



Thurs, March 23, 2017

Pick up: self check

Honors: Please bring in
field trip forms & sign up
for Wed or Friday

Today you will:

1. Self check
2. Trimesters Notes
3. Vocab Practice

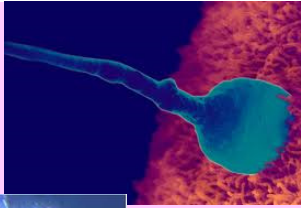
Homework/Planner:

Anything not complete up to ISN pg 181

Quiz on Reproductive System-Fetal Development Fri!

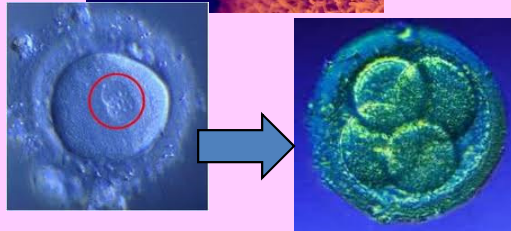
- <https://www.youtube.com/watch?v=jk0F-TnKFwU>

•Fertilization



COPY → ISN p.180

•Zygote



•Blastocyst.....



= Hollow ball of about 100 cells

•Gastrulation...

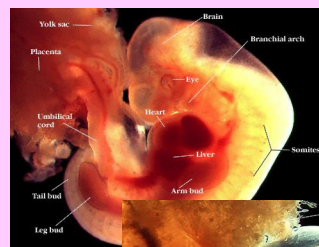


Means "gut-forming"

