# Puberty/Adolescence Day 1: Overview

Grades 9 and 10, Lesson #4

#### **Time Needed**

One class period

#### **Student Learning Objectives**

To be able to...

- 1. Identify with at least 75% accuracy which physical and emotional/social changes happen to females and males at puberty, which happen *only* to males and which happen *only* to females.
- 2. Recognize that puberty is a process, not an event, and that variation in age-of-onset and duration is to be expected.

#### **Agenda**

- 1. Review the reproductive system (Lesson 3's content) in two ways: correct the homework aloud, and have pairs of students use the "Cards" (and scissors, envelopes) to reflect on the functions of the parts.
- 2. Have the pairs of students complete *Puberty/Adolescence Worksheet 1*. Discuss as a class.
- 3. Repeat with Worksheet 2.

4. Respond to students' questions (anonymous and otherwise) on the reproductive system and on puberty.

#### **Materials Needed**

Class Materials (two sets for each class period):

Job/Function Cards \* (or three sets, if there are more than 28 students in any class)

Student Materials (one for each *pair* of students):

Puberty/Adolescence Worksheets, 1 and 2 one pair of scissors one envelope

#### **Activities**

1. Review the reproductive system (Lesson 3's content) in two ways:

First, have students trade homework and go over the correct answers aloud. Students can correct one another's work, or you can have all pens/pencils put aside, review them aloud, and grade them yourself later.

Next, have students form teams of two. Let students choose their own teammates, understanding that the topic of the day is fairly explicit. Thus, you may want to challenge your more socially sophisticated classes to try coed teams, but try to be very sensitive to the individuals who (because of cultural expectations, shyness, or any other reason) may prefer a teammate of the same gender.

Give each team one page of "Job/Function Cards," a pair of scissors and an envelope. Have them cut their cards apart, each taking two. Show them, on the blackboard, a couple of examples of what to do:

PART: Heart PART: Fingers

#### JOBS /FUNCTIONS: JOBS /FUNCTIONS:

1. pumps blood

- provide sensation (have many nerve endings)
- 2. grasp things

Give them about five minutes to describe, in writing, the functions of the parts on their Cards, helping their teammates to do so, too. This is an "open-book" exercise; it is perfectly OK (in fact, to be encouraged) if people use their notes and handouts from lesson 3's class, and their health texts to complete the Cards. This is **not** a "game" with winners and losers; everybody who learns, wins.

**ALTERNATELY:** If you are concerned that the task is too complex for your students, give them "Parts Cards," instead ... where the job/function of the part is already described, and all the student has to do is name the part whose function is described. Spelling counts.

OR, an even less complex task: Give a complete set of all 56 Cards, already cut apart, with 28 paper clips, to each pair of students. Have them clip each *Part Card* to the corresponding *Job/Function Card*.

The answers to the exercise are as follow:

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Job/Function Card A (fimbria) corresponds to Part Card I.
Job/Function Card B (testes) ......Part Card J.
Job/Function Card C (vas deferens) ......Part Card K.
Job/Function Card D (abdomen)......Part Card L.
Job/Function Card E (foreskin) ......Part Card U.
Job/Function Card F (vagina) ......Part Card V.
Job/Function Card G (clitoris) ......Part Card W.
Job/Function Card H (prostate gland) ......Part Card X.
Job/Function Card I (navel) ......Part Card A.
Job/Function Card J (penis) ......Part Card B.
Job/Function Card K (epididymis) ......Part Card C.
Job/Function Card L (cervix) ......Part Card D.
Job/Function Card M (uterus) ......Part Card G.
Job/Function Card N (pelvis) ......Part Card H.
Job/Function Card O (bladder) ......Part Card E.
Job/Function Card P (scrotum) ......Part Card F.
Job/Function Card Q (buttocks) ......Part Card Y.
Job/Function Card R (spermatic cords) .......Part Card BB.
Job/Function Card S (hymen) ......Part Card AA.
Job/Function Card T (cilia) ......Part Card Z.
Job/Function Card U (clitoral hood) ......Part Card N.
Job/Function Card V (anus) ......Part Card M.
Job/Function Card W (ovaries) ......Part Card O.
Job/Function Card X (cowper's glands) .......Part Card P.
Job/Function Card Y (seminal vesicles) .......Part Card T.
Job/Function Card Z (urethra) ......Part Card R.
Job/Function Card AA (fallopian tubes) .......Part Card S.
Job/Function Card BB (vulva) ......Part Card Q.
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Have each person read one completed Card aloud. Each person will be able to report on a different part, unless there are more than 28 students in your class.

