Objectives
Students will
• Discuss the mental, emotional and social changes
• Describe the physical changes during puberty
• Identify similarities and differences in male and female growth patterns
• Discuss the development of secondary sex characteristics
• Describe stresses related to puberty

Concepts
1. Females tend to start pubertal changes two to four years earlier than boys, which is why 5th and 6th grade girls may be larger than boys. These learners are beginning the transition into adolescence and adulthood. Essentially, what occurs is that the body’s hormone activity increases and begins the series of invisible physical changes. Hormones may be described as body chemicals which cause something specific to happen (such as growth of the uterine lining) to certain parts of the body.
2. Hormone activity begins (about 8-12 for females, 10-14 for males) to stimulate physical changes in the body. There may be wide variations in when these changes occur in specific individuals and these should be expected and discussed. Learners need to know it’s OK if they don’t get their period until 16 years of age, or they don’t seem to get their growth spurt until their senior year in high school.

Materials
• “Developmental Changes” information
• Handouts of male and female reproductive organs
• Video “Human Growth V” (21 minutes)
• Question box

Activities
1. Discuss mental, emotional, and social changes
   A. What does it mean to grow mentally?
      1. Understand more about oneself
      2. Understand more about the world
      3. Organize new knowledge and fit it in with what is already known
      4. Form values
   B. What does it mean to grow emotionally?
      1. Understand feelings
      2. Understand the feelings of others
      3. Learn constructive ways to express feelings
      4. Control behavior
   C. What does it mean to grow socially?
1. Develop a concern for the world and people
2. Learn to accept differences in others
3. Seek independence
4. Make own decisions

2. Show the video “Human Growth V”
3. Review physical and emotional changes which occur during puberty by using the “Developmental Changes” information
4. Elicit from students other changes that may occur
5. Stress that these changes occur according to each person’s individual body clock and that females usually begin to develop before males
6. Using handouts, review male and female reproductive organs
   - penis          - cervix
   - urethra        - vagina
   - scrotum        - uterus
   - testicles      - fallopian tubes
   - vas deferens   - ovaries

7. Brainstorm emotional changes that take place during puberty
   A. Moods shift quickly and unpredictably
   B. Concern about body changes
   C. Increased feelings of independence
   D. Interest in opposite sex
   E. Interests are changing
   A. Behavior shifts from childish to mature and back again

7. Exceptional Education Inclusion Activities
   A. Have students bring in pictures of themselves at different stages of development
   B. Cut out pictures of people of all ages and discuss how their age is known
   C. Label the diagrams on the overhead and have students copy them

**Body Clock**

<table>
<thead>
<tr>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Growth of bony pelvis</td>
<td>2. Straight public hair</td>
</tr>
<tr>
<td>3. Growth spurt</td>
<td>3. First ejaculation</td>
</tr>
<tr>
<td>4. Pubic hair</td>
<td>4. Growth spurt-arms, legs and penis</td>
</tr>
<tr>
<td>5. First menstruation</td>
<td>5. Voice changes (growth of larynx)</td>
</tr>
<tr>
<td>6. Underarm hair and coarser body hair</td>
<td>6. Underarm hair and coarser body hair</td>
</tr>
<tr>
<td>7. Oil and sweat glands activated</td>
<td>7. Oil and sweat glands activated</td>
</tr>
<tr>
<td>8. Growth of uterus and vagina</td>
<td>8. Facial hair (beard)</td>
</tr>
</tbody>
</table>
FEMALE REPRODUCTIVE ORGANS INSIDE THE BODY

- fallopian tubes
- ovaries
- uterus
- cervix
- vagina
Label the parts of the male anatomy.

urethra  urinary bladder  penis  scrotum  vas deferens
prostate gland  testes (testicle)
ANATOMY DRAWING (MALE)

1. vas deferens
2. urinary bladder
3. prostate gland
4. urethra
5. penis
6. testes (testicle)
7. scrotum

Label the parts of the male anatomy.

urethra  urinary bladder  penis  scrotum  vas deferens
prostate gland  testes (testicle)
DEVELOPMENTAL STAGES
OF THE SECONDARY SEX
CHARACTERISTICS

1. Male Genital Development
   A. Pre-puberty - usually none
   B. Initial enlargement of the scrotum and testes; reddening and texture changes of the scrotum
   C. Initial enlargement of the penis; further growth of testes and scrotum
   D. Further enlargement of the penis, testes and scrotum; growth in breadth and development of the glans
   E. Adult in size and contour

2. Pubic Hair Development
   A. Pre-puberty; hair over the pubic area similar to that on the abdomen
   B. Sparse growth of long, straight, downy hair at the base of the penis or along the labia
   C. Hair becomes darker, more coarse and curly; spreads sparsely over the entire pubic area
   D. Further spread of hair distribution not extending to the thighs
   E. Adult in amount and type

3. Female Breast Development
   A. Pre-puberty; increased pigmentation of the papilla only
   B. Enlargement of areolar diameter; small area of elevation around the papillae
   C. Further elevation and enlargement of breasts and areolas, with no separation of the contours
   D. Areolas and papillae project from the breast to form a secondary mound
   E. Adult, with projection of the papillae only; recession of the areolas into the general breast contour

4. Other Changes
   A. Pre puberty-usually none
   B. Usually time of peak height velocity for girls
   C. Usual point of onset of menstruation. Facial hair begins to grow and voice deepens for boys
   D. Usual time of peak height velocity for boys; axillary hair begins to grow

* The A’s are corresponding time periods, as well as the B’s, C’s, etc.