THE GREAT BODY SHOP
The Children's Health Market, Inc.
Level 1

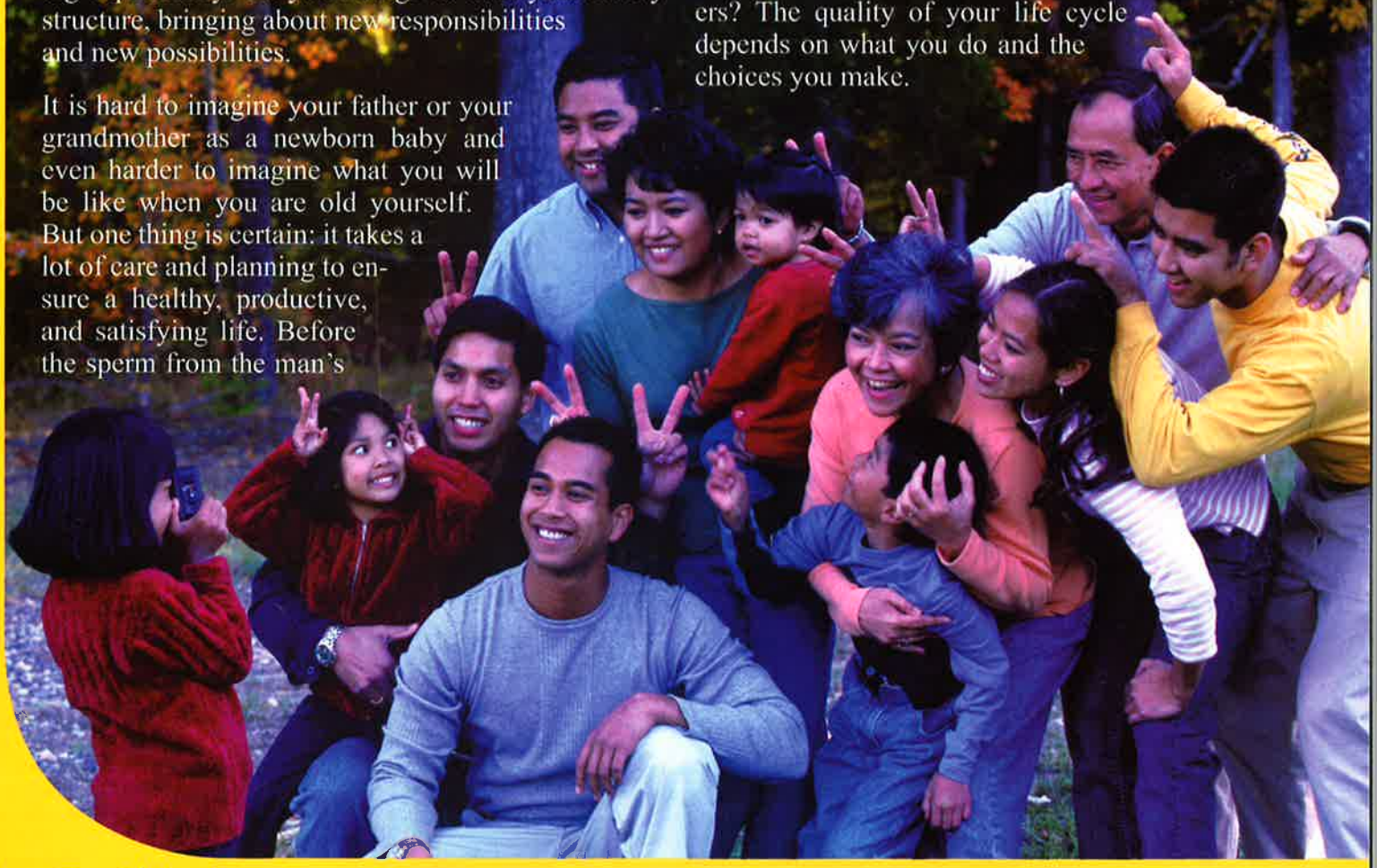
The Cycle Of Life

Life Is a Cycle

Change is a part of growing up and growing up has definite stages that everyone experiences. As you grow and change, your parents and grandparents will change as well. No person remains the same for their entire life. Every person goes through the same basic stages of life—growing from being nothing more than a single cell to become a beautiful newborn baby, an active and curious toddler, a child ready for school, a teenager testing independence and expanding horizons, a young adult setting out on a new work life (and possibly marrying and starting the cycle all over again), then a middle-aged adult caring for the family and planning for later years. And finally, an older person seeing life more as a whole, while experiencing a lessening of physical strengths and increasing dependency. As you change so does your family structure, bringing about new responsibilities and new possibilities.

