Science City during this period.


NATIONAL SCIENCE DAY CELEBRATIONS
ORGANISED BY DEPARTMENT OF
ZOOLOGY &
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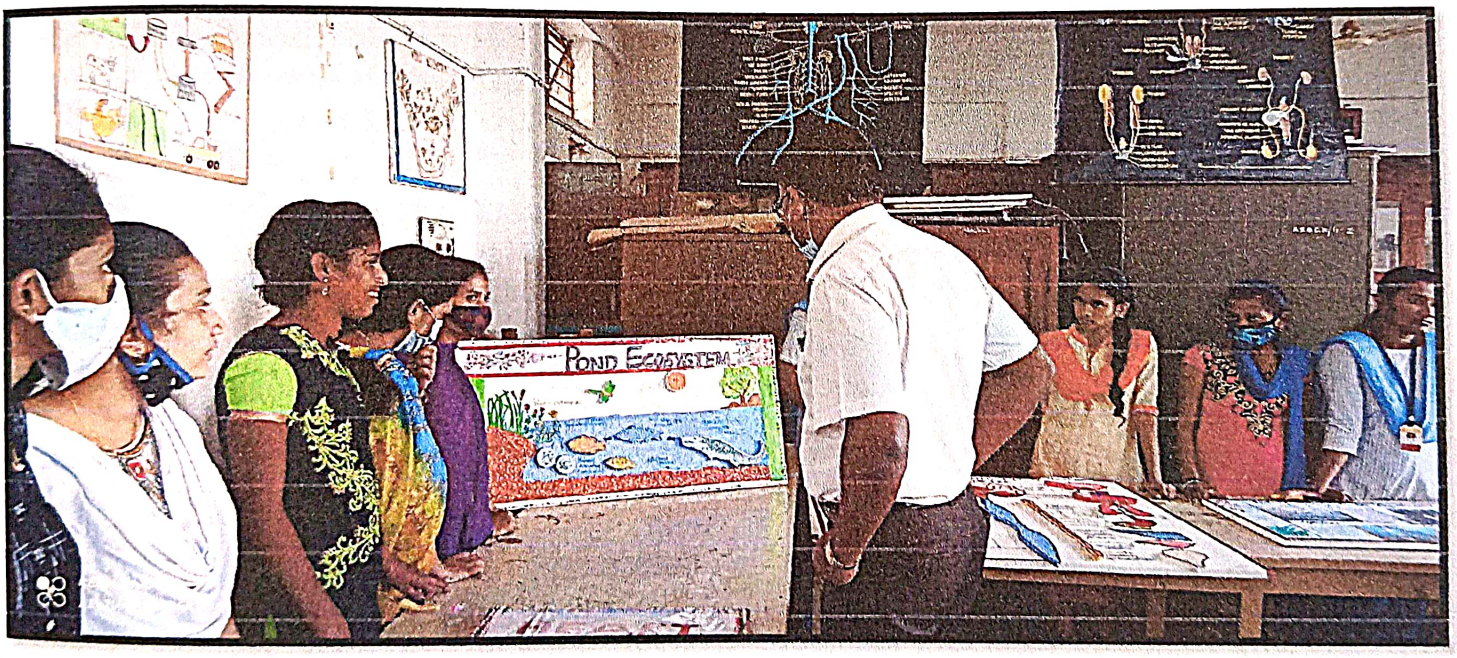

POND ECOSYSTEM

Structure and Function of the Heart

As a central part of the circulatory system, the heart is primarily responsible for pumping blood and distributing oxygen and nutrients throughout the body. Because of this task, the heart may be considered one of the most important organs of the body, such that even small dysfunctions or abnormalities may cause drastic changes or effects in the human organism. The heart is a muscle whose working mechanism is made possible by the many parts that operate together. The organ is divided into several chambers that take in and distribute oxygen-poor or oxygen-rich blood. These chambers are accompanied by veins and arteries that facilitate the same function. With all of its parts working together towards the same goal, the heart successfully pumps blood with ease.

