

Financial Fitness for Life

HIGH SCHOOL TEST EXAMINER'S MANUAL

William B. Walstad

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National Council on Economic Education

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FOREWORD

The National Council on Economic Education (NCEE) is deeply committed to providing the highest quality products for teachers to use in their classrooms to help them give their students the economic tools and skills that are required for every student. Providing teachers with up-to-date assessments are part of the total package. This Examiner's Manual for the *Financial Fitness for Life: High School Test* provides the test administrator with information on giving the test to students and provides the teacher with information to compare his/her students' performance with that of similar students across the nation.

NCEE is truly indebted to many individuals who shared their multitude of talent and precious time to review, revise, and correlate the questions in the *Financial Fitness for Life: High School Test* to the Personal Finance and Economics Standards. Special thanks go to William Walstad and Ken Rebeck for undertaking and managing this work. Other members of the National Advisory Committee (acknowledged by name and institution on pp. 1-2 and in Appendix 1) prepared and reviewed questions in their various stages of development and assisted with the field testing of items.

In all and through all, NCEE gratefully acknowledges the generous funding and magnanimous support of the Bank of America Foundation for making this accomplishment possible.

Robert F. Duvall, Ph.D.
President and Chief Executive Officer
National Council on Economic Education (NCEE)

FINANCIAL FITNESS FOR LIFE: HIGH SCHOOL TEST EXAMINER'S MANUAL

The *Financial Fitness for Life: High School Test* (FFFL-HS Test) is a standardized test for measuring the achievement of high school students in courses that use the *Financial Fitness for Life* curriculum materials and in other courses that emphasize instruction in personal finance. The test should be a valuable tool for assessing what high school students know about the basics of personal finance and related concepts in economics and business education.

The purposes of this *Financial Fitness for Life: High School Test Examiner's Manual* are threefold. First, it provides test users with a detailed description of the personal finance and economics content on the test so they are fully informed about test coverage and rationale for each item. Second, it explains how the test should be administered to students and also discusses the possible uses of the test for personal finance instruction. Third, it presents statistical evidence documenting the reliability and validity of the test as an achievement measure of high school personal finance. The manual should provide test users with the information they need to administer the test and interpret the results.

1. TEST DEVELOPMENT

In 2001, the National Council on Economic Education (NCEE) published a *Financial Fitness for Life: Teacher Guide* and also the *Financial Fitness for Life: Student Workouts* for grades 9–12 (Schug and Morton, 2001). These materials contained 22 lessons on topics in personal finance that were organized around five major themes. At the time of publication, no standardized test was available to assess student knowledge and understanding of the personal finance and economics content presented in these instructional materials. The NCEE decided to complete this curriculum package by developing such a test in the fall 2002, after securing the necessary funding from the Bank of America Foundation.

The work on the FFFL-HS Test began in late fall 2002 and continued through the fall of 2004. The first part of this work was the preparation of the FFFL-HS Test by the test developers and a national committee. The second part of the work was the trial administration of test items and the creation of the final version of the new test.

National Advisory Committee. In late fall 2002, a National Advisory Committee (NAC) was formed for all FFFL tests (high school, middle school and upper elementary). The NAC was composed of 12 members with expertise in teaching personal finance, teacher training in personal finance, and in the development of national tests (see Appendix 1 for a list of the NAC members).

On the NAC were five teachers who had experience with using the FFFL materials and also with teaching personal finance to students at different grade levels: Charles Collier (Harmony Elementary School, Bellingham, Washington); Karen Pappas (Fruit Cove Middle School, Jacksonville, Florida); Debbie Poole (Fernway Elementary School, Orland Park, Illinois); Jeffrey Redmon (Kinlock Park Middle School, Miami, Florida); and Kathleen Simmons (Canyon High School, Comal I.S.D., New Braunfels, Texas).

Also on the NAC were four representatives from the NCEE's affiliated centers and state councils for economic education. Each of these individuals had extensive experience with FFFL materials either by serving as authors of FFFL teacher guides or student workouts or by conducting teacher workshops on FFFL materials. They included: John Clow, center director at the Leatherstocking Center for Economic Education, State University of New York at Oneonta; Barbara Emery, program coordinator at the Center for Economic Education and Entrepreneurship, University of Delaware; Sarapage McCorkle, who at the time this work began was the director of the Center for Entrepreneurship and Economic Education at the University of Missouri at St.

Louis (and now with Junior Achievement, St. Louis); and Amy Willis, director of the Arizona Council on Economic Education and previously a high school teacher in Arizona.

Three other individuals completed the NAC. Each had participated in the development of national tests in economics. William Walstad, a professor of economics at the University of Nebraska-Lincoln, directed this FFFL testing project and served as NAC chair. His past test experience includes the preparation of the NCEE's *Test of Economic Literacy* (high school), *Test of Economic Knowledge* (middle school), and the *Basic Economics Test* (upper elementary). The other test developer serving on the NAC was Ken Rebeck, an assistant professor at St. Cloud State University. He had worked with William Walstad on the development of the third edition of the *Test of Economic Literacy* (2001) and had also conducted FFFL workshops for teachers through the Minnesota Council on Economic Education. The NCEE representative on the NAC was Claire Melican, NCEE Vice President for Program Administration. She previously worked at the Educational Testing Service where she directed the development and yearly administration of the Advanced Placement Tests in Economics.

The meeting of the NAC was held in mid-January, 2003, in Orlando, Florida. Several decisions were made prior to or at that meeting that would affect the shape and content of the new test. First, the test would be designed to assess student understanding of the high school materials contained in the *Financial Fitness for Life* curricula as presented in the *Teacher Guide* and *Student Workouts* for grades 9–12. The content of questions would be primarily targeted to cover the objectives listed in the lessons for these materials (see Table 1 for a list of lessons and themes and Appendix 5 for a list of objectives).

Second, a multiple-choice format would be used for the test so it could more widely sample the extensive content found in the FFFL materials. This decision was important because it permitted a sufficient number of test items to be

evenly distributed across each of the five themes. This design would mean that the test user would have the flexibility to administer one or more theme subtests in case the full FFFL materials could not be covered in the available instructional time.

Third, the FFFL-HS Test was designed as an achievement test and not a speed test. A decision was made to limit the test to 50 questions so that it could be completed in the typical 40-minute time period. This period was well within the length of most class periods in high schools and would allow ample time for teachers to make arrangement within a classroom for testing, present the instructions, and administer the test. The content for most questions would not be overly complex so that test items could be easily answered in less than a minute, on average. Also, in case the whole test could not be administered in a class period, students could be tested by FFFL theme.

Each NAC member was responsible for supplying 30 questions for review at the meeting based on assigned grade levels. The NAC then reviewed and rated the pool of about 150 high school items using three categories: accept as is or with minor revision, needs major revision, or reject. Questions for revision were either revised at the meeting or suggestions were made for further revision by the two test developers. The NAC also rated the importance of each of the instructional objectives that were listed in the *FFFL Teacher Guide* for each lesson so the content of the test would best reflect what was considered important FFFL content to be tested. Assignments were also made for new questions to be written to fill content gaps by FFFL theme.

The outcome from this meeting was Draft I of the FFFL-HS Test. This draft contained all questions except those rejected by the NAC plus the new questions submitted by NAC members to fill content gaps that had been identified at the meeting. These questions were sorted by FFFL theme and objective to evaluate content coverage.

The two test developers then revised these questions to produce Draft II that contained a

pool of 86 possible items. This revised set of questions was sent to the NAC members for review in early February, 2003. Enclosed with the mailing to the committee members was a description of how test items covered the content outlined in the *FFFL Teacher Guide*. The committee was asked to rate items by whether they approved of the use of an item if selected from the item pool, whether they thought an item should be revised but left in the pool, or whether an item should be dropped from the pool.

The test developers then prepared Draft III based on the item pool and a few more new test items that were submitted to fill content gaps. Draft III was a 50-item test with 10 items per theme. The test developers selected items for the draft from NAC-approved items, newly submitted items, or items they revised.

This draft was then sent to the NAC for further review in March, 2003. The NAC evaluated it for coverage of personal finance content based on FFFL themes. They also checked the wording of questions for potential problems with reading or item bias, and assessed the suitability of the test items for high school students. Minor revisions were then made to the test to produce the field-test version (Draft IV) of the FFFL-HS Test.

Field-Testing. This version of the test was field-tested in April and May, 2003, with about 214 high school students in Arizona, Delaware and New Jersey. The members of the NAC arranged this testing and provided feedback on any problems with test length or administration. Seven teachers were recruited to assist with this work, one from Arizona (Alice Temnick, Cactus Shadows High School, Cave Creek, AZ), five from Delaware (Christopher Mascioli, Archmere Academy, Claymont, DE; Carla Lawson, Caesar Rodney High School, Camden-Wyoming, DE; Stephanie Trainer, Charter School of Wilmington, Wilmington, DE; Sally Dodds, Christiana High School, Newark, DE; and Chris Schumacher, Middletown High School, Middletown, DE), and one from New Jersey (Jeanette Griffin, East Or

ange Campus High School, East Orange, NJ). Comments received from teachers indicated that the test could be completed in a 40-minute class period.

The test developers then reviewed the test data from the field-testing. Items were retained for the test that showed reasonable difficulty levels and the ability to discriminate between students of greater or lesser understanding of personal finance. Items were also revised based on the content reviews of the test supplied by the NAC members. The results from the field-testing and subsequent revision produced the pretest and posttest version (Draft V) of the FFFL-HS Test.

Final Version. This version of the test was used for pre- and posttesting during the 2003–2004 school year. The student sample that participated in this testing was primarily from Texas. A decision was made to recruit Texas teachers who would be willing to attend a two-day training session in Houston on the use of the FFFL materials. These teachers would then return to their schools and teach the FFFL materials either during the fall 2003 semester or the spring 2004 semester and give the FFFL-HS Test as a pretest and posttest. These teachers also recruited a “control” teacher at each school who tested students who had not received FFFL instruction. A list of the FFFL teachers who participated in the testing is found in Appendix 2.

Section 6 reports the data results from that student testing. Although pretests were administered, these data were not used for the examiner’s manual because they were not considered to be reliable. Some teachers gave the pretest after instruction had begun and it was difficult to match pre- and posttest data in many cases. The results reported in this manual are based on posttest data gathered from 859 high school students during the fall 2003 and spring 2004 semesters.

After analyzing the posttest results and receiving final reviews from the NAC, a final version of the FFFL-HS Test was approved by the test developers. The last section of the manual

presents the 50 test items. As will be discussed in the next section, there was good coverage of the personal finance concepts to establish the content validity of the test. Other sections of this manual discuss results from the analysis of test validity and reliability. This information shows that the FFFL-HS Test is a valid and reliable measure of high school student understanding of personal finance.

2. THE CONTENT AND STRUCTURE OF THE TEST

The content of the *Financial Fitness for Life: High School Test* is based on three documents. They served as the primary guides to content validity for the development of the FFFL-HS Test.

Content. The first document was the *FFFL Teacher Guide* (Schug and Morton, 2001). The *FFFL Teacher Guide* provides a description and outline of what experts in personal finance and economics consider as core concepts and topics in personal finance that should be taught to high school students. All lessons in this guide were written by content and pedagogy experts, field-tested by teachers, and reviewed by other experts.

As shown in Table 1, this publication contains 22 lessons that are organized into five content themes:

- The Economic Way of Thinking
- Earning Income
- Saving
- Spending and Using Credit
- Money Management

Associated with each lesson are specific student objectives (see Appendix 5). The themes, lessons and student objectives served as a primary content guide for the development of the FFFL-HS Test.

The FFFL-HS Test has 50 questions. The right side of Table 1 shows the distribution of the 50 items across the five themes and the 22 lessons. Each theme contains ten questions distrib-

uted across related lessons. Each theme represents 20 percent of the test. This distribution of test items suggests that the test is a measure of personal finance because it samples the content domain as described by the theme, lessons, and objectives in the *FFFL Teacher Guide*.

The second major document used to establish the content validity of the FFFL-HS Test is the *National Standards in Personal Finance* (Jump\$tart Coalition, 2002). It identifies what K–12 students should know and be able to do in personal finance. This publication contains 26 standards that are organized into four topics:

- Income
- Money Management
- Spending and Credit
- Saving and Investing

There are 3 income standards, 8 money management standards, 8 spending and credit standards, and 7 saving and investing standards.

The introductory material for the *FFFL Teacher Guide* for grades 9–12 shows that the lessons and content of this publication are highly correlated with *National Standards in Personal Finance*. Therefore, the content of the FFFL-HS Test should also be highly correlated with these personal finance standards. The right side of Table 2 shows the approximate distribution of FFFL-HS Test items across the 26 personal finance standards and four major topics. About 24 percent of the FFFL-HS Test items would meet the income standards, about 32 percent would meet the money management standards, 22 percent would meet spending and credit standards, and 22 percent would meet saving and investment standards. The results clearly show the FFFL-HS Test covers most of the national standards in personal finance as identified by content experts.

The third document used to establish the content validity of the FFFL-HS Test was the *Voluntary National Content Standards in Economics* (NCEE, 1997). The left side of Table 3 shows major economic concepts or topics related to each standard. A complete listing of the 20 standards statements can be found in Appendix 4.