Then, have the team drop all four of their cards in their envelope, write their names on the envelope, and turn it in to you so you can give them credit for participating in the exercise.

2. Give each pair/team a copy of Puberty/Adolescence Worksheet 1, Allow them 8 or 10 minutes to complete it. Have the pairs trade with another team and discuss the answers as a whole class.

The answers on many items are, obviously, a matter of opinion. (No one knows exactly what percentage of teens experience bouts of loneliness.) In general, on the social, emotional, spiritual and behavioral items, we have chosen the conservative answer ("some/many girls and guys"... instead of "almost every" one). The only exceptions are the very first and last items. We believe that 99+% of teens go through a very self-conscious stage and emerge from adolescence more self-confident than before.

For the physical and health-related items, we have based our answers on hard facts ... We used the term "almost every..." to mean 95+% and the term some/many ... to mean 10-95%.

We have included changes that happen only to **some** teens, in order to validate and affirm **everyone's** experience of maturation.

Here are the answers we arrived at for Worksheet 1:

- 1. A,C (arguably B and D, however)
- 2. A.C
- 3. B,D (arguably A and C, however)
- 4. C (one exception: girls with extremely little body fat. . . including athletes and people with anorexia)
- 5. C (same exception as #4)
- 6. A
- B,D (These may include crushes on idols [singer, actor, etc.], older people [teacher, boss, etc.], or peers and they may be on folks of one's own gender or another gender regardless of one's eventual sexual orientation.)
- 8. A.C
- 9. A,C
- 10. A,C
- 11. A,D (Like all the physical [and some of the other] changes, this is genetic; thus a guy or girl whose family has very little facial and body hair will probably have very little, too, though almost all guys will get at least a little. Many White people, especially those of Southern European and Middle Eastern ancestry, have more facial and body hair than many people of other racial groups. Girls should not worry about hair around the nipples or above their upper lip; it is common and normal.)
- 12. A,C
- 13. A,C (more noticeable, of course, in guys; but true for everyone)
- 14. B,D
- 15. B,D
- 16. A
- 17. A
- 18. B (25% of guys, however, *never* have any...even though their reproductive systems are functioning and healthy. Note that people have nocturnal emissions when there is a surge of hormones during sleep, **not** necessarily when an erotic dream is taking place. Girls **and** guys may experience erotic dreams [and orgasm] during sleep. Almost all guys, once they reach puberty, and some girls can ejaculate. For girls, ejaculation is when a clear fluid comes out of the urethra during orgasm or sexual arousal.

- 19. A,C (The rapid growth of arms and legs explains people's temporary "clumsiness." Also, since extremities grow **before** circulatory system, many teens are suddenly tired a lot, needing naps, seeming "lazy" due to insufficient oxygen.)
- 20. A.C
- 21. B,D
- 22. B,D
- 23. A,D (Like other changes, this is a function of large amounts of hormones called "androgens.")
- 24. A,D (more noticeable in guys; but true for everyone, since the clitoris does become erect ... more noticeable, usually, to the person experiencing the erection than to anyone else, despite how obvious it may feel)
- 25. A,C (more noticeable, of course, in guys; but true for everyone)
- 26. B,D (arguably, A and C, however)
- 27. B,D (arguably, A and C, however)
- 28. B,C (more noticeable, of course, in girls; but 80% of boys have some, temporarily, too. In addition to genetics and ratio of muscle to fat, use of marijuana can also cause growth of breast tissue in males; the latter may **not** be temporary.)
- 29. B,D (almost everyone gets at least a couple of pimples, but "many" get what we'd call acne. Severity varies greatly; the cause is a high level of hormones called androgens.)
- 30. B,D (99% actually **have** wisdom teeth, but only about 30% "erupt" or "come out" fully; some never erupt, even partially.)
- 31. B,D (arguably A and C, however the frequency of such thoughts and feelings varies greatly. Students who haven't experienced them certainly need not feel "abnormal.")
- 32. B,D (According to a 1973 national survey, the Sorenson Report, 58% of adolescent males and 39% of adolescent females say they have masturbated at least once. [We presume that this omits masturbation as an infant or pre-schooler ... which is almost universal.] The respondents were not asked whether they were masturbating more often than before puberty, but most experts believe that frequency tends to increase at puberty for most youth. Nonetheless, students who have never masturbated certainly need not feel "abnormal." Like all behaviors, it is a matter of choice. Some people believe it is very wrong to masturbate; others believe it is perfectly OK.)
- 33. B,D (arguably A and C; it does reflect a normal developmental stage, although **at times** a teen may prefer to be alone)
- 34. B,D
- 35. B,D (arguably A and C, however)
- 36. C
- 37. C (This is normal, healthy vaginal fluid ... the body's way of lubricating and cleansing itself, just as the fluid in the eyes moistens and cleans the eye.)
- 38. B,D (arguably A and C, however)

