

# Puberty, day 1

Grades 4-6, Lesson #9

## Time Needed

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50-60 minutes

## Student Learning Objectives

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To be able to ...

1. describe the physical, emotional and social changes of puberty.
2. explain that puberty is triggered by the endocrine system, specifically the pituitary gland.
3. distinguish among definitions of erection, menstruation, nocturnal emission, ovum, puberty, and sperm.
4. explain the purposes of bras, athletic supporters and menstrual hygiene products.

## Agenda

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1. Explain reasons for this lesson.
2. Use film to define "puberty" and introduce major concepts and terms OR
3. Use brainstorm to review Activity #2 and to compare and contrast male and female development.
4. Use "visual aids" to discuss athletic supporters, bras, and menstrual supplies.
5. Use *Puberty Worksheet #1* to review terms.

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### **Materials Needed**

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#### **Classroom Materials:**

- OPTIONAL: video or DVD (see Activity #2, next page)
- OPTIONAL: small bra, small athletic supporter, tampon with applicator, tampon without applicator, mini-pad, maxi-pad

#### **Student Materials: (for each student)**

- One copy per student of *Puberty Worksheet #1*

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**Activity**

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**1. Explain reasons for this lesson.**

Explain that everyone here either has begun or will soon begin to develop from a child into an adult. This lesson will help them understand the changes that involves.

**2. To explain terms and concepts, you may want to kick off this lesson with an audio-visual tool.**

That said, we have not found a puberty film produced in the last decade that we can recommend ... one that is inclusive and respectful (neither condescending nor reinforcing of gender stereotypes). If you find one, please contact us so that we (at Public Health – Seattle & King County) might preview it to recommend to other **FLASH** curriculum users:

[beth.reis@kingcounty.gov](mailto:beth.reis@kingcounty.gov). And always make sure you have district approval and that you have previewed materials personally before using them in the classroom.

**3. Or you may want, instead, especially if they had a session on puberty last year, to launch right in to more active student participation.**

Ask for a volunteer or two to **define puberty**. Thank them and build on what they said, so you end up defining it as **a time when a person's body, feelings and relationships change from a child's into an adult's**.

Ask the class when that happens. **Be clear that knowing an average age is kind of useless, since most of us aren't "average." A range is more useful.** It is normal to start noticing changes, for a girl, any time between about age 8 or 9 and age 13.<sup>1,2,3</sup> Guys, on average, start noticing changes a little later, between about ages 9 or 10 and 14.<sup>4,5</sup> And puberty isn't an overnight process; it can take several years to complete. Longer in boys, on average, than girls. If someone gets to be 16 and still hasn't noticed any changes in their body, they might want to chat with a doctor. Remind people that puberty involves changes in not only your body but also your feelings and relationships. So your friend's body might start maturing first, but you may be maturing emotionally and socially sooner than your friend. And it isn't a race, anyway. The **pituitary gland**, in a person's brain, will trigger the changes of puberty whenever it is programmed to do so. Younger for one person; older for another.

Have the class **brainstorm puberty changes** as you write them on the blackboard. Then help them distinguish changes that happen **(a) to boys only, (b) to girls only, and (c) to both**. And finally discuss and answer questions about each item. Changes to be sure to include:

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<sup>1</sup> The American Association of Pediatrics. (2006). *Puberty Information for Boys and Girls - Public Education Brochure*. Retrieved June 15, 2009 from Teen Q & A Web site: <http://www.aap.org/family/puberty.htm>

<sup>2</sup> Steingraber, S. (2007). *The Falling Age of Puberty in U.S. Girls: What We Know, What We Need to Know*. Retrieved August 14, 2009 from Breast Cancer Fund Web site: [http://www.breastcancerfund.org/site/c.kwKXldPaE/b.3266509/k.27C1/Falling\\_Age\\_of\\_Puberty\\_Main\\_Page.htm](http://www.breastcancerfund.org/site/c.kwKXldPaE/b.3266509/k.27C1/Falling_Age_of_Puberty_Main_Page.htm)

<sup>3</sup> Family Practice Notebook. (before May 10, 2008). *Female Tanner Stage*. Retrieved August 14, 2009 from <http://www.fpnotebook.com/Endo/Exam/FmlTnrStg.htm>

<sup>4</sup> The American Association of Pediatrics. *Puberty Information for Boys and Girls - Public Education Brochure*.

<sup>5</sup> Family Practice Notebook. (before May 10, 2008). *Male Tanner Stage*. Retrieved August 14, 2009 from <http://www.fpnotebook.com/Endo/Exam/MlTnrStg.htm>

- **height growth spurts (both)** – Explain that you grow most in your sleep.
- **shoulders broaden (boys)** – Explain that this is a skeletal change, not something he can speed up through strength-training, although strength-training is certainly OK.
- **hips widen (girls)** – Explain that the idea is for her pelvic bones to form sort of a bowl, in order to support a pregnancy if she ever decides to have a biological child.
- **breasts develop (girls and, to some extent, many boys)** – Explain that many boys do experience some breast development and that it usually disappears within six months or a year. It can be scary if he doesn't realize how common it is. If it doesn't disappear in a year's time, he might chat with his doctor about it. Girls can, of course, also expect that their breasts will develop, too. No matter what size or shape or color they end up (and there's quite a variety) and even if they are different from one another, they will almost always be sensitive to sexual touch and able to nourish a baby.
- **acne may begin (both)** – Explain that acne is caused by a combination of thicker skin than when you were younger and more oils, along with bacteria. Sometimes the new, thicker layer of skin blocks the pores or openings where the oils are supposed to flow, causing a pimple. If it gets infected it can become a blackhead. People should wash gently with mild soap a couple of times a day and after heavy exercise, but it will not prevent acne altogether. Scrubbing hard can actually make acne worse. And thinking that washing will *cure* acne, makes it sound like people who have it are dirty. That's neither true nor fair.
- **stress-related, malodorous perspiration begins (both)** – Explain that everyone sweats when they are hot, but that at puberty another group of sweat glands starts to produce sweat *also* when you feel stressed or upset. This kind of sweat in teens and adults can have a strong odor. Different cultures feel differently about it. Many people in the U.S. find it unpleasant. So people often bathe or shower more often after puberty. And many use deodorant or antiperspirant, too.
- **pubic and underarm hair develops (both)** – Explain that pubic hair grows around a person's genitals (around the labia or penis) and that pubic and underarm hair is often coarser and sometimes a different color than the hair on the person's head. You can explain, too, that, like the use of deodorant, shaving one's underarm hair is a culture-based, personal decision.
- **facial hair develops and body hair may thicken (boys and, to some extent, many girls)** – You can explain that the *amount* of hair a person gets on their face and body is genetic (inherited from a person's biological family). Explain that it isn't unusual for girls to notice new hair on the face or around the nipples and a girl might feel self-conscious if she didn't know it was common.
- **voice deepens (both, though more in boys)** – Explain that the depth of the voice is a matter of air passing the vocal chords. The vocal chords are like the strings of a stringed instrument. If anyone in the class plays a stringed instrument, ask them which strings make the lower notes. They say it is the thicker ones. Well, your vocal chords thicken during puberty, no matter what sex you are. On average a boy's will get thicker than a girl's as he matures, but that's just an average. The reason a guy may notice his voice cracking sometimes, is that the vocal chords don't always get thick evenly. There may be a time when one end of the vocal chord is thicker than another and as air pushes past, the pitch of his voice may change in mid-sentence.



