

Pregnancy

Day 3: Prenatal Health

Grades 9 and 10, Lesson #15

Time Needed

one or two class periods, depending on whether there are oral field trip reports, and how many there are

Student Learning Objectives

To be able to...

1. Describe at least 2 paternal behaviors which can maximize the odds of a healthy pregnancy outcome.
2. Describe at least 4 maternal behaviors which can maximize the odds of a healthy pregnancy outcome.
3. Identify the first trimester as the time the embryo is most vulnerable to environmental hazards.

Agenda

1. Explain the lesson's purpose and relevance.
2. Have students present oral Field Trip Reports on "Prenatal Health and Drugs" and "Other Birth Defects."
3. Hand out the Prenatal Health Worksheet. Have students read it silently.
4. Explain the role of the volunteers staffing the "game stations." Explain the rules of the Game to the *whole* class and play the Prenatal Health Game.
5. Have the 11 volunteers read the Worksheet aloud.
6. Discuss the Worksheet and the lesson's key concepts. Summarize and present Baby Expert Awards.

Materials Needed

One per student of:

Prenatal Health Worksheet

Five per class period of:

Baby Expert Award (from Lesson 14) ... or one per student, if you prefer not to make the activity competitive

One class set of:

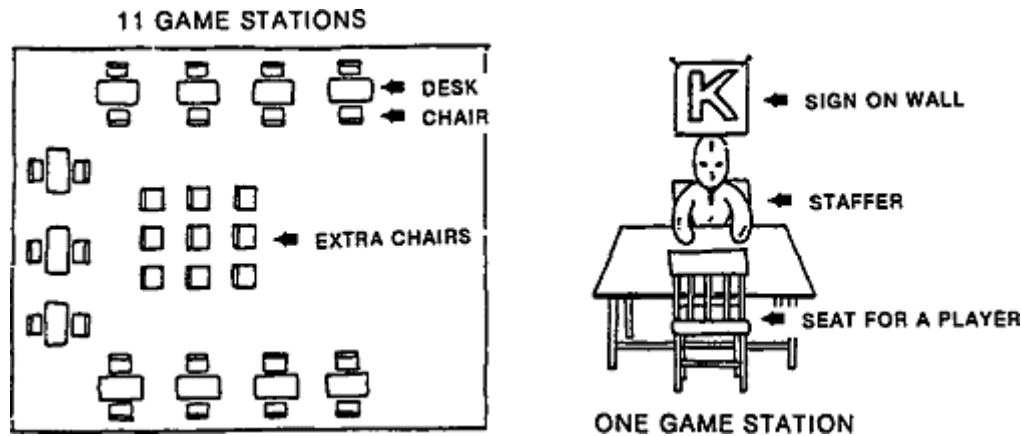
Clue pages (cut into 110 separate clues, taped onto index cards or copied onto card stock and then cut into 110 separate clues)

Eleven red pens

Eleven hand-drawn signs (sheets of paper, each with a large block letter, A through K)

To Do

Rearrange the classroom, posting the eleven signs (above) around the perimeter to create eleven learning or "game" stations, like so:



ALTERNATIVE: If this set-up is not possible or feels daunting, you can use Activity 4B instead. To do that, you will have students sit in teams of 4-6 and **each team will need a bell or other simple noisemaker.**

Activities

1. Explain the lesson's purpose and relevance:

*For the last couple of days, we've been looking at pregnancy ... at how a pregnancy develops, when all is well. But everything **doesn't** always go well. Today we'll study some pregnancy-related problems. We'll talk about how to avoid some of them, how to give a baby **the best possible chance of a healthy start**. Many of you will one day have children. Perhaps some of you already do. I am certain that, after today's class, every person in this room, male or female, will have at least one new idea about how you personally can improve your **future** children's chances of being born healthy. Those of you who don't ever have children will be able to be the "health educators" for people you love who **do**.*

This lesson could be a sensitive one for students who may have birth defects, or who have a close relative with a birth defect. With these students' feelings in mind, emphasize here that:

Most of the time doctors can't tell what caused a particular birth defect, and, **when we can identify a cause** it is usually a chromosomal problem over which the parents may have had no control. We will simply be looking, today, at a few things you, as potential parents, can control.