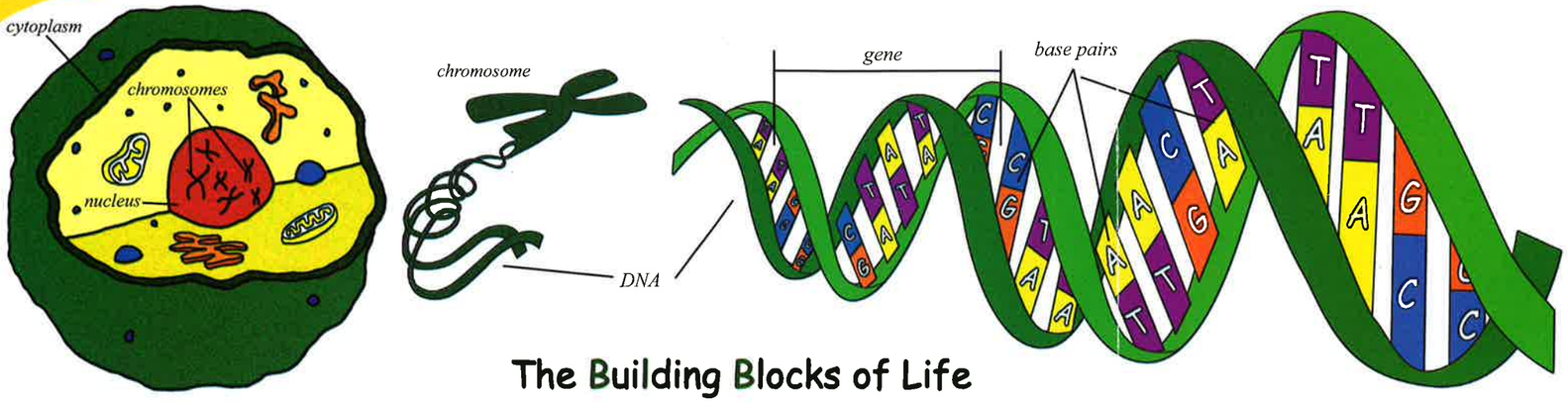
It is hard to imagine your father or your grandmother as a newborn baby and even harder to imagine what you will be like when you are old yourself. But one thing is certain: it takes a lot of care and planning to ensure a healthy, productive, and satisfying life. Before the sperm from the man's body joins with the egg from the woman's body to produce that one cell that will become a human baby, it is vitally important that the prospective parents have planned well for the care of the baby. The mother and father need to be healthy, check their genetics for possible health risks, and be drug-free. The parents need to be able and willing to provide a good and stable environment for the child's healthy development. Good prenatal care is essential for the mother and child, and plans need to be made to care for the baby after birth.

Parents continue to plan and care for children for many years, but children also start to plan and care for themselves and others. The cycle has begun to repeat itself. What kind of planning do you do for yourself? For others? How do you care for yourself or for others? The quality of your life cycle depends on what you do and the choices you make.



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The Building Blocks of Life

Cells are the basic building blocks of every living system. Those cells are like little factories constantly carrying out many different activities that support and direct the operation of the system. Proteins are the substances that carry out all the work in the cells. They produce energy, process the cell's food, dispose of wastes, and interact internally and externally with the surrounding cells. Sections of the cells are contained in a plasma sac called cytoplasm, which allows water and nutrients to pass through it. Inside each cell is a nucleus, which provides all the directions for the activity of that cell.

The complete set of directions for that cell (in humans) is called the human genome. The directions are coded along a long strand of DNA (deoxyribonucleic acid), a substance composed of four nucleotides, called bases: (A) adenine, (T) thymine, (G) guanine, and (C) cytosine. Each person has a different arrangement of these letters in base pairs of AT and GC which is called a person's genetic code. The nucleus also contains the chemical RNA (ribonucleic acid), which is the messenger molecule. The DNA unwinds and passes the code onto the RNA, which moves the copied code to the cytoplasm, where proteins are made.

Each human cell has 23 pairs of chromosomes, which are very long DNA molecules and associated proteins that carry many genes. Each of the 22 pairs of chromosomes are just alike, but the 23rd pair carries the sex genes and may or may not be just alike depending on whether the person is male or female.

Genes are the fundamental units of heredity that pass on characteristics from parents to offspring. They are spread out over the length of the DNA in two ladder shaped strands held together in the shape of a double helix, with each side of the ladder containing the mirror image of the other side of the ladder. Every cell, whether it is a muscle cell, a brain cell, or other type of cell in the human body, has the same genetic makeup.

