

If Those Dolls Were Real People (60 minutes)

Section

Your Body, Your Life

Investigative Questions

How can media (including advertising) and entertainment (including toys) help shape perceptions of what girls and boys should look like, beginning at very young ages? How can these perceptions affect mental and physical health?

Description of Content

Students take measurements of a favorite category of children's toys—action figures and fashion dolls. They'll use ratios to chart what those action figures and fashion dolls would look like if they were the height of an average U.S. man or woman. They will then discuss what effect they think toys like these might have on a young child's perspective of what is normal, and how this may affect mental and physical health.

Students are directed to the *BAM! Body and Mind™* Web site for more information on the effects of media on kids' body image.

Relevant Standards

This activity fulfills science and health education standards.

Objectives

Students will:

- Take accurate measurements
- Calculate ratios
- Describe/show how media, and even the toys they play with, can shape perceptions of how both boys and girls should look
- Describe how messages about body image can affect both mental and physical health

Ideas and Behaviors Common Among Students

This activity offers information from the literature on ways your students may already think and act with respect to body image and the media.

Materials

- Student Reproducible: Data Charts, If Those Dolls Were Real People
- An assortment of action figures and fashion dolls, both male and female

Safety

Observe normal classroom safety procedures for this module.

Teacher Background

According to Nielsen Media Research, a typical child in the United States today watches more than 19 hours of television a week. According to the non-profit organization National Institute on Media and the Family, the average American child plays computer or video games for seven hours each week. The American Academy of Pediatrics estimates that kids see 40,000 television commercials each year, and they also are exposed to ads on the Internet, in magazines, on billboards, in newspapers, on the radio, and all around them.

Media conveys powerful messages—about what is “cool” to wear, what music to listen to, which TV shows to watch. It also sends powerful messages about how people are supposed to look.

The problem is that many of the images children see in the media bear little relationship to real life. According to the non-profit organization Just Think, the average fashion model is much taller than the average woman—but weighs about 23% (one-fifth) less. According to the National Eating Disorders Association, while the average woman is 5’4” tall and weighs 140 pounds, the average model is 5’11” and weighs 117 pounds. In addition, media techniques ranging from airbrushing to the use of “body doubles” create photographs that are visually arresting, but simply no reflection of reality.

Unrealistic body image portrayed in the media, and even by forms of entertainment such as toys, may affect both mental and physical health. Seeing thin female and muscular male models can affect kids’ thoughts about their own bodies, and may cause confusion, anxiety, insecurity, anger, or depression, especially for those who already have concerns about their body or place great importance on their appearance. Some kids may risk their physical health through unhealthy dieting or excessive physical activity. Some may begin smoking to control their appetite or develop eating disorders. Some may engage in unhealthy weight training, or use anabolic steroids or dietary supplements, for muscle growth.

Just as children need to learn how to be critical of the things they read, they also need to know how to do the same with pictures, video, and sound. *MediaSharpSM*, a media literacy education guide from the Centers for Disease Control and Prevention, outlines seven key questions that are critical to understanding media messages:

- **Who is communicating and why?** Every message is communicated for a reason—to entertain, inform, and/or persuade. However, the basic motive behind most media programs is to profit through the sale of advertising space and sponsorships.
- **Who owns, profits from, and pays for media messages?** Media messages are owned. They are designed to yield results, provide profits, and pay for themselves. Both news and entertainment programming try to increase listenership or viewership to attract advertising dollars. Movies also seek to increase box-office receipts. Understanding the profit motive is key to analyzing media messages.
- **How are media messages communicated?** Every message is communicated through sound, video, text, and/or photography. Messages are enhanced through camera angles, special effects, editing, and/or music. Analyzing how these features are used in any given message is critical to understanding how it attempts to persuade, entertain, or inform.