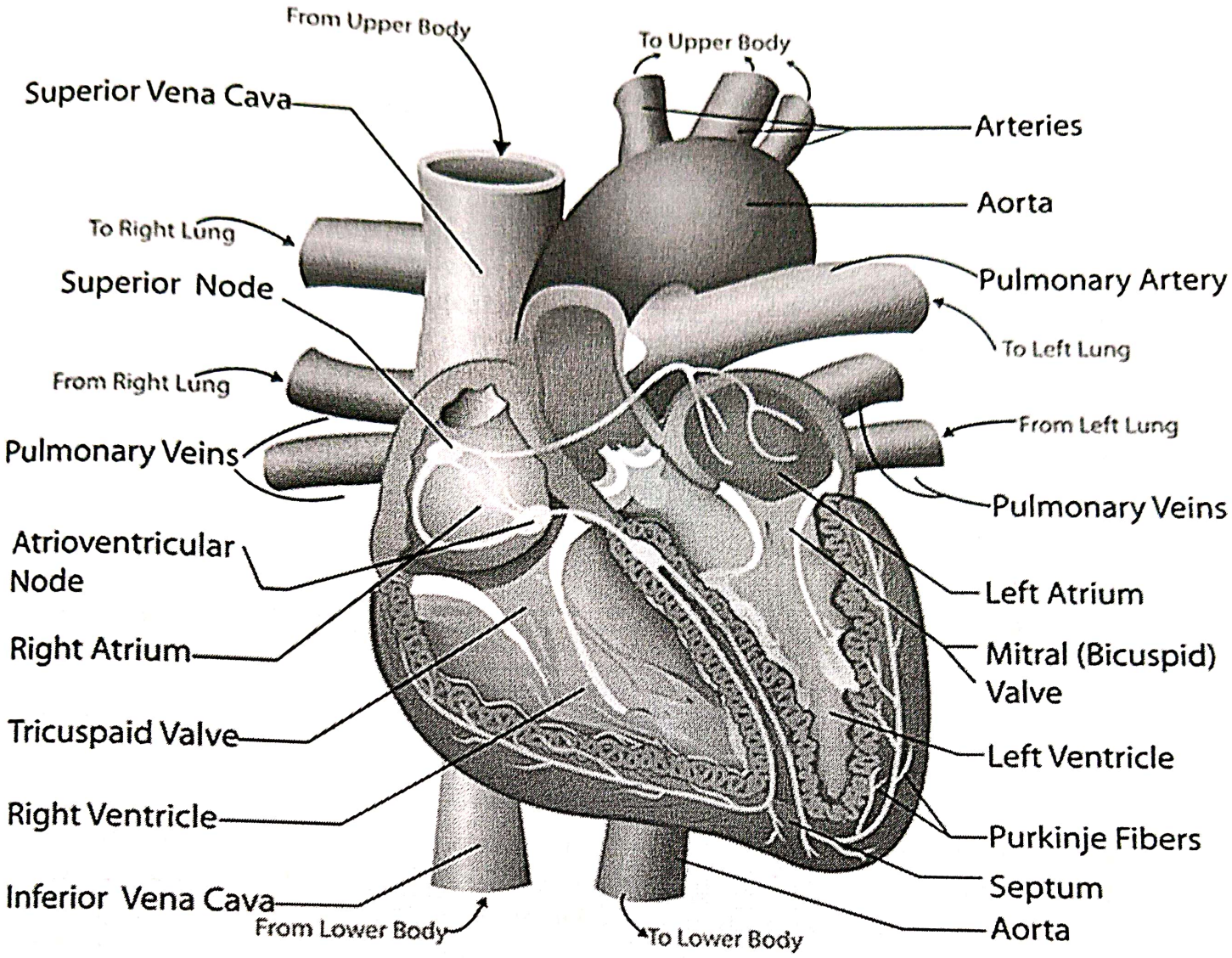
Normally, a good-functioning adult heart could go on three cardiac cycles or 72 beats per minute—this rate changes for children whose heart rates are normally and relatively faster.