2. Have students present their oral Field Trip reports on "Prenatal Health and Drugs" and on "Other Birth Defects." Field Trip Grading forms (with grading criteria) are in Lesson Plan 1. This may take most of a class period, depending on the number of students prepared to present.
3. On the second day of the lesson (or the first, if there were no Field Trip Reports) you will play the Prenatal Health Game. We recommend rearranging the classroom ahead of time, so that, as students enter the room, each will choose a seat that will later determine his or her role in the game ... saving considerable time and confusion. The room should be set up with eleven chairs around its perimeter, facing in, with a letter (A to K) on the wall above each chair. At each chair there should be a desk. All the remaining chairs should be gathered in the center of the room, like so:

Begin by handing out the Prenatal Health Worksheet and giving everyone a couple of minutes to look it over.

4. **A.** Now, point out that eleven people have "volunteered" to staff game stations, by sitting around the perimeter of the room. Give each Staffer a packet (rubber-banded) of ten clues and a red pen. The person at Game Station A gets clues A1 through A10, and so on.

As you hand these out, instruct the Staffers about their role:

*I am giving each of you **TEN CLUES**. Your job will be to show them to students who come to your game station ... one clue at a time, in numerical order (clue 1, clue 2, etc.) **As soon as a Player guesses the correct answer you may tell her/him that she/he is right** ...no matter how many clues have been given at that point. He or she will write the answer in the blank. Take a moment to read your clues.*

I am also giving each of you a RED PEN. When a Player finishes writing the answer on the Worksheet, you'll write, in red on the person's Worksheet, the number of the last clue you gave the person. So if you are staffing Station B and Chris, for example, guessed the answer after the fifth clue, you would write "5", in red, where it says "B equals — " on Chris' Worksheet. One other thing: you should only show clues to one player at a time, using a blank sheet of paper as a privacy wall. Other players must wait patiently in line at your game station.

Now, address the whole class:

You see that there are 11 unfinished portions on your Worksheets and 11 game stations around the room, lettered A through K. You play the Prenatal Health Game by going to any game station and looking at clues (the Staffer at that station will show you one clue at a time until you guess the correct answer). Guessing should be done at a whisper, so others can't overhear. Otherwise there won't be any challenge to it. The last "clue" will actually give you the answer if you haven't guessed it by then. As soon as you fill in that part of the Worksheet, give your paper to the Staffer so he/she can give you credit for finishing that Station ... the Staffer will write down, in red, how many clues it took you.

Then go to another game station. Look for one that's available; you don't have to do the stations in order. If all the Game Stations are in use, just be patient. Staffers are only allowed to work with one Player at a time. When you finish the entire Worksheet, have a seat and relax.

The object of the game is to complete the Worksheet, and to do so with the fewest possible clues. We'll be stopping the game twelve minutes before the end of the period. Of those players who have completed their Worksheets correctly at that time, the five with the lowest total scores will "win." Spelling counts ... it must be completely correct to win.

There will be awards and 10 extra credit points for the winners. Those few extra points are just to spice up the game. Of course the real object of the game is learning, so let's not put competition above all else. In fact when we stop the game, we'll read the Work sheet aloud so that everyone can complete it, even the Staffers.

Play the Prenatal Health Game. Call "Time" 12-15 minutes before the end of the period.

4. **B ... Alternative to using game stations:** Divide the class into groups of 4-6 people and give each group a bell or other simple noisemaker (drum, rattle). Read the questions from the worksheet aloud, stopping to read clues at each blank. For visual clues, you may draw or do a charade. The group confers quietly as you read, draw and act out clues. They decide upon an answer and ring their noisemaker. The first group to ring in must say their answer aloud, in unison. If they are correct, they get a point. If they are incorrect, a point gets subtracted from their score, and other groups may ring in to guess.
5. Have the Staffers – or if you used Alternative B, then have volunteers -- each read her or his portion of the Worksheet aloud. Thus the person who staffed Game Station A, reads aloud beginning with "Dear Mom and Dad," and continuing until he or she reaches an asterisk. Then Staff B takes over, and so forth. When the reader comes to a blank, he or she fills in

the correct answer and spells it. *

As it is being read aloud, everybody (Staffers as well as Players), will fill in any still-empty blanks on their Worksheets. For Staffers, this will mean filling in the whole thing.

Correct answers for the Worksheet are:

(A) chromosomes	(D) regular exercise	(G) nourishment	(I) kitty litter
(B) chemicals	(E) clinic, physician's	(H) alcohol, tobacco, illegal, prescription, over- the-counter	(J) X-rayed, radiation
(C) sexually transmitted diseases	(F) midwife, obstetrician		(K) birth center, hospital

6. Finally, discuss seriously the meaning of the Worksheet, and answer questions students may have about particular items.