- **genitals enlarge (both)** – This is more obvious for a boy, since he looks at his penis and scrotum every time he uses the bathroom. A girl is less likely to notice, but her vulva (labia and clitoris) get bigger at puberty, too.
- **erections happen more frequently (more noticeable in boys)** – Explain that an erection is what you call it when the penis or the clitoris fills up with blood and gets harder and bigger. Everyone gets erections, even babies. In fact, ultrasounds show us that male fetuses in their mothers' uteruses are already getting erections. Presumably female fetuses do, too, but their clitorises would be too tiny to be visible in an ultrasound. Erection is perfectly healthy and it happens sometimes when you are thinking of something sexual or of someone you like, but it also can happen, especially at puberty, for no apparent reason. A guy may find it embarrassing when he has one in public, but he can just carry something in front of him if it does. And it may help to know that it happens at some point to almost all guys.
- **sperm production and ejaculation begin (boys)** – Explain that sperm are the microscopic cells from a man's body that can start a pregnancy, when they combine with a woman's egg cell. And ejaculation is what you call it when the sperm come out of his penis (in a fluid called "semen"). A man may ejaculate during sleep, masturbation, or sexual touch with a partner. Once he's able to ejaculate, he's able to help start a pregnancy. That's not to say he's ready to be a good dad yet, but it is biologically possible to make a baby.
- **nocturnal emissions begin (many boys)** – The slang term for nocturnal emission is "wet dream" (but it isn't offensive slang). Some boys – not all – will ejaculate during their sleep. They may or may not have been dreaming at all. The wet dream can be their body's response to the higher level of hormones in their bloodstream during a growth spurt. But guys should know that not everyone has nocturnal emissions and there's nothing to worry about whether they do or don't. Some guys find them very personal and will prefer to wash their own bedding when they have a wet dream.
- **ovulation and menstruation begin (girls)** – – The slang term for ovulating is "releasing an egg;" the slang term for menstruating is "having a period" (neither of these are offensive slang). Explain that about once a month, starting at puberty, one or the other of a girl's ovaries will allow an egg or, in Latin, an "ovum" to mature and pop out. That's called ovulating. It usually travels into the nearest fallopian tube. If she has had sexual intercourse and there is sperm in that fallopian tube, it may fertilize the egg. The fertilized egg will travel the rest of the way down the tube and, in a week or so, it will nest, or "implant," in the uterus to begin growing into a baby. In the meantime, the uterus has developed a thick, blood-rich lining to be a good nest in case she did get pregnant. If that egg doesn't get fertilized, though, it will live for only about 24 hours and then dissolve and be reabsorbed by her body. The uterus will wait a couple of weeks, in case the egg did get fertilized, with support from her body's hormones. Then, after a couple of weeks, if no egg has implanted, the hormone level will drop and her uterus will, basically, give up on her being pregnant that month. The lining will come out in the form of blood and little pieces of tissue, through her vagina ... so that she can build up a fresh new lining the next month in case she gets pregnant. The shedding of the lining is called menstruating. A woman doesn't have muscles to control when her period comes out, the way you can control when urine comes out. It will just dribble out for 2 to 10 days. That's why she'd need a pad or a tampon to soak it up. If she doesn't have one handy when she happens to get her first period, a bunch of toilet paper will do briefly, until she can

get one. But many girls start carrying supplies in their backpacks or purses as they reach the age of 9 or 10, just in case.

- **crushes and attractions may begin (both)** – Explain that, although kindergartners can get crushes, too, they may feel more intense at puberty. It is the feeling of really wanting someone to like you. Of having your tummy feel funny when they walk in the room or when you hear their voice. Everybody will feel this eventually, but some people notice it at this age and others may not notice those kinds of feelings until middle school, high school or even later. A person may have crushes on people of their own sex, the other sex or both. It may or may not predict how they will feel when they're grown. That is, really liking someone of a different sex doesn't necessarily mean you will eventually figure out that you are heterosexual (straight). And, likewise, really liking someone of your own sex doesn't necessarily mean you will eventually figure out that you are gay or lesbian. It often takes time to figure out. There's no rush.
- **self-consciousness may increase (both)** – Explain that everybody goes through a time of worrying what other people think of them. Students with older brothers and sisters may have noticed that they may be spending longer in front of the mirror getting ready for school and that they may be getting really picky about their clothes. It's OK. Adults worry about what other people think, too. But it gets less painful as you mature. It may help to realize that other people may be so worried about how *they* look and what you think that they aren't noticing how you look as much as you think they are.
- **concern for others may grow (both)** – As you start focusing more on other people's feelings and needs, you may, in fact notice that you are less self-conscious.
- **sudden mood changes may begin (both)** – Explain that feeling happy one minute and in tears the next, sometimes for no apparent reason, isn't at all unusual at puberty. The hormones in your blood stream influence how you feel.
- **When might you want to see a doctor or counselor about it?** MedLine Plus says, "Being a teenager [and we'd add, "or a preteen"] is hard. You're under stress to be liked, do well in school, get along with your family and make big decisions. You can't avoid most of these pressures, and worrying about them is normal. But feeling very sad, hopeless or worthless could be warning signs of a mental health problem.

"Mental health problems are real, painful and sometimes severe. You might need help if you have the signs mentioned above, or if you

- Often feel very angry or very worried
- Feel grief for a long time after a loss or death
- Think your mind is controlled or out of control
- Use alcohol or drugs
- Exercise, diet and/or binge-eat obsessively
- Hurt other people or destroy property
- Do reckless things that could harm you or others

"Mental health problems can be treated. To find help, talk to your parents, school counselor or health care provider."<sup>6</sup>

<sup>6</sup> MedLine, a service of the U.S. National Library of Medicine, and the National Institutes of Health, (2009). *Teen Mental Health*, retrieved August 14, 2009 from Teen Mental Health Web site: <http://www.nlm.nih.gov/medlineplus/teenmentalhealth.html>

- **friction with parents or guardians may grow (both)** – Explain that a preteen or teen and a parent or guardian probably both want the same thing in the long run ... for the teen to grow up and become more independent. But sometimes you feel like a little kid and want to get taken care of and other times you prefer to think for yourself. The adults in your life go through similar changes as you're going through puberty, sometimes wanting to make decisions for you because they're afraid you'll get hurt and other times ready to let you try your wings. If you aren't on the same page at the same time, there can be – and often are – some times of struggle. That doesn't mean you don't love each other. Most families get through it eventually.
- **freedom to make decisions grows (both)** – People's parents and guardians often trust them with more of their own choices, especially as they take on more responsibilities.
- **understanding of self may grow (both)** – Explain that means beginning to gain more of a sense of who you are and that, as this happens, a person gets more self-confident.

