



2003 AGENDA

SUBJECT Report Pursuant to AB 2532/Pacheco, Chapter 1096 of the Statutes of 2002: Textbook Weight	X	ACTION
	X	INFORMATION
		PUBLIC HEARING

Recommendation:

- 1) Receive report on textbook weight.
- 2) Direct staff to work with the Curriculum Commission to review the data findings and options related to this issue, and to have the Commission compile a recommendation report to the Board in March of 2004.

Summary of Previous State Board of Education Discussion and Action

N/A

Summary of Key Issue(s)

Assembly Bill 2532 by Assemblymember Pacheco, Chapter 1096 of the Statutes of 2002, requires the State Board of Education to adopt maximum weight standards for elementary and secondary school textbooks by July 1, 2004. This legislation specifically requires the Board to take into consideration the health risks to students when devising these new standards.

The attached report outlines some of the major issues surrounding this topic, including the research into student back injuries and their relation to heavy backpacks. The report includes data collected by weighing State Board-adopted textbooks for the core subjects of Reading/Language Arts, Mathematics, History-Social Science, and Science for grades K-8, as well as, a sampling of locally-adopted materials for grades 9-12 in the four core areas.

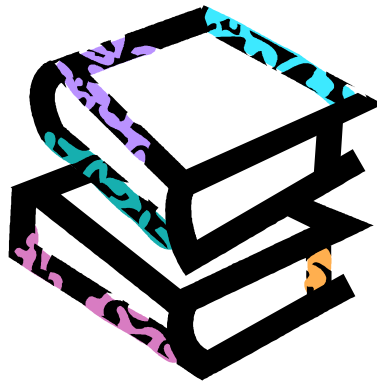
The report demonstrates that the individual weight of State Board-adopted (for K-8) and locally adopted (9-12) textbooks in the four core subjects of History-Social Science, Mathematics, Reading/Language Arts, and Science does not exceed the maximum weight that students should carry, as recommended by health professionals. However, the combined average weight of the textbooks of the four core areas does exceed this recommended maximum at nearly all grade levels from K-12, presenting a health hazard for students. Pediatricians and chiropractors recommend that students not carry more than fifteen percent of their body weight in a backpack, or risk negative health impacts.

Fiscal Analysis (as appropriate)

N/A

Attachment(s)

[Textbook Weight in California: Data and Analysis \(16 page report\)](#)



Textbook Weight in California: Data and Analysis

**A Report Prepared for the State Board of Education
Dr. Thomas Adams, Director
Suzanne Rios, Administrator
Dr. Kenneth McDonald, Adoption Analyst
Curriculum Framework and Instructional Resources Division
California Department of Education**

June 25, 2003

Table of Contents

Part 1: Executive Summary	3
Part 2: The Scope of the Problem	5
Part 3: Data	6
Part 4: Conclusion	13
Appendix 1: Publisher Key	14
Appendix 2: Assembly Bill 2532, Chapter 1096	15

Executive Summary On AB 2532: Textbook Weight Legislation

Introduction:

Assembly Bill 2532 by Assemblymember Pacheco, Chapter 1096 of the Statutes of 2002, requires the State Board of Education to adopt maximum weight standards for elementary and secondary school textbooks by July 1, 2004. This legislation specifically requires the Board to take into consideration the health risks to students when devising these new standards.

This report outlines some of the major issues surrounding the topic of heavy textbooks and the impact on student health, including the research into student back injuries as a result of heavy backpacks. The report focuses on data collected by weighing State Board-adopted textbooks for the core subjects of Reading/Language Arts, Mathematics, History-Social Science, and Science for grades K-8, as well as, a sampling of locally-adopted materials for grades 9-12 in the core areas. This data collection was conducted in order to establish a baseline understanding of the scope of the problem.

This report is viewed as a starting point for the dialogue between the State Board of Public Education, the Superintendent of Public Instruction, the education community, the publishing industry and other interested parties to discuss the options and the best interests of the students of California in moving toward a system of textbook weight standards.