Structure of the heart

The heart can be found at the chest's center, underneath the sternum in a thoracic compartment. It comprises four chambers and several valves that regulate the normal flow of blood within the body.

Two chambers called **atria** are located in the upper portion of the heart with the left atrium receiving oxygen-rich blood and the right receiving oxygen-free blood. The valves that separate these chambers are called **atrioventricular valves,** composed of the tricuspid valve on the left and the mitral valve on the right.

On the other hand, **ventricles** are chambers found on the lower portion of the heart; they pump oxygen-enriched blood into the body's organs, reaching even the smallest cells. Similar to the atria, valves also separate the ventricular chambers. Collectively-termed as **semilunar valves,** these are comprised of the pulmonary and aortic valves.



Easy to edit vector illustration of anatomy of heart. Image Credit: Snapgalleria / Shutterstock

The heart also has a wall that is composed of three layers: the outer layer **epicardium** (thin layer), the middle layer **myocardium** (thick layer), and the innermost layer **endocardium** (thin layer). The myocardium is thick because it is made up of cardiac muscle fibers.

The heart structure is made more complex because of the mechanisms that allow blood to be distributed throughout the body and return to the heart. Facilitating this continuous process are two types of blood vessels: veins and arteries. The vessels that bring oxygen-free blood back into the heart are called **veins**; those that bring oxygen-rich blood away from the heart and to other body parts are called **arteries**.

Functioning in the left ventricle, the largest artery is called the **aorta**. The aorta is considered a main artery in the body. It further splits into two smaller arteries called common iliac arteries.

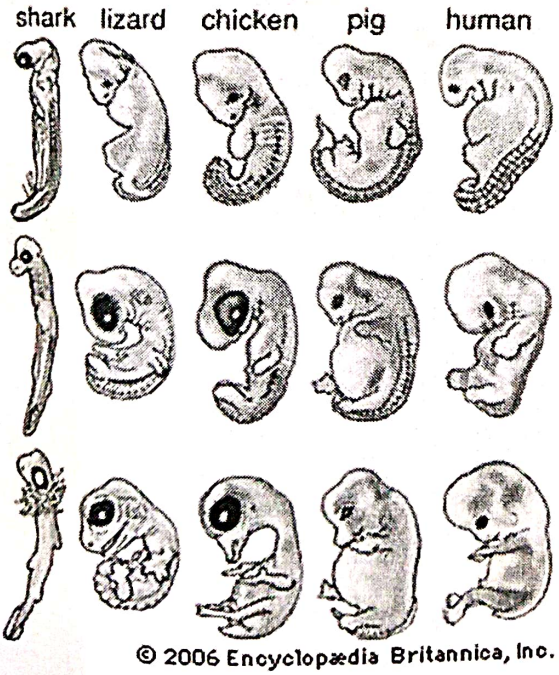
With regular functioning, the heart can continuously supply a sufficient amount of oxygen to all parts of the body.