**4. Use visual aids to introduce “products” for newly adolescent bodies.**

Show and discuss an athletic supporter, a bra and several kinds of menstrual hygiene products (a tampon with applicator, a tampon without, a maxi-pad, a mini-pad). Discuss:

A) What is each one for?

B) How does a person decide when to use these?

Be sure to mention that:

- “deodorant tampons/pads” are unnecessary, and can be irritating. A daily bath or shower is sufficient for cleanliness.
- which menstrual hygiene products are “best” is a personal decision and sometimes a girl's family and culture may have strong opinions about it, but that medically, they are all OK

**5. Hand out “Puberty Worksheet #1” and use it as a discussion tool.**

Answers:

1. b having a period = menstruation
2. a the penis or clitoris filling with blood and getting larger = erection
3. f the cell from a man that can start a pregnancy = sperm
4. c sperm coming out of the penis during sleep = nocturnal emission
5. d the “egg” cell from a woman that can start a pregnancy = ovum (plural = ova)
6. e a child's body beginning to change into an adult's body = puberty
7. g the gland in the brain that triggers the beginning of puberty = pituitary

# Puberty Worksheet 1

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NAME \_\_\_\_\_ DATE \_\_\_\_\_

DIRECTIONS: Put the letter of each word next to the correct definition of the word.

- |                       |  |
|-----------------------|--|
| a) erection           | _____ 1. having a period   |
| b) menstruation       | _____ 2. the penis or clitoris filling with blood and getting larger   |
| c) nocturnal emission | _____ 3. the cell from a man that can start a pregnancy                |
| d) ovum               | _____ 4. sperm coming out of the penis during sleep                    |
| e) puberty            | _____ 5. the "egg" cell from a woman that can start a pregnancy        |
| f) sperm              | _____ 6. a child's body beginning to change into an adult's body       |
| g) pituitary          | _____ 7. the gland in the brain that triggers the beginning of puberty |



# Puberty, day 2

Grades 4-6, Lesson #10

## Time Needed

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40-50 minutes

## Student Learning Objectives

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To be able to ...

1. Distinguish puberty facts from myths.
2. Anticipate puberty with positive feelings, recognizing that the timing of change is individual.

## Agenda

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1. Review purpose of lesson.
2. Respond to "Anonymous Question Box" questions re: puberty.
3. Use *Puberty Worksheet #2* to reinforce facts and debunk fears/myths re: puberty.
4. Summarize by discussing peer pressure in the puberty years.

## Materials Needed

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### Student Materials: (for each student)

- *Puberty Worksheet #2*
- OPTIONAL for family homework, pamphlets: *The Talk-To-Me Books* are sets of 2 pamphlets for each family with which grown-ups and students interview one another. Available from Planned Parenthood of the Great Northwest Washington: [education@ppgnw.org](mailto:education@ppgnw.org) or call 206-328-7715

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**Activity**

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1. **Explain again the reasons you are doing these lessons on puberty.**
  - o Sometimes people are afraid of things they don't understand.
  - o Sometimes people feel as if they are the ONLY one to ever experience certain changes; they may "dump on" themselves because they think they aren't normal.
  - o Those feelings are UNNECESSARY; people can look forward to puberty with excitement and pleasure, IF they know what to expect!
2. **Respond to "Anonymous Question Box" questions re: puberty (see lesson 1 for setting up an anonymous question box or boxes).**
3. **Use *Puberty Worksheet #2* to reinforce facts and debunk fears/myths re: puberty.**
  - a. Divide the class into 3 teams.
  - b. Hand out *Puberty Worksheet #2* and give the teams 20 minutes to reach consensus (within each team) on each item. Encourage people to discuss the items they disagree on, to explain to one another why they believe as they do about an item.
  - c. Have one spokesperson for each team write their team's responses on the blackboard and explain, one at a time, why they chose a particular answer. You can award 1 point for each correct answer and an extra ½ point to the team with the best explanation. The team with the most points "wins" although we would encourage you to award prizes, if you do that, to anyone who participated actively.
4. **Summarize by discussing peer pressure in the puberty years.**

Discuss how it felt to disagree with teammates, whether there was overt peer pressure to agree (for consensus) or whether each person was considerably listened to. Summarize the lesson by explaining that, at puberty, it is probably more difficult than at any age before or after to disagree with the crowd BECAUSE one is beginning to separate from one's family and to gradually identify more with friends. That is normal...and one has to find ways to trust one's own judgment AT THE SAME TIME as one enjoys one's friends.

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**Related Activities For Integrated Learning**

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**A. Language Arts**

Add to glossary, the terms "endocrine system," "erection," "hormone," "menstrual period," "nocturnal emission," "ovum," "penis," "pituitary gland," "sperm," "uterus," and "vagina".

**B. Social Studies**

Students may do reports on puberty rites of various cultures.

**C. Math**

Have students find the average age among *these* girls and the average age among *these* boys of starting puberty ... of noticing the very first changes ... like, in girls, breast budding and, in boys, first pubic hair: (Do not use names of children in your class.)

Ann: 8yrs, 11 mo. (age 8.9)  
Bob: 9 yrs, 11 mo. (age 9.9)  
Cathy: 10 yrs, 6 mo. (age 10.5)  
Diana: 11 yrs, 4 mo. (age 11.3)  
Ed: 11 yrs, 5 mo. (age 11.4)  
Gary: 12 yrs, 8 mo. (age 12.7)  
Faye: 12 yrs, 11 mo. (age 12.9)  
Henry: 14 yrs, 10 mo. (age 14.0)

(answer: these girls' range 8.9-12.9; mean = 10.9, these boys' range 9.9-14.0; mean= 12.0)<sup>12</sup>

**NOTE:** Depending upon your students' math skill level you can have them convert months to decimal fractions of a year, or you can provide the decimals.

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**Homework**

Students' options:

- Discuss with an adult in the family *Puberty Worksheets 1 and 2*<sup>3</sup>
- With an adult in the family, use *The "Talk-To-Me" books*, sets of 2 pamphlets with which parents and students interview one another. They allow children and the adults who love them an opportunity to practice communicating. They help people articulate their own and their family's, generation's and culture's beliefs and feelings about growing up, family life and sexual health.
- Write a letter to a 6 or 7-year-old, real or imaginary, about growing up.