TABLE 1. *Financial Fitness for Life Guide*: Content Coverage for FFFL-HS Test

Themes and Lessons	Items	Total	Percent
There is No Such Thing as a Free Lunch (<i>The Economic Way of Thinking</i>)		10	20.0
1. How to Really Be a Millionaire	1, 2	2	
2. The Economic Way of Thinking	3, 4, 5, 6, 7	5	
3. Decision Making	8, 9, 10	3	
Education Pays Off: Learn Something (<i>Earning Income</i>)		10	20.0
4. Job Application Process	11, 12, 13	3	
5. Making Your Own Job	14	1	
6. Why Some Jobs Pay More than Others	15, 16, 17	3	
7. Uncle Sam Takes a Bite	18, 19, 20	3	
Tomorrow's Money: Getting to the End of the Rainbow (<i>Saving</i>)		10	20.0
8. What's the Cost of Spending and Saving?	21, 22, 23, 24	4	
9. There is No Free Lunch in Investing	25, 26, 27, 28, 29, 30	6	
10. Investment Bingo			
Spending and Credit Are Serious Business (<i>Spending and Using Credit</i>)		10	20.0
11. What Is Credit?	31, 32	2	
12. Making Credit Choices			
13. Applying for Credit	33, 34	2	
14. All about Interest	35, 36, 37	3	
15. Shopping for a Credit Card			
16. Shopping for a Mortgage			
17. Shopping for an Auto Loan			
18. Consumer Credit Protection	38	1	
19. Scams and Schemes	39, 40	2	
Get a Plan: Get a Grip on Life (<i>Money Management</i>)		10	20.0
20. Managing Your Money	41, 42, 43	3	
21. Banking Basics	44, 45	2	
22. Managing Risk: The Good News about Insurance	46, 47, 48, 49, 50	5	
Total Number of Questions		50	
Percent of Total			100.0

TABLE 2. National Standards in Personal Finance: Content Coverage for FFFL-HS Test

Standard Selected Key Concepts*	Items	Total	Percent
A. INCOME		12	24.0
1. Sources of income	1, 11, 12, 13	4	
2. Determinants of income	9, 14, 15, 16, 17	5	
3. Taxes and transfer payments	18, 19, 20	3	
B. MONEY MANAGEMENT		16	32.0
1. Limited resources and choice	5, 8	2	
2. Opportunity cost	7	1	
3. Personal financial responsibility	6	1	
4. Financial decision making	10	1	
5. Inflation and investing	28	1	
6. Insurance, risk management	46, 47, 48, 49, 50	5	
7. Budgeting	41, 42, 43	3	
8. Use of money management tools	44, 45	2	
C. SPENDING AND CREDIT		11	22.0
1. Benefits and cost of spending	3, 4	2	
2. Information on products			
3. Costs and benefits of payment methods	31, 32	2	
4. Risk and credit	35, 36	2	
5. Sources of credit	37, 40	2	
6. Credit history and records	33, 34	2	
7. Managing financial difficulties			
8. Rights and responsibilities of buyers, sellers, and creditors	38	1	
D. SAVING AND INVESTING		11	22.0
1. Saving and investing	21, 23	2	
2. Reasons for saving and investing	2	1	
3. Risk, return and liquidity investment	25, 26, 27	3	
4. Buy and sell investments	29, 30	2	
5. Rate of return on investments	22, 24	2	
6. Sources of investment information	39	1	
7. Government and saving and investment			
Total Number of Questions	50	50	100.0

Note: *For a complete description of each standard, see Appendix 3 or Jump\$tart Coalition (2002).

TABLE 3. National Standards in Economics: Content Coverage for FFFL-HS Test

Standard Selected Key Concepts*	Items	Total
1. Scarcity, choice, productive resources	5, 6, 8, 9	4
2. Decision-making, marginal analysis	3, 4, 7	3
3. Economic systems & allocation mechanisms		
4. Economic incentives — prices, wages, profits, etc.		
5. Voluntary exchange & trade	32	1
6. Specialization & comparative advantage		
7. Markets & price		
8. Supply & demand	16	1
9. Competition		
10. Economic institutions	29	1
11. Money & money supply		
12. Interest rates	21, 22, 23, 24, 27, 28, 35, 36, 37	9
13. Labor markets & income	17	1
14. Entrepreneurship	14	1
15. Physical & human capital investment	15	1
16. Economic role of government		
17. Government failure, special interest groups		
18. Output, income, employment, & the price level		
19. Unemployment & inflation		
20. Fiscal & monetary policy		
Total Number of Questions		22

Note: *28 of the 50 items on the FFFL-HS Test (1, 2, 10, 11, 12, 13, 18, 19, 20, 25, 26, 30, 31, 33, 34, and 38–50) focus on personal finance topics. For a complete description of each standard, see Appendix 4 or NCEE (1997).

The FFFL materials include some economics content because that content serves as a foundation for developing understanding of personal finance. The introductory material for the *FFFL Teacher Guide* also shows that some FFFL lessons are correlated with economics standards. This economics connection, however, is supplementary because the primary focus of FFFL is personal finance.

The right side of Table 3 shows the classification of those FFFL-HS Test items that address some aspect of the economics standards, although the connection in some cases is minor. About 22 items (or 44 percent) of the test address some economics content. The other 28 items are not included in the table because their content is solely personal finance.

Several points should be remembered in evaluating the coverage of the test across personal finance or economics standards in Tables 1–3. First, the FFFL-HS Test is not designed as a test of each FFFL lesson in Table 1, each standard for personal finance in Table 2, or each economic standard in Table 3. There are too few test items per lesson or standard to make a sound judgment about mastery of a particular lesson or standard. It was not feasible for the test to include the number of items needed to assess all the FFFL lesson objectives or all the benchmarks associated with each personal finance or economics standard.

Second, the classification of a test item by lesson or standard is not exact. Some items may fit into more than one lesson or standard, or may not be a good fit. Some items might not fit any standard (as with economics). The distribution in Tables 1–3 reflects the best judgment of the test developers and NAC on the placement of an item.

Third, the distribution of test items reflects the test developers’ interpretation of what *ought* to be included in a general test of personal finance in high school based on content outlined by FFFL materials and the national standards in personal finance and economics. The weights for the test content were determined on the basis of consultation with members of the NAC.

TABLE 4. Cognitive Levels for the FFFL-HS Test

Level	Emphasis
I Knowledge	recognition and recall—ability to remember facts in a form close to the way they were first presented
II Comprehension	grasp the meaning and intent of information—ability to tell or translate in own words
III Application	use of information—ability to apply learning to new situations and circumstances

Cognitive Levels. Test items can also be classified by cognitive level. Although many taxonomies for the cognitive domain have been proposed, the most widely used was the one developed by Bloom (1956). This work has six levels: knowledge, comprehension, application, analysis, synthesis, and evaluation. Only the first three levels were used to classify test items for the FFFL-HS Test. A description of these cognitive levels is found in Table 4.

One reason for this change is that test experts have found Bloom’s *Taxonomy* to be more useful for classifying instructional objectives than it is for classifying test items (Ebel & Frisbie, 1991, pp. 51-52). This problem applies to the FFFL-HS Test because cognitive ratings of test items can be arbitrary, especially at the three highest levels—analysis, synthesis, and evaluation. To address this problem, the number of levels was reduced to the first three (knowledge, comprehension and application) because they were the ones most well-defined and justified. FFFL-HS Test items that could be classified as analysis or evaluation could be considered application items, so they were placed in the application category in the three-level taxonomy. Educators have found it easier to work with these three levels, or a modification of them, rather than the entire six that were described by Bloom (Davis, 2001, p. 242).

Table 5 displays the distribution of FFFL-HS Test items across the three cognitive levels. There are 14 knowledge, 25 comprehension, and 11 application items. In percentage terms, 78 percent of the items fall into the knowledge or comprehension levels, and 22 percent of the items are application. These results show that the test contains several cognitive levels, but the cognitive specification is weighted at the lower levels of Bloom's *Taxonomy*.

3. USES OF THE TEST

To Measure Student Understanding

The *Financial Fitness for Life: High School Test* was designed primarily to aid teachers in assessing and improving the quality of high school teaching of personal finance. There are several ways of using it to achieve this objective.

AS A PRETEST

The FFFL-HS Test can be administered as a pretest at the outset of a unit of instruction using FFFL materials or at the beginning of a semester to assess the students' prior knowledge of personal finance concepts. This use is important to high school teachers because some school districts now provide instruction in personal finance—sometimes only on a limited basis—before the high school grades. If this prior instruction in personal finance has been effective, many students will have acquired some knowledge of personal finance. Thus, the wise high school teacher will want to know the students' areas of strength and weakness to balance the course's content appropriately.

To determine areas of students' relative strength or weakness in personal finance, teachers can compare the scores of their students with the scores for each test item provided in this manual. The relevant scores for comparison with those *without FFFL* are found later in the manual (Sec-

tion 6, Tables 6–8, 10). Small differences between scores reported for a given question in this manual and those obtained in the classroom should not be emphasized. Certain kinds of comparisons, however, may prove useful. For instance, if the average score of students on the test as a whole is as good as or better than these published scores, significantly lower scores on selected items may indicate areas of personal finance the teacher may wish to emphasize in subsequent teaching. The manual also provides brief rationales for each question (Section 7). Teachers might want to examine those rationales before deciding whether the particular concept tested deserves greater attention in the classroom. If still in doubt, the teacher should refer to the relevant pages of the *Financial Fitness for Life: Teacher Guide* or *Student Workouts* (see page numbers listed with item rationales).

Teachers can group their students' responses by content as shown in Tables 1–2. This work will enable the teacher to compare scores in several different areas of personal finance content. For example, the scores of students in a given class can be compared with those published for FFFL themes. Students' incorrect responses often tend to cluster about specific topics; the identification of such topics may lead teachers to give these topics greater emphasis in their instruction. Whether a comparison is made with individual items or broad categories, the FFFL-HS Test can be used to discover the areas in which students have strengths and weaknesses before formal teaching begins so that the teacher can make appropriate adjustments in the time and emphasis given to various topics in personal finance.

AS A POSTTEST

The FFFL-HS Test can be used at the end of a semester or unit of instruction to measure the extent to which understanding has improved. Post-test scores for a given group of students may be compared to their pretest scores and to the appropriate published scores for students in the tables

TABLE 5. *Financial Fitness for Life*: Cognitive Level Coverage for FFFL-HS Test

Themes and Lessons	I Knowledge	II Comprehension	III Application
There is No Such Thing as a Free Lunch (<i>Economic Way of Thinking</i>)	2	5	3
1. How to Really Be a Millionaire		1, 2	
2. The Economic Way of Thinking		5, 6	3, 4, 7
3. Decision Making	10	8, 9	
Education Pays Off: Learn Something (<i>Earning Income</i>)	4	4	2
4. Job Application Process	12	11, 13	
5. Making Your Own Job		14	
6. Why Some Jobs Pay More than Others	15, 17		16
7. Uncle Sam Takes a Bite	18, 19		20
Tomorrow's Money: Getting to the End of the Rainbow (<i>Saving</i>)	2	6	2
8. What's the Cost of Spending and Saving?		21, 23	22, 24
9. There is No Free Lunch in Investing	28, 30	25, 26, 27, 29	
10. Investment Bingo			
Spending and Credit Are Serious Business (<i>Spending and Using Credit</i>)	2	6	2
11. What Is Credit?		31, 32	
12. Making Credit Choices			
13. Applying for Credit	33, 34		
14. All about Interest		35, 36, 37	
15. Shopping for a Credit Card			
16. Shopping for a Mortgage			
17. Shopping for an Auto Loan			
18. Consumer Credit Protection			38
19. Scams and Schemes		40	39
Get a Plan: Get a Grip on Life (<i>Money Management</i>)	4	4	2
20. Managing Your Money	41, 42, 43		
21. Banking Basics		44	45
22. Managing Risk: The Good News about Insurance	46	47, 49, 50	48
Total Number of Questions	14	25	11
Percent of Total	28%	50%	22%

Note: For cognitive levels, I = Knowledge; II = Comprehension; and III = Application. See Table 4.

presented later in this manual. A pretest and posttest use of the FFFL-HS Test should help to provide evidence of the effect of *Financial Fitness for Life* in improving knowledge and understanding of personal finance.

Such assessment will be particularly useful if the test is administered on both a pre- and posttest basis to classes in which varying degrees of emphasis are placed on personal finance and different teaching approaches are employed. When used in this way, the FFFL-HS Test can measure the effects of varying teaching treatments on student performance in personal finance. Such research of this kind can contribute significantly to the improvement of teaching effectiveness of personal finance in high schools. Researchers employing the FFFL-HS Test in experimental and non-experimental settings should pay particular attention to the technical data reported in this manual to make sure that the FFFL-HS Test serves as a reliable and valid measure for their specific applications and research needs.

When used as a posttest, the FFFL-HS Test should be administered early enough to allow one or two class periods to be used for discussion of test scores and results by FFFL themes. The teacher can take advantage of the students' natural interest in their relative standing in the class and in relation to the published results in this manual for the sample of students who have had previous FFFL training.

Item Discussion. When students cannot answer a question or find it most difficult to select the correct answer, they are often interested in what the correct answer is and why it is correct. Students' incorrect responses tend to be concentrated on specific topics. It is on those topics that review time can be spent most profitably, since the clustering of errors is an indication of confusion about the topic. The teacher may wish to read the rationale for each correct answer from the Item Rationale or refer students to the pages in the *FFFL Student Workouts* as listed in the item rationale. Discussion can then continue be-

tween students and teacher, using the FFFL booklets and supplementary materials on personal finance for further information. The FFFL-HS Test can become a powerful teaching tool if used in this way.