Dates and Discoveries

1886	Genes are discovered (called "factors") *—Gregor Mendel*
1911	Proof that genes are carried on chromosomes *—Thomas Hunt Morgan*
1943	Discovery that genes are made of DNA *—Oswald Avery*
1953	Discovery of the double helix structure of DNA *—Watson and Crick*
1961	Discovery of the messenger RNA *—Sydney Brenner*
1973	Genes cloned by transferring a virus virtual bacteria *—Stanley Cohen and Herbert Boyer*
1975	Technique developed to read chemical DNA *—Fred Sanger and Walter Gilbert*
1983	A "copying machine" developed to make copies of specific DNA in a test tube *—Kary Mullis*
1990	Target date set 15 years hence to decode the human genome
1999	First finished full length sequence of a human chromosome is produced (chromosome #22)
2003	Human genome completed to 99.99% accuracy

At This Stage...	Infancy (Birth to 1 year)	Early Childhood (Age 1–5)	Later Childhood (about age 6–12)	Teenage (Puberty and Adolescence) (about age 12–18)	Young Adult (about ages 18–25)	Adult (about ages 25–65+)	Older Adult (about age 65+)
You Do These Things...	• Eat, sleep, cry when hungry, uncomfortable, or tired; smile and coo with delight (from about 4 months) • Grow a lot (often to triple birth weight and double the height by 18 months.) • Learn to recognize people and things • Learn to use hands and feet to balance, sit up, crawl, stand & even walk • May say a word or two by one year	• Run, talk, use your body with increasing skill in large and small motor activities • Acquire and practice social skills and learn to follow rules • Gradually become ready to read, write, work with numbers, and make some decisions that involve short-term planning • Learn basic skills for limited self-care, but need considerable help and support	• Continue to grow, reaching roughly 75% of adult height • Might become proficient in many sports and games that require different muscle groups and skill levels • Learn to read, write, do basic math, and retain large amounts of information • Begin to apply critical thinking skills to solve everyday problems • Grow socially and emotionally and begin to recognize what other people are feeling • Build childhood friendships and other relationships • Set short-term priorities and make longer range plans	• Undergo major changes as sex hormones become active at the onset of puberty: If you are a girl, you grow taller, develop breasts and body hair, and begin to menstruate. If you are a boy, you grow taller and stronger, develop body hair, mature sex organs, and a deeper voice. • Now physically able to reproduce another human being • Experience growth in mental capacity and a change in outlook • Develop skills and proficiencies to prepare for adult life and work • Experience wide swings in mood, levels of self-confidence and self-control, often feeling new desire for independence • Form complex new relationships • Experience increased conflict under peer and parental pressure	• Operate independently of the family • Work full-time earning a living and/or acquiring further education • Form adult relationships • May seek a permanent exclusive relationship • May marry and have children • Enjoy the satisfactions and activities of adult life	• Enjoy recognition and pleasures of adult life • Work full-time in the workplace and/or at home to meet career and family needs • May at some time experience pleasures and responsibilities of being a grandparent • May need to provide assistance to aging parents	• Often have more leisure time and/or new activities • May need to adjust lifestyle and finances at retirement • Experience physical changes due to aging including reduced strength and energy • Face greater challenges in maintaining good health • Benefit from lifelong good health habits and regular exercise
You Are Responsible For...	• Being a beautiful baby • No responsibilities • Totally dependent at this stage of life	• Gradually assuming some responsibility for basic self-care, but mostly dependent	• Learning to respect one's self and others • Practicing basic self-care in personal hygiene, health, and safety • Following parental instructions, setting goals, doing school work and home chores • Forming positive relationships with family, friends, and pets • Learning to use money and other resources wisely	• Applying full effort in school and at home to gain new knowledge and skills • Respecting yourself and others • Practicing new health hygiene routines • Making sound judgments including using restraint • Practicing the family's positive values • Using refusal skills to reject negative peer pressure • Setting and meeting short- and long-term goals and objectives • Graduating from high school	• Doing your best at work and/or studies, in personal relationships, and in the community • Progressing toward full financial independence • Responding with empathy to the needs of others • Establishing your own good health habits	• Using talents and skills to make a significant contribution at work, at home, and in the community • Serving as a role model for children and associates • If a parent, being a good parent guiding, supporting, and protecting children • Planning for older adulthood	• Learning to adjust to major changes in life • Accepting increasing amount of assistance • Paying increased attention to health and physical problems • Continuing to learn and develop with a positive outlook • Keeping your mind and body active

How Healthy Is Your Body Image?

Take the following quiz and find out! Write agree or disagree next to each of the following statements.