<sup>1</sup> Family Practice Notebook, (before May 10, 2008). *Female Tanner Stage*. Retrieved August 14, 2009 from <http://www.fpnotebook.com/Endo/Exam/FmlTnrStg.htm>

<sup>2</sup> Family Practice Notebook, (before May 10, 2008). *Male Tanner Stage*. Retrieved August 14, 2009 from <http://www.fpnotebook.com/Endo/Exam/MlTnrStg.htm>

<sup>3</sup> see "Preparing Parents" pages 6-7





## Puberty Worksheet 2

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NAME \_\_\_\_\_ DATE \_\_\_\_\_

DIRECTIONS: Write "T" for "true" next to each statement you believe is correct.  
Write "F" for "false" next to the wrong statements.

- \_\_\_\_\_ 1. Girls may start puberty any time between the ages of 8 and 13.
- \_\_\_\_\_ 2. Usually, boys start puberty a little younger than girls.
- \_\_\_\_\_ 3. The pituitary gland, in the brain, tells the body when to begin puberty.
- \_\_\_\_\_ 4. Boys only get erections when they think about something sexual.
- \_\_\_\_\_ 5. A person's feelings may change from moment to moment, especially during puberty.
- \_\_\_\_\_ 6. If your parents started puberty early, you might too.
- \_\_\_\_\_ 7. You can tell whether a girl is menstruating by looking at her.
- \_\_\_\_\_ 8. Boys often have some breast growth during puberty.
- \_\_\_\_\_ 9. It is common for boys to have nocturnal emissions at puberty, but it is also healthy not to.
- \_\_\_\_\_ 10. The main reason teenagers get acne is they eat the wrong foods.
- \_\_\_\_\_ 11. Girls should not use tampons until they are grown.
- \_\_\_\_\_ 12. The vagina is always wet, just like the mouth and eyes.
- \_\_\_\_\_ 13. There is something wrong with a boy if he ejaculates in his sleep.
- \_\_\_\_\_ 14. If a boy has not started puberty by age 13, he should see a doctor, because there might be something wrong with his endocrine system.
- \_\_\_\_\_ 15. It is OK for a girl to shower or play sports during her menstrual period.
- \_\_\_\_\_ 16. A boy should start wearing an athletic supporter ("jock strap") during puberty when he plays sports, to protect and support his genitals.
- \_\_\_\_\_ 17. A girl may start wearing a bra for support when her breasts start to develop, especially if she is uncomfortable being active and playing sports.
- \_\_\_\_\_ 18. It is necessary to wash more often once you begin puberty.

## Puberty Worksheet 2 - Answer Key

NAME \_\_\_\_\_ DATE \_\_\_\_\_

DIRECTIONS: Write "T" for "true" next to each statement you believe is correct.  
Write "F" for "false" next to the wrong statements.

- T 1. Girls may start puberty any time between the ages of 8 and 13.
- F 2. Usually, boys start puberty a little younger than girls.
- T 3. The pituitary gland, in the brain, tells the body when to begin puberty.
- F 4. Boys only get erections when they think about something sexual.
- T 5. A person's feelings may change from moment to moment, especially during puberty.
- T 6. If your parents started puberty early, you might too.
- F 7. You can tell whether a girl is menstruating by looking at her.
- T 8. Boys often have some breast growth during puberty.
- T 9. It is common for boys to have nocturnal emissions at puberty, but it is also healthy not to.
- F 10. The main reason teenagers get acne is they eat the wrong foods.
- F 11. Girls should not use tampons until they are grown.
- T 12. The vagina is always wet, just like the mouth and eyes.
- F 13. There is something wrong with a boy if he ejaculates in his sleep.
- F 14. If a boy has not started puberty by age 13, he should see a doctor, because there might be something wrong with his endocrine system.
- T 15. It is OK for a girl to shower or play sports during her menstrual period.
- T 16. A boy should start wearing an athletic supporter ("jock strap") during puberty when he plays sports, to protect and support his genitals.
- T 17. A girl may start wearing a bra for support when her breasts start to develop, especially if she is uncomfortable being active and playing sports.
- T 18. It is necessary to wash more often once you begin puberty.

# Reproductive System

Grades 7 and 8, Lessons #6 and 7

## Time Needed

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Two periods

## Student Learning Objectives

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To be able to...

1. Pronounce, spell, and describe the function (with 75% accuracy) of the 45 terms in the glossary on Reproductive System Reference Sheet 3.
2. Explain that variation in size and shape of sexual parts is normal.

## Agenda

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1. Explain the relevance of the lesson to the unit and to students' lives.
2. Use Reproductive System Reference Sheets 1-3 or draw on the blackboard, to introduce the anatomy.
3. Answer students' verbal and anonymous questions.
4. Play the Reproductive System game.
5. Assign homework.



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## Materials Needed

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### Classroom Materials, equipment:

- *Reproductive System Reference Sheets 1 and 2* on transparencies\*
- 32 *Reproductive System Game Cards* (one class set ... that is: one single-sided copy of each of eight pages, cut into four parts, so there's one question on each "card.")
- Overhead projector
- Shoe box or coffee can
- 500 paperclips

### Student Materials (for each student):

- *Reproductive System Reference Sheets 1-3*
- *Family Homework Exercise: The Reproductive System*
- *Family Homework Letter* (Appendix B)
- *Reproductive System Worksheet* (2 copies per student)

\* Unless you prefer to draw freehand, introducing one part at a time

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**Activities, Day One**

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1. **Explain the relevance of the lesson to students' lives and to what you have studied so far:**

**Home & Family Life** - Just as we have studied how to take care of a home and a family in this course, we also want to work on "how to take care of yourself." The first step is to understand how your own body and other peoples' bodies work.

**Health** - Before you can learn about how to keep a body system healthy, you have to understand how it is supposed to work, when it *is* healthy. We have studied other systems; today we will look at the reproductive system.

**Science** - We have studied how individual cells reproduce, and we have looked at simple life forms. It is time to look at reproduction in mammals, and humans in particular.

2. **Hand out to each student a copy of Reproductive System Reference Sheets 1-3.**

Then introduce the reproductive system in one of two ways. You can use transparencies of Reproductive System Reference Sheets 1 and 2. Or, preferably, draw the systems on the blackboard, so that you can introduce one part at a time. Pronounce the name, and explain the function of each part. Describe the path of a sperm cell, using the terms "erection" and "ejaculation." Describe the menstrual cycle, beginning with "ovulation." If you do not consider yourself knowledgeable enough to do such a lecture/demonstration, it is fine to use a video instead (many puberty videos contain a section on reproductive anatomy).

3. **Answer students' questions, both verbal and anonymous.**

Depending on how long this takes, you may or may not finish the lesson today.