Caution should be used in reading or paraphrasing item answers from item rationales, particularly if the test is used on a pre- and posttest basis. After posttesting, reading the correct response and its rationale should cause no harm and is likely to be effective as a teaching/learning activity. This practice, however, should not be followed after *pretesting* if a subsequent posttest is to be administered. The reason is that the same items would be used both as a pretest and a posttest, and students would know the correct answers based on the pretest discussion of items, thus invalidating a pre- and posttest comparison.

DURING A COURSE

A third use of the FFFL-HS Test is to administer one of its forms midway during a course or unit of instruction and to use the results for *formative* evaluation purposes. Data on student performance near the halfway point can then be used to alter instructional strategies for the balance of the course or unit, thereby more closely reaching the instructional goal—greater student understanding of personal finance.

The FFFL-HS Test is also flexible. One worthwhile use of the FFFL-HS Test is to give FFFL theme tests after the teacher has completed instruction on those FFFL themes. Student scores can then be used to evaluate whether additional instruction is needed on the FFFL theme before the teacher begins instruction on the next FFFL theme (see Section 6, Tables 12–14).

It should be remembered if whole or parts of the FFFL-HS Test are administered during a course and also as a posttest, it is likely that some student “learning” will result because students will then answer a test item twice. Students may “remember” items from one test administration to the next, thus making any comparison invalid.

4. ADMINISTERING THE TEST

General Instructions

The *Financial Fitness for Life: High School Test* was designed for high school teachers or administrators to use with high school students taking courses or units in personal finance that use the *Financial Fitness for Life* materials for instruction. It is also possible to use this test in personal finance courses and units that do not use FFFL materials because the test covers concepts that would typically be taught in many personal finance courses. The decision, however, about whether the FFFL-HS Test should be used to measure student achievement in these other courses or units should be based on a careful review of test items and course content.

Those individuals who administer the FFFL-HS Test should be familiar with the test procedures that are described below. Specific directions for the student are provided in the student test booklet. Although these instructions will be adequate for most situations, it is suggested that the examiner carefully look over the test and the answer sheet before the testing session begins to anticipate any problems. Unless standard procedures are followed when the FFFL-HS Test is given to high school students, the results obtained at different times may not be strictly comparable with the published results in this manual. For most uses, the FFFL-HS Test should be easy to administer and it may be scored by hand or machine.

Materials

The FFFL-HS Test booklets are reusable, provided students follow instructions and do not write in the booklets. After each testing session, you should inspect the booklets for pencil marks. Either erase any marks completely before using the booklets again or discard them.

The test questions may be answered on a facsimile of the blank answer sheet provided in Ap-

pendix 6, or on a machine-readable answer sheet having at least 50 answer positions, each with at least four options. If answers are to be machine scored, the teacher must use answer sheets that are compatible with the scoring equipment to be used, and the students must mark the answer sheets with the appropriate pencils (usually No. 2 lead). In any event, students should be cautioned not to use a ballpoint pen. Use of a pen will make it difficult to change responses, and most machines will not score ballpoint markers. For machine scoring, it is advised to have additional pencils of the appropriate type on hand.

The room in which the test is to be administered should be well lighted, well ventilated, and quiet. Students should have sufficient working space to accommodate both the test booklet and answer sheet. Students should be seated so as to minimize opportunities to see each other's answers (unless the group-testing method is used).

All test materials should be counted and assembled prior to the testing session. Placing an answer sheet under the front cover of every test booklet so that both answer sheet and test booklet can be distributed together saves testing time. Students should receive only one booklet.

Timing the Test

The FFFL-HS Test requires about 40 minutes of testing time for high school students, depending on the group. If testing is done in a class period that is shorter than 40 minutes, and the time cannot be extended, allowance should be made for this factor when test scores are evaluated and compared to these published test results.

The FFFL-HS Test was designed as a power test rather than as a speed test, so it is probable that most students will complete it in less than 40 minutes. Since many class periods are set at 45 to 50 minutes, the testing should begin as soon as possible after the start of class. To ensure that students do not arrive late, it may be helpful to remind them in the class prior to the test to try hard to be on time and to bring No. 2 pencils.

It is also possible for the teacher to administer the FFFL-HS Test by theme or subtest portions of the entire FFFL-HS Test. For example, if more time is needed for testing than the class period permits, then just three FFFL theme tests could be administered one day and the remaining two FFFL theme tests could be administered the second day.

In the instructions that follow, it is assumed that the teacher will administer the entire test in one class setting. If the testing is to be conducted in subparts or by FFFL theme, then some modification of these general directions will be necessary for the shortened test. Students will also need to be told that they should stop their testing work as they complete the specified FFFL theme or set of themes that are to be tested.

Directions for the Examiner

If the test booklets and answer sheets are passed out together (with No. 2 pencils if necessary), instruct those students taking the test to fill in the requested background information on the answer sheet before opening the test booklet. If the test booklets and answer sheets are not passed out together, distribute the booklets while the students are filling out the preliminary information on the answer sheet. In either case, test booklets should remain face up and closed until the examiner gives the signal to begin.

When everyone has received all the necessary materials, say:

Read the directions to yourselves as I read them aloud:

1. Please fill out the information requested on the answer sheet before beginning your test.
2. Do not write in this booklet or make other marks in it unless your teacher tells you to do so.
3. When marking your answer sheet, use *only* a regular No. 2 pencil. **DO NOT USE A BALLPOINT PEN.** Do not make any stray marks on the answer sheet. If you make a

mistake, erase completely the answer you wish to change.

4. This test is designed to measure your understanding of personal finance. Not all students who take this test will have taken a separate course or unit in personal finance, but most have learned something about the subject in their other courses, through reading newspapers, listening to the radio, watching television, browsing the Internet, or from some other source. These questions will measure how well you understand the principles of personal finance and their application.
5. This FFFL test of 50 questions is broken into five parts called themes. Each FFFL theme has 10 questions. After you complete the 10 questions on one theme, you should move to the next theme and answer those questions. Continue this work until you complete all questions. After you are finished you can return to questions to check or complete any answers.
6. You should try to answer *every* question by marking what you think is the best choice. You might not know the answers to some questions, but use the information you *do* have to eliminate those you think are incorrect and select your best answer. Work at a comfortable speed, but do not spend too much time on any one item. The test consists of 50 questions or incomplete statements, for which you should choose the **one best answer**. With some items more than one answer may appear to be correct, but your task is to choose the *best* answer.

After reading the directions say:

“Sample questions 1 and 2 on the front cover of the test booklet give examples of a properly marked answer. Notice that response C on question 1 and response A on question 2 have been completely filled in. When you begin the test, read each question carefully and choose your answer. Then use your pencil to blacken the lettered space *on the answer sheet* that corresponds to the letter of the answer you have chosen.”

If answer sheets will be machine scored, say:

“The test will be scored by machine, so be sure that you use only a No. 2 pencil to mark your answers on your answer sheet. Fill in the space under the letter that corresponds to the letter of the answer you have chosen. Be certain to make each mark heavy and black. If you change an answer, be sure to erase your first mark completely before making another mark. Erase all stray marks on your answer sheet.”

Whether the sheets are to be scored by hand or by machine, say:

“When you finish the test, go back and check your answers. If you have any questions, raise your hand now. I cannot answer *any* questions about the test content after it has begun. However, if your pencil breaks or if you find you have a faulty booklet or answer sheet, raise your hand.”

When you have answered all questions, say:

“You will have 40 minutes for the test. Remember: Make no marks on the test booklet itself. All right. Begin.”

During the first minutes of the test, check to see if the students are marking their answer sheets properly. When testing is completed, collect all materials. Verify that all materials have been collected before students leave the room.

5. SCORING THE TEST

The score for the *Financial Fitness for Life: High School Test* is the number of correct responses. The maximum possible score is 50. A single answer sheet should be used, and this sheet may be scored by hand or by machine.

To score the test by hand, use the key and facsimiles of the answer sheet in Appendix 6. Scan each answer sheet to make certain the student marked only one answer for each question; if more than one answer space has been marked, the response to that question is considered wrong. To use the scoring key, punch out the blackened circles and place the key over the answer sheet. The raw score is the total number of answer

marks showing through the holes minus any multiple-marked items.

After the tests have been graded and returned to the students, the teacher should read each test item aloud (as the students read silently from their test booklets and take note of their responses), asking those who answered correctly to raise their hands. The number of correct responses divided by the number of students taking the test and multiplied by 100 is the class percentage correct for that item. This percentage may be compared with the test data (see Section 6, Table 8).

Most high schools are equipped to machine score tests. In such cases, a special answer sheet is required that is compatible with the scoring machine available. Usually, No. 2 pencils *must* be used to mark answers. If machine scoring will be used, check with the scoring service in advance about required answer sheets and pencils.

Machine scoring of tests often produces a printout of the student roster with raw scores and percentiles for the scores by group tested. In addition, the group mean, standard deviation, and a frequency distribution are often provided. Such data can be useful in the interpretation of results.

6. TECHNICAL DATA

Student Sample

The *Financial Fitness for Life: High School Test* was administered to a sample of high school students during the 2003–2004 school year. Some of these high school students had received instruction in personal finance using the FFFL materials. Another group of high school students was also tested in the same schools. These “control” students had not received FFFL or personal finance instruction during that school year.

The test data in this manual provides results from this large sample of high school students, both those who had received FFFL instruction and those students who had not received such instruction. Test users can inspect these samples

and compare them to the scores of their students when they administer the FFFL-HS Test. In addition, data from this sample was used to judge the technical adequacy of the FFFL-HS Test.

Table 6 reports the aggregate statistics obtained from the 859 high school students who took the test. These results are shown by type of instruction (with or without FFFL). The sample data were collected from classes in the 14 high schools listed in Appendix 2. Most of these high schools were in Texas, but two were in other states—one in Minnesota and one in New Jersey. All of the FFFL teachers participated in training sessions on using FFFL curricula and were familiar with the content of the FFFL materials. Each FFFL teacher then taught students using the FFFL materials. They also arranged for a similar group of students in their school who had not received FFFL instruction to be tested.

No claim is made that the group tested is *exactly* representative of the student population enrolled in high schools throughout the nation because it was not possible to obtain a stratified, random sample of students. The data, however, are probably indicative of the results that would be obtained if a teacher trained in the use of FFFL materials provided personal finance instruction to students and compared those results to students who have not received FFFL instruction.

These data were collected from students and teachers so that information was available for judging the characteristics of the FFFL sample and the test results. Data supplied later in this section contain scores broken down across subsample characteristics by gender, grade level, race and ethnic origin, household income level, poverty level and type of community.

The sample data should not be considered as indicating the absolute standard of achievement in FFFL or personal finance instruction. Rather, the sample results provide a relative standard. They can aid teachers in comparing their students with others. The comparisons will be meaningful to the extent that composition of the student body in any class is similar to the sample tested.

TABLE 6. Aggregate Statistics for the Student Sample Taking the FFFL-HS Test

Sample Size	
Number of Students	859
Percent with FFFL	61%
Reliability	
Coefficient alpha	.86
Standard error of measurement	3.14
Means	
<i>With FFFL</i> (n = 524)	27.84 (8.72)
<i>Without FFFL</i> (n = 335)	22.34 (6.52)

Note: Standard deviations are in parentheses.

Percentile Tables

Table 7 presents the raw test scores and corresponding percentile ranks from the samples of high school students with and without FFFL instruction. The percentile ranks were obtained by calculating the total percentage of students who scored at or below a certain raw score. These tables permit the conversion of raw scores to percentile ranks by whether students have had prior instruction in personal finance. The *with FFFL* column shows the results for those students who received FFFL instruction from teachers who had received FFFL training. The *without FFFL* column shows the results from the sample of high school students who had not received FFFL instruction.

Percentile ranks allow comparisons to be made among students in different groups. For example, a student who receives FFFL instruction and obtains a raw score of 35 on the FFFL-HS Test has a percentile rank of 79 among those students who also received FFFL instruction. A raw score of 35 for a student who has not had FFFL instruction would be the equivalent of a percentile rank of 99. Therefore, a student with FFFL instruction and a raw score of 35 is performing as well as, or better than, 99 percent of students with the same score who have not received FFFL instruction.

**TABLE 7. Percentiles for FFFL Scores:
FFFL-HS Test**

Raw Score	With FFFL (n = 524)	Without FFFL (n = 335)
50		
49		
48		
47	99	
46	99	
45	99	
44	98	
43	96	
42	95	
41	93	
40	92	
39	90	
38	87	
37	84	
36	82	99
35	79	99
34	76	97
33	72	96
32	68	94
31	65	91
30	62	87
29	58	85
28	53	82
27	49	78
26	45	72
25	41	67
24	39	63
23	34	56
22	31	50
21	27	45
20	23	40
19	20	34
18	16	30
17	13	25
16	10	21
15	8	17
14	5	13
13	4	10
12	3	6
11	2	4
10	1	2
9		2
8		1
7		
6		
5		
4		
3		
2		
1		

Item Difficulty and Discrimination

Test administrators may want to know how their students performed on certain items of the FFFL-HS Test. This information would be particularly important in cases where the teacher covered only some of the concepts or topics included in the test. Information on item difficulty and discrimination will help teachers evaluate student performance on particular items.

Item Difficulty. Table 8 shows the percentage of correct responses on each item for students with and without FFFL instruction. This percentage is an estimate of the difficulty of an item for a particular group of students. Theoretically, this percentage can range from 0 to 100 percent, but most items will fall in the 40 to 80 percent correct range for those students with FFFL instruction. Students without FFFL instruction will generally have a lower percentage correct for each item.