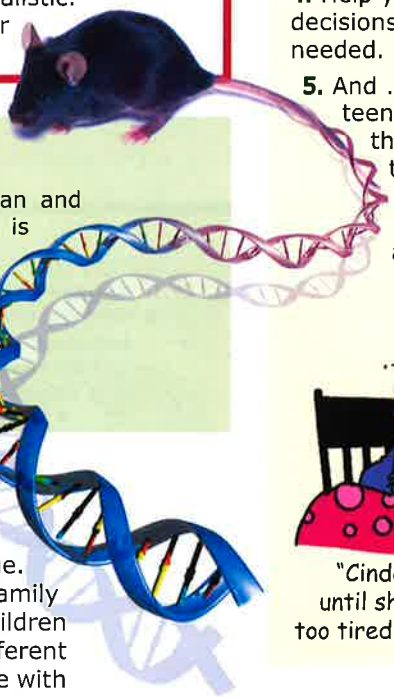
1. I know and accept my physical strengths and weaknesses. _____
2. I make choices that promote my overall good health. _____
3. I can name three things I like about my body. _____
4. I generally like and accept who I am. _____
5. I think that very slim models have the "perfect body." _____
6. I use fad diets and/or extreme exercise so that I can look better. _____
7. When I look in a mirror, I only see the parts of me I don't like. _____
8. When I get older, I want to have plastic surgery to have a better body. _____

For questions 1–4, give yourself 2 points for every agree answer and 0 points for every disagree answer. For questions 5–8, score 2 points for each disagree answer and 0 points for each agree answer.

12–16 points: Excellent! You are building up a healthy and realistic body image.

8–12 points: Many of your attitudes are positive, but you could set some goals to improve other areas to develop a healthy body image.

0–8 points: Your body image is unhealthy and unrealistic. Discuss with your health teacher, counselor, or your parents how to improve your body image.



Are You a Man or a Mouse?

Genetic researchers have sequenced both the human and the mouse genome. Amazingly, the mouse genome is 85% identical to the human genome. This makes the mouse ideal for studying and predicting how the human body might respond to chemical, biological, and viral agents. Scientists found that there are between 20,000–25,000 genes and about 3 billion chemical base pairs that make up human DNA.

What Is a Family?

The most basic definition of a family is a group of people related legally, through bloodlines or marriage. But there are many kinds of families: a nuclear family (a mother, father, and natural or adopted children living together as a unit), an extended family (different generations living together), a childless family (couple with no children), a single parent family (children live with either the mother or father), a boomerang family (adult children come back to live with their parents), and a sandwich family (where parents are raising children and at the same time caring for older parents and relatives in the household), as well as other types of families. People who have joined together to establish a loving, caring, permanent unit and live together in the same household consider themselves to be a family.

Whatever the definition, everyone agrees that families are important. In fact, your family may well be the most important influence in your life. Here are some interesting quotations about families. What do they mean to you?

Family Notes:

Parenting is old hat for your mom and dad. They have been doing it for at least eleven or twelve years. But now they are entering a new stage of parenthood. You are suddenly thinking new thoughts, wanting to do outrageous things, not doing from one minute to the next what they would expect you to do. In short, the whole family is growing up. Here are some tips that will help make parenting a little easier and will also help the family to glide through the teenage years with the greatest of ease—or at least—to experience fewer bumps along the way. Parents need to . . .

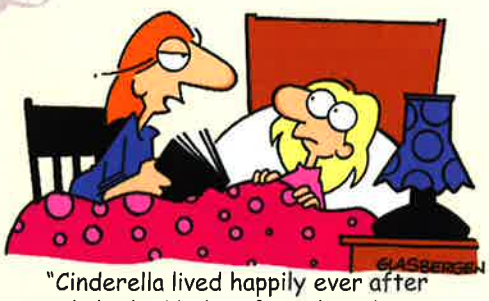
1. Establish basic house rules and stick to them.

2. Listen, listen, listen, when it is convenient and especially when it is not.

3. Encourage your teenager to test new ideas, try new projects, explore new activities, and to develop new talents within boundaries that are safe and supportive.

4. Help your teenager to make good decisions. Locate resources for help when needed.

5. And . . . (this is a hard one) let your teenagers accept responsibility for their actions. It is important for teenagers to learn from their mistakes now so they can make fewer and less serious ones as adults.



"Cinderella lived happily ever after until she had kids. After that she was too tired to know if she was happy or not."

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"Family faces are magic mirrors. Looking at people who belong to us, we see the past, present and the future." —*Gail Lumet Buckley*

"The family is the basic cell of government."—*Gloria Steinem*

"A family is like a corporation. Everyone has their own responsibility to help it function."—*M. Westover*

"Govern a small family, as you would cook a small fish, very gently."—*20th Century Chinese Proverb*

"The first, and frequently the last, source of support for individuals."—*US Census current Population Reports*

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