Chapter Objectives
After completing this chapter, you will be able to:

- **Identify** the early signs of pregnancy.
- **Explain** the importance of proper nutrition during pregnancy.
- **List** six categories of basic baby supplies.
- **Describe** why parents need to develop a budget.
- **Identify** ways expectant parents can prepare for the birth of a child.
- **Compare and contrast** the options for the delivery of a baby.

Writing Activity  
*Topic Sentence*

**A Healthy Pregnancy**  Developing a topic sentence is like building a house’s frame. If the frame is poorly built, the entire building will collapse. Write a paragraph that includes a topic sentence about how a woman can remain healthy during her pregnancy.

**Writing Tips**  A topic sentence provides an overview of a paragraph. Here are some tips for writing a good topic sentence:

1. **State** the main idea of the paragraph.
2. **Place** the ideas in the order in which they will be covered in the paragraph.
3. **Avoid** making the topic sentence overly detailed.
Explore the Photo
A pregnancy affects all members of the family, not just the mother. How do you think each person in this photo is affected by this pregnancy?
**A Healthy Pregnancy**

**Reading Guide**

**Before You Read**

Create a KWL Chart  Create a chart with three columns labeled “What I Know,” “What I Want to Know,” and “What I Learned.” Skim the section and fill in the first two columns. Then fill in the last column after you read.

**Read to Learn**

**Key Concepts**
- Identify the early signs of pregnancy.
- Explain the importance of proper nutrition during pregnancy.

**Main Idea**

It is important that pregnant women have regular doctor checkups and practice good nutrition. They also should follow appropriate exercise routines and avoid excess stress.

**Content Vocabulary**
- obstetrician
- anemia
- Rh factor
- gestational diabetes
- preeclampsia
- osteoporosis
- lactose intolerance
- lactase

**Academic Vocabulary**

You will find these words in your reading and on your tests. Use the glossary to look up their definitions if necessary.
- robust
- alleviate

**Graphic Organizer**

As you read, note the food groups pregnant women should eat. List two foods in each group. Use a chart like the one shown to organize your information.

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Example 1</th>
<th>Example 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grains</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meat and Beans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oils</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Graphic Organizer** Go to this book’s Online Learning Center at glencoe.com to print out this graphic organizer.

**Academic Standards**

**English Language Arts**
- NCTE 8 Use information resources to gather information and create and communicate knowledge.

**Science**
- NSES F Develop understanding of personal and community health.

**Social Studies**
- NCSS I A Culture Analyze and explain the ways groups, societies, and cultures address human needs and concerns.
Health During Pregnancy

A pregnant woman’s responsibilities grow along with her baby. What happens to a baby during prenatal development can affect both the baby’s and parents’ lives. Mothers-to-be need to eat a well-balanced diet, exercise moderately, get plenty of sleep, and manage stress. This is important for both the mother’s and the baby’s health.

Early Signs of Pregnancy

How do women discover that they are pregnant? Within a few weeks of conception, women usually experience one or more of the following signs of pregnancy:

- A missed menstrual period (often the first indicator)
- A full feeling or mild ache in the lower abdomen
- Tiredness or faintness
- A frequent, urgent need to urinate
- Swollen breasts, causing discomfort or tenderness
- Nausea or vomiting, particularly in the morning

These symptoms are common, but they do not always mean that a woman is pregnant. If a woman believes she is pregnant, she should take a pregnancy test as soon as possible. Doctors can conduct tests to confirm pregnancy. There are also a variety of home pregnancy tests available. They are easy to use and fairly accurate. Early detection of pregnancy is crucial to the health of the expectant mother and her baby.

Medical Care

Once pregnancy is determined, it is important for a woman to schedule a doctor’s visit. Most pregnant women choose an obstetrician for medical care during pregnancy. An obstetrician (əb-stə-tri-shən) is a doctor who specializes in pregnancy and childbirth.

Obstetricians will schedule regular check-ups during pregnancy. These checkups will become more frequent as the pregnancy progresses. The doctor also assists during childbirth and examines the newborn. It is important that expectant mothers find a doctor they like, feel comfortable with, and trust.

Meeting with Obstetricians

A pregnant woman often meets all the doctors in a medical office or clinic. How can meeting the other doctors help a woman prepare for childbirth?
Many obstetricians work as part of a team with other doctors, taking turns caring for patients at night and on weekends. Although pregnant women usually have a primary doctor, they typically meet all the doctors who work in the office. This is so they know and feel comfortable with all the doctors.

The primary doctor performs most of the woman’s checkups. However, if the he is not on duty when the woman is ready to deliver, another doctor on the team will deliver the baby. Since no one knows when labor will begin, it could happen on the primary doctor’s day off. He also could be ill or on vacation.

Some women believe they will save money by seeing a doctor only when the baby is ready to be born. This is not the case. Most obstetricians set a fee for all the services they provide throughout the pregnancy, from the first exam to the follow-up visits after the baby is born. Nothing is more important to the health of the baby than for the mother to get regular medical care and advice from the beginning to the end of the pregnancy.

### The First Exam

When pregnancy is confirmed, the woman receives a thorough examination that includes:

- A check of her blood pressure, pulse, respiration, and weight.
- A discussion of her medical history, including existing medical conditions, such as high blood pressure, that may require special treatment or observation during pregnancy.
- A measurement of her pelvis to determine whether it is wide enough to allow a baby of normal size to pass through.
- An analysis of her urine for signs of infection or diabetes, a condition characterized by excessive amounts of urine. Diabetes develops when the body is not able to produce enough insulin to keep blood sugar (glucose) within an acceptable range. This condition affects the body’s ability to burn energy.
- Blood tests to rule out anemia. **Anemia** is a condition that results from not having enough red blood cells. Symptoms include fatigue, shortness of breath, rapid heartbeat, and feeling cold and weak.

### Monitoring Blood Pressure

Blood pressure is checked regularly during pregnancy because increased pressure may signal a serious problem. What condition might be indicated by high blood pressure?
The blood test also shows whether or not the mother's blood contains a certain protein. This protein is referred to as the Rh factor. Knowing about the presence (Rh positive) or absence (Rh negative) of this protein is very important. The Rh factor is determined genetically. If the mother's blood does not have the protein and the fetus's blood does, the mother's blood builds up antibodies that attack the protein in the fetus's blood. This does not affect a first pregnancy, but it can endanger any future pregnancies. Once identified, the mother can receive an injection that will prevent the antibodies from forming, thus protecting any Rh positive fetus.

A check of the woman's immunity to rubella, also called German measles. If a pregnant woman has not been vaccinated against this disease and has never had it, she must be especially careful to avoid anyone who has it. If she contracts rubella during pregnancy, the fetus could be harmed.

One question every pregnant woman has is “When will my baby be born?” The approximate birth date is easy to calculate. Nine months and one week after the first day of her final period before pregnancy is her baby's due date. Of course, doctors know that even in a typical pregnancy a variation of up to two weeks before or after that date can be expected.

Periodic Checkups

Expectant mothers have checkups, or prenatal visits, once a month until about the sixth or seventh month of pregnancy. After that, women see the doctor twice a month. In the final month, checkups occur once a week. During these visits, the doctor monitors the baby's development and the mother's health. Regular checkups allow immediate response should a problem arise.

Between the 24th and 28th weeks of the pregnancy, most women take a glucose tolerance test to check for signs of gestational diabetes. Gestational diabetes is a form of diabetes that occurs only during pregnancy. If left untreated, gestational diabetes can cause the baby to be heavier than is normal or healthy.

Some women who do not normally have diabetes develop the condition when they are pregnant. This type of diabetes usually goes away after the baby is born. Gestational diabetes can usually be controlled by a special diet but may require medication.
Another serious condition that can occur during the second half of pregnancy is preeclampsia. Preeclampsia (ˌprē-i-ˈklām(p)-sē-ə) is a condition characterized by high blood pressure and the presence of protein in the mother’s urine. It can prevent the baby from getting enough blood, which provides oxygen and food. Treatment for preeclampsia depends on how far along in the pregnancy a woman is. Treatment might include bed rest or medication. The doctor can recommend the best treatment option.