People may be confused by item I, "What does kitty litter have to do with prenatal health? An infection called "toxoplasmosis" (which can cause birth defects) may be transmitted by handling cats' feces. Pregnant women should avoid changing kitty litter and should use rubber gloves if they work in the garden (to avoid outdoor fecal matter, too). They should wash carefully after touching raw meat. Toxoplasmosis is relatively rare, but it bears mention because it is easily prevented.

If it is relevant in your students' community, you may want to mention, at this point, that pregnant women should also avoid using hot tubs, because it is risky to raise their body temperatures above 104 degrees.

A key question for discussion is:

"As you may remember from our previous lessons, babies born to teens are more likely to have birth defects than babies born to women in their twenties; why do you suppose that is?"

There are three crucial issues in response to this question...

(1) Teens are less likely to seek **prenatal care** and those who do often start it late in the pregnancy. They may not *believe* they could really be pregnant, they may not *recognize* the symptoms, they may be *afraid* to go to the doctor, afraid to talk with one another, etc.

(2) Teens are more likely to use **drugs**, legal and illegal (especially alcohol), because they may not be *planning a pregnancy*, may not *realize* they are pregnant as soon in their pregnancy as an adult woman might, and may not understand the *risk* to the developing fetus.

(3) And teens are less likely to eat a really nourishing, balanced diet ... again, because they

may not be *planning a pregnancy*, may not *realize* they are pregnant if it is early on in the pregnancy, and may not understand its importance to the developing fetus ... they are also still growing and some of the food goes for this.

Another discussion starter might be this:

“Babies of teenagers are not the only ones with problems; those born to adults can also have preventable birth defects; what do you think we, as a society, can do to provide more support?”

If you have time for a longer debate, ask this, but keep in mind that some students’ parents may have used alcohol, cigarettes and other drugs during pregnancy:

“Some people say that, if a woman knowingly risks her fetus’ health, say, for example, by using cocaine during the pregnancy, she should be prosecuted for ‘prenatal child abuse’? What do you think? If it’s abuse, should she lose custody of her newborn? Should she be required to get treatment for her drug problem? What if no treatment is available? What if the drug is cigarettes, instead of cocaine? Is that child abuse?”

Finally, summarize the lesson:

For most birth defects the cause is unknown. Researchers are trying to find causes and solutions. On the other hand, we know a lot more than we knew a generation ago; there are lots of ways you can improve the odds for your future children.

*We do know the causes of some birth defects – or what we should be calling **congenital conditions** -- and how to prevent them.. Other congenital conditions can’t be **prevented**, but can be **detected** early in a pregnancy. Some of these can be repaired before the baby is born; in other cases couples may choose abortion. Still other congenital conditions are genetic and can’t be prevented; but people can get genetic counseling before starting a pregnancy, if they think they might be at risk. Genetic counseling provides education about risks of defects, disease and other abnormalities based on the age and medical/family history of both birth parents.*

So, there are things that both birth Mom and birth Dad can do before they start a pregnancy, to improve the baby’s chances. What are some of these?

*There are also things birth Mom and birth Dad can do **during** the pregnancy and birth, to “stack the deck” in their baby’s favor. What are some of these?*

Your generation can protect your children in ways older generations couldn’t ... if you plan.

Finally, if time allows, have all Players who completed their Worksheets before you called time, add up the sum of their clues. Present *Baby Expert Awards* to the 5 winners. If time is short, you can tally people’s scores after class and present the Awards at the start of the next class.

Prenatal Health Worksheet

NAME _____ PERIOD _____

LETTER FROM A NEWBORN BABY

Dear Mom and Dad,*

Well, you got me here safely. Thanks! I want you to know how much I appreciate all that you have already done for me. First, you gave me healthy

_____. Some of that was just my good luck ... but you've had
(A=)
them for your whole lives and you've kept them healthy all those years! **

One way you protected them, Dad, was to avoid using teratogenic (birth-defect causing) _____ especially 10, 11, and 12 months ago. ** Before
(B=)
starting me, you both got check-ups. In particular, you asked the doctor to test you for

_____. **
(C) (C) (C=)
Because you were trying- to get pregnant, Mom, you began getting

_____, eating right and taking
(D) (D=)
folic acid (a B vitamin). *

Then, as soon as you thought you might be pregnant, Mom, you had a test at a

* **NOTE:** This could just as easily be a letter to just a Mom or to Birth Mom and Birth Dad; or two Moms and a Sperm Donor; or Mom, Dad and Surrogate Mom; or two Dads and Birth Mom. Whichever parent or parents are present before and during pregnancy are the ones a baby might thank for trying to provide a healthy start. And remember, too, that even if parents do everything "right" a baby may still be born with a disease or disability. All we can do is our best.