Human embryo development

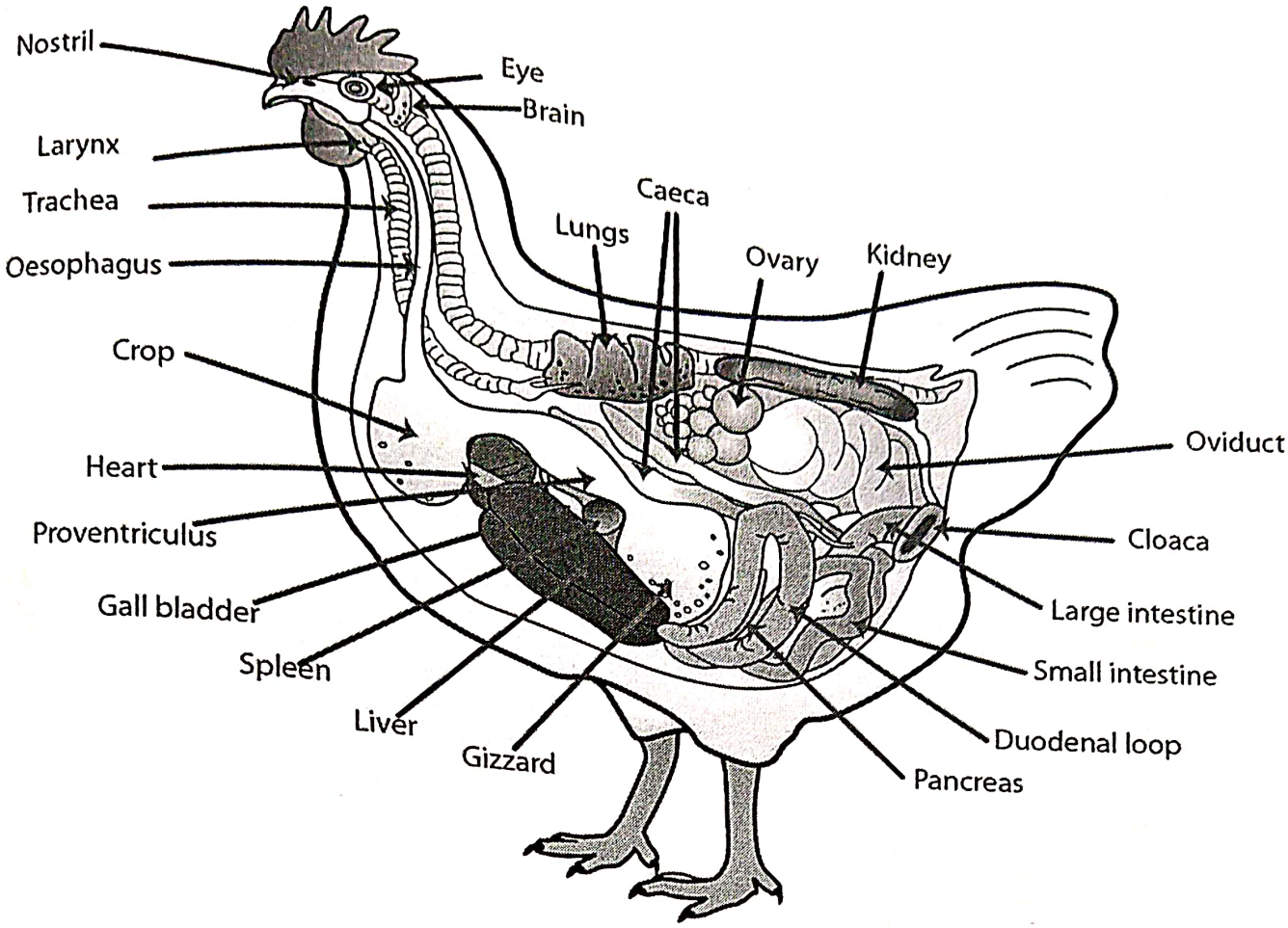
The human body, like that of most animals, develops from a single cell produced by the union of a male and a female gamete (or sex cell). This union marks the beginning of the prenatal period, which in humans encompasses three distinct stages: (1) the pre-embryonic stage, the first two weeks of development, which is a period of cell division and initial differentiation (cell maturation), (2) the embryonic period, or period of organogenesis, which lasts from the third to the eighth week of development, and (3) the fetal period, which is characterized by the maturation of tissues and organs and rapid growth of the body. The prenatal period ends with parturition and is followed by a long postnatal period. Only at about age 25 years are the last progressive changes completed.

Pre-Embryonic And Embryonic Development

Much of the embryonic developmental machinery (the cellular apparatus) used in human development is similar to that used by other vertebrates as well as some invertebrates. The machinery is essential for four processes: cell proliferation, cell specialization, cell interaction, and cell movement. During these processes, the approximately 20,000–25,000 genes in the human genome give rise to as many as 100,000 different proteins, which give the conceptus form and substance.