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**Activities, Day Two**

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4. **Play the Reproductive System Game.**

- a. Begin by refreshing everyone's memory about ground rules and emphasizing mutual consideration.
- b. Drop the *Reproductive System Game Cards* into a shoe box or coffee can.
- c. Have students pair up and provide each pair with plenty of scrap paper.
- d. One student draws a game card and hands it to you.
- e. You read the question aloud and give each team a half a minute to consult with one another, and/or look at their reference sheets, and jot their answer on a slip of scrap paper. Thus, all teams play at once holding their answers up, as soon as they can.
- f. Either you or the student who drew the question reads the answer and explanation aloud.
- g. Every team with a correct answer gets a paper clip.

- h. A second student draws a game card ... repeat steps d-g, until all 32 game cards have been used.
- i. Any team with at least 16 paper clips gets a prize (perhaps an extra "A," extra participation points, penny candy).

We recommend that students read the answer and explanation aloud, in groups who can do it with a minimum of giggling and a reasonably mature, matter-of-fact attitude. It gives them the opportunity to practice pronunciations and especially to rehearse a new behavior: communicating about sexuality in a responsible, dignified way. However, a participatory exercise can be counter-productive (can decrease comfort and respect) if the class is too rambunctious and/or has had less experience with active learning. Use your own judgment.

This game is a learning tool, not just a review. So some items in the game are new information. The teams should be encouraged to guess. Playing matters more than winning.

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## Homework

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Students' options ...

- **Family Homework Exercise: The Reproductive System**  
Students will need to take home two copies of *The Reproductive System Worksheet* to complete this Family Homework. And, as always, students will also need to take home the *Family Homework Letter* (Appendix B).
- Complete and turn in *The Reproductive System Worksheet*, independently.

NOTE: If you assign a **Family Homework Exercise**, it is essential to offer at least one alternative assignment. There will be some students who do not have a family member with whom they feel they can discuss these issues. Also, allow at least a week for **Family Homework Exercises**, as many families are very busy.

Q: True or False? The menstrual period lasts about a day each month.

A: False

Explanation: It usually takes between two and 10 days for the uterus to completely empty. There are about four to six tablespoons of blood and tissue in all.

Q: True or False? Each time a man or boy ejaculates, about 360 million sperm cells come out.

A: True

Explanation: He may release a half to a whole teaspoonful of semen. It usually contains at least 200 million sperm cells. 360 million is average.

#### REPRODUCTIVE SYSTEM GAME CARDS

Q: How long after its release can an egg be fertilized? About a day, about a week, or about month?

A: About a day.

Explanation: If it doesn't meet with a sperm within a day, or two at most, the ovum just dissolves.

Q: True or False? Another word for tube is "duct."

A: True

Explanation: That is why many books call the fallopian tubes "oviducts" and the vas deferens tubes "sperm ducts." Duct is spelled D-U-C-T, not D-U-C-K like the bird.



Q: The end of the uterus that opens into the vagina is the \_\_\_\_\_

A: Cervix

Explanation: The cervix is not a separate part; it's just the neck of the uterus. The doctor wipes some cells from the cervix when a woman has a Pap Test for cancer. These cells are examined under a microscope.

Q: The sac that holds the testes is called the \_\_\_\_\_

A: Scrotum

Explanation: The scrotum holds them and controls their temperature. Sperm can only grow at temperatures a little cooler than normal body temperature of 98.6 degrees ... so the testes have to be outside the body, in the scrotum, in order to be cool enough to make sperm.

#### REPRODUCTIVE SYSTEM GAME CARDS

Q: True or False? Once a girl starts having menstrual periods, she will get one every 28 days.

A: False

Explanation: 28 days is only an average. Adult women may have periods every 20 to 36 days. In some adults and most young girls, the cycle is a different length each time ... 3 weeks one time, 5 weeks another, maybe even skipping some months altogether. Then, around age 45 to 55, a woman stops having menstrual periods.

Q: True or False? Having intercourse a lot will make the penis larger?

A: False

Explanation: The penis is not made of muscle, so exercise has no effect on its size. Like the ears and the feet, the penis is a different size in each person. But no matter how big it is, it works just as well. And most penises are about the same size when they are erect.

Q: True or False? When a boy is circumcised, the doctor removes the glans of the penis.

A: False

Explanation: Neither the glans, nor the shaft is removed. It's the foreskin that is removed in a circumcision operation. The foreskin is a sleeve of skin that partly covers the glans.

Q: When a woman or girl releases an egg, it's called \_\_\_\_\_

A: Ovulating or Ovulation

Explanation: The Latin name for egg is "ovum." So when an ovum pops out of an ovary, it's called ovulation. That happens about once a month, a couple of weeks before a girl's period.

#### REPRODUCTIVE SYSTEM GAME CARDS

Q: True or False? A woman usually ovulates during her menstrual period.

A: False

Explanation: She usually ovulates two weeks before her next period. She ovulates and then, if she does not get pregnant, the extra lining in the uterus is not needed. So after two weeks, it comes out. That's called menstruating or "having a period."

Q: Name one of the parts of the body that makes some of the liquid in semen.

A: Seminal vesicles, prostate gland, Cowper's glands.

Explanation: Any of these answers is OK. Actually, the seminal vesicles and prostate contribute directly to the semen. The Cowper's glands make a discharge that lines the urethra and makes it less acid-like. All three parts are important in keeping sperm healthy.

Q: True or False? After puberty, the vagina is wet most of the time.

A: True

Explanation: Just like the mouth and eyes, the vagina is normally wet. That's how it cleans itself. This normal discharge is white or clear; it does not itch and it varies in amount. It's a sign of good health.

Q: The liquid that carries sperm is called \_\_\_\_\_

A: Semen

Explanation: Semen is the thick, white discharge that nourishes sperm and helps it travel further and live longer. A teaspoonful or less of semen comes out each time a man or boy ejaculates.

#### REPRODUCTIVE SYSTEM GAME CARDS

Q: When sperm comes out, it's called \_\_\_\_\_.

A: Ejaculation or Nocturnal Emission

Explanation: Either answer is correct. Ejaculation means the release of sperm. If a man or boy ejaculates in his sleep, it's called a nocturnal emission or "wet dream."

Q: When the penis or clitoris fills with blood and becomes larger, it's called an \_\_\_\_\_.

A: Erection

Explanation: Erections happen more frequently after puberty. People get them often, even without feeling sexual feelings. It is nothing to worry about, it is the body's way of practicing. A boy knows when he has an erection. A girl may not notice when she has one, because the clitoris is very small.

Q: The word that describes both testicles and ovaries is \_\_\_\_\_.

A: Gonads

Explanation: A male's testes and a female's ovaries are a lot alike. Both kinds of gonads make sex cells (sperm and eggs) and both kinds of gonads make sex hormones.

Q: True or False: All human beings have genitals, whether they are male or female.