- **Who receives media messages and what sense is made of them?** Messages are filtered through the “interpretive screens” of our beliefs, values, attitudes, and behaviors. Identifying the target audience for a given message and knowing its “filters” and the way in which it interprets media messages help make you media sharp!
- **What are the intended or underlying purposes and whose point of view is behind the message?** Behind every message is a purpose and point of view. The advertiser’s purpose is more direct than the program producer’s, though both may seek to entertain us. Understanding their purposes and knowing WHOSE point of view is being expressed and WHY is critical to being media sharp.
- **What is NOT being said and why?** Because messages are limited in both time and purpose, rarely are all the details provided. Identifying the issues, topics, and perspectives that are NOT included can often reveal a great deal about the purposes of media messages. In fact, this may be the most significant question that can uncover answers to other questions.
- **Is there consistency both within and across media?** Do the political slant, tone, local/national/international perspective, and depth of coverage change across media or messages? Because media messages tell only part of the story and different media have unique production features, it helps to evaluate multiple messages on the same issue. This allows you to identify multiple points of view, some of which may be missing in any single message or medium. This is typically referred to as the “multi-source rule.”

This activity will help students in your class see how toys and media help shape their image of a “perfect” body, and how this can affect their health. They will learn how to ask questions and think about the messages they see and hear.

Procedure

Engagement (5 minutes)

1. Pass out the dolls and ask students what they think the dolls would look like if they were real people. Take a few guesses. Then tell students your class will be taking some measurements to see for themselves.

Exploration (15 minutes)

1. Have students work in groups. Give each group one male and one female doll.
2. Using a tape measure and a doll, show students how to obtain the following measurements: height, chest, waist, inseam, and foot (length). Have students write these measurements in the first blank column of each of the charts on Data Charts, If Those Dolls Were Real People (student reproducible).

Once students have completed the measurements, have them complete the reproducible. For example, if the fashion doll is 12 inches tall and the average woman is 5 feet 4 inches tall, what would the doll’s other enlarged measurements be? First, convert the average woman’s height to inches (64), then divide by the doll’s height (12) to get a ratio of 5.33. Then multiply each of the measurements by this ratio.

Here is how a completed chart might look for a fashion doll.

	Female	Doll	If the Doll Were a Real Person	Average U.S. Female
I N C H E S	Ratio	1:5.3		
	Height	12 in.	64 in.	64 in. (5 ft. 4 in.)
	Chest	5.12	27.1	40.5
	Waist	3.75	19.9	34
	Inseam	5.4	28.6	29
	Foot	.87	4.6	9.5

Here is how a completed chart might look for an action figure.

	Male	Doll	If the Doll Were a Real Person	Average U.S. Male
I N C H E S	Ratio	1:6		
	Height	11.5 in.	69 in.	69 in. (5 ft. 9 in.)
	Chest	7.75	46.5	42.5
	Waist	5.25	31.5	37
	Inseam	5	30	30.5
	Foot	1.375	8.25	10.5

The average male and female measurements on the student reproducible are from a 2003 SizeUSA survey of 6,310 women and 3,791 men of various ethnicities, ages 18 and older. Information on SizeUSA is available at www.sizeusa.com/.

Make sure to tell students that the sizes listed for an average U.S. man or woman are just that—averages of all types of Americans—and that everyone is unique.

After students have completed the charts they will discuss the following questions in their small groups. Then you will discuss the questions as a class.

Explanation (10 minutes)

1. Discuss with students: What would the dolls look like if they were real people? Describe each in detail. (The fashion doll may have very small feet—which would mean she could not stand. Of course, the doll may not be able to stand on its own, either. The action figure might have a much larger chest and a much smaller waist than the average person.)

Elaboration (30 minutes)

1. Discuss with students the following questions: Why do you think these figures are designed with such measurements? How might these measurements affect perspectives of what is “normal”? How might this affect mental health? (Possible answers include: confusion, stress, insecurity, anger, or depression.) How might this affect physical health? (Possible answers include: unhealthy dieting, excessive physical activity,

smoking, eating disorders, unhealthy weight training, or using steroids or dietary supplements for muscle growth.)

