

# Financial Fitness for Life

## UPPER ELEMENTARY 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: Upper Elementary 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: Upper Elementary 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: UPPER ELEMENTARY TEST EXAMINER'S MANUAL

The *Financial Fitness for Life: Upper Elementary Test* (FFFL-UE Test) is a standardized test for measuring the achievement of upper elementary 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 upper elementary students know about the basics of personal finance and related concepts in economics.

The purposes of this *FFFL: Upper Elementary 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 assessment and instruction. Third, it presents statistical evidence documenting the reliability and validity of the test as an achievement measure of personal finance taught in upper elementary school. 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 3–5 (Suiter, 2001). These materials contained 15 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-UE 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-UE 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 upper elementary materials contained in the *Financial Fitness for Life* curricula as presented in the *Teacher Guide* and *Student Workouts* for grades 3–5. 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-UE Test was designed as an achievement test and not a speed test. A decision was made to limit the test to 40 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 upper elementary 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 upper elementary 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-UE 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 in personal finance using FFFL materials.

The two test developers then revised these questions to produce Draft II that contained a pool of 59 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 40-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 upper elementary students. Minor revisions were then made to the test to produce the field-test version (Draft IV) of the FFFL-UE test.

**Field-Testing.** This version of the test was field-tested in April and May, 2003, with about 187 upper elementary students in Missouri and Washington state. The members of the NAC arranged this testing and provided feedback on any problems with test length or administration. NAC member Charles Collier (Harmony Elementary School, Bellingham, Washington) field-tested in his classes. Eight other teachers were recruited to assist with this work, one from Missouri (Susan Gross, St. Anthony of Padua School, St. Louis, MO), and seven from Washington state (Danica Kelly, Fidalgo Elementary School, Anacortes, WA; Lynn Boice and Karen Hodges,

Harmony Elementary School, Bellingham, WA; Ann King and James Write, Picnic Point Elementary School, Edmonds, WA; Gerald Alford, Silver Beach Elementary School, Bellingham, WA; and Tammy McDonald, Sumas Elementary School, Sumas, WA). 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-UE 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-UE 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 815 upper elementary 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-UE Test was approved by the test developers. The last section of the manual presents the 40 test items. The next section discusses coverage of 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-UE Test is a valid and reliable measure of understanding of personal finance among upper elementary students.

## 2. THE CONTENT AND STRUCTURE OF THE TEST

The content of the *Financial Fitness for Life: Upper Elementary Test* is based on three documents. They served as the primary guides for the content validity of the FFFL-UE Test.

**Content.** The first document was the *FFFL Teacher Guide Grades 3–5* (Suiter, 2001). It provides a description and outline of what experts in personal finance and economics consider as core concepts and topics in personal finance to be taught to upper elementary students. All lessons in this guide were written by content and pedagogy experts and field-tested by teachers.

As shown in Table 1, the *Guide* contains 15 lessons organized into four content themes:

- Earning Income
- Saving
- Spending and 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 development of the FFFL-UE Test.

The FFFL-UE Test has 40 questions. The right side of Table 1 shows the distribution of the 40 items across the four themes and the 15 lessons. Each theme contains ten questions distributed across related lessons. Each theme repre-

sents 25 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-UE 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 3–5 shows that the lessons and content of this publication are highly correlated with *National Standards in Personal Finance*. Therefore, the content of the FFFL-UE Test should also be highly correlated with these personal finance standards. The right side of Table 2 shows the approximate distribution of FFFL-UE Test items across the 26 personal finance standards and four major topics. About 30 percent of the test items would meet the income standards, about 30 percent would meet the money management standards, 22.5 percent would meet spending and credit standards, and 17.5 percent would meet saving and investment standards. The results show the FFFL-UE 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-UE 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-UE Test**