Most doctors welcome the father or another person who will be attending the birth to accompany the pregnant woman at prenatal visits. This gives the support person a chance to meet the doctor and follow the baby’s growth. Also, sometimes it is helpful to have someone else to ask questions and remember important information.

**Discomforts of Pregnancy**

Most women experience few problems during pregnancy. In fact, some women say that pregnancy is a time of robust, or thriving, health. Many women experience an increase in energy and well-being. Other women feel some discomfort. This usually does not indicate serious problems. However, if a woman experiences one or more of the following symptoms, she should discuss it with her doctor.

- **Nausea or Vomiting** While this is commonly called morning sickness, it can occur at any time of the day. Morning sickness is the most common complaint of pregnant women. It rarely lasts beyond the fourth month of pregnancy. If it is severe or prolonged, however, women should alert their doctors.

- **Sleepiness** Due to hormonal changes, sleepiness is quite common early in pregnancy. Many women feel more energetic in the middle months of pregnancy. For most women, fatigue returns in the final months, since the baby weighs more and takes up more room.

- **Heartburn** This is a burning feeling in the upper abdomen. It has nothing to do with the heart. Women with heartburn should ask their doctors about safe forms of relief.

- **Shortness of Breath** Pressure on the lungs from the baby can cause shortness of breath. This is particularly common late in pregnancy.

- **Varicose Veins** When there is pressure on the blood vessels in the legs, varicose veins can appear. These are swollen veins, or blood vessels, that are close to the skin’s
surface. Getting plenty of exercise, resting with the legs elevated, and using support stockings can help relieve the swelling.

- **Muscle Cramps in the Legs** Gentle stretches, rest, and a diet rich in calcium may *alleviate*, or ease, the pain caused by leg cramps.
- **Lower Back Pain** Wearing low-heeled shoes and learning to lift properly, or avoiding lifting altogether, can minimize back problems. Exercises that strengthen the back can also help.

**Possible Serious Complications**

A few women experience more serious problems during pregnancy. Any of the following symptoms should be reported to a doctor immediately:

- Vaginal bleeding
- Unusual weight gain or loss
- Excessive thirst
- Diminished need to urinate or pain during urination
- Severe abdominal pain
- Persistent headaches
- Severe vomiting
- Fever
- Increased vaginal mucus
- Swelling of the face, hands, or ankles
- Blurred vision or dizziness
- Prolonged backache

**Physical Changes**

The common length of pregnancy is about 40 weeks, or 280 days, from the first day of the last menstrual cycle. See **Figure 5.1** on page 134 for a description of physical changes a woman can expect each month of her pregnancy.

Toward the end of the 40 weeks, the baby’s weight seems to shift downward, and most mothers feel more comfortable in their upper abdomen. This shift is called lightening. Sometimes there is a visible change in the shape of the mother’s abdomen, giving signs that the baby has dropped into the birth canal. The birth canal is the channel through which the baby passes during birth.

In most births, the fetus is usually upside down at this point, with the head nestled in the mother’s pelvis. This is the easiest and safest position for birth. Once the head is out of the mother’s body, the rest of the body usually delivers easily.

In some cases, the fetus does not turn to the head-down position in the last few weeks. Instead, the fetus is in a seat-down position in the mother’s pelvis. This is called a breech presentation. In many of these instances, a doctor uses a surgical procedure called a cesarean section to deliver the baby. A complete discussion of cesarean birth appears in Chapter 6.

In the last few weeks of pregnancy, the skin of the mother’s abdomen appears stretched to capacity. This is when stretch marks will generally appear. The muscles of the uterus and abdomen can be stretched to many times their original size during pregnancy. At the end of pregnancy, the muscles of the uterus contract to push out the baby during delivery. The mother’s abdominal and uterine muscles generally return to near-normal sizes approximately six weeks after delivery.
<table>
<thead>
<tr>
<th>Month</th>
<th>Pregnancy Development</th>
</tr>
</thead>
</table>
| Month 1 | Missed menstrual period.  
|         | Other signs of pregnancy may not yet be noticeable.  |
| Month 2 | Breasts begin to swell.  
|         | Pressure on bladder from enlarging uterus results in need to urinate more frequently.  
|         | Possible nausea (morning sickness) and fatigue.  |
| Month 3 | Breasts become firmer and fuller, may ache.  
|         | Nausea, fatigue, and frequent urination may continue.  
|         | Abdomen becomes slightly larger. The uterus is about the size of an orange.  
|         | Weight gain may total 2–4 pounds (0.9–1.8 kg).  |
| Month 4 | Abdomen continues to grow slowly.  
|         | Most discomforts of early pregnancy are usually gone.  
|         | Appetite increases.  |
| Month 5 | Enlarged abdomen becomes apparent.  
|         | Slight fetal movements felt.  
|         | Increased size may begin to affect posture.  |
| Month 6 | Fetal movements sensed as strong kicks, thumps, and bumps. Some may be visible.  
|         | Weight gain by the beginning of this month may total 10–12 pounds (4.5–5.4 kg).  |
| Month 7 | Increased size may affect posture.  |
| Month 8 | Discomfort may result from increased size. Backache, leg cramps, shortness of breath, and fatigue are common.  
|         | Fetal kicks may disturb the mother’s rest.  
|         | At the beginning of this month, weight gain totals about 18–20 pounds (8.2–9.1 kg).  |
| Month 9 | Lightening is felt as the fetus drops into the pelvis. Breathing becomes easier.  
|         | Other discomforts may continue.  
|         | A total weight gain of 25–35 pounds (11.3–15.9 kg) is typical.  
|         | False labor pains may be experienced.  |
**Weight Gain During Pregnancy**

Women typically gain between 24 and 30 pounds during a healthy pregnancy. This weight is from the baby itself and from changes to the mother’s body. **Figure 5.2** shows how that weight is usually distributed.

Recommended weight gain is about a pound per month during the first three months. In the fourth through ninth months, weight gain should be about three to four pounds per month.

Gaining too little weight can increase the risk of fetal death or premature birth. Gaining too much weight can put added stress on the mother’s body and increase the risk of complications. Women who begin a pregnancy underweight or overweight will require special monitoring.

**Maternity Clothes**

By around the fourth or fifth month, a pregnant woman needs looser clothing to allow for freedom of movement and circulation as the baby grows. Maternity pants often have a stretch panel in the front. Shirts also are made looser to allow room for the growing baby. When choosing clothing, an expectant mother should consider how garments will fit during her ninth month.

**Daily Routines**

Pregnant women can take care of themselves in many ways. While pregnant women can usually follow some of the same daily routines they had before pregnancy, they should also do the following:

- **Eat a healthful diet.** Eat a variety of nutritious meals and snacks to get the nutrients that both mother and baby need.
- **Get plenty of rest.** Taking frequent breaks during the day may provide more energy.
- **Exercise.** Moderate exercise is important to everyone, including pregnant women.

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**Figure 5.2 Weight Gain During Pregnancy**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight of average baby at birth</td>
<td>7–8</td>
</tr>
<tr>
<td>Placenta</td>
<td>1–2</td>
</tr>
<tr>
<td>Amniotic fluid</td>
<td>1½–2</td>
</tr>
<tr>
<td>Increased size of uterus and supporting muscles</td>
<td>2</td>
</tr>
<tr>
<td>Increase in breast tissue</td>
<td>1</td>
</tr>
<tr>
<td>Increase in blood volume</td>
<td>1½–3</td>
</tr>
<tr>
<td>Increase in fat stores</td>
<td>5</td>
</tr>
<tr>
<td>Increase in body fluids</td>
<td>5–7</td>
</tr>
</tbody>
</table>

**Total** 24–30

Weight gain during pregnancy is due to many factors besides the actual weight of the baby. Next to the baby itself, what causes the greatest weight gain during pregnancy?
Doctors may recommend walking, yoga, or swimming. Look for exercise classes that are designed for pregnant women.

