



HOLY FAITH PRESENTATION SCHOOL

RAWALPORA SRINAGAR KASHMIR

Term-I

(Class 8th - Science)

Chapter :- Reaching the Age of Adolescence

Exercise Questions

1. What is the term used for chemical secretions of endocrine glands responsible for changes taking place in the body?

Soln:

The chemical substance secreted by the endocrine glands is called Hormones. Hormones are responsible for the changes taking place in the body.

2. Define adolescence.

Soln:

The time period which comes between the beginning of adulthood and puberty is called Adolescence. In this time period, the body undergoes different changes alongside reproductive maturity. It starts somewhat at the age of 11 and ends at the age of 18 or 19. This period of adolescence may differ from person to person.

3. What is menstruation? Explain

Soln:

The process of shedding of the uterine lining on a regular monthly basis is called menstruation. It starts at puberty and in the reproductive cycle of the female body. The uterus prepares itself to receive a fertilized egg on every month. Due to this the inner lining of the uterus becomes thick and is supplied with blood to nourish the embryo. If the egg is not fertilized, then the lining of the uterus breaks down and gets released in the form of blood through the vagina. The time period for this is about 2 to 8 days every month. This monthly cycle is known as the menstrual cycle.

4. List changes in the body that take place at puberty

5. Soln:

The changes that take place at the time of puberty are as follows:

- The height and weight of the body will suddenly increase
- The hair seems to appear in the area such as legs, hands, face and underarms
- In female, the enlargement of the ovary takes place and starts producing matured eggs and on the other hand in males, the testis grows and starts producing sperms
- In males, the shoulder broadens and chest becomes wider, whereas in females the region below the waist becomes wider.
- The acne seems to appear because of the excessive secretion of the oil from the skin.
- In boys, the larynx becomes prominent under the influence of hormones, the vocal cord becomes longer and thicker resulting in hoarse voice.



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NCERT Solution for class 8 Science Chapter Reaching the Age of Adolescence

5. Prepare a Table having two columns depicting names of endocrine glands and hormones secreted by them.

Soln:

Endocrine Glands	Hormones
Testis	Testosterones
Ovary	Oestrogen
Pituitary	Growth hormone
Adrenal	Adrenalin
Thyroid	Thyroxin
Pancreas	Insulin

6. What are sex hormones? Why are they named so? State their function Soln:

The chemical substances produced by the sex organs are called sex hormones. For example, in females, the sex hormones produced by the ovary is called oestrogen and in males, the sex hormones produced by the testis is called testosterone.

Some of the functions performed by the sex hormones:

Oestrogen: This hormone is responsible for the development of secondary sexual characters in females like enlargement of breasts, development of female reproductive organs etc.

Testosterone: this hormone brings the secondary sexual characters in boys such as the growth of beard, the voice becomes hoarse, development of the reproductive organs, stimulates spermatogenesis etc.



7. Choose the correct option.

- (a) Adolescents should be careful about what they eat, because
- (i) proper diet develops their brains.
 - (ii) proper diet is needed for the rapid growth taking place in their body.
 - (iii) adolescents feel hungry all the time.
 - (iv) taste buds are well developed in teenagers.
- (b) Reproductive age in women starts when their
- (i) menstruation starts.
 - (ii) breasts start developing.
 - (iii) body weight increases.
 - (iv) height increases.
- (c) The right meal for adolescents consists of
- (i) chips, noodles, coke.
 - (ii) chapati, dal, vegetables.
 - (iii) rice, noodles and burger.
 - (iv) vegetable cutlets, chips and lemon drink.

Soln:

a.(ii) proper diet is needed for the rapid growth taking place in their body.

b.(i) menstruation starts.

c.(ii) chapati, dal, vegetables.

8. Write notes on—

- (a) Adam's apple.
- (b) Secondary sexual characters.
- (c) Sex determination in the unborn baby.

Soln:

a) **Adam's apple:** In human males, the larynx grows larger at the time of puberty and can be seen as a protruding part of the throat. This protrusion is known as Adam's apple. In boys under the influence of sex hormones, the larynx becomes prominent. Due to this, the vocal cord becomes thicker and longer which causes the voice hoarse. On the other hand in females, the larynx is of small size and is hardly visible. Therefore, girls have a high pitched voice while the boys have deep voice.

b) **Secondary sexual characters.** We know testis and ovaries are the reproductive organs. they produce the gametes i.e., sperms and ova. In girls breasts begin to develop at puberty and boys begin to grow facial hairs. As these features help to distinguish the male from the female they are called secondary sexual characters.

c) **Sex determination in the unborn baby.** Sex chromosomes determine sex in human beings. In males there are 44+XY chromosomes, whereas in females there are 44+XX Chromosomes. Here X and Y chromosomes determine the sex in human beings. Two types of gametes are formed in male, one type is having 50% X chromosome, whereas other



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type is having Y-chromosome. In females gametes are only of one type and contain X- chromosomes. Thus females are homogametic. Therefore if male gamete having Y-chromosome undergoes fusion with female gamete having X-chromosome the zygote will have XY-chromosome and this gives rise to male child. On the other hand if the male gamete having X-chromosome undergoes fusion with female gamete having X-chromosome the zygote will be having XX-chromosome and this gives rise to a female child.