Data on item difficulty should be interpreted with care. Item difficulty (percentage of correct responses) depends on many things besides the complexity of the fact, concept, or principle being tested. Such matters as classroom emphasis on the specific point in question, the closeness or plausibility of incorrect alternatives or “distractors” and the relation of the item content to students’ outside activities, experiences, reading, and awareness may also affect item difficulty. It is worth emphasizing, therefore, that undue attention should not be placed on small differences between the percentage reported in this manual and those obtained in the classroom.

Each question on the FFFL-HS Test has four possible choices: one correct answer and three distractors. Pure chance would dictate an expected correct score of 25 percent on the test for those who had no knowledge of personal finance. If some students with FFFL instruction score below 25 percent on the test (or about 12 or less correct answers), their answer sheets in particular should be carefully checked for systematic errors in test marking, scoring, or test administration.

Item Discrimination. Also reported in Table 8 is the discrimination coefficient for each FFFL test item. It is the corrected item-to-total score correlation or point-biserial correlation. The coefficient measures the correlation between the students' total test scores (less the particular item) and their scores on a particular item. It is an assessment of the functioning of that item with the students who were tested.

This correlation coefficient ranges from 0 to 1. The *higher* the value of the coefficient, the better the item functions as a discriminator between those students who know more or know less personal finance. If this coefficient is zero, it would indicate that this item fails to discriminate between those with more and less knowledge of personal finance as measured by their total score.

In general, if an item has a discrimination coefficient below 0.20, the item may either be a weak discriminator or it may indicate that there is limited classroom coverage of the tested concept. Questions with a *negative* coefficient are *reverse discriminators* (indicating that more lower-scoring students get the question right than do higher-scoring students). Teachers should be aware that the item discrimination coefficient does *not* adjust for the reading level or general ability of students. Thus, higher ability students may do well on a given question regardless of whether or not they have had FFFL or personal finance instruction.

Item Responses

Tables 9 and 10 show the percentages of students responding to the four options on an FFFL test item, with the percentage for the correct response in bold face and with an asterisk. An analysis of item responses can be useful. For example, if a substantial percentage of students answered A when the correct answer was C, the teacher would do well to study distractor A to determine the reason why students selected the incorrect response. It should also help to consult the Item Rationale (Section 7) for explanations.

TABLE 8. Item Discrimination and Percentage of Correct Responses: FFFL High School Test

Item	Correct Answer	Corrected	Percent Correct	
		Item—Total Correlation (n = 859)	With FFFL (n = 524)	Without FFFL (n = 335)
1	B	.40	.58	.17
2	C	.30	.94	.88
3	C	.25	.30	.14
4	A	.36	.82	.80
5	D	.14	.40	.31
6	D	.24	.80	.83
7	A	.43	.84	.78
8	C	.32	.62	.56
9	B	.37	.52	.38
10	B	.22	.56	.47
11	A	.37	.76	.68
12	D	.38	.52	.39
13	C	.37	.65	.46
14	B	.40	.86	.76
15	B	.27	.54	.42
16	C	.20	.56	.49
17	A	.41	.71	.57
18	D	.34	.54	.42
19	C	.29	.50	.37
20	A	.36	.78	.66
21	C	.16	.32	.23
22	D	.13	.33	.23
23	D	.32	.44	.32
24	B	.10	.34	.25
25	B	.22	.44	.48
26	A	.22	.36	.30
27	B	.41	.69	.51
28	A	.15	.22	.20
29	A	.35	.55	.48
30	C	.41	.73	.54
31	D	.39	.75	.61
32	C	.35	.63	.51
33	B	.25	.34	.16
34	C	.19	.40	.27
35	A	.41	.64	.57
36	C	.29	.53	.44
37	B	.21	.46	.36
38	A	.37	.48	.16
39	D	.47	.67	.48
40	D	.38	.44	.24
41	C	.20	.42	.37
42	D	.36	.41	.34
43	B	.39	.61	.44
44	B	.40	.62	.50
45	C	.39	.69	.59
46	A	.26	.60	.56
47	D	.33	.44	.37
48	C	.25	.61	.56
49	A	.26	.35	.25
50	B	.28	.55	.49

TABLE 9. Percentage Response to Each Alternative: FFFL High School Test
FFFL Sample (n = 524)

Item	A	B	C	D	Blank
1	24	58*	12	5	1
2	1	4	94*	1	0
3	7	12	30*	50	0
4	82*	6	7	6	0
5	14	27	19	41*	0
6	7	4	9	80*	0
7	84*	5	6	5	0
8	4	17	62*	17	0
9	15	52*	12	20	0
10	8	8	28	56*	0
11	76*	6	2	15	0
12	8	20	21	52*	0
13	4	3	65*	27	0
14	4	86*	9	2	0
15	13	54*	8	25	0
16	21	15	56*	9	0
17	71*	7	9	12	0
18	8	12	27	54*	0
19	23	12	50*	16	0
20	78*	8	7	6	0
21	7	13	32*	49	0
22	9	33	24	33*	0
23	23	24	9	44*	0
24	22	34*	36	8	0
25	11	45*	29	15	0
26	36*	16	19	29	0
27	11	69*	9	11	0
28	22*	18	37	23	0
29	55*	17	17	10	0
30	10	6	74*	10	0
31	6	12	7	75*	0
32	22	9	63*	6	0
33	7	34*	38	22	0
34	28	16	41*	16	0
35	64*	19	7	10	0
36	13	19	53*	14	0
37	15	46*	19	21	0
38	48*	13	26	14	0
39	7	17	9	67*	0
40	25	19	12	44*	0
41	24	23	42*	12	0
42	9	13	37	41*	0
43	17	61*	17	5	0
44	8	62*	23	7	0
45	18	7	69*	6	0
46	60*	22	12	6	0
47	5	19	32	44*	0
48	6	27	61*	6	0
49	35*	18	25	23	0
50	15	55*	11	19	0

Note: *Correct answer

TABLE 10. Percentage Response to Each Alternative: FFFL High School Test
Control Sample (n = 335)

Item	A	B	C	D	Blank
1	46	17*	29	8	0
2	3	8	88*	1	0
3	15	25	14*	46	0
4	80*	7	10	3	0
5	15	23	30	31*	0
6	6	4	7	83*	0
7	78*	7	9	6	0
8	7	18	56*	19	0
9	8	38*	21	32	0
10	10	10	33	48*	0
11	68*	6	4	22	0
12	6	22	33	39*	1
13	9	3	46*	41	1
14	6	76*	13	5	0
15	16	42*	6	35	0
16	25	16	49*	11	0
17	57*	13	17	13	0
18	11	15	32	42*	0
19	27	9	37*	28	0
20	66*	13	10	11	0
21	11	17	23*	50	0
22	13	37	27	23*	0
23	28	29	11	32*	0
24	21	25*	40	14	0
25	7	48*	28	16	0
26	30*	19	17	34	0
27	10	51*	21	18	0
28	20*	25	34	20	0
29	48*	15	21	16	0
30	18	13	54*	15	0
31	11	19	10	61*	0
32	25	16	51*	8	0
33	9	16*	43	31	0
34	30	16	27*	27	0
35	57*	19	14	10	0
36	13	25	44*	18	0
37	19	36*	22	23	0
38	16*	16	43	25	0
39	13	22	17	48*	0
40	30	25	20	24*	1
41	27	23	37*	13	0
42	12	14	40	34*	0
43	26	44*	19	9	0
44	10	51*	30	10	0
45	23	8	59*	8	0
46	57*	18	16	8	0
47	9	20	34	37*	0
48	9	25	56*	9	0
49	25*	23	24	28	0
50	15	49*	15	21	0

Note: *Correct answer

Reliability

The reliability of a test is the degree of consistency with which a test measures student performance. For example, two students taking the same test are likely to obtain different scores, but each student taking the test again (without intervening instruction in the subject tested) should obtain about the same score as the first time. Many factors (including practice in taking the test or guessing) cause changes in student performance from day to day. As a result, we can never measure a student's performance perfectly (that is, obtain a student's "true" score).

SEM. Fortunately, it is possible to estimate the amount of variation in test scores that is due to measurement error, and therefore to specify a range within which one can be relatively certain the "true" score will fall. By taking account of such measurement error, the reliability of the test as a whole can be estimated.

The standard error of measurement (SEM), which is reported in Table 6, is an estimate of the amount of variation that can be expected in a test score (Linn & Gronlund, 2000, pp. 119-125). A raw score of 24 on a test with an SEM of 3.14 indicates about 67 percent certainty that a person's "true" score lies in a range from 20.86 to 27.14 (24 ± 3.14), or that we can be 95 percent certain that the "true" score lies in a range from 17.72 to 30.28 [$24 \pm (2 \times 3.14)$]. The smaller the SEM, the more accurate a test is as a measuring instrument. Individual test scores are best thought of as lying within a range, rather than as a single score, because of our inability to measure perfectly (the SEM is never zero).

Alpha. Another measure of overall test reliability is the coefficient alpha (Cronbach, 1951). It is a measure of the internal consistency among test items with a common focus, which for the FFFL-HS Test is personal finance. One way to conceptualize internal consistency is to think of splitting the test in half and correlating student

scores on both halves. The alpha coefficient provides an estimate of the average of all possible split half correlations.

The alpha statistic ranges from zero to 1.00. The higher the coefficient, the better items work together in measuring test construct, and thus the greater the statistical reliability of the test. An alpha of 1.00 would indicate a perfectly reliable test, while a coefficient of zero would indicate a totally unreliable one. The alpha of 0.86 for the FFFL-HS Test indicates that there is good internal consistency among items and that the FFFL-HS Test is a highly reliable measure of personal finance achievement among high school students.

Finally, it should be stressed that the reliability of the FFFL-HS Test is substantially higher than that of most teacher-made tests of personal finance. The major question to be determined by each user of the FFFL-HS Test is whether the test as a whole (or individual questions) is appropriate for the testing of his or her students.

Validity

Substantial evidence was collected for establishing the validity of the *Financial Fitness for Life: High School Test* as an achievement measure of understanding of personal finance in high school. This evidence reported in this section consists of content and construct validity.

Content. One of the most important validity questions for an educational achievement test such as the FFFL-HS Test is whether or not it measures what *ought* to be measured. This question cannot be answered by reference to statistics. The work that was done to establish the *content validity* of the FFFL-HS Test was described in detail in Sections 1 and 2 of this manual. In brief, the specification of the personal finance content that should be represented on this test was explained in the two guidelines for the teaching of personal finance: (1) *Financial Fitness for Life: Teacher Guide for Grades 9–12* (Schug and Morton, 2001); and (2) *National Standards in Per-*

sonal Finance (JumpStart Coalition, 2002). These documents served as the guide for the development and selection of test questions on the FFFL-HS Test. Results of this content validity work are shown in the content specification tables (Tables 1 and 2). In addition, the item rationales in the next section give an explanation for the correct answer for each test item that is based on the personal finance content in these two documents. Finally, the FFFL-HS Test includes some economic content that is considered to be important for instruction in personal finance.

The process used for test development also ensured that the items on the FFFL-HS Test would contain valid content as outlined in the *FFFL Teacher Guide* and *National Standards in Personal Finance*. This work was reviewed by a National Advisory Committee composed of five teachers and four directors of centers or councils for economic education. All members of this committee had experience with the FFFL materials either in use with students in the classroom or in providing training on their usage with teachers. These committee members and the three test developers, who also served on the NAC, evaluated the content of questions for any potential bias or reading problems that would affect the performance by different types of high school students. All items were also field-tested with students and then checked by NAC members before they were included on the FFFL-HS Test.

The content validity of the FFFL-HS Test was determined by comparing the test questions with the content specification determined to be important by authoritative experts in personal finance instruction for high schools. Nevertheless, there is no one standard for content validity. Whether the FFFL-HS Test is a valid test often depends on the purpose for which it is used. Some teachers or test users may disagree with the personal finance content presented in the *FFFL Teacher Guide* or used for test questions by the NAC members. In those cases, the FFFL-HS Test may not be content valid for the purposes for which the test users want to use the test.

Construct. There is substantial evidence from the student sample on the *construct* validity of the FFFL-HS Test. Construct validity refers to the ability of the test to measure the underlying construct or focus of the test. The FFFL-HS Test is designed to measure understanding of personal finance among high school students. One type of evidence for construct validity that is presented is whether the test performs well with different groups of students and in the expected direction.

As shown in Table 6, students with FFFL instruction scored 5.5 points higher than students without FFFL instruction. This difference is statistically significant in the expected direction. The probability that this difference is due to chance is about zero (probability less than 0.001).

A further check on the construct validity of any individual test item may be made by reviewing the performance on each item for students with and without personal finance instruction (Table 8). By comparing the percent correct from each group, it is clear that the “with FFFL” group performed better than the “without FFFL” group on all but 2 of the 50 items on the FFFL-HS Test.

Criterion-Related Validity. A third type of validity is criterion-related. This type correlates test performance with another valid and reliable instrument or criterion that measures the same construct. This evidence is often difficult to obtain because a good criterion measure is often not available, as was the case with the FFFL-HS Test. With a reliable and valid criterion, evidence on content and construct validity may be more convincing and important (Ebel & Frisbie, 1991).

Additional Construct Evidence. Table 11 presents some descriptive statistics from the student sample for the FFFL-HS Test. The data are broken down by gender, grade level, the race or ethnic composition of the school, the household income of the class, the free lunch composition of the school, and type of community. The mean FFFL-HS Test score, standard deviation, and sample sizes are given for each subgroup.

