

Student Laboratory Packet**What Changes Occur During Birth ?**
A Laboratory Activity for the Living Environment

A human baby develops for about 38 weeks inside the mother's uterus (organ in which the fertilized egg will develop). After 8 weeks it is a fetus (embryo that has all of its body systems). The placenta is the organ that connects the embryo to the mother's uterus and supplies nutrients and gases for its development. Then labor (contractions of the uterus during birth) begins. These contractions involve the muscles of the uterus shortening during birth. Sometimes a doctor has to perform a caesarean operation (birth of a baby in which the uterus must be cut open) to help in the delivery.

GOALS

In this activity, you will:

- compare the changes that occur during birth.
- learn why a caesarean delivery may be needed.
- compare a delivery through the birth canal with a caesarean delivery.

KEYWORDS

Define the following keywords:

caesarean _____

contractions _____

fetus _____

labor _____

placenta _____

uterus _____

MATERIALS

metric ruler

PROCEDURE**Part A. Stages of Birth**

- Look at the diagrams of four stages of birth shown in Figures 1 and 2.

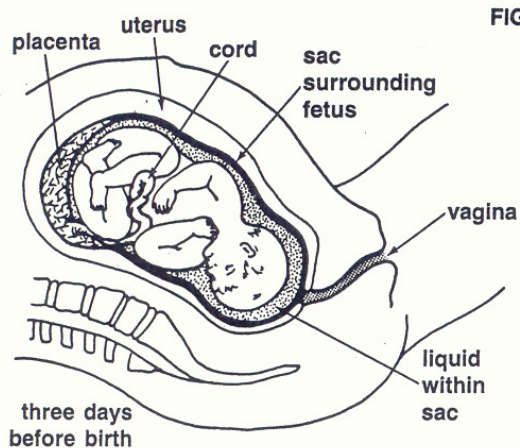


FIGURE 1.

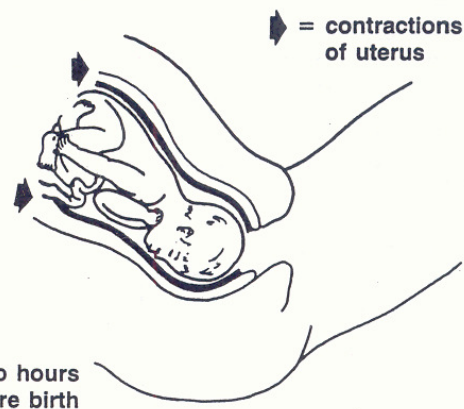
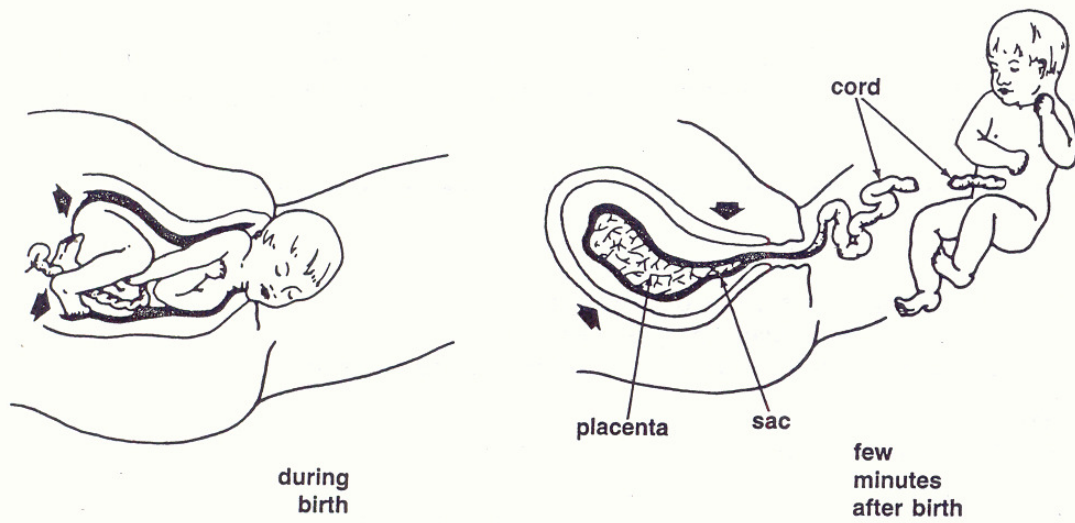


FIGURE 2.



