Puberty, day 1

Grades 4-6, Lesson #9

Time Needed

50-60 minutes

Student Learning Objectives

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

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.

Materials Needed

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*

Activity

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. 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.[1,2,3] Guys, on average, start noticing changes a little later, between about ages 9 or 10 and 14.[4,5] 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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[1] The American Association of Pediatrics. (2005). *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

[2] 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

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

[4] The American Association of Pediatrics. *Puberty Information for Boys and Girls - Public Education Brochure.*

[5] 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."[6]

[6] 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

NAME _____ **DATE** _____

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

a) erection
b) menstruation
c) nocturnal emission
d) ovum
e) puberty
f) sperm
g) pituitary

___ 1. having a period

___ 2. the penis or clitoris filling with blood and getting larger

___ 3. the cell from a man that can start a pregnancy

___ 4. sperm coming out of the penis during sleep

___ 5. the “egg” cell from a woman that can start a pregnancy

___ 6. a child’s body beginning to change into an adult’s body

___ 7. the gland in the brain that triggers the beginning of puberty