2. Have students visit the Your Body and Your Life sections of the BAM! Web site to learn more about the issues surrounding body image. If you do not have enough computers for students to do this easily, you can print out the information at this site.
3. Discuss with students the following questions: Given what they have learned, do your students think the measurements of the dolls should be changed? What would need to change to make the dolls look more like real people? (How much longer would the fashion doll's feet have to be? How much smaller would action figure's chest have to be?)
4. Have the group write an essay expressing their opinion on why the dolls should or should not be changed. Some students may suggest specific changes. Other students may think the dolls are just fine. In either case, however, they should give reasons for their opinion.

Evaluation

Performance Descriptors

Complete the following rubric for each group:

Names of Students in Group: 1. 2. 3. 4.		
Performance Descriptor	Scoring Criteria	Teacher Score
Measurement (up to 10 points)	Students took measurements of the doll and entered them in the first column on the chart.	
Calculation (up to 15 points)	Students discussed how the doll would look in real life.	
Analysis, Application, and Stating an Opinion (up to 15 points)	Students discussed how unrealistic proportions might affect perspectives of what is "normal," as well as mental and physical health. Students wrote an essay clearly stating their opinion on why the dolls should or should not be changed.	
Total Points		50

Web Resources

Centers for Disease Control and Prevention (CDC):

CDC BAM! Body and Mind™

BAM! Body and Mind is brought to you by the Centers for Disease Control and Prevention (CDC), an agency of the U.S. Department of Health and Human Services (DHHS). BAM! was created to answer kids' questions on health issues and recommend ways to make their bodies and minds healthier, stronger, and safer. BAM! also serves as an aid to teachers, providing them with interactive activities to support their health and science curriculums that are educational and fun.

CDC Division of Adolescent and School Health (DASH) Healthy Schools, Healthy Youth: www.cdc.gov/HealthyYouth/index.htm

This site provides descriptions of DASH's initiatives to prevent the most serious health risk behaviors among children, adolescents, and young adults. You can find information on specific health topics that affect youth, data and statistics, and details on school health programs.

CDC VERB™ Youth Media Campaign: <http://www.cdc.gov/youthcampaign/>

This site includes materials for kids and adults associated with the VERB™ campaign, which encourages young people ages 9–13 years to be physically active every day. You can also find research and statistics on youth, physical activity, media, and the campaign itself.

American Academy of Pediatrics: www.aap.org

Television, Advertising, and Children: <http://www2.aap.org/healthtopics/mediause.cfm>

A comprehensive overview about the impact of media on children, designed for parents. Sections focus on the rating system for films, Internet use, and guidelines for television viewing.

Understanding the Impact of Media on Children and Teens: <http://safetynet.aap.org/>

A short, research-based fact sheet on the impact of media. The guide includes specific activities for parents to use with their children.

Cable in the Classroom Links to Media Literacy Organizations: <http://www.ciconline.org/>

This site provides a comprehensive list of media literacy organizations that offer resources, research, and background information on media literacy, including tips for teachers, parents, and caregivers.

KidsHealth: [www.kidshealth.org](http://kidshealth.org) Kids and Eating Disorders:
http://kidshealth.org/kid/health_problems/learning_problem/eatdisorder.html

A simple explanation of eating disorders written at a level that elementary students can understand.

I'm Growing Up – But Am I Normal?
www.kidshealth.org/kid/grow/body_stuff/growing_up_normal.html

A brief explanation for kids that all people are different. This would be helpful for students who are worried that they are too short or too tall, too heavy or too thin.

PBS Kids: www.pbskids.org
PBS Kids Go! Don't Buy It: Get Media Smart!:
www.pbskids.org/dontbuyit/advertisingtricks/

This guide helps young people explore the effects of media in their lives, and stimulates family discussion on media. Talking points and activities help children and their families understand differences between media entertainment and real-life values.

Text Correlations

Glencoe Science Probe I, pages 202-203

Glencoe Teen Health, Course 1, page 103, "False or Misleading Claims"

Glencoe Teen Health, Course 2, Chapter 2: Taking Responsibility for Your Health; page 110, "Positive Body Image"

Glencoe Teen Health, Course 3, Chapter 10: Your Body Image

Relevant Standards

National Science Education Standards

Content Standard F, Grades 5-8: Science and Technology in Society

Technology influences society through its products and processes. Technology influences the quality of life and the ways people act and interact. Technological changes are often accompanied by social, political, and economic changes that can be beneficial or detrimental to individuals and to society. Social needs, attitudes, and values influence the direction of technological development.