** **When reading this letter aloud,** stop at the double asterisks and give the next reader a turn.

_____ or _____ office. ** They said I
 (E) (E=)
 was on the way! So right away, you started getting prenatal care from a
 _____ or an _____. **
 (F) (F=)






You made sure you gave me plenty of _____, so I'd have
 (G=)
 building blocks to grow with. In fact, Dad, you helped with that; you knew Mom needed
 it, too ... for her own health. ** Mom, you were careful not to use most drugs – not
 _____, not _____, not _____
 (H) (H) (H)
 drugs. You were even careful about _____ drugs and
 (H)
 _____ drugs! ** Dad, you helped Mom to avoid getting sick. For one
 (H=)
 thing, you made sure you were the one to change the _____
 (I)
 _____. ** And, Mom, you made sure you didn't get
 (I=)
 _____ while I was developing, because the _____
 (J) (J=)
 could have damaged my brain or my skeleton. **


When you went into labor, you went to a _____
 (K)
 _____ or _____ where Mom and I could get help
 (K) (K=)
 if anything went wrong. Even if I had been born at home, you'd still have made sure we
 had a trained helper.

For all this and the next eighteen years, thanks.

Love,


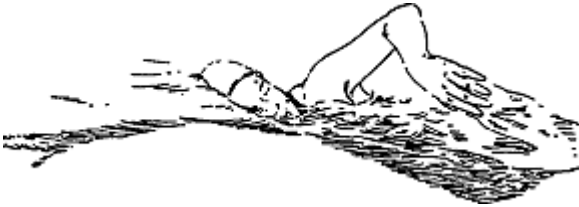
Your Baby **

<p></p> <p style="text-align: center;">Clue A 1 of 10</p> <p>It is an 11-letter word</p>	<p style="text-align: center;">Clue A 2</p> 
<p style="text-align: center;">Clue A 3</p> <p>They are made of a protein called "DNA".</p>	<p style="text-align: center;">Clue A 4</p> <p>They are strings of protein particles or "genes".</p>
<p style="text-align: center;">Clue A 5</p> <p>Mom (or birth mother or egg donor) gave me 23 of them.</p> <p>Dad (or birth father or sperm donor) gave me another 23.</p>	<p style="text-align: center;">Clue A 6</p> <p>Probably, if I'm a girl, 2 were shaped like this: </p> <p>Probably, if I'm a boy, one was shaped like this:  and one, like this: </p>
<p style="text-align: center;">Clue A 7</p> <p><u>C</u> _ _ <u>O</u> _ <u>O</u> <u>S</u> <u>O</u> _ _ <u>S</u></p>	<p style="text-align: center;">Clue A 8</p> <p><u>C</u> <u>H</u> _ _ <u>O</u> _ <u>O</u> <u>S</u> <u>O</u> _ _ <u>E</u> <u>S</u></p>
<p style="text-align: center;">Clue A 9</p> <p><u>C</u> <u>H</u> <u>R</u> <u>O</u> _ _ <u>O</u> <u>S</u> <u>O</u> _ _ <u>E</u> <u>S</u></p>	<p style="text-align: center;">Clue A 10</p> <p><u>C</u> <u>H</u> <u>R</u> <u>O</u> <u>M</u> <u>O</u> <u>S</u> <u>O</u> <u>M</u> <u>E</u> <u>S</u></p>