39. A,C (arguably B and D, however)

Make sure the class notices how few of the changes (8 out of 39) happen **only** to one gender. The genders are hardly "opposites" ... we are much more alike than different. One might experience less embarrassment or awkwardness if one realized what a huge percentage of one's friends and acquaintances (of all genders) were experiencing most of the same changes.

Collect the Worksheets. Since the answers are, to a great extent, a matter of opinion, we recommend giving credit for completing the Worksheet, rather than an actual grade.

3. Have the same pairs of students repeat the activity, using *Puberty/Adolescence Worksheet* 2. Discuss it.

The answers for Worksheet 2 are as follow:

- 1. maybe (He had started puberty; he *may* have begun producing sperm. Once a guy has his first ejaculation, he can assume he is fertile.)
- 2. no
- 3. no
- 4. maybe (Even a couple of weeks *before* she has had her first menstrual period, a girl might have begun to ovulate. Most girls begin to ovulate about a year after first menstruation, but everyone is different.)
- 5. 9-15 years
- 6. 11-16 years
- 7. girls, but not every individual girl
- 8. 2.5-3 years
- 9. 4 or more years
- 10. guys, but not every individual guy
- 11. at about 17 years old (If there have been **no** signs of changes.)
- 12. talk with a parent or other trusted adult, check with school nurse or clinic, see family doctor, see endocrinologist

Collect the Worksheet.

4. Spend the remainder of the period responding to students' questions (anonymous/written and verbal) on the reproductive system and on puberty and adolescence.

## Job/Function Cards A - D

,	,
(A)	(B)
<u>PART: FIMBRIA</u>	PART: TESTES
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
1.	1.
	_
	2.
(C)	(D)
PART: VAS DEFERENS	<u>PART: ABDOMEN</u>
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
1.	1.
2.	

## Job/Function Cards E - H

······	,
(E)	(F)
<u>PART: FORESKIN</u>	<u>PART: VAGINA</u>
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
1.	1.
	2.
2.	3.
	4.
	5.
(G)	(H)
PART: CLITORIS	PART: PROSTATE GLAND
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
1.	1.

## Job/Function Cards I - L

<b>(I)</b>	(J)
<u>PART: NAVEL</u>	<u>PART: PENIS</u>
<u>JOBS/FUNCTIONS:</u>	<u>JOBS/FUNCTIONS:</u>
1.	1.
	2.
	3.
(K)	(L)
PART: EPIDIDYMIS	PART: CERVIX
1000/511110710110	
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
JOBS/FUNCTIONS: 1.	<u>JOBS/FUNCTIONS:</u> 1.
	1.
	1.

## Job/Function Cards M - P

	(1.4)	/NI)
	(M)	(N)
	PART: UTERUS	PART: PELVIS
	JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
1.		1.
2.		
3.		
	(O)	(P)
	(O) PART: BLADDER	(P) <u>PART: SCROTUM</u>
1.	PART: BLADDER	PART: SCROTUM
1.	PART: BLADDER	PART: SCROTUM  JOBS/FUNCTIONS:
1.	PART: BLADDER	PART: SCROTUM  JOBS/FUNCTIONS:  1.

## Job/Function Cards Q - T

	(Q)	(R)
	PART: BUTTOCKS	PART: SPERMATIC CORD
<u>.</u>	JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
1.		1.
		2.
2.		3.
		4.
	(S)	(T)
	PART: HYMEN	PART: CILIA
<u>.</u>	JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
1.		1.
		_
		2.

## Job/Function Cards U- X

r	·
(U)	(V)
PART: CLITORAL HOOD	<u>PART: ANUS</u>
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
1.	1.
	0
	2.
(W)	(X)
PART: OVARIES	PART: COWPER'S GLANDS
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
1.	1.
2.	
3.	