Analysis of Data Collection:

- ◆ **This report only analyzes the weight of textbooks**, and does not take into account the other materials that students may be carrying in their backpacks.
- ◆ **Pediatricians and chiropractors recommend that students not carry more than fifteen percent of their body weight in a backpack**, or risk negative health impacts.
- ◆ **The data demonstrates that the *individual weight* of State Board-adopted (for grades 1-8) and locally adopted (for grades 9-12) textbooks in the four core subjects of History-Social Science, Mathematics, Reading/Language Arts, and Science does not exceed the maximum weight that students should carry, as recommended by health professionals.** A selection of textbooks was weighed at various Sacramento area schools and Learning Resource Display Center (LRDC) sites.
- ◆ **However, the *combined average weight* of the textbooks in the four core areas does exceed this recommended maximum at nearly all grade levels from 1-12, presenting a health hazard for students.** For this grade range, the combined average weight of the four core textbooks ranges from just over 8 pounds at 1st grade to over 20 pounds at 11th grade. These totals represent as little as 11.3% of body weight for 12th grade boys to as much as 17.7% of body weight for 2nd grade girls. In the data summary, the combined average textbook weight for every grade level except for 10th grade boys and 12th grade boys and girls is over this recommended level.

Recommendation:

This first phase of a report on textbook weight demonstrates that instructional materials in the four core areas exceed the maximum recommended weight for students to carry on a regular basis. Thus, it is our recommendation that the State Board President in collaboration with the Superintendent of Public Instruction convene a “working group” of representatives from the key education organizations and associations, legislative staff, and representatives from the publishing industry to discuss the data findings and options related to this issue. This group would compile a second phase report to the State Board at their January 2004 meeting, on recommendations for maximum weight standards. This would enable the Board to make their final adoption of weight standards by the Legislative deadline of July 1, 2004.

The Scope of the Problem

Although the research on the subject of backpack-related injuries to students is fairly recent, there already exists conflicting views on the significance of the problem. The California legislation, Assembly Bill 2532, cited the raw data on various categories of injuries collected by the United States Consumer Product Safety Commission (CPSC) from emergency rooms, and concluded that in 1999, “more than 3,400 pupils between 5 and 14 years of age, inclusive, sought treatment in hospital emergency rooms for injuries related to backpacks or book bags.” According to the CPSC data, over the period from 1994-2000, more than 23,000 youths ages 6 to 18 were treated in emergency rooms for backpack-related injuries.¹

However, a recent article by Brent Wiersema, Eric Wall, and Susan Foad, entitled “Acute Backpack Injuries in Children,” in the journal Pediatrics has raised some questions about this data. A panel of medical researchers analyzed the CPSC’s data and found that only a small percentage of backpack injuries treated in emergency rooms are related to the weight of the backpack. According to this study, most backpack-related injuries correspond to “nonstandard” use of a pack, including tripping over it or getting hit with one. The study found that the most common means of injury were tripping over the backpack (28%), followed by wearing (13%), and getting hit by the backpack (13%). Back injuries comprised only 11% of the injuries suffered by students, with head injuries most common at 22%.²

This study raises doubts about the health dangers of heavy backpacks. However, it too fails to completely illuminate the scope of the problem. Both the often-cited CPSC data and the Pediatrics study deal only with emergency room data, while back injuries tend to be chronic and treated in a doctor’s office rather than in an emergency room. In addition, the Pediatrics study dealt with a very small sample of injuries, including only 247 students in its results. No studies exist that examine the broader picture of student back injuries, so ultimately it is primarily anecdotal evidence and media coverage that have shaped this debate.³

One issue is the general trend of removing lockers where students can store books in between classes. Lockers have been removed in many schools due to the proliferation of both weapons and drugs in schools. Districts face a double-edged sword in terms of locker searches; if they conduct searches without adequate cause, they risk a lawsuit claiming violation of a student’s Fourth Amendment protections, but if they fail to conduct a search and a student later conducts

¹ Assembly Bill 2532, Chapter 1096. See also Kathy Boccella, “Some see a book ban as the cure for backpack bloat,” Philadelphia Inquirer, 15 November 2002 (story online at <<http://www.philly.com/mld/inquirer/4522888.htm>>, 24 February 2003). CPSC data can be accessed directly online at <<http://63.74.109.9/neiss/default.html>> (24 February 2003).