<p style="text-align: center;">Clue C 1 of 10</p> <p>Three words. The first has 8 letters. The second 11 letters. The third 8 letters.</p>	<p style="text-align: center;">Clue C 2</p> <p>They are germs (viruses, fungi, parasites and bacteria) passed from person to person by some specific kinds of touch.</p>
<p style="text-align: center;">Clue C 3</p> <p>We may not know we have them because there are not always symptoms.</p>	<p style="text-align: center;">Clue C 4</p> <p>HIV GENITAL HERPES GENITAL WARTS (also called Human Papillomavirus or HPV)</p>
<p style="text-align: center;">Clue C 5</p> <p>SYPHILIS GONORRHEA CHLAMYDIA</p>	<p style="text-align: center;">Clue C 6</p> <p>We used to call these "V.D."</p>
<p style="text-align: center;">Clue C 7</p> <p>The first word is _ E X _ _ _ _ _ Y</p>	<p style="text-align: center;">Clue C 8</p> <p>The second word is T R _ _ _ S _ _ _ _ _ E D</p>
<p style="text-align: center;">Clue C 9</p> <p>The third word is D I _ _ E A _ _ E _</p>	<p style="text-align: center;">Clue C 10</p> <p>SEXUALLY TRANSMITTED DISEASES</p>



<p>Clue D 1 of 10</p> <p>Two words. One has 7 letters; The other has 8.</p>	<p>Clue D 2</p> <p>The first word means “frequent” or “consistent”.</p>
<p>Clue D 3</p> <p>The first word also means Mom made it a habit ... a good habit.</p>	<p>Clue D 4</p> <p>The first word is R<u>E</u> _ _ _ _ A _</p>
<p>Clue D 5</p> <p>The first word is R<u>E</u> _ _ _ L<u>A</u>R</p>	<p>Clue D 6</p> <p>The first word is R<u>E</u>G<u>U</u>L<u>A</u>R</p>
<p>Clue D 7</p> 	<p>Clue D 8</p> 
<p>Clue D 9</p> <p>The second word is E<u>X</u>E _ _ _ _ E</p>	<p>Clue D 10</p> <p>E<u>X</u>E<u>R</u>C<u>I</u>S<u>E</u></p>



Clue E 1 of 10

It's two words. One has 6 letters.
The other has 10 letters.

Clue E 2

The first word means "a place patients go ... often for free or low cost medical care".

Clue E 3



Clue E 4

The first word may be a center run by Public Health, Planned Parenthood, or another health agency.

Clue E 5

The first word is
C _ ! _ ! _

Clue E 6

The first word is
C L I N I C

Clue E 7



Clue E 8

The second word means "doctor's".

Clue E 9

The second word is
P H Y S _ _ _ _ _ ' S

Clue E 10

P H Y S I C I A N ' S



Clue F 1 of 10

Two words. One is a 7-letter word.
The other is a 12-letter word.

Clue F 2

The first word is someone who is not a doctor, but who is specially trained to help women during pregnancy and birth.

Clue F 3



Clue F 4

The first word is
_! _ _ ! _ E

Clue F 5

The first word is
M I D W I F E

Clue F 6

The second word is a doctor who specializes in pregnancy and birth.

Clue F 7



Clue F 8

The second word is
Q _ _ _ E _ _ ! _ ! A N


Clue F 9

The second word is
Q _ S T E T _ I C I A N

Clue F 10

The second word is
O B S T E T R I C I A N





<p style="text-align: center;">Clue G 1 of 10</p> <p>An 11 letter word.</p>	<p style="text-align: center;">Clue G 2</p> 
<p style="text-align: center;">Clue G 3</p> <p>It comes from healthy foods.</p>	<p style="text-align: center;">Clue G 4</p> <p>It includes vitamins, minerals, proteins, complex carbohydrates, unsaturated fats, etc.</p>
<p style="text-align: center;">Clue G 5</p> <p>It means "sustenance" or "nutrition".</p>	<p style="text-align: center;">Clue G 6</p> <p>Mom not only ate well, to give me this, but also took special prenatal vitamins the doctor gave her.</p>
<p style="text-align: center;">Clue G 7</p> <p>It is _ _ _ _ <u>I S H</u> _ _ _ _</p>	<p style="text-align: center;">Clue G 8</p> <p>It is _ _ _ _ <u>I S H</u> _ <u>E N T</u></p>
<p style="text-align: center;">Clue G 9</p> <p>It is <u>N</u> _ _ _ _ <u>I S H M E N T</u></p>	<p style="text-align: center;">Clue G 10</p> <p>It is <u>N O U R I S H M E N T</u></p>