## Job/Function Cards Y- BB

·····	,
(Y)	(Z)
PART: SEMINAL VESICLES	<u>PART: URETHRA</u>
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
1.	1.
	2.
(AA)	(BB)
PART: FALLOPIAN TUBES	<u>PART: VULVA</u>
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
1.	1.
2.	2.

#### Part Cards A - D

(A)	(B)
PART:	PART:
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
1. allows passage of oxygen	1. allows passage of urine
and nourishment, before birth then it stops working	2. allows passage of semen
	provides sensation (has many nerve endings)
(C)	(D)
PART:	PART:
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
1. helps sperm mature	produces fluids to help sperm     travel
	produces a mucous plug to keep germs out, during pregnancy

#### Part Cards E - H

(E)	(F)
PART:	PART:
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
1. provides storage for urine	1. holds testes
	2. controls temperature
	3. provides sensation (has many nerve endings)
	\
(G)	(H)
(G) <u>PART:</u>	(H) <u>PART:</u>
, ,	, ,
PART:	PART:
PART:  JOBS/FUNCTIONS:  1. houses and protects	PART:  JOBS/FUNCTIONS:  1. supports and protects the

#### Part Cards I - L

(1)	(J)
PART:	PART:
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
1. find an ovum and bring it into the fallopian tube	<ol> <li>produce sperm</li> <li>produce sex hormones (androgens and testosterone)</li> </ol>
(K)	(L)
(K) <u>PART:</u>	(L) <u>PART:</u>
PART:	PART:
PART:  JOBS/FUNCTIONS:  1. provide storage for sperm	PART:  JOBS/FUNCTIONS:  1. contains most of our internal
PART:  JOBS/FUNCTIONS:  1. provide storage for sperm	PART:  JOBS/FUNCTIONS:  1. contains most of our internal

#### Part Cards M - P

(M)	(N)
PART:	PART:
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
allows passage of bowel movement (feces)	protects the glans of the clitoris
provides sensation (has many nerve endings)	<ol><li>provides sensation (has many nerve endings)</li></ol>
(O)	(P)
PART:	PART:
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
<ol> <li>provide storage for ova</li> <li>allow maturation of ova produce sex hormones (estrogen, progesterone and androgens)</li> </ol>	produce fluid that cleanses the urethra of acid (from urine) to protect the sperm

#### Part Cards Q - T

(Q)	(R)
PART:	PART:
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
protects openings of urethra and vagina (as eyelids protect eyes)	<ol> <li>allows passage of urine</li> <li>in males, also allows passage of semen</li> </ol>
(S)	(T)
PART:	PART:
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
<ol> <li>allow passage of ova</li> <li>allow passage of sperm</li> </ol>	contribute fructose (sugar) to semen for nourishing sperm

# Part Cards U - X

(U)  PART:  JOBS/FUNCTIONS:  1. protects the glans of the penis;  2. provides sensation;  NOTE: males who have been circumcised don't have one	(V) PART:  JOBS/FUNCTIONS:  1. allows passage of blood and pieces of endometrium during menstruation  2. allows passage of sperm  3. allows passage of baby  4. produces fluids to cleanse and lubricate itself and to help sperm travel  5. provides sensation
(W)  PART:  JOBS/FUNCTIONS:  1. provides sensation (has many nerve endings)	(X)  PART:  JOBS/FUNCTIONS:  1. contributes fluid to semen for sperm's mobility (to help them travel)

#### Part Cards Y - BB

masturbation), or by use of a

tampon, or physical activities

such as sports or riding a bike

(Y)	(Z)
PART:	PART:
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
<ol> <li>provides a cushion for the tail bone</li> </ol>	<ol> <li>Sweep an ovum down the fallopian tube</li> </ol>
contains muscles for movement	2. sweep sperm cells through the epididymis
(AA)	(BB)
PART:	PART:
JOBS/FUNCTIONS:	JOBS/FUNCTIONS:
<ul><li>1. may reduce risk of infections in the vagina</li><li>NOTE: It may be stretched during sex (including</li></ul>	<ol> <li>suspends the testis</li> <li>supplies blood to the testis</li> <li>provides sensation (has</li> </ol>

many nerve endings)

4. allows passage of sperm

NAMES:

# Puberty/Adolescence Worksheet 1

ad	RECTIONS: Below is a list of changes the olescence. Check one or more columnary ange.			• • •	
		(A) Almost every guy	(B) Some/ many guys	(C) Almost every girl	(D) Some/ many girls
1.	They become more self-conscious for a while.				
2.	They get a new kind of perspiration.				
3.	They have sudden mood changes (happy one minute, down the next).				
4.	They begin to ovulate (to release mature ova).				
5.	They begin to menstruate (to have periods).				
6.	Their shoulders get broader.				
7.	They start getting more crushes and attractions (maybe first love).				
8.	They get hair in their armpits.				
9.	They get pubic hair (hair around the genitals).				
10	The hair on their arms and legs gets darker and coarser.				
11	They get hair on their chests and faces.				
12	.Their genitals get darker.				
13	.Their reproductive systems (inside and out) become larger.				