Themes and Lessons	Items	Total	Percent
<b>Education Pays Off: Learn Something (<i>Earning Income</i>)</b>		<b>10</b>	<b>25.0</b>
1. Earning Income	1, 2, 3, 4, 5	5	
2. Urban Mouse and Rural Mouse	6, 7, 8	3	
3. People Pay Taxes	9, 10	2	
<b>Tomorrow's Money: Getting to the End of the Rainbow (<i>Saving</i>)</b>		<b>10</b>	<b>25.0</b>
4. The Grasshopper and the Ant	11, 12, 13	3	
5. Why? How? Where?	14, 15, 16, 17, 18, 19, 20	7	
<b>Spending and Credit Are Serious Business (<i>Spending and Credit</i>)</b>		<b>10</b>	<b>25.0</b>
6. Consumers Want Goods and Services	21	1	
7. To Choose is to Refuse	22, 23	2	
8. How Would You Like to Pay?	24, 25, 26	3	
9. More about Methods of Payment <b>[NOTE: These objectives are exactly the same as those for Lesson 8]</b>			
10. Why Do I Want All This Stuff?	27	1	
11. This One or That One?	28	1	
12. Credit is Based on Trust	29	1	
13. Buddy, Can You Spare a Dime?	30	1	
<b>Get a Plan: Get a Grip on Life (<i>Money Management</i>)</b>		<b>10</b>	<b>25.0</b>
14. Managing Money	31, 32, 33	3	
15. It's a Balancing Act	34, 35, 36, 37, 38, 39, 40	7	
<b>Total Number of Questions Percent of Total</b>		<b>40</b>	<b>100.0</b>

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

<b>Standard Selected Key Concepts*</b>	<b>Items</b>	<b>Total</b>	<b>Percent</b>
<b>A. INCOME</b>		<b>12</b>	<b>30.0</b>
1. Sources of income	2, 8, 20, 34	4	
2. Determinants of income	1, 3, 4, 5, 7	5	
3. Taxes and transfer payments	9, 10, 37	3	
<b>B. MONEY MANAGEMENT</b>		<b>12</b>	<b>30.0</b>
1. Limited resources and choice	22, 32	2	
2. Opportunity cost	12	1	
3. Personal financial responsibility	25	1	
4. Financial decision making	13, 16	2	
5. Inflation and investing			
6. Insurance, risk management			
7. Budgeting	35, 36, 38, 40	4	
8. Use of money management tools	15, 24	2	
<b>C. SPENDING AND CREDIT</b>		<b>9</b>	<b>22.5</b>
1. Benefits and cost of spending	23, 28, 33	3	
2. Information on products	6, 21, 27	3	
3. Costs and benefits of payment methods	26	1	
4. Risk and credit	30	1	
5. Sources of credit	29	1	
6. Credit history and records			
7. Managing financial difficulties			
8. Rights and responsibilities of buyers, sellers, and creditors			
<b>D. SAVING AND INVESTING</b>		<b>7</b>	<b>17.5</b>
1. Saving and investing	11, 14, 31, 39	4	
2. Reasons for saving and investing	17, 18, 19	3	
3. Risk, return and liquidity investment			
4. Buy and sell investments			
5. Rate of return on investments			
6. Sources of investment information			
7. Government and saving and investment			
<b>Total Number of Questions</b>	<b>40</b>	<b>40</b>	<b>100.0</b>

**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-UE Test**

<b>Standard Selected Key Concepts*</b>	<b>Items</b>	<b>Total</b>
1. Scarcity, choice, productive resources	6, 21, 22, 32	4
2. Decision-making, marginal analysis	12, 13, 23, 33	4
3. Economic systems & allocation mechanisms		
4. Economic incentives — prices, wages, profits, etc.	8, 16	2
5. Voluntary exchange & trade		
6. Specialization & comparative advantage		
7. Markets & price		
8. Supply & demand		
9. Competition		
10. Economic institutions	11, 14	2
11. Money & money supply		
12. Interest rates	30	1
13. Labor markets & income	2, 3, 4, 34	4
14. Entrepreneurship	7, 20	2
15. Physical & human capital investment	1, 5	2
16. Economic role of government	10, 37	2
17. Government failure, special interest groups		
18. Output, income, employment, & the price level		
19. Unemployment & inflation		
20. Fiscal & monetary policy		
<b>Total Number of Questions</b>		<b>23</b>

Note: \*17 of the 40 items on the FFFL-UE test (9, 15, 17, 18, 19, 24, 25, 26, 27, 28, 29, 31, 35, 36, and 38–40) 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-UE Test items that address some aspect of the economics standards, although the connection in some cases is minor. About 23 items (or 57.5 percent) of the test address some economics content. The other 17 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-UE 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 upper elementary grades based on the content outlined by FFFL materials and the national standards in personal finance and economics. The weights for the test content were determined in consultation with members of the NAC.