- **Practice good hygiene.** Keeping the skin clean helps the body maintain a healthy temperature and eliminate waste. A warm bath or shower before bedtime also may help pregnant women relax.

Pregnant women do not need to radically change their activities during pregnancy. Moderation is advised, but most activities can continue as before. Most women are able to continue working throughout their pregnancy.

### Emotional Health During Pregnancy

Pregnancy and birth are major events in a couple’s life. They are also times of emotional adjustments. It is vital to talk to each other. Spending time alone together can help. Family and friends can also be sources of information and support.

Pregnancy causes hormonal changes that may lead to mood swings. Most women feel upset and worried at some time during pregnancy. This is why effective stress-reduction techniques are important.

#### Depression

Emotional and physical stress can lead to deep and lasting feelings of sadness. This is known as depression. Expectant mothers who feel overwhelmed need to seek help. There are a number of ways to find support. A woman’s doctor may recommend a professional counselor or local support group. Often, women who are going through, or have been through, similar experiences can help the expectant mother. Some books also can help expectant mothers understand their concerns and improve their outlook.

#### Stress

If you have experienced stress, you know how it affects you. You may feel moody, anxious, annoyed, or scared. Perhaps you lose your appetite, have nightmares, or feel sweaty and shaky. Pregnancy can be a stressful time.

It is important that pregnant women find ways to ease the stress for themselves and their babies. There are many ways to cope with stress while pregnant.

- **Avoid sugary foods and caffeine.** These can make pregnant women nervous or jumpy.
• **Exercise.** Gentle exercises, such as stretching, and moderate physical activity, such as walking, can help pregnant women feel lighter and more energetic.

• **Take a time-out.** Taking time to relax and enjoy a favorite activity or hobby can help relieve stress.

• **Practice relaxation techniques.** Pregnant women can learn breathing or visualization exercises through books or classes.

• **Talk about concerns.** Mothers-to-be can benefit from talking to supportive friends or family members, especially those who have children of their own. They can also talk to their doctors or seek a counselor.

• **Take a class for expectant parents.** The more pregnant women know about the birth process, the greater their sense of control. Feeling prepared can help reduce stress.

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**Nutrition and Fetal Brain Development**

Some pregnant women do not follow a sensible and balanced diet. Others, wrongly concerned about gaining weight, severely restrict their food intake. Either way, the developing fetus is put in serious danger. One possible outcome of failing to supply adequate nutrition to the fetus is that brain development could be stunted and the baby could be mentally retarded. Alcohol consumption, cigarette smoking, and drug abuse during pregnancy can have similar results.

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**Science Inquiry** Dieting during pregnancy can cause problems with fetal brain development. Why do you think a pregnant woman might diet even though she knows this?

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**Nutrition During Pregnancy**

Good nutrition is the single most important requirement during pregnancy. The baby’s growth and development, including crucial brain development, depend on nutrients from the mother. By eating a nutritious, balanced diet, a pregnant woman promotes her baby’s development and maintains her own health.

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**Five Food Groups Plus Oils**

Expecting mothers need a variety of nutrients to keep themselves and their developing babies healthy. The U.S. Department of Agriculture has developed nutritional guidelines for pregnant women. These guidelines are known as MyPyramid for Moms. The guidelines divide foods into five food groups, plus the oils category.

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**Grains**

Eating grains is essential to any well-balanced diet. They contain carbohydrates, which provide our body with energy. Grains fortified with folic acid can help prevent defects to the baby’s nervous system. The nutrients in grain also reduce the risk of heart disease and keep the digestive system working properly. The grains group includes any food made from wheat, rice, cornmeal, barley, or other grains. Examples include bread, pasta, oatmeal, and tortillas.

Grains are divided into whole grains and refined grains. Whole grains, such as whole-wheat flour and oatmeal, contain the entire grain kernel. Refined grains have been milled, causing parts of the grain to be removed. This gives them a finer texture and slows down the rate at which they spoil. However, refining also removes fiber, iron, and some vitamins. Examples of refined grain products include white bread and white rice. Most refined grains are enriched. This means that some vitamins and iron have been added back into them. However, they are still missing the fiber and some of the vitamins of whole grains.

Because whole grains are generally more nutritious than refined grains, it is recommended that at least half of the grains eaten be whole grains. Look to see that grains such as wheat, rice, oats, or corn are referred to as “whole” in the list of ingredients.
Vegetables
Eating vegetables keeps the mother’s heart healthy. Vegetables also can reduce her chances of getting diabetes, high blood pressure, and some kinds of cancer.

Vegetables are rich in potassium and dietary fiber. Many are rich in folic acids and vitamins A, C, and E. Most are low in fat and calories, and therefore can help to control the mother’s weight. Different colored vegetables typically provide different nutrients. They are divided into the following categories:

- Dark green vegetables, such as broccoli and spinach
- Orange vegetables, such as carrots and pumpkin
- Dry beans and peas
- Starchy vegetables, such as potatoes and corn
- Other vegetables, such as celery and onions

Fruits
Any fruit or 100 percent fruit juice is part of this group. Some common fruits include apples, bananas, tomatoes, avocados, strawberries, and oranges. Fruit juices are high in calories and do not contain fiber. Eat a variety of fruits rather than just fruit juice for most of your fruit choices. Fruits can be fresh, frozen, canned, or dried.

Fruits have many of the same benefits as vegetables. Fruits also help maintain a healthy heart and blood vessels. Fruits can help control body weight. Many fruits are good sources of potassium, dietary fiber, vitamins A and C, and folic acid.

Milk Products
Foods in the milk group include all varieties of milk, cheese, ice cream, and yogurt.
Nutrients in milk products include calcium, potassium, vitamin D, and protein. Calcium is vital for building healthy bones and teeth. It is important that pregnant women get adequate calcium to prevent osteoporosis. **Osteoporosis** is a condition in which bones become fragile and break easily.

Choosing milk products that are low-fat or fat-free is important. High-fat milk products contain saturated fats and cholesterol that can lead to a greater risk of heart disease. If you cannot consume milk, choose lactose-free milk products and calcium-fortified foods and beverages.

**Meat and Beans**

Meat, poultry, fish, dried beans, nuts, and eggs belong to this group. Choose meat and poultry cuts that are low-fat. They provide protein, which is vital to the baby’s growth and development of bones and teeth. Protein also helps keep the mother’s body healthy. Expectant mothers need more protein than they did before they were pregnant.

**Oils**

Oils are fats that are liquid at room temperature. They can come from either plants or fish. Common oils include olive oil, corn oil, and canola oil. Many foods are naturally high in oils, including nuts, olives, and some fish.

Solid fats, such as butter, contain more saturated or trans fats than oils. These kinds of fats can increase your risk for heart disease. Oils have more monounsaturated and polyunsaturated fats, which are healthier. Oils are healthier than solid fats, but they are still high in calories, so their intake should be limited.

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**Milk Group** Eat calcium-rich foods. Get three cups of low-fat or fat-free milk, or an equivalent amount of low-fat yogurt or low-fat cheese, every day. Note that 1½ ounces of cheese equals 1 cup of milk.

**Oils** Choose healthy oils. Read the Nutrition Facts label on foods. Look for polyunsaturated and monounsaturated oils such as olive oil or canola oil.

**Meat & Beans Group** Go lean with protein. Choose lean meats and poultry. Bake it, broil it, or grill it. And vary your protein choices with more fish, beans, nuts, and seeds.
Nutrition and Pregnancy

Eating nutritiously is one of the best gifts a pregnant mother can give her unborn baby. What can happen if a mother does not eat a balanced diet?

Vitamins and Minerals

A variety of vitamins and minerals are vital to both the fetus and the mother. Whenever possible, it is best to get these from a healthy diet, rather than by taking supplements. Pregnant women should take vitamins, minerals, or other supplements only with their doctor’s approval.

Vitamins

Vitamins help to maintain a healthy pregnancy. Research has determined some birth defects, such as spina bifida, are linked to vitamin deficiency. Women usually need more vitamins during pregnancy. Here are some of the most important ones.