² Brent Wiersema, Eric Wall, and Susan Foad, “Acute Backpack Injuries in Children,” Pediatrics vol 111, no. 1 (January 2003), 163-166. See also “Study: ER backpack pains rarely involve backs,” CNN.com, <<http://www.cnn.com/2003/EDUCATION/01/06/backpack.injuries.ap/>> (25 February 2003); Bill Lindelof, “Packs may be a pain, just not in the back,” Sacramento Bee, 29 Wednesday 2003, available online at <<http://www.sacbee.com/content/news/education/story/6017951p-6973953c.html>> (25 February 2003).

³ For example, see Bocella, “Some see a book ban...”; Sam Dillon, “Heft of Students’ Backpacks Turns Into Textbook Battle,” New York Times, 24 December 2002, A1; Michael Flaherty, “Textbook Torture for Students,” San Francisco Examiner, 19 September 2002, available online at <<http://www.examiner.com/news/default.jsp?story=n.backpacks.0919w>> (25 February 2002).

violence with a weapon, sells drugs, etc., the district faces liability suits from the parents of victims affected by those crimes.⁴ Confronted with these difficulties, some districts decide that having lockers is simply not worth this cost.

Another issue that must be kept in mind is the fact that many of the items found in students' backpacks today are not textbooks. Again, without lockers that can serve as a storage space, students even at the elementary grades may be lugging food, additional clothing, electronic devices such as cellular phones, pagers, and game machines, binders, assorted school supplies, and various personal effects. While it may appear that a solution would be to ban unnecessary personal items on school campuses, this would be extremely unpopular, and impossible to implement without backpack searches that would likely run into the legal minefield of Fourth Amendment suits mentioned above. Efforts to ban just cellular phones on school campuses, for instance, have often run into difficulties.⁵

Assembly Bill 2532 added Section 49415 to the California Education Code. This section requires the State Board of Education to adopt maximum weight standards for student textbooks in elementary and secondary schools by July 1, 2004. The following section of this report provides data on the actual weight of textbooks adopted by the State Board for grades 1-8, and by local districts for grades 9-12, to assist the Board as it prepares to meet this mandate.

The Data

The following tables were compiled by weighing textbooks at various locations during January and February 2003.⁶ The primary focus was on student edition textbooks for the four core content areas (Reading/Language Arts, Mathematics, History-Social Science, and Science) for grades 1-12. Kindergarten materials were not weighed due to the fact that there is typically not a single student edition textbook for most programs at that grade level. Due to the incredible variety of supplemental materials, workbooks, homework assignments, literature libraries, experiment kits, and other materials that are included in these programs, ancillary materials were not weighed.

⁴ The current standard defined by Supreme Court decisions is that school officials must have a "reasonable suspicion" that they will find something that is illegal or against school rules. Some districts create rules specifically defining the locker as school property and granting officials the right of search, but even these policies are no guarantee that a district will win an expensive lawsuit filed after the fact. See, for example, *New Jersey v. T.L.O.*, 468 U.S. 1214 (1984).

⁵ For examples of the debates over cell phones in schools, see Patti Ghezzi, "Cellphone ban likely will be softened," Atlanta Journal-Constitution, 30 July 2002, online at <<http://www.accessatlanta.com/ajc/metro/backtoschool/dekalb/cell.html>> (25 February 2003); also Michelle Galley, "Cellphone Bans Get a Second Look," Education Week, 31 October 2001, online at <<http://www.edweek.org/ew/newstory.cfm?slug=09cellphone.h21>> (25 February 2003).

⁶ Textbooks were weighed at the following locations: California Department of Education, 1430 N Street, Sacramento, CA 95814; Elk Grove Unified School District, 9510 Elk Grove-Florin Road, Elk Grove, CA 95624; Sacramento County Office of Education, 9738 Lincoln Village Drive, Sacramento, CA 95827; Mira Loma High School, 4000 Edison Avenue, Sacramento, CA 95821. The books were weighed with a Pelouze 10lb. digital scale provided by the California Department of Education. The CFIR Division is grateful for the assistance of those individuals who made their collections of materials available for this project, particularly Carol Teresi, Andrea Fiske, and Edith Crawford.

Grades 1-8

Materials from grades 1-8 were taken from the State Board’s adoption lists from the four most recent standards-aligned adoptions: 1999 History-Social Science, 2000 Science, 2001 Mathematics, and 2002 Reading/Language Arts/English Language Development. An effort was made to be comprehensive; however, programs that did not rely primarily on a text, or reflect a regular course of study (e.g. the Reading/Language Arts/English Language Development Intervention Programs), were not included in the data summaries.