**TABLE 4. Cognitive Levels for the FFFL-UE 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-UE 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-UE 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-UE 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-UE Test items across the three cognitive levels. There are 8 knowledge, 19 comprehension, and 13 application items. In percentage terms, 67.5 percent of the items fall into the knowledge or comprehension levels, and 32.5 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: Upper Elementary Test* was designed primarily to aid teachers in assessing and improving the quality of upper elementary teaching of personal finance. There are several ways of using it to achieve this objective.

##### AS A PRETEST

The FFFL-UE 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 upper elementary teachers because some school districts now provide instruction in personal finance—sometimes only on a limited basis—before the upper elementary grades. If this prior instruction in personal finance has been effective, many students will have acquired some knowledge of personal finance. Thus, the wise upper elementary 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-UE 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-UE 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-UE Test***

Themes and Lessons	I Knowledge	II Comprehension	III Application
<b>Education Pays Off: Learn Something (<i>Earning Income</i>)</b>	<b>3</b>	<b>4</b>	<b>3</b>
1. Earning Income	1, 2	4, 5	3
2. Urban Mouse and Rural Mouse	7	6	8
3. People Pay Taxes		10	9
<b>Tomorrow's Money: Getting to the End of the Rainbow (<i>Saving</i>)</b>	<b>1</b>	<b>5</b>	<b>4</b>
4. The Grasshopper and the Ant		11, 12	13
5. Why? How? Where?	16	14, 19, 20	15, 17, 18
<b>Spending and Credit Are Serious Business (<i>Spending and Credit</i>)</b>	<b>1</b>	<b>6</b>	<b>3</b>
6. Consumers Want Goods and Services			21
7. To Choose is to Refuse	22		23
8. How Would You Like to Pay?		25, 26	24
9. More about Methods of Payment <b>[NOTE: These objectives are exactly the same as those for Lesson 8]</b>			
10. Why Do I Want All This Stuff?		27	
11. This One or That One?		28	
12. Credit is Based on Trust		29	
13. Buddy, Can You Spare a Dime?		30	
<b>Get a Plan: Get a Grip on Life (<i>Money Management</i>)</b>	<b>3</b>	<b>4</b>	<b>3</b>
14. Managing Money		31, 32	33
15. It's a Balancing Act	34, 35, 37	36, 38	39, 40
<b>Total Number of Questions</b>	<b>8</b>	<b>19</b>	<b>13</b>
<b>Percent of Total</b>	<b>20.0%</b>	<b>47.5%</b>	<b>32.5%</b>

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-UE 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-UE 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 upper elementary classes. Researchers employing the FFFL-UE 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-UE Test serves as a reliable and valid measure for their specific applications and research needs.

When used as a posttest, the FFFL-UE 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-UE 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-UE 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-UE Test is also flexible. One worthwhile use of the FFFL-UE 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 12–13).

It should be remembered if whole or parts of the FFFL-UE 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: Upper Elementary Test* was designed for upper elementary teachers or administrators to use with upper elementary 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-UE 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-UE 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-UE Test is given to upper elementary students, the results obtained at different times may not be strictly comparable with the published results in this manual. For most uses, the FFFL-UE Test should be easy to administer and it may be scored by hand or machine.

### Materials

The FFFL-UE 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 40 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. The 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-UE Test requires about 40 minutes of testing time for upper elementary 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-UE 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-UE Test by theme or subtest portions of the entire FFFL-UE Test. For example, if more time is needed for testing than the class period permits, then just two 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 taking the test to fill in the requested 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 40 questions is broken into four 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 40 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 sheet 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 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: Upper Elementary Test* is the number of correct responses. The maximum possible score is 40. 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 be sure the student marked only one answer for each question; if more than one answer was marked, the response to that question is considered wrong. To use the 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 appropriate norming data (see Section 6, Table 8).

Most upper elementary 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: Upper Elementary Test* was administered to a sample of upper elementary students during the 2003–2004 school year. Some of these students had received instruction in personal finance using the FFFL materials. Another group of upper elementary 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 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-UE Test. In addition, data from this sample was used to judge the technical adequacy of the FFFL-UE Test.

Table 6 reports the aggregate statistics obtained from the 815 upper elementary 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 12 elementary schools listed in Appendix 2. Eleven of these elementary schools were in Texas and one was in Washington state. 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 to be tested who had not received FFFL instruction.