- Vitamin A ensures proper eye development and helps keep skin healthy.
- The B vitamins assist in general fetal development.
- Vitamin C helps build healthy teeth and gums. It also helps form the connective tissue of skin, bone, and organs.
- Vitamin D aids in the creation of bones and teeth.
- Folic acid is necessary for normal spinal development in the fetus. Lack of folic acid can lead to spina bifida. Pregnant women need twice the normal amount. Even women who are considering becoming pregnant should increase their intake of folic acid.

Minerals

Pregnant women need iron, a mineral that helps prevent anemia and assists in developing the baby’s own blood supply. Extra iron is stored in the baby’s liver and is used in the months right after birth. During this time, a baby who lives on breast milk lacks iron in the diet. The mother can get iron from dried beans, raisins, dates, meat, and leafy green vegetables.

Calcium and phosphorous are also important minerals during pregnancy. These nutrients work together to produce strong bones and teeth and ensure regular elimination of waste from the body. Milk and other dairy products are good sources of calcium and phosphorous.

Food Quantities

All pregnant women should eat a wide variety of healthy foods. However, the exact quantities needed vary depending on the mother’s age, weight, and activity level, as well as the stage of pregnancy.

When you visit the MyPyramid for Moms Web site you can create a specific plan based on these factors. Figure 5.4 shows a sample nutrition plan made using this Web site. The
This nutrition plan will show you how much food you need from each food group, during each stage of pregnancy.

Within each food group, pregnant women should choose foods that are rich in the vitamins and minerals needed. For example, carrots, winter squash, and spinach are good choices from the vegetable group for pregnant women.

**Nutrition and Pregnant Teens**

Teens’ bodies have special nutritional needs because they are still developing. Pregnancy places additional strain on the body. Many teens fill up on high-calorie, low-nutrient foods. Pregnant teens must be especially careful to eat nutritious meals and snacks. It is essential for a teen’s own body and for her growing baby to get all the needed nutrients for proper growth and development.

It is especially important for pregnant teens to get enough calcium and iron. Calcium is essential for growing bones. Iron helps the blood carry oxygen to all parts of the body. During pregnancy, a woman has more blood in her body, so iron is even more important to her health. As with any pregnant woman, pregnant teens should discuss their nutritional needs with their doctor.

**Special Diets**

Some people are sensitive to certain foods, such as dairy. Some people choose to avoid certain foods for personal reasons, such as vegetarians. A pregnant woman needs to discuss these considerations with her doctor to ensure that her fetus gets the needed nutrients for healthy growth and development.

**Sensitivities to Milk**

Milk and other dairy products are a rich source of calcium, protein, and other key nutrients. Expectant mothers who cannot tolerate milk products need special eating strategies. One alternative is to eat larger amounts of other calcium-rich foods, such as broccoli,
tofu, and leafy green vegetables. Protein can come from meat, fish, dried beans, and nuts.

Some people are lactose intolerant. Lactose is a type of sugar found in milk. A person is lactose intolerant if milk products cause symptoms such as abdominal pain and gas. Many people who have problems digesting lactose can still eat dairy foods, if they are served in small quantities or eaten with other foods. Fortified soy milk can also provide nutrients for people who are lactose intolerant.

Lactase is an enzyme that helps digest lactose. Eating foods with lactase, such as yogurt, helps some people digest milk. Taking lactase in liquid or tablet form can also relieve symptoms. Before taking a lactase supplement, pregnant women should consult their doctors.

**Vegetarians**

Vegetarians do not eat meat, which is high in protein. Some vegetarians, called vegans, do not eat any animal products at all, including eggs and milk. Vegetarians eat food from plant sources, such as vegetables, fruits, grains, beans, nuts, and seeds. People may choose this diet for religious or cultural reasons, because of their concern for animals, or health reasons. By eating enough tofu and other soybean products, dried beans, nuts, and nut butters such as peanut butter, pregnant vegetarians can still get the protein they need. As with any pregnant woman, pregnant vegetarians should discuss their diet with their doctor. This will help ensure they get the needed nutrients for a healthy baby and a healthy mother.

**Section 5.1**

**After You Read**

**Review Key Concepts**

1. **Explain** why it is important for a pregnant woman to receive prenatal care from the beginning through the end of her pregnancy.
2. **List** three vitamins and explain each one’s purpose.

**Practice Academic Skills**

**English Language Skills**

3. Visit the MyPyramid for Moms Web site and explore the tools for an expectant mother. Use what you have learned to make a poster explaining MyPyramid for Moms. Use simple language and art to emphasize the importance of good nutrition, both for the mother and the developing baby.

**Science**

4. Pregnant women often feel more tired than normal and require extra sleep. However, women often find it difficult to sleep due to the discomforts of pregnancy. Conduct research to find out what pregnant women can do to help them sleep better without medication. Include talking to women with children, or women who are pregnant as part of your research.

**Check Your Answers** Check your answers at this book’s Online Learning Center at glencoe.com.
Feeding Decisions
Breast-Feeding  Bottle-Feeding

Read to Learn
Key Concepts
• List six categories of basic baby supplies.
• Describe why parents need to develop a budget.

Main Idea
New babies require items such as clothing, equipment, and a place to sleep. Parents also should create a budget and prepare any siblings for the new baby.

Content Vocabulary
formula flexible expense
pediatrician maternity leave
fixed expense paternity leave

Graphic Organizer
Go to this book’s Online Learning Center at glencoe.com to print out this graphic organizer.

Academic Vocabulary
You will find these words in your reading and on your tests. Use the glossary to look up their definitions if necessary.
slat reimbursement

Graphic Organizer
As you read this section, note three advantages of breast-feeding and three advantages of bottle-feeding. Use a T-chart like the one shown to organize your information.

<table>
<thead>
<tr>
<th>Feeding Decisions</th>
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<tbody>
<tr>
<td>Breast-Feeding</td>
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Academic Standards

English
NCTE 7  Conduct research and gather, evaluate, and synthesize data to communicate discoveries.

Mathematics
NCTM Number and Operations  Understand numbers, ways of representing numbers, relationships among numbers, and number systems.

Science
NSES B  Develop an understanding of the structure and properties of matter, chemical reactions.

NCTE  National Council of Teachers of English
NCTM  National Council of Teachers of Mathematics
NSES  National Science Education Standards
NCSS  National Council for the Social Studies
Preparing for Parenthood

Pregnancy is a time of anticipation and preparation. It is also a time for expectant parents to think about what their baby’s physical, emotional, and intellectual needs will be and how they are going to meet them. Many expectant parents worry that they may not be up to the demands of raising a child. This is especially true for first-time parents. Parents should discuss their hopes, fears, worries, and other aspects of parenting with each other before the baby’s arrival.

How will they handle guidance and discipline? How will parenting tasks be shared? How will they manage the new expenses? Of course, no one can plan for every situation. Parents’ ideas often change as they gain parenting experience. Agreeing on certain ground rules, however, can help reduce confusion and conflict in relationships later on.

Parents-to-be must also prepare for their changing responsibilities. They may already be spouses, employees, students, volunteers, sisters or brothers, or daughters or sons. Now they will become parents as well. Some of the existing roles will change due to the time and energy that parenthood demands.

Everyone can benefit from good time-management skills. These skills are especially important for parents. Developing a basic daily schedule helps keep things on track. Routines also help infants and young children know what to expect and when to expect it. This helps them feel secure. Using time wisely can help staying on a schedule easier. For example, combining errands or taking advantage of nap times can help parents feel less overwhelmed.

Preparing for the Baby

New babies require preparation, such as preparing a nursery. Why is it important to have a nursery set up before the baby arrives?
Other Children in the Family

It is not always easy for children to accept a new baby in their lives. Older siblings may not be excited about the new addition to the family. Who can blame them? All of a sudden their world is turned upside down. They have to share their parents’ attention, their toys, and their space. It is a big adjustment. Of course, many children are happy to have a sibling. They look forward to helping care for the new baby. They also enjoy showing their sibling how things work.

