National Geographic
Inside the Womb Multiples
Directions: Must complete 80% of the questions, but do NOT leave any *Sections completely blank!!!

*Day 1

1. Where exactly does fertilization occur?

*Day 5

2. What is a blastocyst?

3. What happens to the egg to cause identical twins?

4. Which women are most likely to have this happen?

5. Not all of the DNA is the same between identical twins. Which is different?

6. What does “monozygotic” mean?

*Day 6

7. Two sacs develop inside the womb: an inner __________ and an outer __________.

8. Do identical twins have a shared or separate placenta?

9. How are fraternal or dizygotic twins formed differently?
**Day 14**

10. What does the organizer do to each stem cell?

11. The embryo develops three layers of tissue at this stage. What does each layer eventually become?
   a. Ectoderm –
   b. Mesoderm –
   c. Endoderm –

12. What is the first organ to develop?

**Month 1 / Week 4**

13. How large are the embryos at this stage? Label it on the ruler to the right.

14. How large is the entire womb?

15. What vestigial structures do embryos have?

16. How is it possible to have multiples that were fertilized on separate days, possibly even by separate fathers?

**Week 6**

17. What organ is nearly formed at this point?

18. How can fertility drugs increase the chance of a multiple pregnancy?
Month 2 / Week 8

19. What part of the fetal body is disproportionately large at this point in pregnancy?

Week 9

20. What is the peak pulse rate at this stage?

21. How are identical twins in conflict with each other?

Week 10

22. What is vanishing twin syndrome? How is it caused?

23. What are mirror image twins? How does this happen?

   a. What is the relationship between vanishing twin syndrome, mirror image twins, and left-handed people?

24. How do conjoined twins form?

Week 12

25. How do the fetuses look physically different at this stage?

26. Which twins, identical or fraternal, have a higher risk of miscarriage?

Week 13-19: summarize in 2 sentences or bullets
**Week 20**

27. What cells are increasing especially rapidly at this stage?

28. Why does physically growing larger become difficult for multiples at this stage of gestation?

29. What is the maximum size fetus that a uterus can support?

**Week 24**

30. What is surfactant, and why is it important in fetal development?

31. Give an example of a prenatal twin behavior that may reappear in early childhood.

**Week 26**

32. What can fetuses see and hear at this stage?

33. Why are identicals from the same amniotic sac often delivered by Caesarean section?

**Month 7 / Week 28**

34. How are the whorled patterns of fingerprints associated with fetal blood supply?

**Week 34 / Final Stages Before Birth**

35. What development is considered essential before delivery of twins, triplets, or quadruplets can be considered safe?