No claim is made that the group tested is *exactly* representative of the upper elementary school student population throughout the nation because it was not possible to obtain a stratified, random sample of students. The data, however, are probably indicative of results that would be obtained if a teacher trained in using 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 sub-sample 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-UE Test**

<b>Sample Size</b>	
Number of Students	815
Percent with FFFL	61%
<b>Reliability</b>	
Coefficient alpha	.88
Standard error of measurement	2.76
<b>Means</b>	
<i>With FFFL</i> (n = 498)	24.43 (7.86)
<i>Without FFFL</i> (n = 317)	17.26 (5.95)

Note: Standard deviations are in parentheses.

### Percentile Tables

Table 7 presents the raw test scores and corresponding percentile ranks from the samples of upper elementary 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 upper elementary 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 31 on the FFFL-UE Test has a percentile rank of 79 among those students who also received FFFL instruction. A raw score of 31 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 31 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-UE Test**

<b>Raw Score</b>	<b>With FFFL (n = 498)</b>	<b>Without FFFL (n = 317)</b>
40		
39		
38	97	
37	95	
36	91	
35	89	
34	86	
33	84	
32	82	
31	79	99
30	75	99
29	73	98
28	69	97
27	64	95
26	61	93
25	57	90
24	54	84
23	49	80
22	45	78
21	38	75
20	32	71
19	28	66
18	23	61
17	19	55
16	17	50
15	14	45
14	12	37
13	8	30
12	6	24
11	4	18
10	3	12
9	2	7
8	1	4
7	1	3
6		2
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-UE 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-UE 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 10 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-UE Test**

Item	Correct Answer	Corrected Item—Total Correlation (n = 815)	Percent Correct	
			With FFFL (n = 498)	Without FFFL (n = 317)
1	A	.34	.66	.38
2	C	.44	.40	.17
3	A	.45	.65	.40
4	B	.38	.76	.59
5	B	.40	.52	.35
6	C	.28	.84	.74
7	D	.40	.79	.38
8	B	.35	.69	.50
9	B	.43	.63	.39
10	D	.36	.85	.71
11	A	.41	.53	.38
12	D	.38	.77	.43
13	C	.46	.55	.29
14	B	.11	.69	.65
15	D	.43	.66	.51
16	B	.44	.53	.28
17	D	.44	.70	.56
18	C	.40	.83	.65
19	C	.40	.91	.80
20	B	.29	.33	.20
21	D	.33	.67	.57
22	C	.42	.62	.33
23	C	.43	.54	.21
24	B	.40	.62	.42
25	B	.40	.78	.62
26	B	.35	.55	.35
27	A	.42	.60	.42
28	D	.35	.63	.53
29	A	.42	.55	.29
30	A	.39	.42	.21
31	C	.09	.40	.34
32	B	.41	.40	.20
33	A	.18	.37	.34
34	D	.35	.48	.40
35	A	.34	.47	.27
36	C	.35	.61	.46
37	A	.48	.83	.65
38	D	.30	.55	.46
39	C	.26	.44	.44
40	B	.47	.63	.41

**TABLE 9. Percentage Response to Each Alternative: FFFL Upper Elementary Test**  
*FFFL Sample (n = 498)*

Item	A	B	C	D	Blank
1	<b>67*</b>	7	18	8	0
2	37	8	<b>40*</b>	15	0
3	<b>66*</b>	10	10	14	1
4	10	<b>76*</b>	6	8	0
5	37	2	<b>52*</b>	9	0
6	8	3	<b>84*</b>	5	0
7	9	6	6	<b>79*</b>	0
8	7	<b>69*</b>	9	15	0
9	31	<b>63*</b>	4	2	0
10	5	4	5	<b>85*</b>	0
11	<b>53*</b>	10	28	8	0
12	13	7	3	<b>77*</b>	0
13	9	21	<b>55*</b>	15	0
14	7	<b>69*</b>	17	8	0
15	6	22	5	<b>67*</b>	0
16	11	<b>53*</b>	10	26	1
17	18	6	5	<b>70*</b>	0
18	3	5	<b>83*</b>	10	0
19	3	4	<b>91*</b>	2	0
20	26	<b>33*</b>	14	27	0
21	19	7	7	<b>67*</b>	0
22	9	14	<b>62*</b>	15	0
23	10	12	<b>54*</b>	24	0
24	12	<b>62*</b>	7	18	0
25	6	<b>78*</b>	9	7	0
26	9	<b>55*</b>	19	17	0
27	<b>60*</b>	14	18	9	0
28	15	13	8	<b>63*</b>	1
29	<b>55*</b>	19	12	14	0
30	<b>42*</b>	12	12	33	0
31	27	5	<b>40*</b>	28	0
32	37	<b>40*</b>	7	17	0
33	<b>37*</b>	26	27	9	0
34	20	15	17	<b>48*</b>	0
35	<b>47*</b>	18	10	24	0
36	13	13	<b>61*</b>	13	0
37	<b>83*</b>	5	3	9	0
38	17	16	12	<b>55*</b>	0
39	18	23	<b>44*</b>	14	0
40	14	<b>63*</b>	17	5	0