Grades 9-12

Data from grades 9-12 reflects more of a general sampling than a comprehensive list of available materials. Materials at these grade levels are adopted at the local level by resolution of the governing board of a local education agency (LEA), and no centralized listing of such materials is maintained by the State Board or the Department of Education. As a result, there is a broader range of materials available at these grade levels. The data provided for grades 9-12 demonstrates a selection of materials that includes both regular and honors high school texts.

Publisher names are anonymous throughout the data tables; however, a full listing of all publishers cited in this report is provided in Appendix 1.

Programs that contained more than one text per grade level (i.e. a multi-volume series) were averaged and that average entered in the data field for that grade level. Such programs have been marked with a footnote.

Table 1: Reading/Language Arts, Grades 1-8

Grade Level	1	2	3	4	5	6	7	8
Publisher								
Publisher A	11.2oz ⁷	2lbs, 14oz ⁸	2lbs, 6.6oz ⁸	4lbs, 0.6oz	3lbs, 14.2oz	3lbs, 11.2oz		
Publisher B	2lbs, 2.5oz ⁸	2lbs, 9.2oz ⁸	2lbs, 2.4oz ⁸	3lbs, 8.0oz	3lbs, 14.6oz	4lbs, 0.6oz		
Publisher C						4lbs, 7.4oz	4lbs, 10.0oz	4lbs, 13.6oz
Publisher D						3lbs, 12.2oz	3lbs, 13.8oz	4lbs, 0.4oz
Publisher E						4lbs, 12.6oz	4lbs, 14.4oz	5lbs, 3.8oz
Publisher F						4lbs, 2.6oz	4lbs, 4.4oz	4lbs, 12.0oz
Average for grade level	1lb, 6.9oz	2lbs, 11.6oz	2lbs, 4.5oz	3lbs, 12.3oz	3lbs, 14.4oz	4lbs, 2.4oz	4lbs, 6.7oz	4lbs, 11.5oz

⁷ This program has a multiple-volume set of textbooks at this grade level; the value provided here is an average of those volumes.

Table 2: Mathematics, Grades 1-8

Grade Level	1	2	3	4	5	6	7	8
Publisher								
Publisher A	3lbs, 6.6oz	3lbs, 6.8oz	3lbs, 10.0oz	3lbs, 10.8oz	3lbs, 8.8oz			
Publisher E ⁸						2lbs, 3.8oz	2lbs, 7.2oz	3lbs, 3.6oz
Publisher E						⁹	4lbs, 3.4oz	3lbs, 2.0oz ⁸
Publisher F							4lbs, 3.0oz	3lbs, 6.0oz
Publisher G	3lbs, 5.4oz	3lbs, 4.4oz	3lbs, 10.0oz	3lbs, 10.8oz	3lbs, 13.2oz	4lb, 1.0oz		
Publisher H	2lbs, 14.6oz	2lbs, 15.8oz	3lbs, 12.2oz	3lbs, 14.2oz	3lbs, 14.8oz	3lbs, 14.4oz		
Publisher I	1lb, 14.8oz	1lb, 14.8oz	2lbs, 11.0oz	2lbs, 11.2oz	2lbs, 10.8oz			
Publisher J	2lbs, 13.8oz	2lbs, 13.4oz	2lbs, 8.4oz	2lbs, 8.8oz	2lbs, 10.4oz	2lbs, 12.0oz		
Publisher K			2lbs, 8.6oz	2lbs, 10.8oz	3lbs, 5.0oz	4lbs, 4.0oz		
Average for grade level	2lbs, 14.2oz	2lbs, 14.2oz	3lbs, 2.0oz	3lbs, 3.1oz	3lbs, 5.2oz	3lbs, 7.0oz	3lbs, 9.9oz	3lbs, 3.9oz

Table 3: History-Social Science, Grades 1-8

Grade Level	1	2	3	4	5	6	7	8
Publisher								
Publisher A			2lbs, 4.2oz	2lbs, 6.4oz	3lbs, 11.0oz	3lbs, 3.2oz	3lbs, 4.4oz	4lbs, 2.4oz
Publisher C								4lbs, 7.4oz
Publisher D								4lbs, 11.4oz
Publisher D								2lbs, 15.0oz
Publisher F								4lbs, 5.4oz
Publisher G	1lb, 12.4oz	1lb, 14.0oz	2lbs, 8.0oz	2lbs, 12.8oz	3lbs, 11.0oz	2lbs, 15.2oz		

⁸ This publisher submitted two programs that were both adopted.