9. Word game:

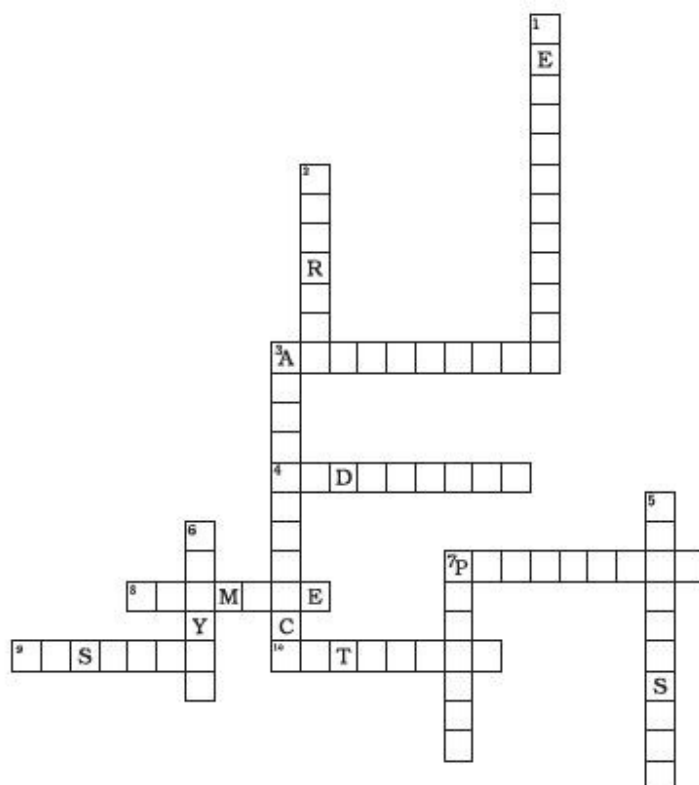
Use the clues to work out the words.

Across

3. Protruding voice box in boys
4. Glands without ducts
7. Endocrine gland attached to brain
8. Secretion of endocrine glands
9. Pancreatic hormone
10. Female hormone

Down

1. Male hormone
2. Secretes thyroxine
3. Another term for teenage
5. Hormone reaches here through blood stream
6. Voice box
7. Term for changes at adolescence





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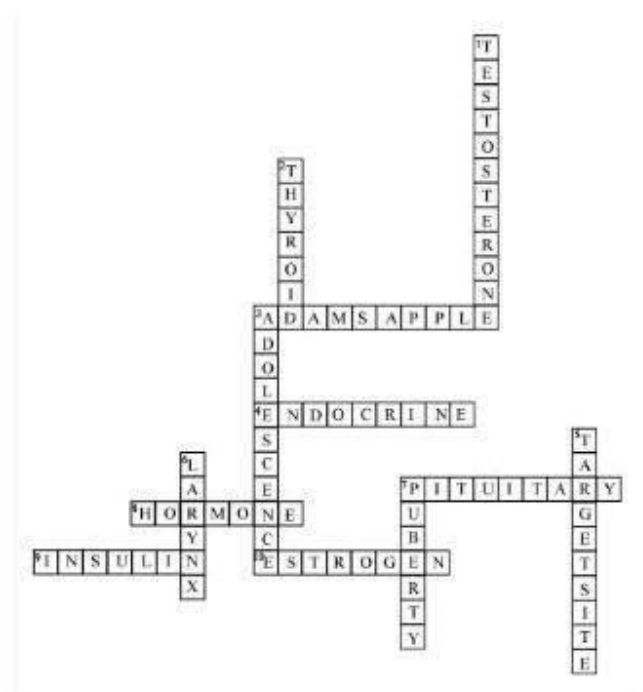
Soln:

Across

3. Adam's apple
4. Endocrine
5. Pituitary
6. Hormone
7. Insulin
8. Estrogen

Down

1. Testosterone
2. Thyroid
3. Adolescence
5. Target site
6. Larynx
7. Puberty





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10. The table below shows the data on likely heights of boys and girls as they grow in age. Draw graphs showing height and age for both boys and girls on the graph paper. What conclusions can be drawn from these graphs.

Soln: Draw graph yourself

Age (years)	Height(cm) BOYS	Height(cm) GIRLS
0	53	53
4	96	92
8	114	110
12	129	133
16	150	150
20	173	165

The above graph shows that the increase in the growth in heights of boys and girls is the same. The increase in growth is less in girls upto first eight years and after that it remains the same upto 20 years.