**TABLE 11. Descriptive Statistics for High School Students with and without FFFL Instruction:
FFFL-HS Test**

	With FFFL			Without FFFL		
	Mean	Std. Dev.	Number	Mean	Std. Dev.	Number
By student sex						
Females	28.57	8.79	227	22.71	6.34	151
Males	27.43	8.50	273	21.95	6.72	167
By grade level						
Grade 11	31.13	8.61	55	19.90	6.30	136
Grade 12	27.73	8.52	395	24.30	6.13	144
By % black in school						
0–20%	27.82	8.83	492	22.33	6.55	325
> 20%	28.22	7.05	32	22.70	5.83	10
By % Hispanic in school						
0–20%	28.01	8.58	452	21.61	6.43	279
> 20%	26.78	9.59	72	25.98	5.75	56
By income level in school						
Low	27.37	7.48	166	19.87	6.33	115
Middle	27.46	9.21	329	23.64	6.26	220
By % free lunch in school						
0–25%	28.42	9.09	329	23.30	6.41	181
> 25%	26.86	7.99	195	21.21	6.49	154
By type of community						
Rural	27.61	7.24	140	20.52	6.63	124
Suburban	38.36	6.49	72	23.41	6.60	155
Urban	25.52	7.99	312	23.45	5.10	56
All students	27.84	8.72	524	22.34	6.52	335

As Table 11 shows, there are higher scores for those students with FFFL instruction compared to the scores for those students without FFFL instruction across *all* categories. What these results indicate is that performance on the test is responsive to instruction in personal finance, regardless of other personal, social, or environmental characteristics listed in the table. These breakdown data indicate that there is *construct* validity to the FFFL-HS Test.

The data on gender and grade level were obtained from student replies on the answer sheets. The data on household income and type of community were obtained from teacher surveys. The data on the composition of schools by race (percent black), ethnicity (percent Hispanic), or estimate of poverty level (percent free lunch) were obtained from school information in a U.S. Department of Education database.

It is important to stress that these categorical breakdowns must be interpreted with caution. The reason is that some of the cell sizes (the subgroup *n*'s) are small. The breakdowns are also for single characteristics without control over other characteristics. To control for confounding caused by other factors requires the use of more advanced statistical procedures and careful model development that are beyond the scope of this manual.

FFFL Theme Tests

The reliability and validity evidence so far has focused on the entire 50-item test. Some teachers, however, may want to administer and score each 10-item FFFL theme test separately. Some teachers may also not have time to complete instruction on all five FFFL themes during a course or unit. Instead of administering the entire test, these teachers might opt to give a FFFL test covering fewer than the five FFFL themes for which students received direct instruction. This part of the manual explains the interpretation of results from administering FFFL theme tests.

Separate Use. It is possible for teachers to give and score the FFFL theme tests after providing instruction on that theme, but such test use should be treated with caution. The problem is that there are only 10 items to test each theme. These few items limit the reliability and validity of the FFFL theme tests. The alpha reliability of each theme test (.44 to .62) is well below the reliability for the overall test (.86). The differences in mean scores for each theme test are also small.

Table 12 presents the mean scores for the FFFL theme tests. These mean scores can easily be converted to percent correct because there are 10 items on each test. Thus a mean score of 6.38 for the FFFL students on the 10 items for FFFL theme one (economic way of thinking) indicates that students had an average score of 63.8 percent correct. A review of the other theme scores show that students performed best on FFFL theme two (income) at 64.2 percent correct, and worst on FFFL theme three (saving) at 44.2 percent correct. How well students performed on the other three FFFL themes can be evaluated separately or in comparison to other theme scores. Comparisons can also be made with the mean scores of those students without FFFL instruction. Percentiles are not reported, however, for the theme tests because of the few test items.

TABLE 12: Theme Scores: FFFL-HS Test

Theme	With FFFL (<i>n</i> = 524)	Without FFFL (<i>n</i> = 335)
1. Economic Way of Thinking		
Mean	6.38	5.33
S.D.	(2.01)	(1.74)
2. Income		
Mean	6.42	5.22
S.D.	(2.24)	(2.09)
3. Saving		
Mean	4.42	3.54
S.D.	(2.02)	(1.61)
4. Spending/Credit		
Mean	5.32	3.79
S.D.	(2.36)	(1.76)
5. Money Mgmt.		
Mean	5.30	4.47
S.D.	(2.37)	(2.17)

Combined Use. It is expected that some classes will not attempt to cover all themes included in the FFFL materials. Table 13 reports the test results for the “with FFFL” and “without FFFL” groups on the first four themes. Table 14 reports the test results for the “with FFFL” and “without FFFL” groups on the first three themes.

Each table supplies the mean and standard deviation of the test score for those students with and without FFFL instruction. In each case the mean score is an expected higher score for the FFFL group that is statistically significant. Each subtest grouping (themes 1–4 or themes 1–3) shows a respectable reliability for the shortened version of the full test. The alpha reliability is .83 for a 40-item test covering themes 1–4 and .78 for a 30-item test covering themes 1–3. Also shown in each table are the percentile rankings for students who have received FFFL instruction and students who have not. These percentile ranks can be useful for comparing achievement when less than the full FFFL test is used with students.

Conclusion

A standardized test such as the FFFL-HS Test has much to offer teachers and school administrators who are responsible for instruction in personal finance. This test instrument was carefully designed and developed to cover the subject matter that *ought* to be taught (and tested) when using the FFFL curriculum materials. The sample data provided statistical evidence on the reliability and validity of the test measure. The use of the FFFL-HS Test as a standardized measure of FFFL achievement has many advantages and should be a valuable resource.

TABLE 13: Themes 1–4: FFFL High School Test

	With FFFL (n = 524)	Without FFFL (n = 335)
Mean	22.54	17.88
S.D.	(7.01)	(5.24)
Percentiles		
Raw Score		
40		
39		
38		
37	99	
36	98	
35	97	
34	96	
33	94	
32	91	
31	89	
30	86	
29	82	99
28	79	99
27	74	97
26	70	95
25	64	93
24	59	90
23	54	85
22	49	82
21	44	74
20	40	68
19	36	61
18	32	53
17	27	45
16	23	38
15	18	32
14	15	28
13	11	24
12	8	17
11	6	13
10	3	9
9	1	6
8	1	4
7	1	2
6		1
5		
4		
3		
2		
1		
0		
Reliability = .83		SEM = 2.79

TABLE 14: Themes 1–3: FFFL High School Test

	With FFFL <i>(n = 524)</i>	Without FFFL <i>(n = 335)</i>
Mean	17.22	14.09
S.D.	(5.25)	(4.16)

Percentiles

Raw Score

30		
29		
28	99	
27	98	
26	97	
25	94	
24	92	
23	87	99
22	83	
21	78	99
20	70	96
19	64	91
18	58	85
17	52	79
16	45	73
15	40	60
14	33	48
13	26	42
12	22	32
11	16	26
10	10	22
9	7	16
8	4	10
7	2	7
6	1	5
5	1	3
4		2
3		
2		
1		
0		

Reliability = .78

SEM = 2.39

7. ITEM RATIONALE: FINANCIAL FITNESS FOR LIFE - High School Test

THEME 1

ITEM	RATIONALE
<p>1. Which is true about most millionaires?</p> <p>a. They inherit most of their wealth.</p> <p>b. They work more than 40 hours a week.</p> <p>c. They work in glamorous jobs like sports or entertainment.</p> <p>d. They avoid investing in the stock market due to its riskiness.</p>	<p>About 2/3 of millionaires work 45 to 55 hours a week. Only 19 percent of millionaires received any income or wealth of any kind from a trust fund or an estate. Fewer than 10 percent of millionaires inherited 10 percent or more of their wealth. Most millionaires do not work in glamorous jobs like sports or entertainment. In contrast, a majority of millionaires are in ordinary industries and jobs. Most millionaires do invest in the stock market. [Lesson 1: TG pp. 4-5; SW pp. 2-5]</p>
<p>2. Which strategy is most likely to improve most people's financial situation over a lifetime?</p> <p>a. using credit to spend more than a person earns</p> <p>b. making financial decisions quickly based on intuition</p> <p>c. saving early in life when a person begins earning an income</p> <p>d. gaining work experience early instead of continuing in school</p>	<p>Saving early in life as a person earns an income will contribute to long-term financial success. The power of compound interest means that people earn interest on the interest accumulated in their savings accounts, and thus the value of their savings will grow. None of the other options provide a likely or viable strategy for wealth creation, and are more likely to reduce the potential to increase lifetime wealth. [Lesson 1: TG p. 5; SW p. 3]</p>
<p>3. Jamal values three goods in this order: (1) a CD player; (2) a computer game; and (3) a sweatshirt. Each item costs \$50. Jamal bought the CD player, what he wanted the most. His opportunity cost is the:</p> <p>a. sweatshirt.</p> <p>b. CD player.</p> <p>c. computer game.</p> <p>d. sweatshirt and the computer game.</p>	<p>An opportunity cost is the best alternative that a person gives up to get something, not all the other alternatives. In Jamal's case, the next best choice was the computer game. The other options are incorrect. The CD player is a benefit from the decision, not a cost. The sweatshirt was not the next best alternative. The combination of sweatshirt and computer game was not the next best alternative because the alternatives were ordered. [Lesson 2: TG pp. 9-10; SW p. 6]</p>
<p>4. If Jessica chooses to buy more auto insurance this year than she bought last year, then Jessica has probably decided that:</p> <p>a. the benefits of more auto insurance are greater than the costs.</p> <p>b. more auto insurance will reduce her risk of an accident.</p> <p>c. this added insurance will help her savings grow faster.</p> <p>d. she will drive more safely in the future.</p>	<p>All choices involve weighing benefits and costs. Jessica has compared the benefits and costs of her decision. In making her choice, Jessica perceives the benefit of having more insurance protection to be greater than its cost. None of the other options are valid. More auto insurance might increase her risk of an accident because she might assume that insurance will cover the cost. Similarly more insurance will not make her drive more safely in the future. Buying more insurance will take money away from what can be saved. [Lesson 2: TG pp. 9-11; SW pp. 6-7]</p>

ITEM	RATIONALE
<p>5. The expression “there is no such thing as a free lunch” means:</p> <ul style="list-style-type: none"> a. free lunches are a scam but cannot be avoided. b. scarce resources are rare and therefore expensive. c. individuals, but not society, suffer from a lack of resources. d. resources used for one purpose could have been used for another purpose. 	<p>Scarcity occurs because our economic resources are limited and economic wants are unlimited. There is an opportunity cost to every decision. The resources used for one purpose such as providing a “free” lunch will not be available for use by a different purpose. None of the other options are correct. Free lunches are not necessarily a scam and can be avoided. All resources are scarce, and some are expensive and others are not. Both individuals and society face a problem of lack of resources. [Lesson 3: TG p. 13; SW p. 11]</p>
<p>6. Which of the following is typically true?</p> <ul style="list-style-type: none"> a. Correct choices have no costs. b. People do not respond to incentives. c. Voluntary trade causes winners and losers. d. People’s choices have consequences for the future. 	<p>There are future consequences for every choice. The other options make no sense and are incorrect. In making any choice, there will be an opportunity cost—the next best alternative that could have been chosen. People do respond to monetary and non-monetary incentives in a predictable ways. Both buyer and seller gain from voluntary trade because otherwise the transaction would not occur. [Lesson 2: TG pp. 11, 15; SW p. 7]</p>
<p>7. Some people choose to stop attending high school before graduation. What is the opportunity cost to the individual of dropping out of high school?</p> <ul style="list-style-type: none"> a. The lower income earned in the job market. b. The lower interest rates one is charged for credit. c. The higher taxes one pays for leaving school early. d. The payments made to companies hiring drop-outs. 	<p>When someone drops out of high school before graduation, there is an opportunity cost of earning a higher income in the future. The high school dropout will have less choice of jobs and will have fewer job skills, so will typically earn less income than high school graduates. The other options are not true. Dropping out of high school is likely to increase a person’s interest rate if they have less income and are riskier consumers. There are no taxes on dropping out of school. Businesses do not necessarily get payments for hiring dropouts. [Lesson 2: TG pp. 9-10; SW p. 9]</p>
<p>8. One consequence of scarcity is that:</p> <ul style="list-style-type: none"> a. there is full employment of resources. b. the production of goods and services is constant. c. people have to make choices among alternatives. d. products which are plentiful have relatively high prices. 	<p>Scarcity exists because economic wants are greater than the limited resources available to satisfy them, so people have to make decisions about how best to use their scarce resources. Scarcity, therefore, forces people to make choices from among alternatives. None of the other options are valid. Scarcity does not create full employment, nor does it mean production is constant. Plentiful products often have lower rather than higher prices. [Lesson 3: TG p. 13; SW p. 11]</p>

ITEM	RATIONALE
<p>9. Which would be considered a human resource?</p> <p>a. office building b. factory worker c. phone book d. electricity</p>	<p>A factory worker is the only resource listed that involves the physical, intellectual, and creative talents of people. An office building, phone book, and electricity are examples of capital resources. [Lesson 3: TG p. 13; SW p. 11]</p>
<p>10. The first three steps of economic decision-making are to:</p> <p>a. draw a conclusion, construct a model, and make a generalization. b. identify assumptions, make a policy, evaluate the policy. c. gather facts, form a theory, and conduct a simulation. d. define the problem, list alternatives, and state criteria.</p>	<p>The first step in making a decision is to recognize and define the problem. A second step is to list the main alternatives. The third step is to identify or state the criteria for evaluating the alternatives. The fourth step involves evaluating alternatives. The fifth and final step is to make a decision. The other options do not use the decision-making process. [Lesson 3: TG pp. 12-15; SW pp. 13-14]</p>
<p>THEME 2</p>	
<p>11. Which is most likely to improve a person's chances of getting a job?</p> <p>a. supplying a neat and accurate application b. preparing a resume only if an employer requests one c. avoiding classified job advertisements in newspapers d. dressing for an interview in a manner that is provocative</p>	<p>It helps to have a neat and accurate application because the application reflects on the character of the person. None of the other options are likely to improve a person's chances of getting a job and may reduce it. [Lesson 4: TG pp. 19-20; SW p. 21]</p>
<p>12. An approach to finding out about job opportunities that consists of contact with friends and family members who might be able to connect you to a potential employer is called:</p> <p>a. logrolling. b. recruiting. c. connecting. d. networking.</p>	<p>Networking is a less formal way of looking for a job that includes contacting friends and family members who might be able to connect you to a potential employer. Logrolling is a political term referring to the trading of votes. Recruiting refers to employers seeking people for jobs. Connecting is a broad term that typically does not apply to job market searches. [Lesson 4: TG pp. 18-19; SW p. 20]</p>