How children react to a new sister or brother depends on how well prepared they were before the baby’s arrival, how they react to change, and their age. Parents should be prepared for a wide range of attitudes, from jealousy and confusion to excitement and love. A two-year-old does not really understand what is happening. Adjusting takes time. Talking about concerns and acceptance of a child’s feelings can help foster a positive relationship between siblings.

Clothes, Equipment, and Space

The list of basic supplies for a baby can be overwhelming for many new parents. Babies need clothes, bedding, bath supplies, and travel equipment such as a stroller. Parents who choose bottle-feeding need bottles, plastic nipples, and lids. Figure 5.5 describes basic baby supplies. Parents can get specific suggestions from doctors, family, friends, and magazines and books that test products.

Baby’s Room

Newborns may sleep as many as 18 to 22 hours a day. During the first six months, most babies sleep 15 to 18 hours a day. Some parents feel that babies sleep better in their parents’ room. This arrangement makes late-night feedings easier. Others think that babies need a quiet space of their own in which to sleep. Of course, many babies share a sibling’s room. Comfortable conditions are more important than a large amount of space. If the baby does not have a separate room, curtains or other room dividers can be used to create a quieter, more private space.

Accepting the New Family Member

Many parents are concerned about how an older child will react to having a new baby brother or sister. Here are some tips parents can use to reassure an older sibling:

- Try not to change the older child’s routine any more than necessary.
- If your local hospital offers sibling classes, consider enrolling your child.
- If possible, have the child come to the hospital to see the new baby.
- When relatives and friends visit, make sure the older child feels included.
- Encourage the older child to help with the baby’s care. For example, he can bring you a diaper or entertain the baby while you are changing her clothes.
- Set aside time each day to spend with the older child without the baby being around.

Take Charge Imagine that a friend recently had a second child. Your friend is worried that visitors will pay attention to the new baby, but ignore the older child. Write an advice column on how your friend might handle this situation.
### Needed Baby Items

#### Diapering Needs
- A changing table, or some surface to use for changing the baby
- If using disposable diapers, about 70 (a week’s supply)
- If using cloth diapers: 3–4 dozen diapers and diaper pins
- Covered diaper pail
- Washcloths or disposable wipes, and diaper rash ointment

#### Clothing
- 6–8 undershirts; 4–6 one-piece footed sleepers or gowns
- 6 cotton receiving blankets; 1 warm outer wrapping blanket
- 1–2 sun hats or bonnets
- 1 sweater, 1 coat or warm wrap, and warm hat (if weather is cold)

#### Feeding Equipment
- Breast-feeding: Breast pump and pads; plastic bottles or bags for storing breast milk
- Bottle-feeding: 6–8 small bottles; nipples and bottle caps; bottle and nipple brush
- Bibs
- High chair

#### Bedding/Bedroom
- Crib and waterproof mattress (if the baby will sleep alone); bumper pad
- Waterproof mattress cover
- 4 fitted crib sheets
- 2–3 lightweight blankets and a heavier crib blanket
- Storage space, such as chest of drawers

#### Bathing and Other Supplies
- Baby bathtub
- Rubbing alcohol and cotton swabs (for umbilical cord)
- Mild, pure soap; baby shampoo
- Several washcloths and 2 soft cotton bath towels
- Cotton balls, baby oil, and baby lotion
- Blunt-tipped nail scissors
- Baby comb and brush set
- Thermometer

#### Travel Equipment
- Car seat that meets the government safety standards
- Tote bag for carrying supplies
- Stroller, carriage, or infant carrier (optional)

---

It is important to have baby supplies ready when the infant first arrives home. **Why do you think sun hats or bonnets are important?**
The Crib  Babies spend countless hours alone in a crib. That means crib safety should be a high priority. Here are the characteristics of a safe crib:

- **Slats**  Slats should be no more than 2 3/4 inches apart. A slat is the flat, narrow strip of wood on the sides of a crib. If they are farther apart than this, a baby’s head could become trapped between them.

- **Paint**  If the crib is painted, the paint should not contain lead and should be smooth, with no flaking.

- **Structure**  Corner posts should all be the same height. If some corner posts are taller than the sides of the crib, the baby’s clothing or bedding could catch on the posts.

- **Sides**  When lowered, crib sides should be about 9 inches above the mattress to keep the baby from falling out. When they are raised, they should be at least 26 inches above the mattress.

- **Latch**  The latch to raise and lower the sides should lock securely. Never use a crib with a broken latch.

- **Mattress**  The mattress should be firm and fit the crib exactly. There should be no space between the crib and the mattress. Infants can get trapped in this space.

- **Safe Bedding**  Soft bedding should not be placed in a crib. While soft bedding such as pillows and quilts may look cute and comfortable, babies can suffocate on it. Even stuffed toys should be removed when a baby is in the crib. Basic bumper pads around the crib, just above the mattress, can be used to protect the baby from the crib’s sides though.

- **End Panels**  If the end panels have decorative cutouts, they should be very small, so the baby’s head, arms, and legs cannot become caught in them.

- **Age**  If the crib was pre-owned, it should be carefully checked to be sure it meets these current safety standards.

  Parents may choose to put a baby monitor near the crib. The device picks up sounds from the room and sends them to a speaker in another part of the home. Baby monitors let parents know if the baby needs attention.

**Car Seat Safety**

Children should be restrained using the appropriate car seats for their size and weight. There are three classes of car seats.

- Infant-only seats fit babies up to 22 pounds. The infant faces to the rear. The seat should be placed in the back seat.

- Convertible seats fit children from birth to about 40 pounds. They are used facing to the rear for the first year, then can be turned around when the baby is at least one year old and weighs at least 20 pounds.

- Children between four and seven years old should use booster seats locked securely in place with adult seat belts.

**Be Prepared**  Most parents are careful to properly place their babies in car seats. However, many parents do not place children in the four to seven age group in booster seats. Conduct research to determine the percentage of injuries that could be prevented if all four- to seven-year-olds were placed in booster seats.

**The Diaper-Changing Area**  Parents need to set aside a space where the baby can be changed and dressed. They can buy a changing table or use almost any sturdy, flat surface. Whatever surface is used, it should be covered with a cloth or towel that can be washed regularly.

  Many changing tables or pads have rails around the sides to help prevent falls. They also come with a restraint strap to help secure the baby. Even young babies can wiggle, roll, or move quickly. That is why a baby should never be left unattended on any elevated surface such as a changing table or a bed, even if restraint straps are used. Even babies who cannot yet roll can still wiggle out of them if not properly supervised. Falls can occur within seconds.
## Breast-Feeding vs. Bottle-Feeding

<table>
<thead>
<tr>
<th>Breast-feeding</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Best source of nutrition for baby.</td>
<td>• Prevents father from participating in feeding.</td>
</tr>
<tr>
<td></td>
<td>• Gives the baby some immunity against diseases.</td>
<td>• Baby has to be fed more often.</td>
</tr>
<tr>
<td></td>
<td>• Creates a bond through physical closeness with the mother.</td>
<td>• In rare cases, may be medical reasons that suggest breast-feeding is not desirable or possible.</td>
</tr>
<tr>
<td></td>
<td>• May boost brain development.</td>
<td>• May be painful for some mothers.</td>
</tr>
<tr>
<td></td>
<td>• Reduces baby’s risk of allergies.</td>
<td>• May be difficult because of work schedule.</td>
</tr>
<tr>
<td></td>
<td>• Causes fewer digestive upsets.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>• Speeds the return of the mother’s uterus to normal size.</td>
<td>•</td>
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<tr>
<td></td>
<td>• Reduces the mother’s risk of later having breast or ovarian cancer.</td>
<td>•</td>
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<tr>
<td></td>
<td>• Reduces the risk that the mother will feel depressed.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>• Is available at all times.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>• Is free, though a nursing mother needs additional food.</td>
<td>•</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bottle-feeding</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Allows father to participate in feeding.</td>
<td>• Can be expensive.</td>
</tr>
<tr>
<td></td>
<td>• Allows mother to have a more flexible schedule.</td>
<td>• Does not give the baby any natural immunities to disease.</td>
</tr>
<tr>
<td></td>
<td>• Eliminates concern about mother’s diet or medications she takes.</td>
<td>• Involves a greater chance of baby developing allergies.</td>
</tr>
<tr>
<td></td>
<td>• Ensures that baby gets essential nutrients.</td>
<td>• Creates risk that baby may not be given close physical contact during feeding.</td>
</tr>
<tr>
<td></td>
<td>• Babies need feeding less often.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>• Available in shelf-stable forms for easier storage and portability.</td>
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</tbody>
</table>

Both breast-feeding and bottle-feeding have advantages. What factor do you think is most important in determining if a mother will breast-feed her baby? Why?
Decisions About Feeding

All parents must decide whether to breast- or bottle-feed their baby. There are several factors for parents to consider when making that choice. Figure 5.6 lists many advantages and disadvantages of breast-feeding and bottle-feeding.