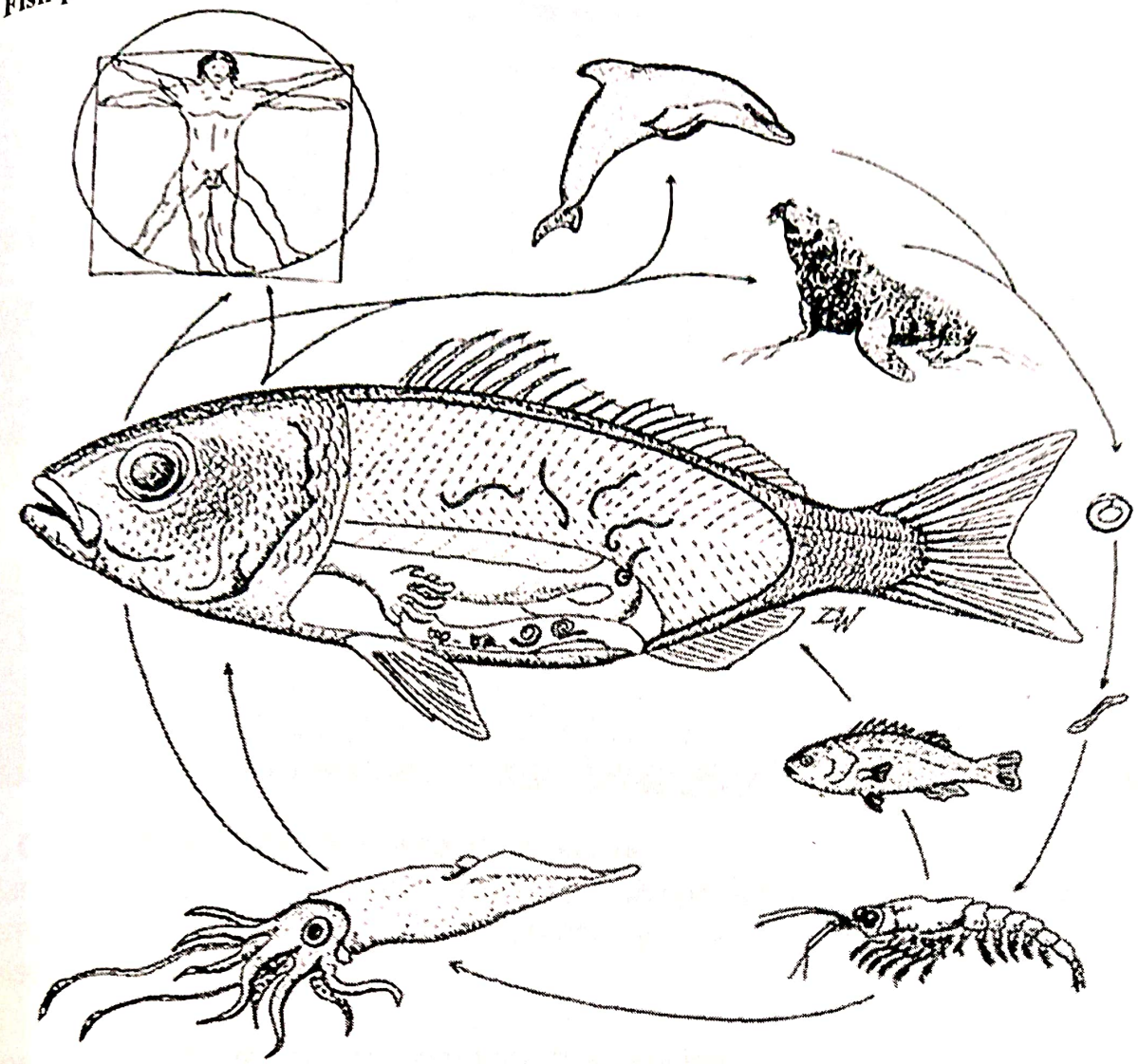
Chick internal anatomy



A knowledge of the anatomy and physiology of an animal is essential for understanding, and correcting, any problems that may arise. For example, knowledge of the digestive system assists in understanding the nutritive requirements of chickens. In addition, knowing what is 'normal' can also help you recognize and take action when the digestive system goes awry. Similarly, knowledge of the female reproductive system is important for understanding any problems that may arise with regards to egg production, fertility, and hatchability.