ITEM	RATIONALE
<p>13. Which question are employers allowed to ask job applicants during a job interview?</p> <p>a. Are you married?</p> <p>b. Do you attend a place of worship?</p> <p>c. What do you feel are your weaknesses as they pertain to this job?</p> <p>d. Do you have any disabilities that might affect your job performance?</p>	<p>Interviewers and job applications are not allowed to pose personal questions that do not pertain to the requirements of the job. Employers who ask about non-job related information such as about marriage, religion, or disabilities are breaking the law. The weaknesses question can be asked because it is job-related. [Lesson 4: TG pp. 19-21; SW pp. 22, 27]</p>
<p>14. A typical characteristic of entrepreneurs is that they:</p> <p>a. like to work part-time.</p> <p>b. are willing to take risks.</p> <p>c. would rather save than invest.</p> <p>d. enjoy working under supervision.</p>	<p>Entrepreneurs are people who are willing to assume the risks involved in starting a business because they hope to make a profit from the business. They tend to be hard working and work full-time. They would rather invest in a business than take the less risky path of simply saving money. They are independent and want to be their own bosses. [Lesson 5: TG pp. 23-25; SW p. 33]</p>
<p>15. Human capital consists of:</p> <p>a. stocks and bonds.</p> <p>b. knowledge and skills.</p> <p>c. plant and equipment.</p> <p>d. savings and investments.</p>	<p>Human capital results from investment in people through education and training. More human capital produces additional knowledge and skills. Stocks and bonds, or savings and investments, refer to financial investments and not human capital. Plant and equipment are capital goods. [Lesson 6: TG pp. 29-30; SW p. 37]</p>
<p>16. Which will result from an increase in the demand for software programmers?</p> <p>a. a decrease in the price of software</p> <p>b. a decrease in the supply of software</p> <p>c. an increase in the wage of software programmers</p> <p>d. an increase in unemployed software programmers</p>	<p>The wage of software programmers is determined in the competitive job market for that occupation. If the demand for software programmers increased, there would be a resulting increase in the wages for programmers. None of the other options are valid outcomes from an increase in demand for programmers. [Lesson 6: TG p. 29; SW p. 37]</p>
<p>17. The U.S. Bureau of Labor Statistics reveals that the fastest growing jobs will require which level of educational training?</p> <p>a. an associate's degree or higher</p> <p>b. postsecondary vocational training</p> <p>c. no more than a high school diploma</p> <p>d. work experience in a related occupation</p>	<p>The three levels of formal education and training that are associated with the fastest-growing jobs are associate's degree, bachelor's degree, and doctoral degree. The three levels of training that are associated with slower-growing jobs are work experience, long-term on-the-job training, and moderate-term on-the-job training. [Lesson 6: TG pp. 29-30; SW p. 40]</p>

ITEM	RATIONALE
<p>18. <i>What is the difference between gross and net pay?</i></p> <p>a. <i>Net pay is gross pay minus saving.</i> b. <i>Gross pay is net pay minus saving.</i> c. <i>Gross pay is net pay minus deductions.</i> d. <i>Net pay is gross pay minus deductions.</i></p>	<p>Gross pay is the total amount of money earned before any deductions are made. The amount left after all deductions are taken out of the gross pay is net pay. [Lesson 7: TG p. 34; SW p. 41]</p>
<p>19. <i>Emily works full-time at Handy Dandy Hardware. Who pays the FICA (Social Security) contributions on Emily's wages?</i></p> <p>a. <i>Emily only</i> b. <i>her employer only</i> c. <i>Emily and her employer</i> d. <i>the federal government</i></p>	<p>FICA or the Federal Insurance Contributions Act is paid by the employee and the employer. This joint employee and employer payment includes contributions for FICA (Social Security). [Lesson 7: TG pp. 34, 36-37; SW p. 42]</p>
<p>20. <i>An employee works for 40 hours per week at \$10 per hour. The deductions per week are \$50 in federal income taxes, \$20 in state income taxes, and \$30 in Social Security taxes. What is the net pay for the week?</i></p> <p>a. <i>\$300</i> b. <i>\$330</i> c. <i>\$350</i> d. <i>\$400</i></p>	<p>Net pay is the amount left after all deductions are taken out of the gross pay. The gross pay for 40 hours per week at \$10 per hour is \$400 per week. The net pay is \$400 minus \$100 in taxes, which is \$300. [Lesson 7: TG pp. 34, 36-37; SW pp. 41, 45-46]</p>

THEME 3

<p>21. <i>What is the opportunity cost of letting your interest compound in your savings account instead of withdrawing the interest as it is earned?</i></p> <p>a. <i>lower taxes in the current year</i> b. <i>increased risk of losing savings</i> c. <i>less money for current purchases</i> d. <i>more interest on the savings account</i></p>	<p>The decision to let the interest compound in a savings account has an opportunity cost. It is the immediate benefit or gratification that accompanies spending for current purchases. None of the other options is a valid opportunity cost for the choice to let the interest compound. [Lesson 8: TG pp. 40-41; SW pp. 53, 57]</p>
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ITEM	RATIONALE
<p>22. <i>Charlie opens a savings account and deposits \$500. If the savings account has a fixed annual interest rate of 5 percent, and he makes no additional deposits or withdrawals, what amount will Charlie have in his savings account at the end of two years?</i></p> <p>a. <i>exactly \$505</i> b. <i>exactly \$550</i> c. <i>less than \$550</i> d. <i>more than \$550</i></p>	<p>Charlie would have more than \$550 in his account at the end of two years because of the power of compound interest. At the end of the first year, he would have \$500 plus 5 percent interest on \$500 ($.05 \times \\$500 = \\$25$), or \$525 total. The second year he would have \$525 plus 5 percent interest on \$525, or \$551.25 total. [Lesson 8: TG pp. 40-43; SW pp. 54-57]</p>
<p>23. <i>Beginning to save while you are young is recommended by financial experts because it:</i></p> <p>a. <i>is easier to save when you first begin earning income.</i> b. <i>is hard to save later in life when you have more income to spend.</i> c. <i>allows you to lock in higher interest rates when you buy on credit.</i> d. <i>lets compound interest work in your favor by earning interest on interest.</i></p>	<p>Even a small amount deposited in a savings account will grow large over a long period of time because of the power of interest compounding. The amount in the account will earn interest and there will be interest earned on the interest payment. There is no proof that options a and b are true. Option c focuses on credit, not saving. [Lesson 8: TG pp. 40-43; SW pp. 54-57]</p>
<p>24. <i>About how many years would it take for \$1,000 to become \$2,000 if \$1,000 is deposited in a savings account with an interest rate of 7.2 percent?</i></p> <p>a. <i>7.2</i> b. <i>10.0</i> c. <i>14.4</i> d. <i>20.0</i></p>	<p>The rule of 72 provides the answer to this question. You can find out how long money will take to double by dividing 72 by the interest rate or the rate of return. When 72 is divided by the interest rate of 7.2, it equals 10. [Lesson 8: TG p. 42; SW p. 57]</p>
<p>25. <i>When making an investment, “market price risk” refers to which possibility?</i></p> <p>a. <i>the difficulty of converting one’s investment into cash</i> b. <i>the value of the investment could decrease over time</i> c. <i>the inability to get any money back from the investment</i> d. <i>the interest earned might be greater than the rate of inflation</i></p>	<p>Market price risk is the risk that the price of an investment will decrease. The price of a financial investment can decrease because the demand for the investment decreases or the supply of an investment increases over time. The other options are different types of risk. The difficulty of converting investments into cash is liquidity risk. Financial risk is the inability to get any money back from an investment. Inflation risk is the risk that inflation will reduce the real value of the investment. [Lesson 9: TG pp. 46-49; SW pp. 58-59]</p>

ITEM	RATIONALE
<p>26. <i>Liquidity risk is highest for which type of investment?</i></p> <p>a. <i>real estate</i> b. <i>mutual fund</i> c. <i>savings account</i> d. <i>individual stocks</i></p>	<p>Real estate typically does not have much liquidity because it is often a unique item and it takes time for a seller to find a buyer and agree on terms. Most mutual funds and individual stocks are liquid assets that can easily be sold and converted to cash because the assets are traded in stock exchanges. It is also easy to get cash from a savings account. [Lesson 9: TG pp. 46-49; SW pp. 58-59]</p>
<p>27. <i>What is the general relationship between risk and reward?</i></p> <p>a. <i>the higher the risk, the lower the potential reward</i> b. <i>the higher the risk, the higher the potential reward</i> c. <i>the amount of risk does not influence potential reward</i> d. <i>there is a relationship, but it is uncertain</i></p>	<p>The greater the risk for an investment, the higher the potential rate of return. The reason for this relationship is that investments with a higher risk want to be compensated. The compensation for assuming this higher risk is the potential for earning a higher rate of return than can be earned on an investment with a lower risk. This potential reward, however, may not be realized and is not guaranteed. [Lesson 9: TG pp. 46-47; SW pp. 58, 60-61]</p>
<p>28. <i>How do you calculate the real rate of return on an investment?</i></p> <p>a. <i>subtract the rate of inflation from the nominal rate of return</i> b. <i>subtract the nominal rate of return from the rate of inflation</i> c. <i>subtract the nominal rate of return from the annual rate of return</i> d. <i>subtract the annual rate of return from the nominal rate of return</i></p>	<p>The real rate of return refers to the rate of return after adjusting the nominal return for the rate of inflation. If the nominal rate of return is 10 percent, and inflation is 2 percent, the real rate of return will be 8 percent. None of the other options make sense as a definition of the real rate of return. [Lesson 9: TG p. 47; SW p. 60]</p>
<p>29. <i>Common stock provides the shareholder with:</i></p> <p>a. <i>ownership in a company.</i> b. <i>a set interest rate per year.</i> c. <i>guaranteed annual dividends.</i> d. <i>insured protection on investment.</i></p>	<p>The purchase of a share of a stock gives the stockholder a share of ownership in a corporation. None of the other options are correct. Common stocks are not fixed interest-paying assets. Not all stocks pay dividends and among those that do, the amount is not guaranteed. There is no insurance protection that comes with the purchase of a common stock. [Lesson 9: TG pp. 46-51; SW p. 63]</p>
<p>30. <i>What are the three most important criteria to consider when investing?</i></p> <p>a. <i>size, insurance, taxes</i> b. <i>leverage, margins, credit</i> c. <i>risk, rate of return, liquidity</i> d. <i>collateral, access to accounts, dividends</i></p>	<p>Risk is important in investing because the money can be made or lost. The rate of return is the income earned for saving or investing. Liquidity refers to the ease with which the investment can be converted to cash. These three factors have the most important influence on the value of an asset or investment. Items listed in the other options are not generally applicable or are less important. [Lesson 9: TG pp. 46-51; SW pp. 58-60]</p>

THEME 4

ITEM	RATIONALE
<p>31. <i>A key advantage of getting credit is that it can help people:</i></p> <p>a. <i>sell assets.</i> b. <i>increase their net worth.</i> c. <i>reduce risk when investing in stocks.</i> d. <i>buy a good or service today and pay for it later.</i></p>	<p>The major advantage of using credit is that it allows a person to obtain a short-term loan for the purchase of a good or services desired now. Credit makes purchases convenient and timely. The loan is repaid at a later date. Credit helps people buy assets. Credit does not increase people's net worth nor reduce risk in investing in stocks. [Lesson 11: TG pp. 61-63; SW pp. 66-67, 69-70]</p>
<p>32. <i>Who generally benefits from a loan transaction?</i></p> <p>a. <i>the lender only</i> b. <i>the borrower only</i> c. <i>both the borrower and the lender</i> d. <i>neither the borrower nor the lender</i></p>	<p>A loan or credit transaction is a voluntary trade in which both the borrower and lender benefit. The borrower is allowed the use of money that he or she does not have. The lender is eventually paid back the amount of the loan, but generally with an additional payment of interest on the loaned funds. [Lesson 11: TG pp. 61-62; SW p. 66]</p>
<p>33. <i>Which three things do creditors consider to be most important when judging a person's creditworthiness to buy a house or car?</i></p> <p>a. <i>marital status, gender, location</i> b. <i>character, collateral, and capacity</i> c. <i>length of loan, credibility, commissions</i> d. <i>occupation, connections, income sources</i></p>	<p>Lenders usually look for the "3 C's": <i>character</i> (if the applicant can be trusted to repay the loan), <i>capacity</i> (if the applicant has enough discretionary income to make payments on the loan), and <i>collateral</i> (if the loan is secured by capital that can be used to repay the debt in case the borrower defaults on the loan). None of the other options are correct. [Lesson 13: TG pp. 68-71; SW pp. 76-78]</p>
<p>34. <i>What does a credit bureau do?</i></p> <p>a. <i>extends credit to qualified buyers</i> b. <i>provides advice on how to use credit</i> c. <i>tracks the bill-paying habits of consumers</i> d. <i>sends warnings to people in credit trouble</i></p>	<p>A credit bureau prepares credit reports that show a record of the credit history of an individual. A credit bureau does not extend credit to buyers. It does not provide credit advice. It does not send warnings to credit users who are in trouble. Under the Fair Credit Reporting Act a person has the right to get a copy of his or her credit report from a credit bureau. [Lesson 13: TG pp. 69-70; SW pp. 76-77]</p>
<p>35. <i>If a borrower chooses to pay back a loan over a longer period of time, the monthly payment is:</i></p> <p>a. <i>lower and the interest paid is higher.</i> b. <i>higher and the interest paid is higher.</i> c. <i>lower and the interest paid is lower.</i> d. <i>higher and the interest paid is lower.</i></p>	<p>In this case, the monthly payment is lower because the amount of the loan to be paid back is spread out over a longer amount of time. However, the amount of interest paid will be higher because the loaned money is being used for a longer period of time and there is extra interest that must be paid for this longer use of the loaned funds. [Lesson 14 TG p. 73; SW p. 87]</p>