Breast milk has many benefits. Health care professionals recommend it whenever possible, even for a short time. There are breast pumps available that allow many mothers to successfully store breast milk. Other caregivers can then feed the baby when the mother is not available. This is an option for mothers who must return to work but want to continue breast-feeding their child.

Using bottles enables the baby's father or other caregivers to enjoy time alone with the baby. Babies who are bottle-fed drink formula. Formula is a mixture of milk or milk substitutes, water, and essential nutrients. It comes in either a powdered form, which is mixed with water, or in liquid form.

Whether a baby is bottle-fed or breast-fed, the nurturing and touch that comes with being held and fed is as important as the food itself.

Choosing a Pediatrician

Before the baby is born, parents should choose a doctor to care for the child. Many parents choose pediatricians. A pediatrician is a doctor who specializes in treating children. This doctor may be the child’s primary doctor for years.

Some families choose a family doctor or family practice medical group so the whole family can go to one place for medical care. A family doctor may treat people of all ages. The medical group may include a pediatrician to care for children.

Parents can ask their own doctors for recommendations for pediatricians. Parents can also ask friends who have children for suggested doctors. Once they have a few names,
Health Care Costs

Medicaid covers 92 percent of prenatal care and delivery cost of a newborn for qualified parents. The new parents must pay the remaining expenses out-of-pocket. Suppose delivery cost is $4,577 and prenatal care is $1,962. What are the expected out-of-pocket expenses?

Starting Hint: Add the delivery cost and prenatal care costs to find the total expenses. Subtract 92% from 100%. Convert the resulting percent to a decimal and multiply it by the total expenses.

For math help, go to the Math Appendix at the back of the book.

Math Concept
Multiply Decimals by Whole Numbers
A percent is a ratio that compares a number to 100. The percent difference (100% - 92%) is divided by 100 and multiplied by total expenses (whole number).

Parents should interview each doctor to see if they like the doctor and agree with his or her ideas about caring for children. Most pediatricians welcome this opportunity to talk with prospective patients.

When choosing a doctor, some considerations are practical. Where is the doctor’s office? What are the office hours? What are the fees for checkups, tests, and vaccinations? Which insurance plans are accepted? Other considerations are emotional. Do you feel comfortable with the doctor and staff?

Making a Budget

Prenatal care is an important expense that can be quite costly. Add these costs to the extra expenses involved with having a baby, and the amount of money needed to support a baby climbs higher than many new parents expect. Planning can help parents meet these expenses. Creating a budget is one way to plan.

A budget is simply a spending plan that people use to help estimate their present and future income and expenses. A budget allows people to set goals for saving and to develop a spending plan that meets their needs. Budgets are helpful for everyone, but especially for expectant and new parents.

The first step in making a budget is to identify income, such as money from jobs. The next step is to list where that income currently goes. A fixed expense is a payment that generally cannot be changed. This can include bills such as a car payment, housing payment and expenses, and taxes. A flexible expense is an expense that can be changed, such as food costs, household items, clothes, and entertainment. For example, you could go out to eat less often to reduce food costs if necessary.

Estimating Health Care Expenses

Health care costs for pregnancy and childbirth can be high. This includes doctors’ fees and the cost of staying in the hospital or birthing center. Hospitals charge different fees based on the care provided. Most health insurance plans will cover these expenses, but only if the woman has insurance coverage at the time she becomes pregnant. If a pregnant woman does not have insurance, some hospitals have free or lower-cost clinics to help people who cannot pay the full fees. Some hospitals will make arrangements for payment plans. There are also government programs that offer financial assistance for health care costs.

Many employers offer health insurance to their employees, and these plans often cover their spouses and children, too. Workers should find out what part of the expenses insurance will cover and what they must pay on their own.

If employers do not provide insurance, people can purchase their own health insurance. It is always a good idea to shop around for a health care plan before buying into one. Insurance companies charge different amounts, and
people can save money by making comparisons. As part of this process, it is important to carefully check the cost of the insurance and know exactly what services it will cover. Some insurance plans pay doctors and hospitals directly. Other plans require the insured persons to pay the bills themselves and then submit a claim for reimbursement, or repayment.

**Consider Child Care Options**

Once expectant parents have developed their budget, they need to review their options for child care. Parents must consider many factors when deciding how to care for their child. These factors include each other’s goals, skills, and time available. Will one parent be able to cut back on working hours or stay at home full-time to care for the child? What other child care options are available, and what are their costs?

Many new parents who work take maternity or paternity leave. **Maternity leave** is time taken off work by a mother after the birth of a baby. **Paternity leave** is when the father takes time off work after a baby’s birth. Under a federal law called the Family Medical Leave Act, employers with more than 50 workers must offer 12 weeks of unpaid family or medical leave to new mothers and fathers. Many workers do not take the entire 12 weeks of leave for financial reasons. Many employers also offer some time off with full or partial pay. Many parents choose to take maternity or paternity leave to help bond with their new child.

Couples sometimes decide that one parent will care for the child and not work outside the home. In the past, this was usually the mother. Today, many fathers are full-time caregivers.

Regardless of who takes primary responsibility for daily caregiving, both parents should share the work of caring for their children. In many families, both parents decide to return to work. In others, there is just one parent to support the family. These single parents need to consider child care options.

**Estimate Other Expenses**

In addition to health care expenses, there are other costs that expectant parents must think about. Some of these include:

- Maternity clothes
- The supplies listed in Figure 5.5 on page 146
- Formula, if a baby is bottle-fed, which can cost between $1,200 and $2,200 per year
- Substitute child care, if needed

Financial Responsibility

Making a budget becomes more important when a couple starts a family. How are fixed expenses different from flexible expenses?
Make a Plan

Once parents have made a list of all the expected expenses, they can compare the expenses to their income and savings. If the couple’s monthly income is less than their projected monthly expenses, it may be necessary to cut back on flexible expenses or to explore other sources of income.

If the mother works outside of the home, she should consider whether her income will be disrupted when the baby arrives and she is off work. Parents who have saved money will have an easier time. Even those with no prior savings should include saving a regular amount in their budget. This cushion helps families deal with unexpected expenses and future needs. Parents should use their plan as a guide to control their spending. Adjustments may need to be made periodically as expenses or income changes.

Reduce Expenses

There are several ways to reduce costs. Shopping for baby clothes at store sales, garage sales, or secondhand stores can save money. Using coupons can help decrease the family’s food budget. Borrowing baby equipment and clothes is another way to save money. However, all used or borrowed items should be carefully cleaned. You should also make sure the items meet any current safety standards.

One of the most important duties of a parent is to make sure children are as safe as possible when traveling in a car. Restraining a child properly is the best way to prevent injuries in a crash. Car seats should not be bought used. The seat may have been damaged in some way. Car seats more than five years old should not be used. To avoid injury, never put a child age 12 or under in the front seat of a car that has passenger-side airbags.
Before You Read

Re-reading If you do not understand a difficult topic, stop immediately and re-read the section. Continuing on in the text will only make you feel discouraged.