3 Layers

- 1.Ectoderm
- 2.Mesoderm
- 3.Endoderm

•Embryo



•Fetus

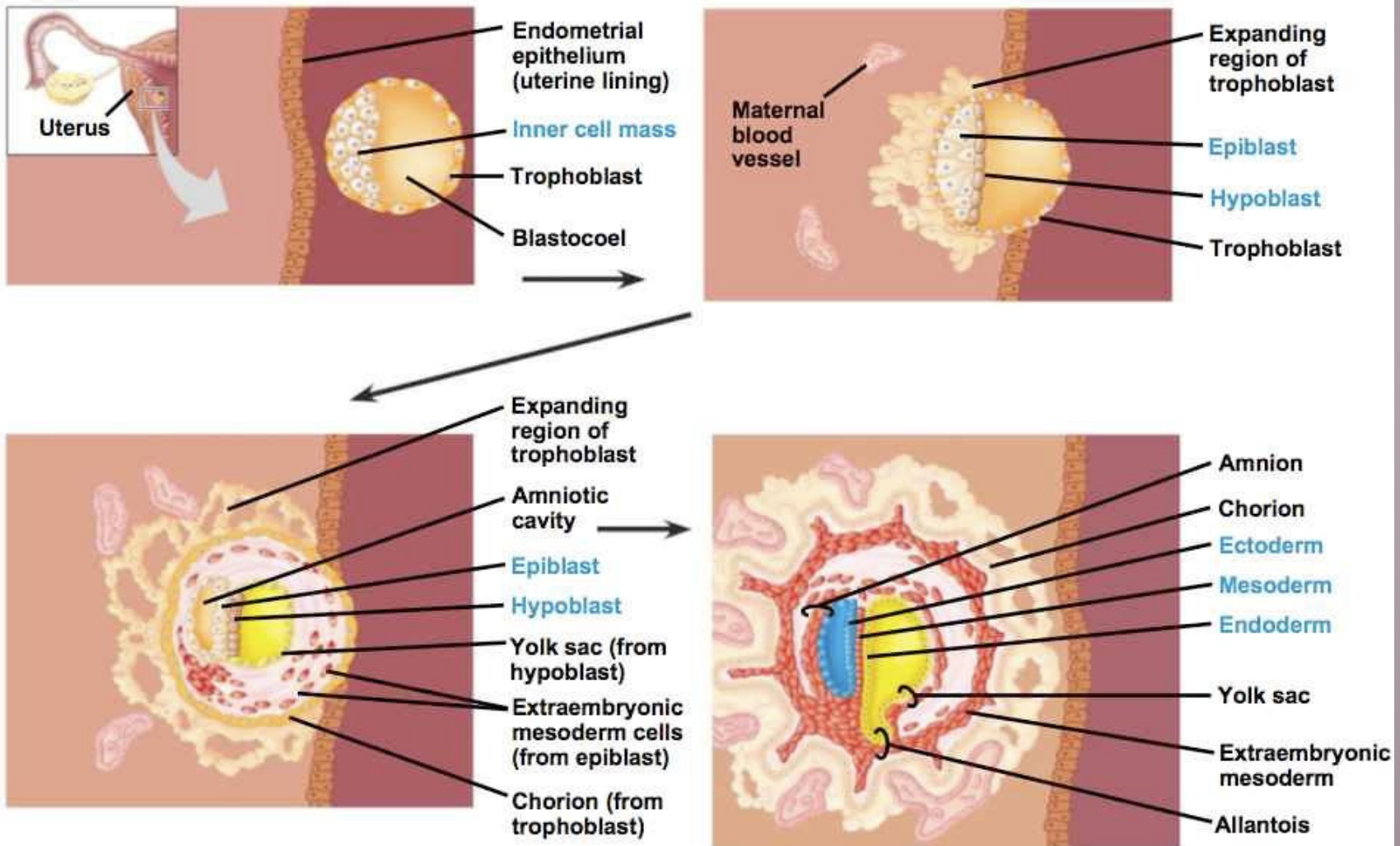


week 8/9

BABY!

BLASTOCYST → GASTRULATION

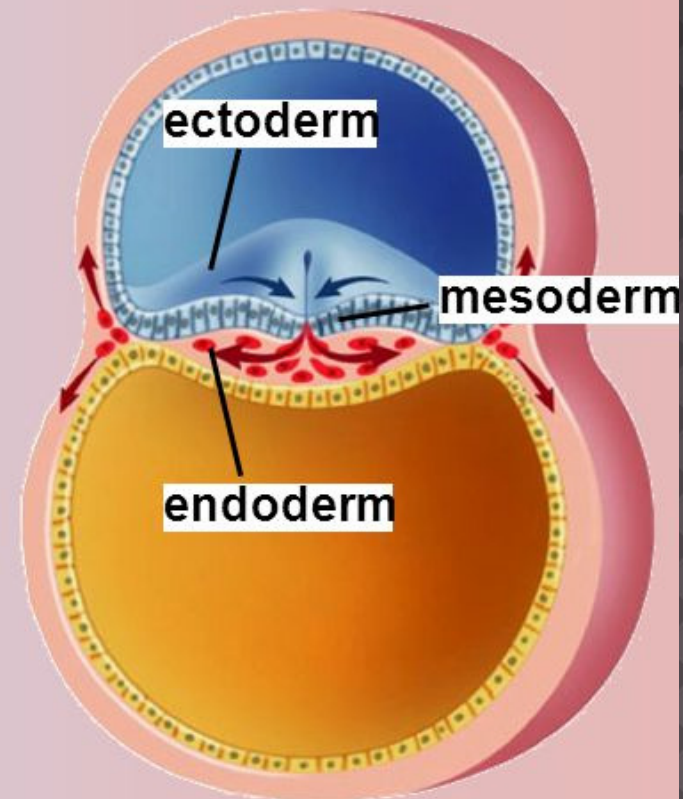
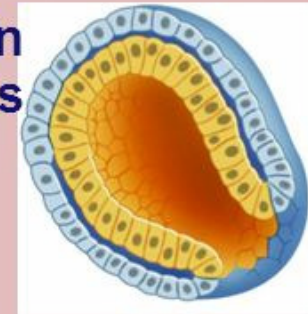
Fig. 47-16-5