⁹ The student edition textbook for this grade level was not available for weighing.

Grade Level	1	2	3	4	5	6	7	8
Publisher								
Publisher H	2lbs, 1.0oz	2lbs, 4.4oz	2lbs, 8.8oz	3lbs, 0.8oz	3lbs, 15.8oz	3lbs, 8.2oz		
Publisher L								3lbs, 15.6oz
Publisher M ¹⁰					1lb, 9.2oz			1lb, 9.2oz
Publisher N ¹¹	10.4oz	10.4oz	13.4oz		14.4oz	6.9oz		
Average for grade level	1lb, 7.9oz	1lb, 9.6oz	2lbs, 0.6oz	2lbs, 12.0oz	2lbs, 12.3oz	2lbs, 8.4oz	3lbs, 4.4oz	3lbs, 11.8oz

Table 4: Science, Grades 1-8

Grade Level	1	2	3	4	5	6	7	8
Publisher								
Publisher A	1lbs, 14.0oz	1lbs, 14.0oz	2lbs, 9.4oz	10.2oz ¹²	10.9oz ¹³			
Publisher C						3lbs, 1.8oz ⁸	3lbs, 5.0oz ⁸	3lbs, 0.2oz ⁸
Publisher D						3lbs, 8.8oz	3lbs, 13.0oz	3lbs, 10.2oz
Publisher F						4lbs, 1.8oz	4lbs, 5.4oz	4lbs, 10.4oz
Publisher G	2lbs, 4.6oz	2lbs, 6.0oz	2lbs, 10.8oz	2lbs, 13.6oz	3lbs, 2.2oz	3lbs, 3.4oz		
Publisher H	2lbs, 7.4oz	2lbs, 7.0oz	2lbs, 10.4oz	2lbs, 12.8oz	3lbs, 0.6oz			
Average for grade level	2lbs, 3.3oz	2lbs, 3.7oz	2lbs, 10.2oz	2lbs, 1.5oz	2lbs, 4.6oz	3lbs, 8.0oz	3lbs, 13.1oz	3lbs, 12.3oz

¹⁰ This program was adopted for grades 5 and 8 and consists of an eleven volume series. The value given is an average of these titles.

¹¹ This publisher's programs are multimedia-based. The values given are for the student activity books that accompany the program.

¹² This program has unit books for this grade level, rather than a single text. The value given is an average of the different books.

Table 5: Reading/Language Arts, Grades 9-12¹³

Grade Level	9	10	11	12
Publisher				
Publisher D	4 lbs, 14.6oz	4lbs, 9.2oz	5lbs, 10.2oz	5lbs, 1.0oz
Publisher H				2lbs, 10.0oz ¹⁴
Average for grade level	4lbs, 14.6oz	4lbs, 9.2oz	5lbs, 10.2oz	3lbs, 13.5oz

Table 6: Mathematics, Grades 9-12¹⁵

Domain	Algebra	Geometry	Trigo- nometry/ Algebra II	Precalculus/ Calculus/ Advanced Mathematics
Publisher				
Publisher A			3lbs, 0.8oz	6lbs, 3.4oz
Publisher C	4lbs, 10.4oz	4lbs, 14.6oz	5lbs, 8.2oz	4lbs, 10.0oz
Publisher E	3lbs, 3.6oz	4lbs, 3.4oz		3lbs, 11.6oz
Publisher F	3lbs, 6.0oz			
Publisher O				4lbs, 6.4oz
Average for grade level	3lbs, 12.0oz	4lbs, 9.0oz	4lbs, 4.5oz	4lbs, 11.9oz

¹³ Frequently, high school reading/language arts programs focus primarily on reading novels, rather than a single unified student edition textbook.

¹⁴ This is an anthology for an honors literature course.

