

# WALT: describe the development of a human in gestation.

- WILF: - Understand what a foetus is.
- Describe the human gestation period in stages.
  - Create a growth graph.



Please do not research anything online for this lesson, as the results may not be appropriate for you and could upset you. Please use the information on these slides and the website I direct you to only.

You may want to complete this lesson with an adult so that they can help you.

Can you order these fruits and vegetables from smallest to largest?



Poppy seed



Swede



Pumpkin



Coconut



Grape



Lemon



Lettuce



Turnip



Papaya



Avocado

This is the size of a foetus (developing baby) in the womb during gestation. Note: the baby is not fruit at any stage! 😊





If the baby is born before 37 weeks, it is called premature.

In humans, the gestation period is split into 3 'trimesters', each lasting about 12 weeks (3 months).

Watch this video about human growth until 1 minute 30 seconds. We'll finish it next week! 😊



# Can you match the statements to the foetus during development?

Week 4



Week 8



Week 12



Week 16



Week 20



Intestines have started to develop and arms and legs begin to sprout. The heart has 4 chambers. Organs are beginning to work. The baby can now bend its hands at the wrist. It is still an embryo at this stage

Ready to be born

Baby can now kick, flex its fingers, and roll. Senses are developing: taste, smell, hearing, sight and touch are becoming more advanced. There may also be some hair on its head, and its kidneys are starting to make urine

The early brain and spinal cord are developing. The heart starts to beat. Not yet a foetus – currently called an embryo

Skin is soft and smooth, and it may already have a full head of hair. Baby is getting plumper and developing layers of fat. Starts to inhale amniotic fluid to exercise its lungs

Baby may now be able to hear a distorted version of its mother's voice, her heartbeat and rumbling tummy. Taste buds are fully formed and lungs are developing quickly

Opens and closes eyes and may be able to detect continuous bright lights outside of its mother's belly. Bones are nearly developed. It has eyebrows and eye lashes.

Ankles, fingers and toes have formed and the embryo is now officially a foetus. Genitals are formed and the baby can even hiccup. Finger and toe nails are starting to develop. Eyes and ears have almost moved to their final positions

Eyebrows and hair are beginning to grow and facial expressions are evident. A scan can now show the sex of the baby. Lungs have started to work, inhaling and exhaling amniotic fluid, and the circulatory system and urinary tract are both fully functional

Continues to grow – almost ready for birth

Week 24



Week 28



Week 32



Week 36



Week 40



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# Week 28



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# Week 40



Ready to be born



During pregnancy, it is important for the mother to eat nutritious foods to help develop the baby healthily, as they need lots of different vitamins to help them grow. There are certain foods and drinks they have to avoid, too!

The body and brain continues to develop after birth - we will look at that next week. 😊

Some other mammals develop in a similar way in the womb.





## Your activity:

This week, you are going to make a diagram and a graph for how the foetus develops before birth, for mothers to be! 😊

You will need to draw the foetus at each stage (you may want the fruit next to it) and then write short labels of the weeks and the key information of growth. Please see the diagram examples on the next slide.

You can look here for information: <https://www.dkfindout.com/uk/human-body/life-cycle/growing-in-womb/> This is the only website you should go on.

Then, draw a line graph of the foetus's growth over the weeks.

Examples on the next slides.


If you only have time for one, choose which to do. 😊



# Diagram example: I am not expecting you to write that much!


FETAL DEVELOPMENT

3.5 weeks




**Day 1:** fertilization: all human chromosomes are present; unique human life begins.  
**Day 6:** embryo begins implantation in the uterus.  
**Day 22:** heart begins to beat with the child's own blood, often a different type than the mothers'.  
**Week 3:** By the end of third week the child's backbone spinal column and nervous system are forming. The liver, kidneys and intestines begin to take shape.

7.5 weeks




**Week 4:** By the end of week four the child is ten thousand times larger than the fertilized egg.  
**Week 5:** Eyes, legs, and hands begin to develop.  
**Week 6:** Brain waves are detectable; mouth and lips are present; fingernails are forming.  
**Week 7:** Eyelids, and toes form, nose distinct. The baby is kicking and swimming.

8.5 weeks




**Week 8:** Every organ is in place, bones begin to replace cartilage, and fingerprints begin to form. By the 8th week the baby can begin to hear.

10 weeks




**Weeks 9 and 10:** Teeth begin to form, fingernails develop. The baby can turn his head, and frown. The baby can hiccup.  
**Weeks 10 and 11:** The baby can "breathe" amniotic fluid and urinate.

12 weeks




**Week 11:** the baby can grasp objects placed in its hand; all organ systems are functioning. The baby has a skeletal structure, nerves, and circulation.  
**Week 12:** The baby has all of the parts necessary to experience pain, including nerves, spinal cord, and thalamus. Vocal cords are complete. The baby can suck its thumb.

16 weeks




**Week 14:** At this age, the heart pumps several quarts of blood through the body every day.  
**Week 15:** The baby has an adult's taste buds.  
**Month 4:** Bone Marrow is now beginning to form. The heart is pumping 25 quarts of blood a day. By the end of month 4 the baby will be 8-10 inches in length and will weigh up to half a pound.

24 weeks




**Week 17:** The baby can have dream (REM) sleep.  
**Week 19:** Babies can routinely be saved at 21 to 22 weeks after fertilization, and sometimes they can be saved even younger.  
**Week 20:** At 20 weeks the baby recognizes its mothers voice.

28-26 weeks



**Months 5 and 6:** The baby practices breathing by inhaling amniotic fluid into its developing lungs. The baby will grasp at the umbilical cord when it feels it. Most mothers feel an increase in movement, kicking, and hiccups from the baby. Oil and sweat glands are now functioning. The baby is now twelve inches long or more, and weighs up to one and a half pounds.

32-30 weeks



**Months 7 through 9:** Eyeteeth are present. The baby opens and closes his eyes. The baby is using four of the five senses (vision, hearing, taste, and touch.) He knows the difference between waking and sleeping, and can relate to the moods of the mother. The baby's skin begins to thicken, and a layer of fat is produced and stored beneath the skin. Antibodies are built up, and the baby's heart begins to pump 300 gallons of blood per day. Approximately one week before the birth the baby stops growing, and "drops" usually head down into the pelvic cavity.

## Graph example (unfinished):

You can use 'Week 2. Science. Growth Stages' to help you.