<p>Clue H 1 of 10</p> <p>Five words. The first has 7 letters. An example is beer.</p>	<p>Clue H 2</p> <p>The second word has 7 letters, too. It can be smoked or chewed.</p>
<p>Clue H 3</p> <p>The third word has 7 letters, too. It means "against the law."</p>	<p>Clue H 4</p> <p>The fourth word has 12 letters. A doctor gives you this.</p>
<p>Clue H 5</p> <p>The fifth word is made from 3 words, hyphenated. An example is cough medicine.</p>	<p>Clue H 6</p> <p>The first word is <u>A</u><u>L</u><u>C</u><u>O</u><u>H</u><u>O</u><u>L</u> The other words are all related.</p>
<p>Clue H 7</p> <p>The next word is <u>I</u><u>O</u><u>B</u><u>A</u><u>C</u><u>C</u><u>O</u></p>	<p>Clue H 8</p> <p>The next word is <u>I</u><u>L</u><u>L</u><u>E</u><u>G</u><u>A</u><u>L</u></p>
<p>Clue H 9</p> <p>The next word is <u>P</u><u>R</u><u>E</u><u>S</u><u>C</u><u>R</u><u>I</u><u>P</u><u>T</u><u>I</u><u>O</u><u>N</u></p>	<p>Clue H 10</p> <p>The last word is <u>O</u><u>V</u><u>E</u><u>R</u><u>-</u><u>I</u><u>H</u><u>E</u><u>-</u><u>C</u><u>O</u><u>N</u><u>T</u><u>E</u><u>R</u></p>



<p style="text-align: center;">Clue J 1 of 10</p> <p>There are two words. The first has 6 letters and a hyphen.</p>	<p style="text-align: center;">Clue J 2</p> <p>The first means “examined with a kind of photograph”.</p>
<p style="text-align: center;">Clue J 3</p> <p>The first word is a way doctors see patients’ skeletons and other hidden objects.</p>	<p style="text-align: center;">Clue J 4</p> 
<p style="text-align: center;">Clue J 5</p> <p>The first word is _ - _ <u>A</u> _ <u>E</u> <u>D</u></p>	<p style="text-align: center;">Clue J 6</p> <p>The first word is <u>X</u> - <u>R</u> <u>A</u> <u>Y</u> <u>E</u> <u>D</u></p>
<p style="text-align: center;">Clue J 7</p> <p>The second word means “streams of energy”. It has nine letters.</p>	<p style="text-align: center;">Clue J 8</p> <p>It is contained in</p> 
<p style="text-align: center;">Clue J 9</p> <p>The second word is <u>R</u> _ _ _ _ <u>I</u> <u>O</u> <u>N</u></p>	<p style="text-align: center;">Clue J 10</p> <p>The second word is <u>R</u> <u>A</u> <u>D</u> <u>I</u> <u>A</u> <u>T</u> <u>I</u> <u>O</u> <u>N</u></p>



<p style="text-align: center;">Clue K 1 of 10</p> <p>These are two terms. The first term is 2 words with a total of 11 letters.</p>	<p style="text-align: center;">Clue K 2</p> <p>It describes an alternative place, usually home-like, where people can go to have babies. Family and friends are welcome to be part of the excitement here.</p>
<p style="text-align: center;">Clue K 3</p> <p>...but not everyone can use this place, only women who expect normal, easy births.</p>	<p style="text-align: center;">Clue K 4</p> <p>The term is <u>B</u> _ _ <u>I</u> <u>H</u> <u>C</u> _ _ _ <u>E</u> <u>R</u></p>
<p style="text-align: center;">Clue K 5</p> <p>The term is <u>B</u> <u>I</u> <u>R</u> <u>I</u> <u>H</u> <u>C</u> <u>E</u> <u>N</u> <u>T</u> <u>E</u> <u>R</u></p>	<p style="text-align: center;">Clue K 6</p> <p>The next term is a word with 8 letters. It is a more traditional place to have a baby (at least in the U.S.).</p>
<p style="text-align: center;">Clue K 7</p> <p>It's a place with a special department called "labor and delivery".</p>	<p style="text-align: center;">Clue K 8</p> <p>Birth Mom and/or Birth Dad make some decisions here, and there is equipment to handle emergencies.</p>
<p style="text-align: center;">Clue K 9</p> <p>The word is _ <u>O</u> <u>S</u> _ <u>I</u> <u>T</u> _ <u>L</u></p>	<p style="text-align: center;">Clue K 10</p> <p>The word is <u>H</u> <u>O</u> <u>S</u> <u>P</u> <u>I</u> <u>T</u> <u>A</u> <u>L</u></p>