A: True

Explanation: "Genitals" are simply the outside parts of anyone's reproductive system. Males' genitals are the penis and scrotum. Females' genitals (sometimes called the vulva) are the labia, the hymen, and the clitoris.

#### REPRODUCTIVE SYSTEM GAME CARDS

Q: The finger-like parts on the end of each fallopian tube are called \_\_\_\_\_.

A: Fimbria

Explanation: Remember, the tubes are not actually attached to the ovaries. When a girl or woman ovulates, the fimbria wave around, find the egg cell and draw it into the tube.

Q: True or False? Doctors usually recommend circumcision.

A: False

Explanation: Today, it is generally left up to the parents whether to have a baby boy circumcised. Doctors disagree about whether it is a good idea. Parents may choose to do it because of religious beliefs or so the son will look like the father or to try to reduce future infections. Many parents today choose not to have their sons circumcised, unless there is a problem.

Q: The tube that carries urine and (in males) semen out of the body is the \_\_\_\_\_.

A: Urethra

Explanation: The male's urethra is the tube that runs through the penis. The female's is the opening in front of the anus and vagina. It is connected to the bladder. In a male it is also connected to the vas deferens.

Q: True or False? The human sperm cell is about as big as an apple seed?

A: False

Explanation: It is actually microscopic ... so small you cannot see it without looking under a microscope. In fact, every sperm cell that made every person alive in the world today could fit in a thimble.

#### REPRODUCTIVE SYSTEM GAME CARDS

Q: True or False? An ovum is the size of a grain of sand.

A: True

Explanation: It is big enough to see without a microscope, but small enough that a 2-liter bottle could contain all the egg cells that made all the people alive in the world today.

Q: True or False? The sperm cells take about a week to develop, before they come out.

A: False

Explanation: They grow in the epididymis for two or three *months* before they can start a pregnancy. That means it is possible for a man to damage his sperm by using certain drugs -- maybe even including alcohol -- before the beginning of the pregnancy. He could possibly harm his future child, while the sperm are maturing.



Q: Is a pregnancy most likely to start *during* a woman's period, just *before* a period, or in *between* her periods?

A: In between her periods.

Explanation: Of course, a pregnancy could start anytime. Many women, and most young girls, do not release eggs on schedule. But the most likely time for fertilization to be possible is about two weeks before a menstrual period.

Q: True or False? A woman with big breasts will be more likely to be able to nurse a baby.

A: False

Explanation: Breast size does not make any difference in nursing. Besides, it does not make a woman more womanly, any more than penis size makes a man manly. Some people worry about breast or penis size, •but size is not what makes a person attractive, lovable, or able to become a parent... and breast size has nothing to do with the amount of milk produced.

### REPRODUCTIVE SYSTEM GAME CARDS

Q: True or False? A baby develops in a woman's or girl's stomach.

A: False

Explanation: A baby develops in the *uterus*. The stomach is part of the digestive system, not the reproductive system. Some people call a person's abdomen (their whole mid-section) their "stomach" but your stomach is actually a specific organ!

Q: The folds of skin that protect the opening to the vagina and urethra are called \_\_\_\_\_.

A: Labia, Labia Majora, or Labia Minora

Explanation: Any of these answers is OK. The outer folds are the labia majora and the inner, smaller folds are the labia minora.

Q: The extra membrane around the opening of some girls' vaginas is called the \_\_\_\_\_.

A: Hymen

Explanation: Some girls are born without this extra skin, or with very little of it. Others may gradually stretch it through sports, masturbation, or tampon use. Some will stretch it or tear it slightly the first time they have vaginal intercourse. Normally, it has an opening to let blood and discharge out.

Q: True or False? Girls are born with all the eggs they will ever have.

A: True

Explanation: A baby girl is born with hundreds of thousands of eggs already in her ovaries. Some of them will mature one day, and may get fertilized and become her babies. That is a good reason for a girl to stay healthy and avoid drugs, to protect those egg cells in case she ever wants children.

### REPRODUCTIVE SYSTEM GAME CARDS

Q: True or False? Men run out of sperm around age 50 or if they have too much sex.

A: False

Explanation: Most men keep making sperm their whole lives. However, women stop releasing eggs around age 50.

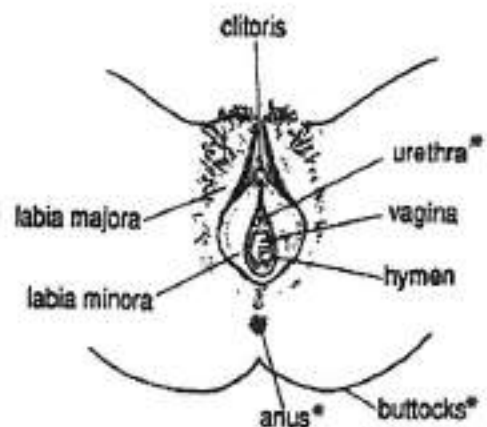
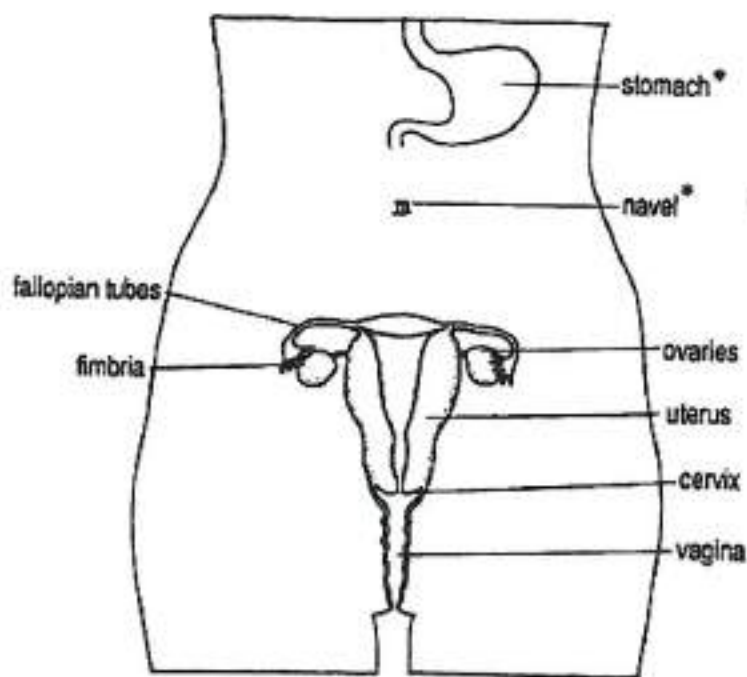
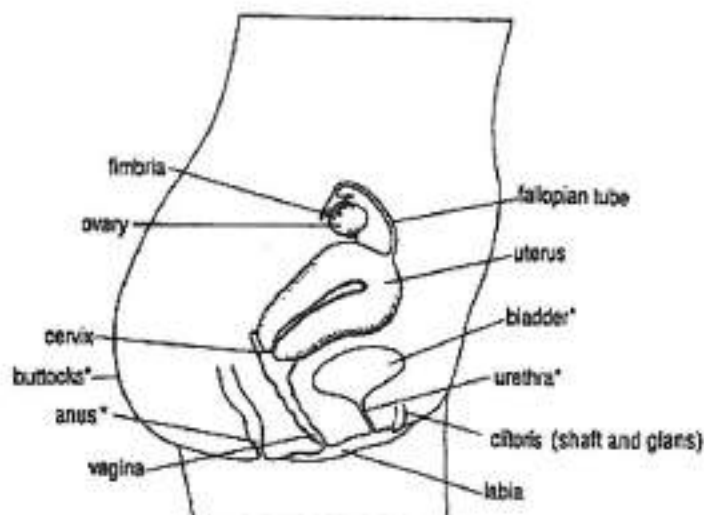
Q: True or False? Alcohol makes a person more sexual.