Benchmarks for Science Literacy

Chapter 6, Benchmark A, Grades 6-8, Ideas 1, 2, 4-6 – Human Identity

However much people may vary in appearance and behavior, the variations are minor when compared with the internal similarity of all human beings. As great as cultural differences among groups of people seem to be, it is their languages, technologies, and arts that distinguish human beings from other species. The theme of same/different is at the core of distinguishing what is

human. Often individuals are very aware of differences between themselves and their family members, between family members and neighbors, between neighbors and foreigners, etc.

At this level, students are studying the details of animal digestion, respiration, and reproduction, and so, in learning how human beings carry out these same functions, they can understand some of the commonalities between human beings and other animals. Middle-school students are interested in machines that support or enhance life functions, so they should also look at ways in which human beings use various machines to improve speed, mobility, strength, hearing, seeing, etc. Whenever students learn something about the ways that technology helps human beings, they also learn something about human capabilities and limitations.

By the end of the 8th grade, students should know that

- Like other animals, human beings have body systems for obtaining and providing energy, defense, reproduction, and the coordination of body functions.
- Human beings have many similarities and differences. The similarities make it possible for human beings to reproduce and to donate blood and organs to one another throughout the world. Their differences enable them to create diverse social and cultural arrangements and to solve problems in a variety of ways.
- Specialized roles of individuals within other species are genetically programmed, whereas human beings are able to invent and modify a wider range of social behavior.
- Human beings use technology to match or excel many of the abilities of other species. Technology has helped people with disabilities survive and live more conventional lives.
- Technologies having to do with food production, sanitation, and disease prevention have dramatically changed how people live and work and have resulted in rapid increases in the human population.

Chapter 6, Benchmark D, Grades 6-8, Idea – Learning

Most students are intrigued to learn about rites of passage in different cultures and compare them to their own.

Various body changes occur as adults age. Muscles and joints become less flexible, bones and muscles lose mass, energy levels diminish, and the senses become less acute. Women stop releasing eggs and hence can no longer reproduce. The length and quality of human life are influenced by many factors, including sanitation, diet, medical care, sex, genes, environmental conditions, and personal health behaviors.

Chapter 7, Benchmark D, Grades 6-8, Idea 1 – Social Trade-Offs

There are tradeoffs that each person must consider in making choices—about personal popularity, health, family relations, and education, for example—that often have life-long consequences.

National Health Education Standards

Standard 1

Students will comprehend concepts related to health promotion and disease prevention.

Relevant performance indicators for grades 5-8:

- Describe the interrelationship of mental, emotional, social and physical health during adolescence.
- Analyze how environment and personal health are interrelated.

Standard 2

Students will demonstrate the ability to access valid health information and health-promoting products and services.

Relevant performance indicators for grades 5-8:

- Analyze how media influences the selection of health information and products.

Standard 4

Students will analyze the influence of culture, media, technology and other factors on health.

Relevant performance indicators for grades 5-8:

- Describe the influence of cultural beliefs on health behaviors and the use of health services.
- Analyze how messages from media and other sources influence health behaviors.
- Analyze the influence of technology on personal and family health.
- Analyze how information from peers influences health.

Ideas and Behaviors Common Among Students

- When asked about their experiences and perceptions of playing with Barbie, preteen girls say that they enjoy playing with her, but described her body as “perfect,” “so skinny,” and “with perfect blue eyes” (Kuther & MacDonald, 2004).
- When asked to react to drawings and photographs, females were most likely to describe body shapes with exaggerated anatomical traits—similar to Barbie’s—as the most beautiful (Magro, 1997).
- Among 9-14 year old children in a large research study, the strongest influence on whether they had concerns about their weight was the media, followed by parents and peers. In addition, those making a strong effort to look like same-sex figures in the media were more likely than their peers to develop weight concerns and become constant dieters (Field et al., 2001).