Note: \*Correct answer

**TABLE 10. Percentage Response to Each Alternative: FFFL Upper Elementary Test**  
*Control Sample (n = 317)*

Item	A	B	C	D	Blank
1	<b>38*</b>	21	28	14	0
2	39	26	<b>17*</b>	18	0
3	<b>40*</b>	14	18	29	0
4	15	<b>59*</b>	14	12	0
5	51	5	<b>35*</b>	8	0
6	19	4	<b>74*</b>	4	0
7	26	26	10	<b>38*</b>	0
8	16	<b>51*</b>	15	19	0
9	49	<b>39*</b>	6	5	0
10	11	10	8	<b>71*</b>	1
11	<b>38*</b>	12	38	13	0
12	33	17	8	<b>43*</b>	0
13	20	28	<b>29*</b>	22	0
14	8	<b>65*</b>	15	13	0
15	11	28	10	<b>51*</b>	0
16	20	<b>28*</b>	22	29	1
17	26	7	10	<b>56*</b>	1
18	4	6	<b>65*</b>	24	1
19	8	5	<b>80*</b>	6	1
20	36	<b>20*</b>	16	28	1
21	20	13	9	<b>57*</b>	0
22	17	25	<b>33*</b>	23	0
23	22	26	<b>21*</b>	31	0
24	19	<b>42*</b>	15	24	0
25	10	<b>62*</b>	15	13	0
26	19	<b>35*</b>	17	28	1
27	<b>42*</b>	24	22	12	1
28	16	18	10	<b>53*</b>	1
29	<b>29*</b>	24	22	23	1
30	<b>21*</b>	12	15	52	0
31	27	12	<b>34*</b>	26	0
32	50	<b>20*</b>	11	19	0
33	<b>34*</b>	19	35	10	1
34	23	18	18	<b>40*</b>	1
35	<b>27*</b>	22	22	29	0
36	15	18	<b>46*</b>	22	0
37	<b>65*</b>	9	10	16	0
38	22	19	13	<b>46*</b>	0
39	16	22	<b>45*</b>	17	0
40	24	<b>41*</b>	18	17	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 2.76 indicates about 67 percent certainty that a person's "true" score lies in a range from 21.24 to 26.76 ( $24 \pm 2.76$ ), or that we can be 95 percent certain that the "true" score lies in a range from 18.48 to 29.52 [ $24 \pm (2 \times 2.76)$ ]. 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-UE 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 the test construct, and thus the greater the 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 0.88 for the FFFL-UE Test indicates that there is good internal consistency among items and that the FFFL-UE Test is a highly reliable measure of personal finance achievement for upper elementary students.

Finally, it should be stressed that the reliability of the FFFL-UE 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-UE 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: Upper Elementary Test* as an achievement measure of understanding of personal finance in upper elementary grades. This evidence reported in this section consists of content and construct.

**Content.** One of the most important validity questions for an educational achievement test such as the FFFL-UE 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-UE 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 3–5* (Suiter, 2001); and (2) *National Standards in Personal Finance*

(JumpStart Coalition, 2002). These documents served as the guide for development and selection of test questions to be included on the FFFL-UE Test. The 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-UE 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-UE 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 upper elementary students. All items were also field-tested with students and then checked by NAC members before they were included on the FFFL-UE Test.

The content validity of the FFFL-UE Test was determined by comparing the test questions with the content specification determined to be important by authoritative experts in personal finance instruction for upper elementary grades. Nevertheless, there is no one standard for content validity. Whether the FFFL-UE 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-UE 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-UE Test. Construct validity refers to the measurement of the underlying construct or focus of the test. The FFFL-UE Test is designed to measure understanding of personal finance among upper elementary 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.