A: False

Explanation: Both alcohol and marijuana are depressants. They may make a person feel less worried about the risks of sexual touch, but they do not make the genitals work better. In fact, they decrease the flow of blood to the reproductive system, causing less feeling there. Many males can't get an erection at all after drinking much alcohol.

# Reproductive System Reference Sheet and Transparency 1

## The Female

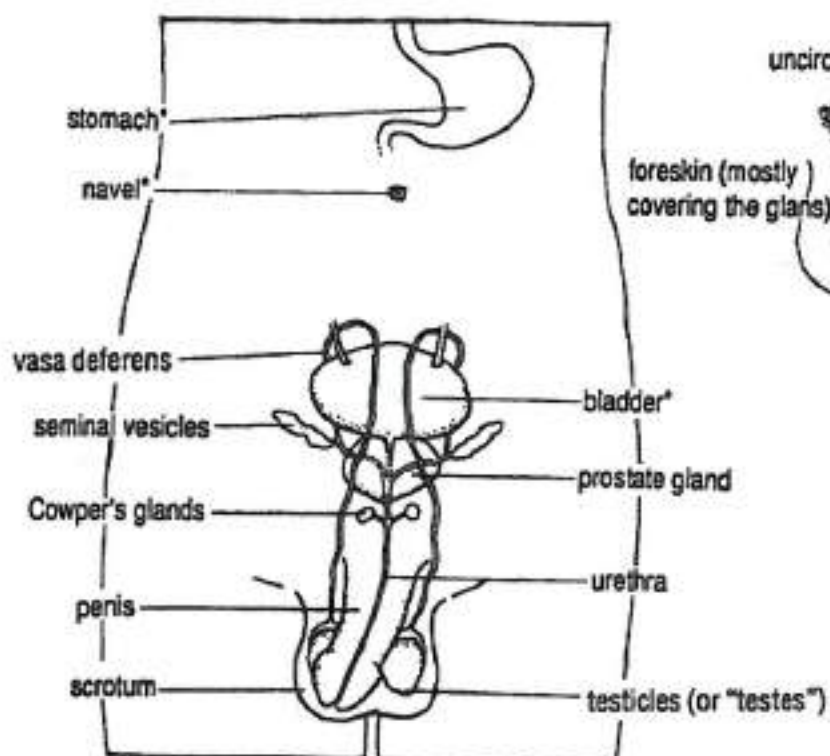
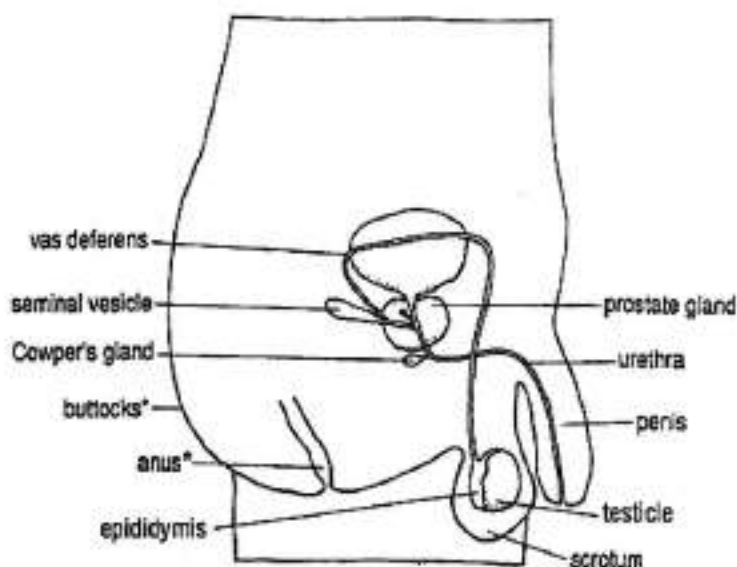


**Female genitals  
or "vulva"**

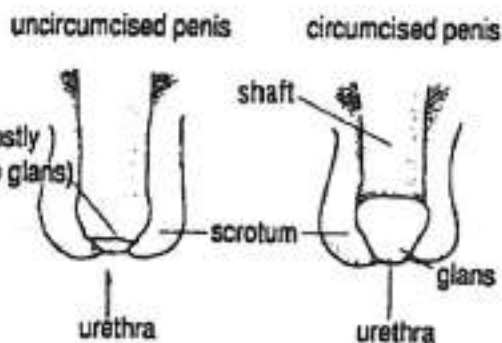
\*not part of reproductive system

# Reproductive System Reference Sheet and Transparency 2

## The male



\*not part of reproductive system



## Male genitals

# Reproductive System Reference

## Sheet 3: GLOSSARY

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**Anus** – The opening in the buttocks from which bowel movements come when a person goes to the bathroom. It is part of the digestive system; it gets rid of body wastes.

**Buttocks** – The medical word for a person's "bottom" or "rear end."

**Cervix** – The opening of the uterus into the vagina.

**Circumcision** – An operation to remove the foreskin from the penis.

**Cowper's Glands** – Glands on either side of the urethra that make a discharge which lines the urethra when a man gets an erection, making it less acid-like to protect the sperm.

**Clitoris** – The part of the female genitals that's full of nerves and becomes erect. It has a glans and a shaft like the penis, but only its glans is on the out side of the body, and it's much smaller.

**Discharge** – Liquid. Urine and semen are kinds of discharge, but the word is usually used to describe either the normal wetness of the vagina or the abnormal wetness that may come from an infection in the penis or vagina.

**Duct** – Tube, the fallopian tubes may be called oviducts, because they are the path for an ovum. The vas deferens may be called sperm ducts, because they are the path for a sperm.