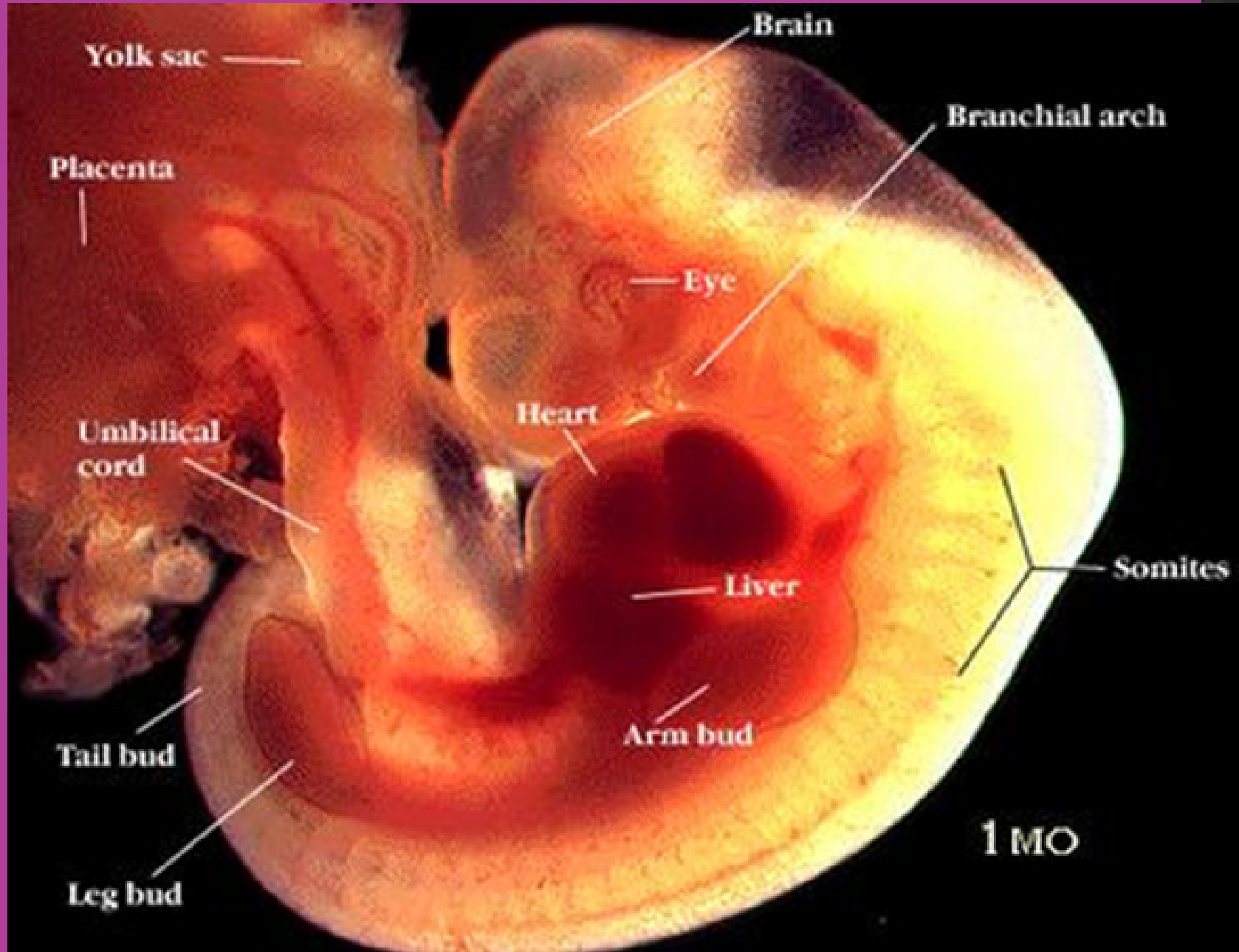
Gastrulation

- Establish 3 cell layers
 - ectoderm
 - outer body tissues
 - skin, nails, teeth, nerves, eyes, lining of mouth
 - mesoderm
 - middle tissues
 - blood & lymph, bone & notochord, muscle, excretory & reproductive systems
 - endoderm
 - inner lining
 - digestive system, lining of respiratory, excretory & reproductive systems