Table 6 shows that students with FFFL instruction scored 7.17 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 virtually zero (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 on all but 1 of the 40 items on the FFFL-UE Test. The performance of both groups was identical on that one item.

**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-UE 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. 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 score, standard deviation, and sample sizes are given for each subgroup.

**TABLE 11. Descriptive Statistics for Upper Elementary Students with and without FFFL Instruction:  
FFFL-UE Test**

	With FFFL			Without FFFL		
	Mean	Std. Dev.	Number	Mean	Std. Dev.	Number
<b>By student sex</b>						
Females	24.75	7.82	242	17.04	5.58	155
Males	24.13	7.88	248	17.73	6.27	133
<b>By grade level</b>						
Grade 3	19.31	4.00	16	10.75	4.63	16
Grade 4	30.92	7.67	85	15.80	5.04	95
Grade 5	23.75	7.13	346	18.91	5.78	170
<b>By % black in school</b>						
0–20%	27.62	7.68	202	18.42	5.41	177
> 20%	22.25	7.22	296	15.80	6.28	140
<b>By % Hispanic in school</b>						
0–20%	28.47	7.88	144	17.22	6.18	158
> 20%	22.79	7.24	354	17.31	5.72	159
<b>By income level in school</b>						
Low	23.31	7.79	353	15.72	6.00	182
Middle	27.16	7.34	145	19.34	5.22	135
<b>By % free lunch in school</b>						
0–50%	27.16	7.34	145	19.34	5.22	135
> 50%	23.31	7.79	353	15.72	6.00	182
<b>By type of community</b>						
Rural	32.73	6.64	60	16.64	6.80	39
Suburban	26.35	7.15	128	17.99	5.28	158
Urban	22.03	7.01	310	16.51	6.40	120
<b>All students</b>	24.43	7.86	498	17.26	5.95	317

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 in the table. These breakdown data indicate that there is *construct* validity to the FFFL-UE 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 40-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 four 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 four 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 (.60 to .68) is well below the reliability for the overall test (.88). The differences in mean scores are also small.

Table 12 presents the mean scores for each of 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 6.78 for the FFFL students on the ten items for FFFL theme one (income) indicates that students had an average score of 67.8 percent correct. A review of the theme scores show that students performed best on FFFL theme one and worst on FFFL theme four (money management) at 51.7 percent correct. How well students performed on the other two 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-UE Test**

Theme	With FFFL ( <i>n</i> = 498)	Without FFFL ( <i>n</i> = 317)
<b>1. Income</b>		
Mean	6.78	4.62
S.D.	(2.26)	(1.98)
<b>2. Saving</b>		
Mean	6.50	4.72
S.D.	(2.20)	(1.93)
<b>3. Spending/Credit</b>		
Mean	5.97	3.95
S.D.	(2.46)	(1.95)
<b>4. Money Mgmt.</b>		
Mean	5.17	3.98
S.D.	(3.37)	(1.81)

**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 three themes.

The table supplies the mean and standard deviation of the test score for those students with and without FFFL instruction. The mean score is an expected higher score for the FFFL group that is statistically significant. The subtest grouping (themes 1–3) shows a respectable reliability for the shortened version of the full test. The alpha reliability is .86 for a 30-item test covering themes 1–3. Also shown 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-UE 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-UE Test as a standardized measure of FFFL achievement has many advantages and should be a valuable resource.

**TABLE 13: Themes 1–3: FFFL-UE Test**

	With FFFL (n = 498)	Without FFFL (n = 317)
<b>Mean</b>	19.26	13.28
<b>S.D.</b>	(6.05)	(4.81)
<b>Percentiles</b>		
<b>Raw Score</b>		
30		
29	98	
28	95	
27	90	
26	85	
25	81	
24	76	
23	72	98
22	67	96
21	62	94
20	57	91
19	52	86
18	48	82
17	41	78
16	35	74
15	29	70
14	24	63
13	18	57
12	14	49
11	10	42
10	7	33
9	6	22
8	4	16
7	3	10
6	1	5
5		4
4		1
3		
2		
1		
0		
<b>Reliability = .86</b>		<b>SEM = 2.36</b>