- **Digestive system**
- **Female reproductive system**
- **Male reproductive system**
- **Respiratory system**
- **Skeletal system**
- **Muscular system**

Fish parasites



ROUNDWORM LIFE CYCLE

A parasite can be broadly defined as an organism that lives on or in another species, the "host", and obtains its nourishment from that species. It is easy to exaggerate the dangers, both real and imagined, of these parasites. There is no reason why fish caught by the California marine angler or bought at the market cannot be fully enjoyed even if they had once contained "guests". Parasitism is very common in nature and should not be viewed with distress. Among all the parasites found in California marine fishes, few appear to cause damage to the fish and only one, a larval roundworm, is cause for human concern. As will be seen, even this parasite is rendered harmless if the seafood is properly prepared or the parasite removed.

1. Climate Change-Resistant Mussels
Many species of fish are vulnerable to environmental changes. Rising water temperatures and changes in ocean acidity pose a threat to many species commonly raised in aquatic farms.

One way fish farmers can deal with this problem is by breeding resilient blue mussels. These mollusks can alter patterns in their genes to become resistant to environmental changes. Selective breeding increases the prevalence of this trait, increasing their survival rate.

By relying on these hardy mussels, aquaculture businesses can better withstand climate change.

2. Shift Toward Microalgae Oil
Similar to how people require omega-3 fatty acids in their diets, many fish need these oils to survive but don't produce them. In the wild, larger fish get omega-3s from eating smaller species, which get it from aquatic plants. Traditionally, farms use these smaller fish to feed the ones in captivity, though this is an unsustainable practice.

An increasingly popular solution to this problem is feeding farmed fish with microalgae oil instead of traditional fishmeal. Food made from oil-rich algae doesn't require aquaculture centers to buy or catch wild fish, so they don't contribute to overfishing. Feeding with microalgae oil benefits aquaculture businesses and the environment.

3. Kelp Farming

Not all aquaculture deals with animals. The cultivation of aquatic plants, such as kelp, is a growing sector. Kelp farming can help with several environmental concerns, including the increased demand for algae oil.

Raising kelp is significantly more eco-friendly than other forms of aquaculture. Many ecosystems benefit from the presence of this plant due to factors such as nutrient content. It's even a healthy food option for humans.

4. Increased Sea Urchin Production

Another less traditional species that aquaculture can benefit from is sea urchins. Like blue mussels, sea urchins are generally resistant to climate change, making them an ideal option for aquatic farmers in a rapidly changing environment.

While these creatures may not be a popular menu item for American consumers, they are valuable commodities in Japan and other international markets. Urchins are native to many areas along the U.S. coast, so raising them in American farms is minimally invasive.

5. Open-Ocean Aquaculture

The majority of aquaculture takes place close to the shore, but overcrowding of these areas can lead to concentrated waste in vulnerable coastal waters. Moving fish farms inland may solve some of these issues, although the process of doing so may be complicated.

With modern technology, open-ocean aquaculture can be optimally located and more effectively managed. Deep waters and stronger currents manage waste and keep it away from the delicate nearshore ecosystems. However, legal regulations regarding this practice are uncertain, and logistical issues are challenging since open-ocean waters are rough.

With time, research and technological development, open-ocean aquaculture will become a viable option. It may prove to be a more sustainable form of fish farming in a world where the future of aquaculture depends on environmental sustainability.

ASD govt degree college for women's.