ITEM	RATIONALE
<p>36. <i>What is the relationship between the interest rate charged an individual and a person's risk of nonpayment of a loan?</i></p> <p>a. <i>a relationship exists, but it can be either direct or indirect</i></p> <p>b. <i>the lower the risk of nonpayment, the higher the interest rate</i></p> <p>c. <i>the higher the risk of nonpayment, the higher the interest rate</i></p> <p>d. <i>no relationship exists between interest rate and risk of nonpayment</i></p>	<p>Higher risk loans are loans where the lender is less certain the borrower can repay. To compensate for this higher risk of loan default, the lender usually charges higher interest rates. Lower risk loans usually result in lower interest rates for borrowers. [Lesson 14: TG pp. 72-75; SW pp. 86-91]</p>
<p>37. <i>The best indicator of the cost of a loan is the:</i></p> <p>a. <i>amount of down payment.</i></p> <p>b. <i>annual percentage rate.</i></p> <p>c. <i>number of payments.</i></p> <p>d. <i>monthly payment.</i></p>	<p>The annual percentage rate, or APR, is the rate paid in a single year on the amount of borrowed money. The APR is based on the declining balance of the loan and not on the amount of the original loan. The other options affect the calculation of the APR but do not substitute for this general measure of the cost of borrowing. [Lesson 14: TG pp. 73-74; SW p. 86]</p>
<p>38. <i>A thief takes your credit card. You report the card missing, but the thief has already run up \$2,000 in bills. How much of the \$2,000 are you responsible for?</i></p> <p>a. <i>Your liability is limited to \$50.</i></p> <p>b. <i>Your liability depends on whether the unauthorized card user is caught.</i></p> <p>c. <i>You are not liable for any of the \$2,000 because you reported the card stolen.</i></p> <p>d. <i>You are liable for the entire \$2,000 because the card was issued in your name.</i></p>	<p>The Truth in Lending Act protects credit cardholders against unauthorized use of a credit card. If a card is lost or stolen, the cardholder is liable for no more than \$50 of charges made by someone else before the card is reported lost or stolen. Once you report the loss or theft, you have no <i>further</i> responsibility for unauthorized charges. [Lesson 18: TG pp. 87-90; SW p. 103]</p>
<p>39. <i>A company calls you and offers an investment opportunity with very high returns. All you have to do is recruit some of your friends who will also invest and soon your checks will start rolling in. This is a description of which type of investment fraud?</i></p> <p>a. <i>identity theft</i></p> <p>b. <i>a loan scam</i></p> <p>c. <i>credit repair scam</i></p> <p>d. <i>a pyramid scheme</i></p>	<p>A pyramid scheme is a plan that pays participants for recruiting new members, but there will eventually be a lack of growth as the number of new potential recruits declines. Identity theft is the use of other people's personal information to make fraudulent use of their accounts or cards. A loan scam is where a person is instructed to send in a fee for a promised loan to be received in the mail, though the loan never comes. Credit repair scam is where a company instructs a person to pay a fee to remove bad credit or bankruptcy from the person's credit records, when little can be done to change a poor credit record by another party. [Lesson 19: TG pp. 93-95; SW pp. 110-114]</p>

ITEM	RATIONALE
<p>40. Which type of financial institution typically charges the highest interest rates for loans?</p> <p>a. credit unions b. commercial banks c. savings and loans d. payday loan companies</p>	<p>Payday loan companies typically charge a very high interest rate. The APR may be 500% or higher. It is easy for a person who is already having financial problems to fall behind in payments. [Lesson 19: TG pp. 94-95; SW pp. 111-114]</p>
<p>THEME 5</p>	
<p>41. Disposable income is the money that is:</p> <p>a. deducted from your paycheck. b. budgeted for variable expenses. c. spent or saved after deductions. d. saved and invested each month.</p>	<p>The amount of disposable income is determined by gross pay minus any deductions such as for taxes and Social Security contributions. The money that remains is disposable income that can either be spent or saved. [Lesson 20: TG pp. 99, 101; SW pp. 118-119, 121]</p>
<p>42. A positive net worth means that:</p> <p>a. income is less than saving. b. assets are less than liabilities. c. income is greater than saving. d. assets are greater than liabilities.</p>	<p>Net worth is determined by the value of assets and liabilities. If the value of assets is greater than liabilities, then a person has a positive net worth. If the value of liabilities is greater than assets, then a person has a negative net worth. [Lesson 20: TG p. 101; SW pp. 117-121]</p>
<p>43. “Pay Yourself First” means that:</p> <p>a. all bills get paid before any saving. b. money is set aside for savings before spending. c. fixed expenses are paid before flexible expenses. d. credit cards pay for what you don’t have as income.</p>	<p>“Pay Yourself First” means to treat savings like it is a fixed expense. This payment to savings is made first before spending money on other goods and services. Some people make savings a fixed part of their budget so that they will be able to reach their goal of saving a certain amount to reach a goal. [Lesson 20: TG p. 100; SW pp. 117-123]</p>
<p>44. Using a debit card to purchase a good is most similar to using a:</p> <p>a. loan. b. check. c. credit card. d. money market account.</p>	<p>A debit card allows the amount of a purchase to be taken directly from a person’s checking account. A check works in the same way, because when a check is written and then cashed, the money is withdrawn directly from the checking account. Using a credit card is similar to taking out a loan. A money market account is a type of savings account. [Lesson 21: TG pp. 103-104; SW p. 130]</p>

ITEM

RATIONALE

45. *This is Marie’s checking account register.*

Check #	Date	Item Description	Deposit	Withdrawal	Balance
	5/14/03	beginning balance			\$500 00
500	5/15/03	Century Auto Parts		100 00	
	5/31	Paycheck	200 00		
501	6/2/03	Best Clothes			

If Marie writes a check for \$50 at Best Clothes, what is her new balance?

- a. \$450
- b. \$500
- c. **\$550**
- d. \$600

After Marie writes a check to Century Auto Parts for \$100, this amount is subtracted from her beginning balance of \$500 to get a balance of \$400. Then, the amount of Marie’s paycheck is added to the current balance of \$400 to get a new balance of \$600. Therefore, after writing a check to Best Clothes for \$50, Marie will have a balance of \$550. [Lesson 21: TG pp. 102-105; SW pp. 134-135]

46. *Which type of insurance protects a person from loss from lawsuits?*

- a. **liability**
- b. casualty
- c. term life
- d. collision

Liability protection in auto insurance covers the cost of property damage or injuries to others caused by the policy owner. Homeowner’s insurance for liability protects against loss from a lawsuit for injuries to invited or uninvited guests. [Lesson 22: TG pp. 107-109; SW pp. 140-141]

47. *Which is the best description of collision coverage in an auto insurance policy?*

- a. *It provides income when the policy holder is unable to work after an accident.*
- b. *It covers the cost of damage to an auto as a result of fire, theft, or storms.*
- c. *It covers the cost of property damage or injuries to others caused by the policyholder.*
- d. ***It provides for the repair and replacement of the policyholder’s car if it is damaged in an accident.***

Collision insurance for autos provides for the repair or replacement of the policy owner’s car damaged in an accident. Comprehensive insurance for auto covers the cost of damage to an auto from theft, fire, or storms. Liability insurance covers the cost of property damage or injuries to others that you caused in the accident. Disability insurance is not part of auto insurance, but would cover the loss of income when the policyholder is unable to work after an accident. [Lesson 22: TG pp. 107-109; SW p. 140]

ITEM	RATIONALE
<p>48. <i>Suzy backs her car into a metal fence, causing \$500 of damage to her car. Suzy has an auto insurance policy with a \$200 deductible. To get her car fixed, how much will her auto insurance company pay?</i></p> <p>a. \$0 b. \$200 c. \$300 d. \$500</p>	<p>A deductible is the amount of loss paid by the insured. Suzy has an insurance policy with a \$200 deductible, so that is how much she will pay. In this case, there is \$500 worth of damage to her car, so the insurance company will pay what is left after Suzy pays her deductible. The amount the insurance company pays is the total amount of damages (\$500), minus the deductible (\$200), or \$300. [Lesson 22: TG p. 109; SW pp. 142-143]</p>
<p>49. <i>Which is the best description of comprehensive coverage in an auto insurance policy?</i></p> <p>a. <i>It covers the cost of damage to an auto as a result of fire, theft, or storm.</i> b. <i>It provides income over a specified period when the policyholder is unable to work.</i> c. <i>It covers the cost of property damage or injuries to others caused by the policyholder.</i> d. <i>It provides for the repair and replacement of the policyholder's auto if it is damaged in an accident.</i></p>	<p>Comprehensive insurance for autos covers the cost of damage to an auto from theft, fire, or storms. Liability insurance covers the cost of property damage or injuries to others that you caused in the accident. Disability insurance is not part of auto insurance, but would cover the loss of income when the policyholder is unable to work after an accident. Collision insurance for autos provides for the repair or replacement of the policy owner's car damaged in an accident. [Lesson 22: TG pp. 107-109; SW p. 140]</p>
<p>50. <i>A whole life insurance policy offers protection:</i></p> <p>a. <i>for income when the policyholder is unable to work.</i> b. <i>during the lifetime of the insured and builds cash value.</i> c. <i>for a specified period of time and does not build cash value.</i> d. <i>that is based on the policy holder following a healthy lifestyle.</i></p>	<p>A whole life insurance policy provides financial protection to people who depend on a wage earner when the wage earner dies and also builds cash value during the life of the insured. Loans can be made against this cash value. Liability insurance would cover the loss of income when the policyholder is unable to work after an accident. Term life insurance offers protection for a period of time and does not build cash value. Whole life refers to lifetime protection and not to the lifestyle of the insured. [Lesson 22: TG p. 108; SW p. 140]</p>

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Appendix 1. Staff and Committee for the FFFL High School Test

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Appendix 2. High Schools Participating in FFFL Testing-High School Level

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Appendix 3. National Standards in Personal Finance

■ INCOME

1. Sources of income
2. Determinants of income
3. Taxes and transfer payments

■ MONEY MANAGEMENT

1. Limited financial resources and choices
2. The opportunity cost of financial decisions
3. Responsibility for financial decisions
4. The decision-making process in financial choices
5. Inflation and spending and investing decisions
6. Insurance and other risk-management strategies
7. Plan for earning, spending, saving, and investing
8. Use of money-management tools

■ SPENDING AND CREDIT

1. Benefits and costs of spending decisions
2. Information about products and services
3. Advantages and disadvantages of payment methods
4. Benefits and costs of consumer credit
5. Sources of consumer credit
6. Credit history and records
7. Identify ways to avoid or correct credit problems
8. Describe the rights and responsibilities of buyers and sellers under consumer protection laws

■ SAVING AND INVESTING

1. Explain the relationship between saving and investing
2. Describe reasons for saving and reasons for investing
3. Compare the risk, return, and liquidity of investment alternatives
4. Describe how to buy and sell investments
5. Explain how different factors affect the rate of return of investments
6. Evaluate sources of investment information
7. Explain how agencies that regulate financial markets protect investors

Source: Jump\$tart Coalition (2002).