## 7. ITEM RATIONALE: FINANCIAL FITNESS FOR LIFE - Upper Elementary Test

### THEME 1

ITEM	RATIONALE
<p>1. <i>The skills that people bring to work are:</i></p> <ul style="list-style-type: none"> <li>a. <b>human capital.</b></li> <li>b. <i>financial capital.</i></li> <li>c. <i>natural resources.</i></li> <li>d. <i>capital resources.</i></li> </ul>	<p>Human capital is the skills, talent, and education that people possess. The other options are not related to skills. Financial capital is money. Natural resources are raw materials from the land and sea. Capital resources are items used to make other goods and services. [Lesson 1: TG pp. 2-4; SW pp. 1-2, 15-16]</p>
<p>2. <i>The payment for work people do is called:</i></p> <ul style="list-style-type: none"> <li>a. <i>profit.</i></li> <li>b. <i>saving.</i></li> <li>c. <b>wages.</b></li> <li>d. <i>interest.</i></li> </ul>	<p>People receive wages for goods and services they produce. They are earning an income by providing labor resources for the economy. The other options are not payments for work. Profit is the return for business owners willing to take risks. Saving is income not spent on current consumption. [Lesson 1: TG pp. 2-4; SW pp. 1-2]</p>
<p>3. <i>Mary teaches first grade at Jefferson School. Jane cleans offices for a cleaning company. Susan donates time to the local scout troop. Who is earning income?</i></p> <ul style="list-style-type: none"> <li>a. <b>Mary and Jane only</b></li> <li>b. <i>Mary and Susan only</i></li> <li>c. <i>Jane and Susan only</i></li> <li>d. <i>Mary, Jane, and Susan</i></li> </ul>	<p>Mary and Jane are each paid for their work and earn an income from selling their labor time. Susan is volunteering her time to the local scout troop, so she is not receiving an income for her work. [Lesson 1: TG pp. 2-3; SW pp. 1-2]</p>
<p>4. <i>Jobs usually pay a higher salary when:</i></p> <ul style="list-style-type: none"> <li>a. <i>they have a job title.</i></li> <li>b. <b>more education is required.</b></li> <li>c. <i>people must be interviewed.</i></li> <li>d. <i>an ad has to be placed in a newspaper.</i></li> </ul>	<p>People with more education are typically paid a higher salary because their education gives them more unique and valuable skills for their jobs. The other options do not have any effect on generating a higher salary. [Lesson 1: TG p. 3; SW pp. 1-2, 17]</p>
<p>5. <i>One way to improve human capital is by:</i></p> <ul style="list-style-type: none"> <li>a. <i>saving money.</i></li> <li>b. <i>going shopping.</i></li> <li>c. <b>attending school.</b></li> <li>d. <i>building a factory.</i></li> </ul>	<p>Human capital consists of the skills, talent, and education that people possess. Investing and improving your human capital can be accomplished through education, practice, and on-the-job training. The other options do not focus on improving human capital, but instead focus on saving, consumption, or creating physical capital. [Lesson 1: TG pp. 3-4; SW pp. 1-2, 18]</p>
<p>6. <i>Which is an example of a service?</i></p> <ul style="list-style-type: none"> <li>a. <i>pizza</i></li> <li>b. <i>jacket</i></li> <li>c. <b>child care</b></li> <li>d. <i>music CD</i></li> </ul>	<p>A service is an activity that people do for others. Child care would be a service because the provider is caring for someone else's child. All of the other options are goods. [Lesson 2: TG pp. 8-12; SW pp. 3-5]</p>