Read to Learn

Key Concepts

- Identify ways expectant parents can prepare for the birth of a child.
- Compare and contrast the options for the delivery of a baby.

Main Idea

Taking childbirth classes can help prepare parents for the birth. Parents must decide who will deliver the baby and where the birth will take place.

Content Vocabulary

- prepared childbirth
- labor
- delivery
- midwife
- alternative birth center

Academic Vocabulary

You will find these words in your reading and on your tests. Use the glossary to look up their definitions if necessary.

- complication
- compressed

Graphic Organizer

As you read, compare and contrast the places women might give birth. Use a Venn diagram like the one shown to organize your information.

Go to this book’s Online Learning Center at glencoe.com to print out this graphic organizer.

Academic Standards

English Language Arts

NCTE 2 Read literature to build an understanding of the human experience.

Social Studies

NCSS I A Culture Analyze and explain the ways groups, societies, and cultures address human needs and concerns.
Prepared Childbirth

Prepared childbirth means reducing pain and fear during the birth process through education and the use of breathing and conditioning exercises. Many expectant parents attend childbirth education classes to help them prepare for labor. Labor is the process in which the baby gradually moves out of the uterus and into the vagina to be born. This leads to delivery. Delivery is the birth of the baby. The father or another designated person can offer support to the mother during labor and delivery.

Childbirth education classes may be offered by hospitals, health care providers, or private teachers. In addition to learning breathing techniques, participants learn so much more, including the following:

- How the baby grows and develops throughout pregnancy
- Tests that may be performed during the pregnancy, such as amniocentesis
- Warning signs that may indicate a serious problem during pregnancy
- What to expect during labor and delivery, including the stages of labor
- The role of the support person
- Breathing and conditioning exercises to make pregnancy, labor, and delivery more comfortable and less painful
- What to expect after the baby is born

Classes offered by hospitals may also include a tour of the facility. Parents-to-be are shown where to go when they arrive and where they will be during labor and delivery, and after delivery. Classes might also review specific rules of the hospital regarding visitors, support persons, and electronics. For example, some hospitals will not allow cameras in the delivery room. Most hospitals have specified areas where cell phones can be used.

Childbirth education classes will also help parents make a plan for the labor and delivery. This is called a birth plan. This tells the medical staff what the couple would like to have happen during the childbirth process, including the possible use of pain medication.

✔️ Reading Check List What are three things parents might learn about in a childbirth education class?

Preparing for Childbirth
Many hospitals and health care providers offer childbirth education classes. How can taking a class help reduce expectant parents’ fears?
Delivery Options

Years ago, most babies were born at home, often with the aid of a midwife. Mothers did not have the option of going to a hospital or the availability of today’s lifesaving technology. Today, there are many options for where a baby will be born and the type of health care professional who will attend the birth.

Health Care Professionals

A health care professional attends most births, regardless of where the birth occurs. There are several types of professionals that can assist with the labor and delivery. The following health care professionals are qualified to deliver babies:

- **Obstetricians** Because these doctors specialize in the care of mothers and babies both before and right after birth, they are qualified to handle any emergencies or problems that might occur.
- **Family Doctors** Some family doctors provide prenatal care and deliver babies. If problems arise, however, they may call in an obstetrician.
- **Licensed Midwives** A midwife is a health care professional trained to assist women in childbirth. There are two types of midwives: certified nurse-midwives (CNMs) and certified midwives. CNMs are registered nurses. Both types of midwives have advanced training in normal pregnancy and birth. All midwives must pass a certification exam before they can practice. Midwives will usually call in an obstetrician if a complication, or problem, occurs.

The health care professional chosen will generally be involved in the care of the mother and baby throughout the pregnancy. This helps the doctor or midwife be better prepared for possible complications. It is important that the parents feel comfortable with their health care professional.

Many mothers also choose to have a doula present during their labor and delivery. A doula is a woman experienced in childbirth who provides advice and support to a mother during labor and delivery, and after childbirth.

Doulas often have suggestions for how to cope with labor pains. They can help keep the mother calm and focused during the delivery. Most hospitals will allow both the father and a doula in the delivery room to support the mother.

Places to Give Birth

Not all babies are born in a hospital. Parents have a choice of where the birth will occur. Expectant parents should explore the hospitals or birth centers in their area before deciding where to deliver their baby.

Their options may be limited by their health insurance or by which hospital their doctor uses. Many hospitals offer tours and will gladly discuss concerns and special needs. Parents should discuss their options with their doctor before making a final decision.
Home
It is only in the last 100 years that most babies have been born in hospitals. Some women still choose a home birth. If a couple is considering a home birth, they should consult their doctor. Together, a decision can be made that will take into account all risk factors.

Unfortunately, it is not possible to know what problems might arise. For example, the umbilical cord might become compressed, or flattened. This can threaten the baby’s oxygen supply and force the need for a special or early delivery. No one can predict these types of problems. Parents should have a plan for dealing with the unexpected.

Many couples who choose home births have a midwife present to assist with the delivery. A couple should interview many midwives and find one that they are comfortable with prior to the birth. Remember, a midwife can assist with labor and delivery, but does not have the training of a doctor should problems arise. A doula, or a non-medical assistant, may also be used at a home birth, but does not have the training of a midwife.

Hospital
Depending on health insurance and other issues, new mothers and their babies may spend two to three days in a hospital after a routine delivery, or up to a week in the hospital if there are complications. The government requires insurance companies to cover at least two days in the hospital after delivery for women who have routine, vaginal births.

Hospitals have a full staff of medical professionals to help parents through labor and delivery. They also have staff to assist with the care of both mother and child after the delivery. In addition to doctors and nurses, many hospitals have staff to teach parents how to care for their new baby, including how to change a diaper and feed the child.

The trained personnel, sanitary conditions, and presence of high-tech medical equipment make many parents more comfortable with a hospital birth. Should a complication arise during or after delivery, a hospital has the staff and resources necessary to respond right away. Hospitals also may offer several types of services to meet the needs of expectant parents.

"Pregnancy and the birth of a child are ranked as one of the most memorable experiences for women, so being well informed of all your options can help ensure a gratifying experience for you and your family."
— American Pregnancy Association
Parents should ask if the hospital offers any of the following:
• Classes that prepare parents for delivery and infant care.
• Programs for siblings and fathers.
• Private rooms that provide soft lighting, music, and comfortable furniture. Mothers and their families can stay in these rooms for labor, delivery, and recovery, unless a complication occurs. Additional medical equipment is kept out of sight but is ready for immediate use.
• The option for mother and baby to room together during their time in the hospital.

Alternative Birth Center
Some couples choose an alternative birth center for their delivery. These centers may or may not be part of a hospital. An alternative birth center is a facility that provides a more homelike environment for labor and delivery. Food and drink is generally offered during labor. Most hospitals allow the mother to eat only ice chips after admittance, as anything else might interfere with anesthesia. Birth centers emphasize prepared, natural childbirth and so do not offer pain medication during labor.

Alternative birth centers also might offer beds large enough for both the mother and father to rest. Music and friends are generally allowed. Many birth centers have birthing tubs for women who choose a water birth. A water birth means the mother is in water during the birth. This would be discussed and agreed upon prior to the birth, as part of the birth plan.

Midwives generally handle births in these centers. Most accept only mothers with a low risk of complications. A nearby hospital or obstetrician is on call to handle any problems that may develop. These centers typically charge less than hospitals do. Time spent at the facility is usually shorter. Parents and their baby typically leave the center within 24 hours if there are no complications.

Section 5.3

After You Read

Review Key Concepts
1. Explain what is meant by the term prepared childbirth.
2. Describe three types of health care professionals who can assist with the birth of babies.

Practice Academic Skills

English Language Skills
3. Locate a novel that contains a description of childbirth. If necessary, ask your teacher, parent, or another appropriate adult for ideas. Read the portion of the novel describing childbirth and write a summary. Was it presented as a pleasant or unpleasant experience?