**Ejaculation** – The release of semen from the penis.

**Epididymis** – The coiled tubes, behind the testicles, where sperm mature, and are stored.

**Erection** – The penis or clitoris filling with blood and becoming larger and harder.

**Fallopian Tubes** – The ducts that carry an ovum from the ovary to the uterus.

**Fimbria** – The finger-like parts on the end of each fallopian tube which find an ovum and sweep it into the tube.

**Foreskin** – The sleeve of skin around the glans of the penis. It is sometimes removed by circumcision.



**Genitals** – The parts of the reproductive system on the outside of a person's body. The female genitals may also be called the vulva.

**Glands** – The parts of the body which produce important fluids (hormones, sweat, urine, semen, saliva, etc.) or cells (sperm, eggs, white blood cells, etc.).

**Glans** – The head of the penis or clitoris. It is full of nerve endings.

**Gonads** – The sex glands. Female gonads are called ovaries. Male gonads are called testicles. Gonads make sex cells (eggs and sperm) and sex hormones. They are part of *both* the reproductive and endocrine systems.

**Hormones** – Natural chemicals made by many glands, which flow, along with blood, through the bloodstream. They are messengers which help the body work properly.

**Hymen** – The thin skin that partly covers the opening to the vagina in some females.

**Labia** – The folds of skin in the female genitals that protect openings to the urethra and vagina.

**Labia Majora** – The larger, outer set of labia.

**Labia Minora** – The smaller, inner set of labia.

**Menstruation** – The lining of the uterus emptying out. It is sometimes called "having a period."

**Nocturnal Emission** – Ejaculation of semen during sleep. It is sometimes called a "wet dream."

**Ovaries** – Female gonads. They are glands on either side of the uterus where egg cells are stored and female hormones are made. The singular is *ovary*.

**Ovulation** – The release of an ovum from the ovary.

**Ovum** – The cell from a woman or girl that can start a pregnancy when it joins with sperm cell. It is sometimes called an "egg cell." The plural is *ova*.

**Penis** – The organ of the male genitals which is sometimes circumcised. It is made of a shaft and a glans, and partly covered at birth by a foreskin. It is used for urination and ejaculation.

**Prostate Gland** – A gland under the bladder that makes some of the liquid part of semen.



**Reproduction** – Making more of something. In humans it means making babies (more humans).

**Scrotum** – The sac that holds the testes and controls their temperature.

**Semen** – The thick, whitish liquid which carries sperm cells.

**Seminal Vesicles** – Glands on each vas deferens that make some of the liquid part of semen.

**Sexual Intercourse** – The kind of sex when the penis is in the vagina. Also called "vaginal intercourse," because oral sex and anal sex may be considered intercourse, too. Usually during vaginal intercourse the male ejaculates and this is how most pregnancies begin.

**Sexuality** – The part of us that has to do with being male or female, masculine or feminine or some of both, being able to trust, liking and respecting ourselves and others, needing and enjoying touch and closeness, and reproducing (making babies).

**Shaft** – The long part of the penis or clitoris. (The shaft of the clitoris is inside of the body.)

**Sperm** – The cell from a man or boy that can start a pregnancy when it joins with an ovum.

**Testicles** – Male gonads. They are glands in the scrotum that make sperm and male hormones. They are sometimes called testes; the singular is testis.

**Urethra** – The tube that carries urine out of the body. In males, it also carries semen, but not at the same time.

**Urine** – Liquid waste that is made in the kidneys and stored in the bladder. It is released through the urethra, when we go to the bathroom. Urine is not the same as semen.

**Uterus** – The organ where an embryo/fetus (developing baby) grows for nine months. Sometimes it is called the "womb."

**Vagina** – The tube leading from the uterus to the outside of the female's body. It is the middle of the three openings in her private parts.

**Vas Deferens** – The tube that carries sperm from the epididymis up into the male's body. The plural is vasa deferens.

**Vulva** – Another word for female genitals.

# A Family Homework Exercise: The Reproductive System

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**ALL FAMILY HOMEWORK EXERCISES ARE OPTIONAL.**

**(1) First, read this aloud together:**

As children start to become teenagers, or even before the teens, they go through many changes. One change is a maturing reproductive system. Change can be exciting, but it can also be confusing. Sometimes people need a little advice or reassurance.

**(2) Each of you try filling out “*The Reproductive System Worksheet*” by yourself.**

**(3) Discuss your answers.**

Did you give similar or different advice?

Do you like each other's ideas or do you disagree?

Has any of those kinds of things ever bothered either of you?

If so, how did you handle it?

**Were there any letters neither of you knew how to answer?** If so, you may want to get a book or call your family doctor. If you have access to the Internet, you can find helpful answers to this kind of question at [www.sxetc.org](http://www.sxetc.org) (from the Network for Family Life Education at Rutgers University). If you live in King County (Washington State), you can call the Planned Parenthood **Facts of Life Line** (206-328-7711), together. If you have two extensions, you can both call at the same time.

## NOTE THESE FACTS:

- It is common, and not a problem for one testicle to be lower than the other.
- Signs of testicular cancer could be a lump or a pulling sensation.
- A white discharge between periods is very normal for young women, as long as it does not smell funny or itch.
- The breasts often develop at an uneven rate. It does not mean anything is wrong.

NOTE: Turn in a Family Homework Confirmation Slip by \_\_\_\_\_ if you want credit.

# The Reproductive System Worksheet

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Name \_\_\_\_\_ Due Date \_\_\_\_\_

**Directions:** Pretend you are "Dear Abby." How would you answer the following letters? If you are not sure how to respond, ask someone in your family or call your family doctor. If you have access to the Internet, you can find helpful answers to this kind of question at [www.sxetc.org](http://www.sxetc.org) (from the Network for Family Life Education at Rutgers University). If you live in King County (Washington State), you can call the Planned Parenthood **Facts of Life Line** (206-328-7711) But after you gather information, answer the letter in your own words.

1. Dear Abby,

One of my testicles is lower than the other. I worry if I have cancer or something.  
What should I do?  
— Worried

Dear Worried,

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2. Dear Abby,

I have this white liquid between my menstrual periods. I'm sort of afraid to ask my parents about it. If I went to the doctor, would my parents find out? Help!  
— Confused

Dear Confused,

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## 3. Dear Abby,

My older brother is always asking me if I have ever had a wet dream. What if I never do? Should I lie to him or what?

— Little Brother

Dear Little Brother,

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## 4. Dear Abby,

One of my breasts is starting to develop, but not the other. My mother says that is very common, but it still makes me feel funny. If my friends ask me to spend the night, I don't know what I'll do.

— Growing

Dear Growing,

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## 5. Dear Abby,

My friends are always talking about sex. I don't mind when we talk about it in class. It's like it's serious there, plus I learn a lot. But when my friends talk about it, it's all a joke, or sort of cheap. It embarrasses me. What can I do about it?

— Listener

Dear Listener,

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You can turn in this worksheet for credit or use it to do **Family Homework Exercise: The Reproductive System.**