gastrulation in primitive chordates

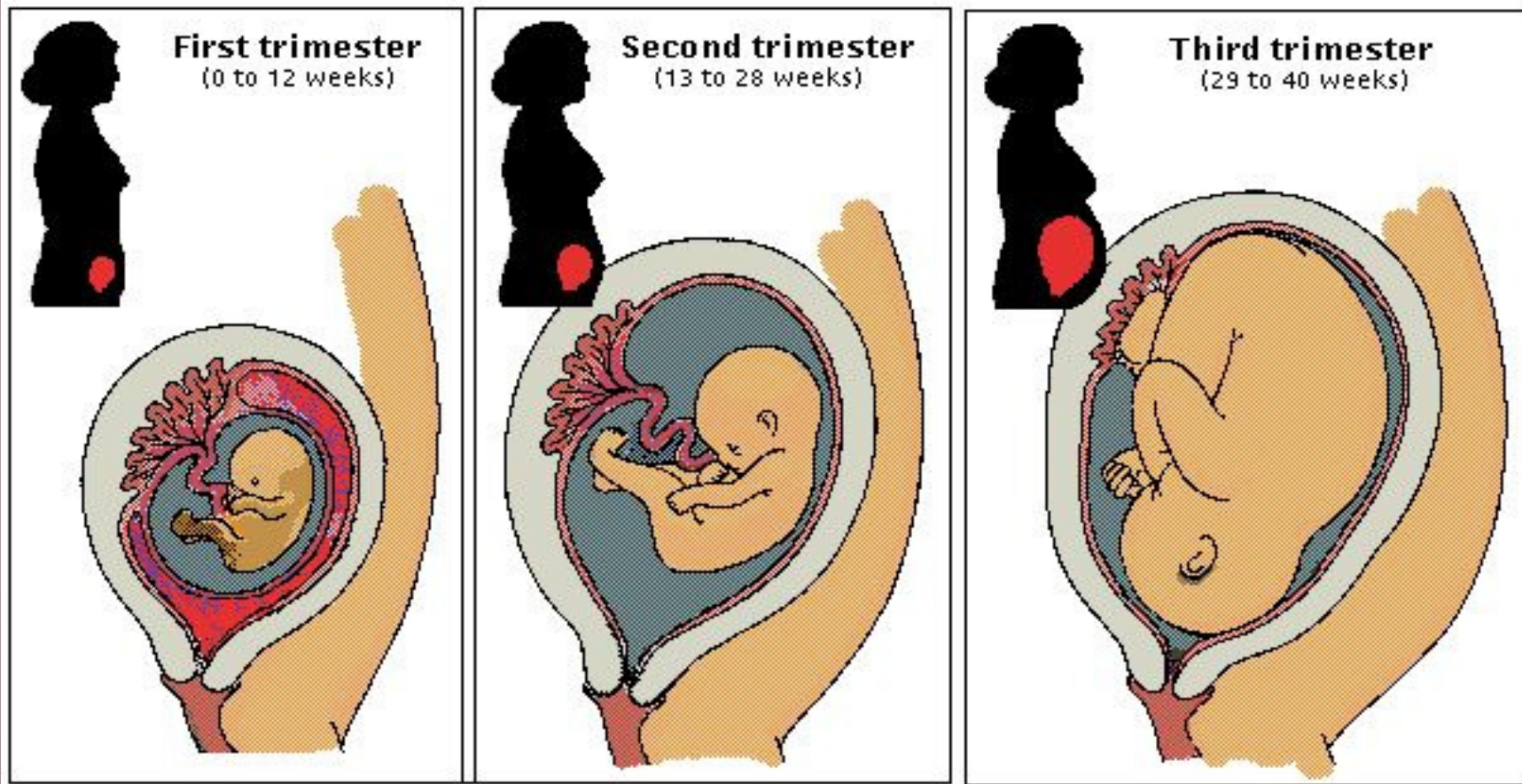


protostome vs. deuterostome



TriMesters

3 distinct periods of GROWTH & DEVELOPMENT



1st TriMester

1. Dramatic changes
2. **Embryo → Blasto → Gastrulation**
3. **AMNIOTIC SAC**: sac in which fetus develop
4. **PLACENTA**: organ connecting fetus to the uterine wall- allow nutrient uptake, waste elimination, gas exchange via the mother's blood supply
5. **ALL ORGAN SYSTEMS HAVE BEGUN TO FORM:**
 1. Brain
 2. Heart – heartbeat after 5wks
 3. Kidneys

2nd TriMester

1. **SKELETON** begins to form
2. Soft hair (lanugo) develops over skin
3. **FIRST MOVEMENTS**
4. **Fetus wakes & sleeps**

3rd TriMester

1. **FETUS RESPONDS TO LIGHT, MUSIC**
2. **NERVES FORM IN LARGE NUMBERS**
3. **FAT DEPOSITS** under skin **DEVELOP**, so it can maintain body temp AND survive when born

Carnegie Stages of Human Development

Dr Mark Hill, Cell Biology Lab, School of Medical Sciences (Anatomy), UNSW



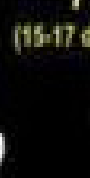
Stage 1 Zygote
(1 day, not to scale)



2
(3 days)



3
(4 days)



4
(5 days)



5
(6 days)



6
(15-17 days)



7
(17-19 days)



8
(17-19 days)



9
(19-21 days)



10
(21-23 days)



11
(23-26 days)



12
(26-30 days)



13
(28-32 days)



14
(31-35 days)



15
(35-38 days)



16
(37-42 days)



17
(42-44 days)



18
(44-48 days)



19
(48-51 days)



20
(51-53 days)



21
(53-54 days)



22
(54-58 days)



23
(56-60 days)

5 mm

Acknowledgements

Special thanks to Dr S. J. DiMarco and Prof. Robert Roberts for allowing reproduction of their research

- https://www.youtube.com/watch?v=h82ltr84_Yg