3055 BA SANGAM COLLEGE

PH: 6674003/9264117 E-mail: basangam@connect.com.fj

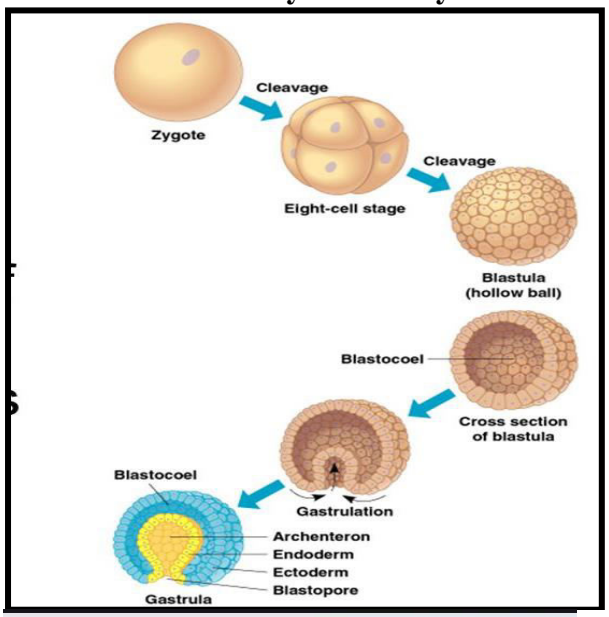
WORKSHEET 9

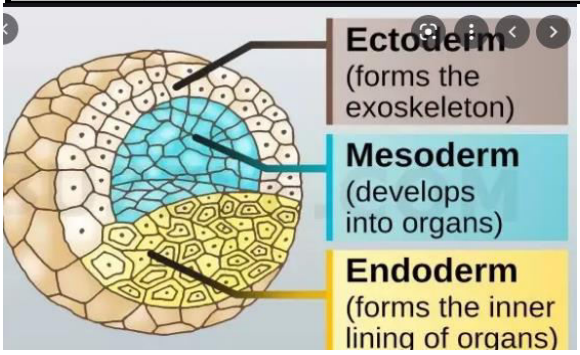
School: **Ba Sangam College** Subject: **Biology**
Year: **13** Name:

Strand	**13.3 Biodiversity Change and Sustainability**
Sub strand	**13.3.2 Diversity Of Life**
Content Learning Outcome	**13.3.2.1 CELLULAR ORGANISATION** **Explore evolution of different conditions and body types from the simple celled organisms to advanced, multicellular organisms**

Diversity Of Life Notes Continued

Formation of Primary Germ Layers:





Fates of the Germ layers:

Germ layers give rise to tissues and organs as listed below.

Ectoderm-hair,nails,epidermis(skin),brain and nerves(nervous system)

Mesoderm-notochord(in chordates),blood and blood vessels,heart,bones,cartilage,muscles,kidneys and ureters,testes,ovaries,oviducts and uterus,lymphatic system.mesenteries.

Endoderm-internal lining of the gut and respiratory pathways, urethra and bladder,liver,pancreas.

Archenteron: the cavity in the gastrula which later becomes the digestive tract.

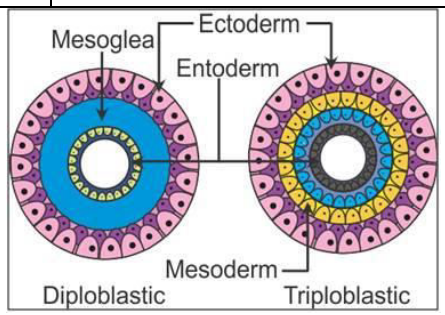
Blastopore: opening in the gastrula

Vegetal hemisphere: larger side of the sphere(blastula)

Animal Hemisphere: smaller side of the sphere(blastula)

Diploblastic versus Triploblastic condition

Diploblastic	Triploblastic
Consists of 2 germ layers: endodern and ectoderm	Consists of 3 germ layers:endoderm,ectoderm and mesoderm
Mesoglea present in between ectoderm and endoderm	Mesoderm-present between ecotderm and endoderm
E.g Porifera and coelenterates	Eg:metazoans,platyhelminthes,annelids Arthropods,molluscs,echinoderms and chordates.



Acoelomate,Pseudocoelomate and Coelomate

- Coelom-fluid filled body cavity found in the higher animals completely surrounded by mesoderem.

Advantages of Coelom

- **Protection of internal organs-**coelom can absorb/cushion shock.
- Allows organs to grow and move independently of the body wall.
- More space for complex organs and organ systems

Activity

1. What is cell division during the first stage of embryonic development called? How can this stagebe described?

_____ anim?
_____
_____
_____(2 marks)

2. What are the cells produced during the first stage of embryonic development called?

_____(1 mark)

3. After the morula stage, what is the next stage? What is the morphological feature that defines this stage?

_____
_____
_____
_____ (2 marks)

4. After the blastula stage, what is the following stage of embryonic development? What is the passage from the blastula to the next stage called?

_____
_____
_____(1 mark)

5. What are the archenteron and the blastopore? During what stage of embryonic development are these structures formed? What happens to the archenteron and the blastopore?

_____
_____
_____
_____(2 marks)

6. How is the mesoderm (third germ layer) of triploblastic animals formed?

_____
_____(1 mark)

7. What are the three types of germ layers that form tissues and organs in animals?

_____
_____
_____ (1 mark)