2. Answer *yes* or *no* to each of the following questions in Table 1.

Table 1. Stages During Birth

	Three days before birth	Two hours before birth	During birth	Few minutes after birth
Is baby inside the uterus?				
Is baby inside the vagina?				
Is baby outside the mother's body?				
Is baby inside the sac?				
Has the sac broken?				
Are contractions occurring?				
Is baby attached to the cord?				
Is the cord attached to the placenta?				
Is the placenta attached to the uterus?				
Is the placenta being pushed out?				
Has the vagina opened?				
Is baby attached to the mother?				
Has liquid been lost from the sac?				
Is baby still dependent on the mother?				

Part B. What Is a Caesarean Birth?

1. Look at the diagram in Figure 3 that shows the outline of the pelvis and the head of a fetus just before the time of birth.
2. Note carefully that the head must be able to pass through the opening in the pelvis during birth.
3. Measure line a. This represents the width of the opening in the pelvis.
4. Measure line b. This represents the width of the head of the fetus.

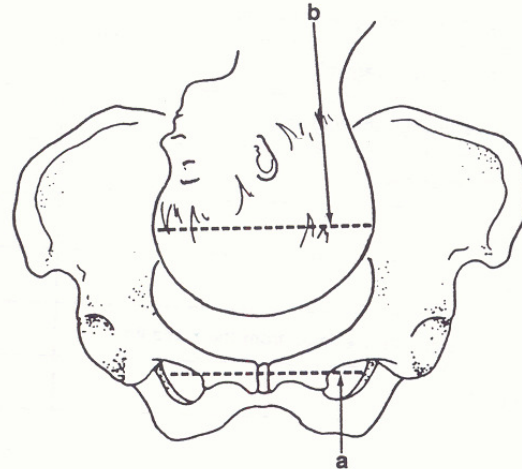


FIGURE 3. Sizes of pelvis and head of fetus

5. Record your data here:

a. width of pelvis opening _____

b. width of fetus head _____

6. Notice that this fetus would not be able to pass through this pelvis opening.
7. A caesarean operation must be done to deliver the baby.
8. Look at how a caesarean birth is done in Figure 4. This is usually done before the mother goes into labor.
9. To compare a birth canal delivery with a caesarean delivery, answer the questions in Table 2.

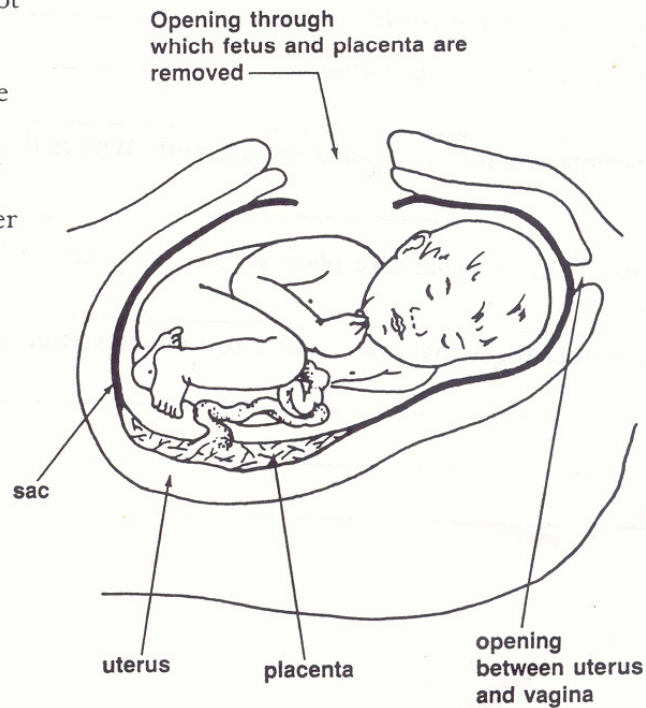


FIGURE 4. Caesarean birth

Table 2. Comparing a Caesarean Delivery With a Birth Canal Delivery

Trait	Birth canal	Caesarean
Does the fetus pass through opening in the pelvis?		
Does the fetus pass through the vagina?		
Does the placenta move through the vagina?		
Is the fetus lifted from the uterus?		
Is the uterus cut open?		
Is the sac cut open?		
Must the cord be cut to separate the fetus from the placenta?		
Do contractions occur?		

QUESTIONS

1. What two body parts surround and protect the fetus as it develops?

2. What is the job of the placenta?_____

3. What is the job of the cord?_____

4. What is meant by the word *labor*?_____

5. The placenta is sometimes called the *afterbirth*. Why is this a good name for this part?_____

6. List several changes that take place several hours before birth._____

7. List several changes that take place a few minutes after birth.