# Puberty/Adolescence Worksheet 1 (continued)

	(A) Almost every guy	(B) Some/ many guys	(C) Almost every girl	(D) Some/ many girls
14. They feel kind of lonely for a while.				
15. They want to be alone more.				
16. They begin making spermatazoa.				
17. They begin to ejaculate (to release semen).				
18. They begin having nocturnal emissions (wet dreams).				
19. Their arms and legs grow longer (they get taller).				
20. Their faces get longer and thinner.				
21. They begin to form deeper, more lasting friendships.				
22. They feel (and show) more concern for others.				
23. Their skin gets thicker and more oily.				
24. They get more frequent erections.				
25. Their voices get deeper.				
26. They begin to have new freedoms.				
27. They take on new responsibilities (job, extra-curricular activities, even parenting).				
28. They have some breast development.				
29. They get acne (pimples).				
30. They get wisdom teeth.				

# Puberty/Adolescence Worksheet 1 (continued)

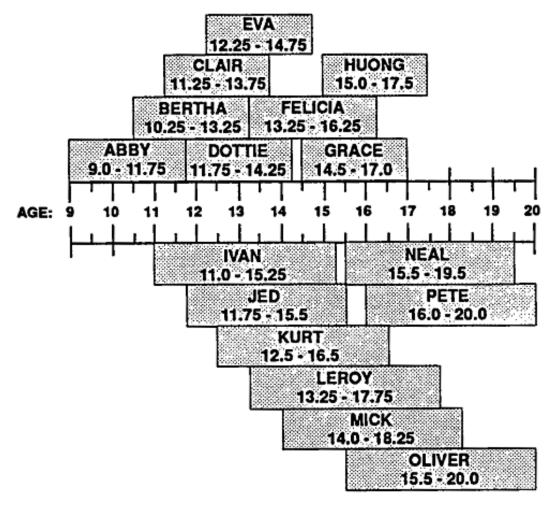
	(A) Almost every guy	(B) Some/ many guys	(C) Almost every girl	(D) Some/ many girls
31. They feel sexual feelings and fantasize about sexual things more than before.				
32. They <u>may</u> masturbate more often than before.				
33. They want to spend more time with friends than before.				
34. They think more about their beliefs and become more aware of their spiritual selves.				
35. They start to think more about the future (to worry, to plan).				
36. Their hips get broader.				
37. They notice some white or clear vaginal discharge.				
38. They have more arguments with their parents for a while.				
39. They eventually start to feel more self-confident.				

## Puberty/Adolescence Worksheet 2

NAMES:	

Below is a chart showing the ages of puberty for sixteen typical young people. The ages are shown horizontally, in the center of the chart. The girls are above the line; the guys, below it. The age at which each person noticed the very first change is noted, too.

**DIRECTIONS**: Study the chart briefly. Then answer the questions below, based on the information in the chart.



- When Ivan was 12, could he start a pregnancy?
   ANSWER:
- When Oliver was 12, could he start a pregnancy?ANSWER:

3.	<ul> <li>Could Clair have gotten pregnant when she was ANSWER:</li> </ul>	
4.	. Could Abby have gotten pregnant when she w ANSWER:	
5.	. What is the age range of <i>starting</i> puberty, for the ANSWER: to	he girls?
6.	. What is the age range of <i>starting</i> puberty, for the ANSWER: to	he guys?
7.	. <i>On average</i> , who starts puberty younger, girls ANSWER:	<b>.</b> .
8.	. How long does it seem to take girls to <i>complet</i> ANSWER: about ye	
9.	. How long does it seem to take guys to <i>comple</i> ANSWER: about ye	
10	0. <b>On average</b> , who takes longer to complete the ANSWER:	
11	At what age do you think a person ought to be noticed any of the changes of puberty?  ANSWER: about ye	
12	2. What should that person do?	
	ANSWER:	