NATIONAL SCIENCE DAY 2020-21

No	Roll No	Name of Student	Signature
	11413	S. Herna durga devi	S. Herna durga devi
	11422	D. Pujitha	D. Pujitha
	11423	P. Anitha	P. Anitha
	11447	G. Krishna veni	G. Krishna veni
	11448	G. Swathi	G. Swathi
	11463	V. Vijaya Durga	V. Vijaya Durga
	11464	K. Gnana nageswari	K. Gnana Nageswari
	11471	K. Kusuma	K. Kusuma
	11517	S. Pavani	S. Pavani
5.	11558	M. Suvarna Latha	M. Suvarna Latha
	11600	M. priya	M. priya
2.	11609	M. Kavya Sri	M. Kavya Sri
3.	11630	P. Sandya rani	P. Sandhya rani
4.	11656	K. Laxmi Kumari	K. Laxmi Kumari
5.	11679	G. Satya Vani	G. Satya veni
6.	11693	D. Sony	D. Sony.
7.	11723	P. Chunalika	P. Chunalika
8.	11724	D. Neelima	D. Neelima
9.	11727	P. Sai Laxmi	P. Sai Laxmi.

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Roll No.	Name of the student	Signature
192205	A. Shanti Rupa	A. Shanti Rupa
192206	K. Sai lalitha	K. Sai lalitha
192207	M. Suguna	M. Suguna
192209	M. Bharathi	M. Bharathi
192210	M. Chandhini	M. Chandhini
192211	G.V.H. Phanendra	G. Phanendra
192212	L. Durga bhavani	L. D. Bhavani
192213	M. Laxmi	M. Laxmi
192214	B.N.D. Lakshmi	B.N.D. Laxmi
192215	ch. Harshitha	ch. Harshitha
192216	V. Keerthana	V. Keerthana
192217	P.K.Ch. Kumari	P.K.ch. kumari
192218	P. Pushpa latha	
192219	D. Sri vani	D. Sri vani
192221	P. Suguna kumari	P. Suguna kumari
192222	N. Usha Rani	N. Usha rani
192223	B. Venisha Rani	B. Vennisha Rani

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ROLL-NO	Name of the student	Signature
1836203	K. S. Durga	K. S. Durga
1836204	B. Aparna	B. Aparna
1836205	G. Geetha	G. Geetha
1836206	K. Vatsavi	K. Vatsavi
1836207	M. Sudha Mounika	M. Sudha Moun
1836208	M. Anusha	M. Anusha
1836210	V. Anusha	V. Anusha
836211	B. Mounika	B. Mounika
1836212	E. Karuna	E. karuna
1836213	E. Lakanya	E. Lavanya
836215	G. Bhanu Deepthi	G. Bhanu Dee
836216	G. Vasantha	G. vasantha
1836217	K. Srideri	K. Sri devi
1836218	K. Devi	K. Devi
836220	B. Chandu	B. chandu
836221	K. Laxmi Durga	K. Laxmi Du

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ROLL NO	Name of the student	Signature
192111	Sk. Basheer	Sk. Basheer
192112	Sk. Karishma	Sk. Karishma
192113	A. Devi	A. Devi
192114	D. Eswari kumari	D. eswari kumari
192115	M. Malleswari	M. Malleswari
192117	S. Nagasatya	S. Nagasatya
192118	P. Jayashila	P. Jayashila
192119	B. PB. Therissa	B. Therissa
192120	L. Priyanka	L. Priyanka
192129	Ch. Devi	Ch. Devi
192135	Ch. Kumari	Ch. kumari
192148	R. Mamatha	R. Mamatha
192145	K. Rajeswari	K. Rajeswari
192147	R. Rani	R. Rani
192123	G. Anjali Devi	G. Anjali Devi
192134	D. je Satya	D. je Satya
192155.	P. Sravanthi	P. Sravanthi
192157	D. Sunitha	P. Sravanthi
192152	S. Sirisha	S. Sirisha