¹⁵ The *Mathematics Content Standards* and the *Mathematics Framework for California Public Schools* do not mandate which domains are covered at each grade level, instead providing a range of levels at which each domain may be taught. Since there is such a range of students at the secondary level, and great variety between programs, the categories here offer only one possible progression from grades 9-12.

Table 7: History-Social Science, Grades 9-12

Grade Level	9	10	11	12
Publisher				
Publisher C	4lbs, 5.8oz		5lbs, 4.4oz	3lbs, 14oz ¹⁶
Publisher E		4lbs, 0.6oz	6lbs, 0.0oz	
Publisher F		4lbs, 11.6oz	4lbs, 15.6oz	
Publisher G		5lbs, 0.6oz		
Publisher P				3lbs, 8.2oz
Average for grade level	4lbs, 5.8oz	4lbs, 9.6oz	5lbs, 6.7oz	3lbs, 11.1oz

Table 8: Science, Grades 9-12¹⁷

Domain	Earth Science	Chemistry/ Physical Science	Biology/ Life Science	Physics
Publisher				
Publisher C	4lbs, 5.4oz	4lbs, 5.4oz	5lbs, 4.4oz ¹⁸	3lbs, 9.8oz
Publisher D		4lbs, 3.0oz	4lbs, 5.8oz ¹⁹	
Publisher F			5lbs, 12.2oz	4lbs, 14.4oz
Publisher H		5lbs, 13.4oz		
Publisher O		4lbs, 2.4oz	6lbs, 6.6oz	2lbs, 13.2oz
Publisher Q		3lbs, 2.4oz		
Average for domain	4lbs, 5.4oz	4lbs, 5.3oz	5lbs, 7.3oz	3lbs, 12.5oz

¹⁶ This publisher offers both a government and an economics text at this grade level; the value given here is an average of these two.

¹⁷ The *Science Content Standards* are not defined by grade level, but rather by domain. Thus the exact progression of grades through these subjects may vary by LEA; the progression given here is only a common example for grades 9-12.

¹⁸ This publisher offered more than one program for this grade level (including both honors and standard level programs). The value given here is an average of the publisher's offerings at this level.

The data support the conclusion that textbooks are a significant percentage of a student’s overall backpack weight. Chiropractors, physical therapists, and pediatricians have recommended that backpacks do not exceed fifteen percent of a child’s body weight.¹⁹ Table 9 offers a comparison of the combined weight of textbooks in the four core content areas with the average weight of a student at each grade level. The ratio of these two weights is provided as a percentage, which can be compared with the fifteen percent goal. Since average student weight data per grade level varies by gender, results for both genders was provided in this table. While statistically the difference in weights across gender is minor (<5%) through the elementary and middle grades, it becomes quite significant in high school.

Table 9: Combined Weight of Average Textbooks as a Percentage of Average Student Weight

Grade Level	Average Textbook Weight, Four Core Content Areas	Average Student Weight, Boys ²⁰ (pounds)	Book Weight as Percentage of Student Weight, Boys	Average Student Weight, Girls (pounds)	Book Weight as Percentage of Student Weight, Girls
1	8lbs, 0.3oz	48.5	16.5%	47.5	16.9%
2	9lbs, 7.1oz	54.5	17.3%	53.5	17.7%
3	10lbs, 1.3oz	61.25	16.5%	60.75	16.6%
4	11lbs, 12.9oz	69	17.1%	69	17.1%
5	12lbs, 4.5oz	74.5	16.5%	77	15.9%
6	13lbs, 9.8oz	85	16.0%	87.5	15.6%
7	15lbs, 2.1oz	89	17.0%	94	16.1%
8	15lbs, 7.5oz	99	15.6%	103	15.0%
9	17lbs, 5.8oz	112	15.5%	109	15.9%
10	18lbs, 1.1oz	123	14.7%	114	15.8%
11	20lbs, 12.7oz	134	15.5%	118	17.6%
12	16lbs, 1.0oz	142	11.3%	121	13.3%

The most basic conclusion evident in this table is immediately clear: the combined average weight of **student textbooks in just the four core subjects meets or exceeds the recommended total backpack weight for students in grades 1-9, for girls in grade 10, and both genders in grade 11.** For 10th grade boys and both genders in grade 12, the weight of the four books did not exceed the fifteen percent threshold, but still represented a considerable burden exclusive of all other backpack content.