- In a study on media influence and body image of both adolescent boys and girls, girls said they were more concerned about their body size and shape and adopted more strategies to decrease weight and restrict eating practices, while boys were more concerned about muscle tone and adopted more strategies to increase weight (McCabe & Ricciardelli, 2001).
- When asked about why they exercise, 9-16 year olds were likely to say that their physical activity was an “effort to look like figures in the media.” The media’s influence on adolescent exercise was stronger among older boys and girls than younger ones (Taveras et al., 2004).
- Many studies have shown that the amount of television, movies, and music videos both children and adolescents watch is related to an increased desire to be thin, dissatisfaction with their own appearance, and the onset of eating disorder symptoms (Stice et al., 1994; Harrison, 2000; Hargreaves, 2002; Presnell, Bearman, & Stice, 2004).
- In a sample of 12-13 year old boys, magazines and television appeared to have a negative effect on many boys’ body image, making them feel too skinny or that they need to exercise more. After viewing these media, boys said comments such as “I need to put on weight” and “I think I have a lot of work to do” (Ricciardelli, McCabe, & Banfield, 2000).
- Even after watching just 30 minutes of television programming and advertising, females reported a more negative perception of the shape of their body (Myers & Biocca, 1992).
- Studies have shown that over time the media’s and toys’ portrayal of the ideal male body type has become more muscular, while body dissatisfaction and anabolic steroid use among adolescent males have increased (Labre, 2002).

References

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Magro, A.M. (1997). Why Barbie perceived as beautiful. *Perceptual and Motor Skills*, 85(1), 363-374.

McCabe, M.P., & Ricciardelli, L.A. (2001). Parent, peer, and media influences on body image and strategies to both increase and decrease body size among adolescent boys and girls. *Adolescence*, 36(142), 225-40.

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Stice, E., Schupak-Neuberg, E., Shaw, H.E., & Stein, R.I. (1994). Relation of media exposure to eating disorder symptomatology: an examination of mediating mechanisms. *Journal of Abnormal Psychology*, 103(4), 836-40.

Taveras, E.M., Rifas-Shiman, S.L., Field, A.E., Frazier, A.L., Colditz, G.A., & Gillman,

M.W. (2004). The influence of wanting to look like media figures on adolescent physical activity. *Journal of Adolescent Health*, 35(1), 41-50.

Student Reproducible:

Data Charts If Those Dolls Were Real People

Take the following measurements for each of the action figures or fashion dolls: height, chest, waist, inseam, and foot (length). Write those measurements in the first column.

Here is a chart for a female doll.

	Female Doll	If the Doll Were a Real Person	Average U.S. Female	
I N C H E S	Ratio	1:5.3		
	Height	12 in.	64 in. (5 ft. 4 in.)	
	Chest	5.12	27.1	40.5
	Waist	3.75	19.9	34
	Inseam	5.4	28.6	29
	Foot	.87	4.6	9.5

Now determine the ratio between the doll and an average person. Suppose the fashion doll is 12 inches tall. What is the ratio between the doll and an average woman's height?

First, convert the average woman's height to inches (64). Now divide 64 inches by the doll's height (12 inches). The ratio would be 5.33.

The ratio between my female doll and an average woman (64/height of my doll) is _____.

RATIO

$$12 \text{ in} \overline{) 64 \text{ in.}} \quad 5.33$$

Multiply each of the other measurements by this ratio. (For example, the doll's foot measurement: .87 inches. Multiply by 5.33. In real life, the doll's foot would be 4.6 inches long.)

Here is a chart for a male doll.

	Male Doll	If the Doll Were a Real Person	Average U.S. Male	
I N C H E S	Ratio	1:6		
	Height	11.5 in.	69 in. (5 ft. 9 in.)	
	Chest	7.75	46.5	42.5
	Waist	5.25	31.5	37
	Inseam	5	30	30.5
	Foot	1.375	8.25	10.5

The ratio between my male doll and an average man (69/height of my doll) is _____.

Multiply each of the other measurements by this ratio.

Once you have your measurements, try to draw a picture of what your doll would look like in real life. Be as specific as you can.