Appendix 4. Voluntary National Content Standards in Economics

1. Productive resources are limited. Therefore, people can not have all the goods and services they want; as a result, they must choose some things and give up others.
2. Effective decision making requires comparing the additional costs of alternatives with the additional benefits. Most choices involve doing a little more or a little less of something: few choices are "all or nothing" decisions.
3. Different methods can be used to allocate goods and services. People acting individually or collectively through government, must choose which methods to use to allocate different kinds of goods and services.
4. People respond predictably to positive and negative incentives.
5. Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and usually among individuals or organizations in different nations.
6. When individuals, regions, and nations specialize in what they can produce at the lowest cost and then trade with others, both production and consumption increase.
7. Markets exist when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services.
8. Prices send signals and provide incentives to buyers and sellers. When supply or demand changes, market prices adjust, affecting incentives.
9. Competition among sellers lowers costs and prices, and encourages producers to produce more of what consumers are willing and able to buy. Competition among buyers increases prices and allocates goods and services to those people who are willing and able to pay the most for them.
10. Institutions evolve in market economies to help individuals and groups accomplish their goals. Banks, labor unions, corporations, legal systems, and not-for-profit organizations are examples of important institutions. A different kind of institution, clearly defined and enforced property rights, is essential to a market economy.
11. Money makes it easier to trade, borrow, save, invest, and compare the value of goods and services.
12. Interest rates, adjusted for inflation, rise and fall to balance the amount saved with the amount borrowed, which affects the allocation of scarce resources between present and future uses.
13. Income for most people is determined by the market value of the productive resources they sell. What workers earn depends, primarily, on the market value of what they produce and how productive they are.
14. Entrepreneurs are people who take the risks of organizing productive resources to make goods and services. Profit is an important incentive that leads entrepreneurs to accept the risks of business failure.
15. Investment in factories, machinery, new technology, and in the health, education, and training of people can raise future standards of living.
16. There is an economic role for government in a market economy whenever the benefits of a government policy outweigh its costs. Governments often provide for national defense, address environmental concerns, define and protect property rights, and attempt to make markets more competitive. Most government policies also redistribute income.
17. Costs of government policies sometimes exceed benefits. This may occur because of incentives facing voters, government officials, and government employees, because of actions by special interest groups that can impose costs on the general public, or because social goals other than economic efficiency are being pursued.
18. A nation's overall levels of income, employment, and prices are determined by the interaction of spending and production decisions made by all households, firms, government agencies, and others in the economy.
19. Unemployment imposes costs on individuals and nations. Unexpected inflation imposes costs on many people and benefits some others because it arbitrarily redistributes purchasing power. Inflation can reduce the rate of growth of national living standards because individuals and organizations use resources to protect themselves against the uncertainty of future prices.
20. Federal government budgetary policy and the Federal Reserve System's monetary policy influence the overall levels of employment, output, and prices.

Source: NCEE (1997).

Appendix 5. FFFL Student Objectives by Lesson and Theme: High School

Test Items

THEME 1: There is No Such Thing as a Free Lunch (The Economic Way of Thinking)

LESSON 1 — How to Really Be a Millionaire

- S1. *Describe the characteristics of millionaires* 1
- S2. *Illustrate how sound financial decisions can increase wealth and a person's standard of living* 2

LESSON 2 — The Economic Way of Thinking

- S1. *List and explain the basic principles of economic reasoning* 3, 4, 5, 6
- S2. *Use economic reasoning to explain how improved money-management skills can improve a family's standard of living*
- S3. *Use economic reasoning to explain why more education results in higher income and in higher income and more opportunities in the future* 7

LESSON 3 — Decision Making

- S1. *Describe how scarcity affects economic choices* 8, 9
- S2. *Describe and discuss the five-step decision-making model* 10
- S3. *Use the decision-making model and decision-making grid to make economic choices*

THEME 2: Education Pays Off: Learn Something (Earning Income)

LESSON 4 — Job Application Process

- S1. *Identify the key steps in the job-application process* 11, 12
- S2. *Practice job-interview skills* 13
- S3. *Practice writing a letter of application and a resume*

LESSON 5 — Making Your Own Job

- S1. *Recognize the characteristics of entrepreneurs* 14
- S2. *Compare the conditions of employment between working for yourself and working for a corporation*
- S3. *Identify examples of small business opportunities in the areas of service, retail, and franchise, including Internet-related opportunities*

LESSON 6 — Why Some Jobs Pay More than Others

- S1. *Identify key terms such as income and human capital* 15
- S2. *Recognize the relationship between investing in human capital and income* 16, 17

LESSON 7 — Uncle Sam Takes a Bite

- S1. *Identify key terms such as gross pay, net pay, deductions, and benefits* 18
- S2. *Recognize the types of benefits provided by employers*
- S3. *Make distinctions between required and optional deductions* 19

Appendix 5. FFFL Student Objectives by Lesson and Theme: High School (continued)

	<u>Test Items</u>
S4. <i>Compute net pay using payroll deductions and tax tables</i>	20
THEME 3: Tomorrow's Money: Getting to the End of the Rainbow (Saving)	
LESSON 8 — What's the Cost of Spending and Saving?	
S1. <i>Identify the opportunity cost and benefit of spending and saving</i>	21
S2. <i>Calculate investment accumulations for various interest rates and lengths of investment</i>	22
S3. <i>Compare early and later investments and identify the benefit and opportunity cost of each strategy</i>	23
S4. <i>Analyze and explain the impact of amount saved, time, and rate of return on savings growth</i>	24
LESSON 9 — There is No Free Lunch in Investing	
S1. <i>Describe the five types of investment risk</i>	25, 26
S2. <i>Describe the relationship between investment risk and investment reward</i>	27
S3. <i>Distinguish between real and nominal rates of return</i>	28
S4. <i>Describe the characteristics of several investments, including savings accounts, stocks, bonds, mutual funds, and real estate</i>	29
S5. <i>Analyze the pyramid of risk and reward</i>	
S6. <i>Compare and contrast the risks and rewards of several types of investments</i>	30
LESSON 10 — Investment Bingo	
S1. <i>Define key investment terms</i>	
S2. <i>Define the characteristics of investment alternatives</i>	
THEME 4: Spending and Credit Are Serious Business (Spending and Using Credit)	
LESSON 11 — What Is Credit?	
S1. <i>Identify key terms such as credit, interest, and risk</i>	
S2. <i>Recognize the advantages and disadvantages of using credit</i>	31
S3. <i>Identify types of financial institutions</i>	
S4. <i>Explain that most credit transactions are voluntary ones in which both sides gain</i>	32
LESSON 12 — Making Credit Choices	
S1. <i>Identify advantages and disadvantages of using credit</i>	
S2. <i>Make decisions about the wise use of credit</i>	
LESSON 13 — Applying for Credit	
S1. <i>Identify the qualities that a lender looks for in a loan applicant</i>	33
S2. <i>Describe what a credit report is and how it is used</i>	34

Appendix 5. FFFL Student Objectives by Lesson and Theme: High School (continued)

Test Items

S3. <i>List the types of information contained in a credit report</i>	
S4. <i>Compare and contrast favorable and unfavorable credit reports</i>	
S5. <i>Use a credit report to determine whether to grant a loan</i>	
LESSON 14 — All about Interest	
S1. <i>Describe the factors that determine the cost of credit</i>	35
S2. <i>Describe the differences between an add-on and an annual percentage rate</i>	
S3. <i>Calculate finance charges using different interest rates</i>	
S4. <i>Calculate APRs given different finance charges and loan repayment periods</i>	
S5. <i>Analyze the relationships among the finance charge, principal of the loan, APR, and loan repayment period</i>	36, 37
LESSON 15 — Shopping for a Credit Card	
S1. <i>Describe how credit cards differ in terms of the annual fee, annual percentage rate, grace period, and credit limit</i>	
S2. <i>Read and understand a credit card statement</i>	
S3. <i>Evaluate the costs and benefits of using a credit card to purchase goods and services</i>	
LESSON 16 — Shopping for a Mortgage	
S1. <i>Describe what it means to amortize a loan</i>	
S2. <i>Use a computer program to amortize several mortgages</i>	
S3. <i>Describe how the cost of buying a home on credit can be reduced</i>	
LESSON 17 — Shopping for an Auto Loan	
S1. <i>Compare and contrast the cost of different loans and choose the loan with the lowest cost</i>	
S2. <i>Shop for a loan online</i>	
S3. <i>Evaluate the factors that reduce the cost of a loan</i>	
LESSON 18 — Consumer Credit Protection	
S1. <i>Identify features of key federal legislation that help protect consumers in credit transactions</i>	38
S2. <i>Analyze how key federal credit legislation applies to specific credit problems</i>	
LESSON 19 — Scams and Schemes	
S1. <i>Recognize various forms of consumer credit frauds</i>	39
S2. <i>Identify high-cost credit practices</i>	40

Appendix 5. FFFL Student Objectives by Lesson and Theme: High School (continued)

Test Items

THEME 5: Get a Plan: Get a Grip on Life (Money Management)

LESSON 20 — Managing Your Money

- S1. *Identify key terms such as disposable income, family budget, variable expense, fixed expense, and net worth* 41, 42
- S2. *Identify the characteristics of a typical monthly family budget including income, expenses, and savings* 43
- S3. *Make spending recommendations for a fictional young family, recognizing the costs and the benefits involved*

LESSON 21 — Banking Basics

- S1. *Recognize the key deposit, credit, and investment services offered by commercial banks, savings and loans, credit unions, and brokerage firms* 44
- S2. *Identify different types of checking accounts*
- S3. *Recognize the steps in setting up and managing a checking account* 45
- S4. *Differentiate between the uses of an ATM and a debit card*

LESSON 22 — Managing Risk: The Good News about Insurance

- S1. *Analyze insurance as a way of reducing risk*
- S2. *Explain that insurance is a way of spreading risk among people in an insurance “pool”*
- S3. *Identify key types of insurance such as health, auto, homeowner’s, renter’s, life, and disability* 46, 47
48, 49
- S4. *Explain the costs and benefits associated with choices regarding the purchase of insurance* 50
-

Appendix 6. Answer Form and Scoring Key, FFFL High School Test

Answer Form

1	A B C D ○ ○ ○ ○	11	A B C D ○ ○ ○ ○	21	A B C D ○ ○ ○ ○	31	A B C D ○ ○ ○ ○	41	A B C D ○ ○ ○ ○
2	A B C D ○ ○ ○ ○	12	A B C D ○ ○ ○ ○	22	A B C D ○ ○ ○ ○	32	A B C D ○ ○ ○ ○	42	A B C D ○ ○ ○ ○
3	A B C D ○ ○ ○ ○	13	A B C D ○ ○ ○ ○	23	A B C D ○ ○ ○ ○	33	A B C D ○ ○ ○ ○	43	A B C D ○ ○ ○ ○
4	A B C D ○ ○ ○ ○	14	A B C D ○ ○ ○ ○	24	A B C D ○ ○ ○ ○	34	A B C D ○ ○ ○ ○	44	A B C D ○ ○ ○ ○
5	A B C D ○ ○ ○ ○	15	A B C D ○ ○ ○ ○	25	A B C D ○ ○ ○ ○	35	A B C D ○ ○ ○ ○	45	A B C D ○ ○ ○ ○
6	A B C D ○ ○ ○ ○	16	A B C D ○ ○ ○ ○	26	A B C D ○ ○ ○ ○	36	A B C D ○ ○ ○ ○	46	A B C D ○ ○ ○ ○
7	A B C D ○ ○ ○ ○	17	A B C D ○ ○ ○ ○	27	A B C D ○ ○ ○ ○	37	A B C D ○ ○ ○ ○	47	A B C D ○ ○ ○ ○
8	A B C D ○ ○ ○ ○	18	A B C D ○ ○ ○ ○	28	A B C D ○ ○ ○ ○	38	A B C D ○ ○ ○ ○	48	A B C D ○ ○ ○ ○
9	A B C D ○ ○ ○ ○	19	A B C D ○ ○ ○ ○	29	A B C D ○ ○ ○ ○	39	A B C D ○ ○ ○ ○	49	A B C D ○ ○ ○ ○
10	A B C D ○ ○ ○ ○	20	A B C D ○ ○ ○ ○	30	A B C D ○ ○ ○ ○	40	A B C D ○ ○ ○ ○	50	A B C D ○ ○ ○ ○

RAW SCORE

PERCENTILE SCORE

NAME _____ DATE _____

month day year

AGE _____ DATE OF BIRTH _____ SEX M F
month day year (circle one)

SCHOOL OR TEST CENTER _____

ADDRESS _____
number and street city state zip

INSTRUCTOR _____ GRADE OR YEAR _____ SEMESTER _____

Appendix 6. Answer Form and Scoring Key, FFFL High School Test (Continued)

Scoring Key

1	A B C D ○ ● ○ ○	11	A B C D ● ○ ○ ○	21	A B C D ○ ○ ● ○	31	A B C D ○ ○ ○ ●	41	A B C D ○ ○ ● ○
2	A B C D ○ ○ ● ○	12	A B C D ○ ○ ○ ●	22	A B C D ○ ○ ○ ●	32	A B C D ○ ○ ● ○	42	A B C D ○ ○ ○ ●
3	A B C D ○ ○ ● ○	13	A B C D ○ ○ ● ○	23	A B C D ○ ○ ○ ●	33	A B C D ○ ● ○ ○	43	A B C D ○ ● ○ ○
4	A B C D ● ○ ○ ○	14	A B C D ○ ● ○ ○	24	A B C D ○ ● ○ ○	34	A B C D ○ ○ ● ○	44	A B C D ○ ● ○ ○
5	A B C D ○ ○ ○ ●	15	A B C D ○ ● ○ ○	25	A B C D ○ ● ○ ○	35	A B C D ● ○ ○ ○	45	A B C D ○ ○ ● ○
6	A B C D ○ ○ ○ ●	16	A B C D ○ ○ ● ○	26	A B C D ● ○ ○ ○	36	A B C D ○ ○ ● ○	46	A B C D ● ○ ○ ○
7	A B C D ● ○ ○ ○	17	A B C D ● ○ ○ ○	27	A B C D ○ ● ○ ○	37	A B C D ○ ● ○ ○	47	A B C D ○ ○ ○ ●
8	A B C D ○ ○ ● ○	18	A B C D ○ ○ ○ ●	28	A B C D ● ○ ○ ○	38	A B C D ● ○ ○ ○	48	A B C D ○ ○ ● ○
9	A B C D ○ ● ○ ○	19	A B C D ○ ○ ● ○	29	A B C D ● ○ ○ ○	39	A B C D ○ ○ ○ ●	49	A B C D ● ○ ○ ○
10	A B C D ○ ○ ○ ●	20	A B C D ● ○ ○ ○	30	A B C D ○ ○ ● ○	40	A B C D ○ ○ ○ ●	50	A B C D ○ ● ○ ○



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