Social Studies
4. There are a number of different types of childbirth classes available. Two popular ones are the Lamaze method and the Bradley method. Research these two methods and write a report briefly describing each one. In your report, discuss whether you think the methods might appeal to different kinds of parents and why.

Check Your Answers Check your answers at this book’s Online Learning Center at glencoe.com.
Toy designers create everything from simple rattles to complex, computer-controlled educational games. They begin with a basic concept. They then go through rigid development guidelines to come up with a final product.

What Does a Toy Designer Do?
Designing toys is challenging work. Toys must be attractive, interesting enough to capture a child's attention, safe, and easy to keep clean. New toys must look original, must function properly, and are often expected to be educational. The toy designer might get ideas from watching children play with existing toys. They might design a new toy based on a make-believe toy that a child thought up.

Where Do Toy Designers Work?
Most toy designers work for toy manufacturers. There is a lot of competition for jobs, so successful candidates must have skills that make them stand out from the crowd. Some designers start their own companies to create the toys they want to sell.

Preparation and Skills

Education and Training
Recommended courses of study include child psychology, graphic design, children's literature, and fine arts. Most toy designers apply for internships with toy companies.

Aptitudes, Abilities, and Skills
Toy designers need the ability to take an idea and turn it into a product. It is also helpful to know how to use computer design programs or how video games work. Knowledge of children's likes and dislikes, and a sense of fun are also needed to be successful as a toy designer.

Academic Skills
Design and basic engineering skills are used to determine how a new toy will work and how it will be built. Knowledge of child development allows a designer to create toys that children will want to use.

Explore Careers

Some toy designers work independently to develop ideas that they then submit to toy manufacturers. These people are called entrepreneurs. Use the Internet to learn more about being an independent toy designer. Write a report presenting what you learn.

Careers Online For more information on careers, visit the Occupational Outlook Handbook Web site through the link on this book’s Online Learning Center at glencoe.com.
Chapter Summary

A woman should see a doctor when she thinks she is pregnant. She should receive regular prenatal care during her pregnancy. Eating a well-balanced diet with foods from each of the five food groups is essential to the health of the developing baby and the mother. Moderate exercise and stress management also are important. Parents-to-be should prepare for the birth of the child. They should create a budget and decide how they will balance their lives after the baby is born. Prepared childbirth helps expectant parents get ready for labor and delivery. They must choose a health care professional to attend the birth and decide where the birth will occur.

Vocabulary Review

1. Use these content and academic vocabulary terms to create a crossword puzzle on graph paper. Use the definitions as clues.

Content Vocabulary
- obstetrician (p. 129)
- anemia (p. 130)
- Rh factor (p. 131)
- gestational diabetes (p. 131)
- preeclampsia (p. 132)
- osteoporosis (p. 139)
- lactose intolerance (p. 142)
- lactase (p. 142)
- formula (p. 149)
- pediatrician (p. 149)
- fixed expense (p. 150)
- flexible expense (p. 150)
- maternity leave (p. 151)
- paternity leave (p. 151)
- prepared childbirth (p. 154)
- labor (p. 154)
- delivery (p. 154)

Academic Vocabulary
- robust (p. 132)
- alleviate (p. 133)
- slat (p. 147)
- reimbursement (p. 151)
- complication (p. 155)
- compressed (p. 156)

Review Key Concepts

2. **Identify** the early signs of pregnancy.
3. **Explain** the importance of proper nutrition during pregnancy.
4. **List** six categories of basic baby supplies.
5. **Describe** why parents need to develop a budget.
6. **Identify** ways expectant parents can prepare for the birth of a child.
7. **Compare and contrast** the options for the delivery of a baby.

Critical Thinking

8. **Drawing Conclusions** Why do you think some women might suffer more from emotional stress during pregnancy than at other times in their lives?
9. **Apply** If you knew a pregnant couple who had a very limited budget, what suggestions might you offer for preparing for the baby?
10. **Infer** Why might someone choose a midwife instead of a doctor to deliver her baby?
11. Interview a Mom  Talk to your mother or another relative or friend about her childbirth experience. Ask the following questions: Where did you give birth? What health care professionals assisted you? Who else was with you during your labor and delivery? Create a chart to compare and contrast the information from your interview with the information you learned in the text.

12. Midwife Requirements  Requirements for becoming a licensed midwife vary from state to state. For example, some states require midwives to be registered nurses, and others do not. Use print or online resources, or contact the state medical board, to research your state’s requirements. Create an oral report to share what you learn with your class.

13. Shopping for Baby Supplies  Many factors go into making purchases for a new baby. Go to a store that sells baby equipment. Choose one item, such as a crib, stroller, or car seat. Watch at least four different people shopping for the chosen item.

Procedure  As you watch the shoppers, keep track of their main concerns. For example, do they seem more concerned with the product’s features or its appearance?

Analysis  Create a chart in which you summarize the features of the product that seemed most important to each shopper. List the factors they took into consideration when making purchasing decisions.

NCTE 7  Conduct research and gather, evaluate, and synthesize data to communicate discoveries.

Real-World Skills

Interpersonal and Collaborative Skills

14. Write a Radio Announcement  Follow your teacher’s instructions to form into groups. Work with your group to create the script for a one-minute public service announcement for the radio. The script should emphasize the importance of car safety seats and discuss the kinds of seats appropriate for different aged children.

Technology Skills

15. Create a Spreadsheet  Use a spreadsheet software program to track the monthly budget for a family expecting a baby. Divide the budget into fixed expenses and flexible expenses. The spreadsheet should calculate a fixed expense total, a flexible expense total, and a total of all expenses.

Financial Literacy

16. Thrifty Shopping  Choose three items new babies need, such as strollers, cribs, and sleepers. Use the Internet to find average prices for each item. Then check classified ads and secondhand stores to determine their secondhand cost. Create a table showing the difference in prices.

Additional Activities  For additional activities, go to this book’s Online Learning Center at glencoe.com.
Academic Skills

**English Language Arts**

17. **Letter to Your Child**  Imagine you are the father or mother of a new baby. Write a letter to your child to read when he or she is older describing what you did to keep the baby safe and healthy during pregnancy. For example, if you were a new mother, how did you adjust your eating habits? Why did you do this? If you were a new father, how did you support the mother? Did you talk to the baby in the womb?

**Science**

19. **Rate Anesthesia Use**  Whether or not to have pain-relieving medication during a birth is an important decision each pregnant woman must make. Many women have local anesthesia. Others choose to have a natural childbirth, without pain-relieving medication.

**Procedure**  Speak to several mothers. Ask them if they used local anesthesia. Try to find some women who did use anesthesia and some who did not. Ask each woman to rate her discomfort on a scale of 1 to 10, with 1 being completely comfortable and at ease and 10 being in unbearable pain.

**Analysis**  Find the average rating for each group. Write a summary discussing which group appeared to have the least discomfort during childbirth.

**Mathematics**

18. **Day Care Costs**  Many new parents must include the cost of day care in their monthly budgets. According to the National Association of Child Care Resources, day care costs for young babies range from $366 per month to $1,221 per month. What is the average cost per month for day care?

**Math Concept** **Measures of Central Tendency**  An average is the sum of the data divided by the number of pieces of data.

**Starting Hint**  Add the minimum ($366) and maximum ($1,221) costs for monthly day care. Divide the result by two.

**NCTE 4**  Use written language to communicate effectively.

**NCTM Data Analysis and Probability**  Select and use appropriate statistical methods to analyze data.

**NSES A**  Develop abilities necessary to do scientific inquiry, understandings about scientific inquiry.

**Standardized Test Practice**

**TRUE/FALSE QUESTIONS**

Carefully read the statement and determine if it is true or false.

20. While following established nutritional guidelines is important for the health of a developing fetus, it matters little to the health of the mother.

a. True  
b. False

**Test-Taking Tip**  If you have time at the end of a true/false test, check your answers. Did you read the statement carefully? Was there any part of the statement that was false? If so, the entire statement is false.