It must be kept in mind that the textbooks weighed indicate only a portion of a student’s total backpack weight, and that the values given are an average. Textbooks for other subjects, novels, homework assignments, gym clothes, food, school supplies, and personal possessions are all commonly found in a student’s backpack but are beyond the scope of this report. Thus, it would

¹⁹ Assembly Bill 2532, Chapter 1096 of the Statutes of 2002, Section 1.(d); Flaherty, “Textbook Torture...”

²⁰ Source: National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000), charts available at <<http://www.cdc.gov/growthcharts>> (25 February 2003).

not be surprising to find students carrying backpacks heavier than recommended by health professionals.

Conclusion

This report has shown that textbooks in the four core areas exceed the maximum recommended weight for students to carry on a regular basis. With this information, it is clear that the actual weight of backpacks, given the presence of other materials carried by an average student, far exceeds the recommendations of health professionals. The State Board has received a mandate from the Legislature to adopt maximum weight standards for textbooks used by students in elementary and secondary schools in California. The data in this report, combined with the brief summary of the issues at stake, suggests that the Board will have to consider many variables when adopting these standards.

Appendix 1: Publisher Key

The following table lists the publishers referenced in the data tables within this report.

Publisher A	Houghton Mifflin
Publisher B	SRA/McGraw-Hill
Publisher C	Glencoe/McGraw-Hill
Publisher D	Holt, Reinhart and Winston
Publisher E	McDougal Littell
Publisher F	Prentice Hall
Publisher G	McGraw-Hill School Division
Publisher H	Harcourt
Publisher I	CSL Associates
Publisher J	Sadlier
Publisher K	Saxon
Publisher L	Scott Foresman
Publisher M	Oxford University Press
Publisher N	Decision Development Corporation
Publisher O	Addison Wesley
Publisher P	Longman
Publisher Q	Brooks/Cole

Appendix 2: Assembly Bill 2532

BILL NUMBER: AB 2532 CHAPTERED
BILL TEXT

CHAPTER 1096
FILED WITH SECRETARY OF STATE SEPTEMBER 29, 2002
APPROVED BY GOVERNOR SEPTEMBER 29, 2002
PASSED THE ASSEMBLY AUGUST 28, 2002
PASSED THE SENATE AUGUST 27, 2002
AMENDED IN SENATE AUGUST 15, 2002
AMENDED IN ASSEMBLY MAY 23, 2002
AMENDED IN ASSEMBLY MAY 1, 2002

INTRODUCED BY Assembly Members Rod Pacheco, Bogh, and Frommer
(Principal coauthor: Senator Speier)
(Coauthors: Assembly Members Longville, Reyes, and Zettel)

FEBRUARY 21, 2002

An act to add Section 49415 to the Education Code, relating to pupil health.

LEGISLATIVE COUNSEL'S DIGEST

AB 2532, Rod Pacheco. Textbook weight.

Existing law requires the governing board of a school district to give diligent care to the health and physical development of pupils.

This bill would require the State Board of Education, on or before July 1, 2004, to adopt maximum weight standards for elementary and secondary school textbooks.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. The Legislature finds and declares all of the following:

(a) Backpacks of elementary and secondary school pupils often contain textbooks, binders, calculators, personal computers, lunches, a change of clothing, sports equipment, and more.

(b) Elementary and secondary school pupils are carrying backpacks weighing as much as 40 pounds.

(c) Chiropractors, physical therapists, and pediatricians are seeing an increased number of children for spinal column injuries, nontraumatic back pain, and significant postural changes from overloaded backpacks.

(d) Chiropractors and pediatricians recommend that backpacks not exceed more than 15 percent of a pupil's body weight.

(e) In 1999, more than 3,400 pupils between 5 and 14 years of age, inclusive, sought treatment in hospital emergency rooms for injuries related to backpacks or book bags according to the United States Consumer Product Safety Commission.

SEC. 2. Section 49415 is added to the Education Code, to read:

49415. On or before July 1, 2004, the State Board of Education shall adopt maximum weight standards for textbooks used by pupils in elementary and secondary schools. The weight standards shall take into consideration the health risks to pupils who transport textbooks to and from school each day.