ITEM	RATIONALE
<p>7. <i>New businesses are started by:</i></p> <ul style="list-style-type: none"> <li>a. <i>economists.</i></li> <li>b. <i>accountants.</i></li> <li>c. <i>stockbrokers.</i></li> <li>d. <b><i>entrepreneurs.</i></b></li> </ul>	<p>Entrepreneurs are people who organize other productive resources to make goods and services. Entrepreneurs start new businesses, take risks, and try new things. Economists, accountants, and stockbrokers typically do not start businesses but work for businesses or government. [Lesson 2: TG pp. 8-12; SW pp. 12-13, 15-16]</p>
<p>8. <i>Chris started a summer business selling tomatoes. He sold tomatoes for \$300 and his business costs were \$250. The \$50 that was left over was his:</i></p> <ul style="list-style-type: none"> <li>a. <i>price.</i></li> <li>b. <b><i>profit.</i></b></li> <li>c. <i>costs.</i></li> <li>d. <i>revenue.</i></li> </ul>	<p>Profit is the amount of revenue left over after all costs of production are considered. Profit is the payment to entrepreneurs for taking the risk to start a business, or to continue in the business. The other options are not what is left over from the situation. Price is what an item is sold for. Costs are the expenses associated with selling a good or service. Revenue is income from sales. [Lesson 2: TG pp. 10-12; SW pp. 12-13, 16]</p>
<p>9. <i>Jake got a part-time job making pizzas. Last week, he earned \$100 in wages. He received a paycheck for \$70. Why was the amount of his paycheck lower than his wages?</i></p> <ul style="list-style-type: none"> <li>a. <i>Jake worked only part-time.</i></li> <li>b. <b><i>Taxes were taken out of his pay.</i></b></li> <li>c. <i>The pizza restaurant lost money.</i></li> <li>d. <i>The owner stole some of his wages.</i></li> </ul>	<p>Taxes are required payments made to the government. Businesses deduct taxes from the income earned by workers and send the taxes to government. Part-time work, business profitability, and theft are not legitimate or general reasons for why his paycheck was lower than his wages. [Lesson 3: TG pp. 16-19; SW pp. 14, 19]</p>
<p>10. <i>Taxes are used to pay for the:</i></p> <ul style="list-style-type: none"> <li>a. <i>profit of a store.</i></li> <li>b. <i>savings of people.</i></li> <li>c. <i>wages of store workers.</i></li> <li>d. <b><i>services of government.</i></b></li> </ul>	<p>Taxes are collected and used by the government to provide goods and services. For example, when government provides education or a judicial system, it is providing a service. Taxes are not used to pay for profits, savings, or the wages of workers in the private sector (e.g., a store). [Lesson 3: TG pp. 16-19; SW pp. 14-15]</p>

## THEME 2

<p>11. <i>Juan put his money in a savings account. The payment that the bank makes to Juan for the use of his money while it is deposited at the bank is called:</i></p> <ul style="list-style-type: none"> <li>a. <b><i>interest.</i></b></li> <li>b. <i>wages.</i></li> <li>c. <i>credit.</i></li> <li>d. <i>profit.</i></li> </ul>	<p>Money deposited into a savings account earns interest. Interest is money people receive for allowing the bank or someone else to use their money for loans or other purposes. The other options are incorrect. Wages are payments for the use of labor resources. Credit is money lent for a fee that must be repaid in the future. Profit is the amount of revenue left over for a business after all production costs have been paid. Profit is also the income earned by entrepreneurs. [Lesson 4: TG pp. 24-25; SW pp. 20-24, 35]</p>
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ITEM	RATIONALE
<p>12. <i>Shawna got \$20 for her birthday. She wants either to save her money for a radio or spend it on a shirt. If she buys the shirt, saving for the radio is her:</i></p> <p>a. <i>expense.</i>  b. <i>revenue.</i>  c. <i>human capital.</i>  d. <b><i>opportunity cost.</i></b></p>	<p>Opportunity cost is the next best alternative in making a decision. In buying the shirt she gives up the opportunity to save for the radio, and that is her opportunity cost. None of the other options correctly describe the situation. Expense is money paid for an item. Revenue is income received by a business from selling a product. Human capital is the skills, education, and talent people have. [Lesson 4: TG pp. 23-25; SW pp. 20-24, 34, 36]</p>
<p>13. <i>Ming wanted to buy a fancy notebook for school and save her money to buy a computer. Ming decided to buy a plain notebook that is less expensive so she can save more money for the computer. Ming's decision is an example of:</i></p> <p>a. <i>paying interest.</i>  b. <i>depositing money.</i>  c. <b><i>making a tradeoff.</i></b>  d. <i>choosing a service.</i></p>	<p>A trade-off is giving up some of one thing to get more of another thing. Ming gave up buying a fancy notebook and bought a plain notebook instead so she could save more money for a computer. The other options have nothing to do with the trade-off decision. Interest payments are made for the use of borrowed money. Money is deposited at a bank. Services are activities people do for others. [Lesson 4: TG pp. 24-25; SW pp. 20-24, 34, 39]</p>
<p>14. <i>Duane earned \$25 raking leaves. He spent \$20 of the \$25 on a video game. The \$5 that he did not spend is called his:</i></p> <p>a. <i>interest.</i>  b. <b><i>saving.</i></b>  c. <i>profit.</i>  d. <i>wage.</i></p>	<p>Saving is income not spent on current consumption, or money not spent on goods and services. Duane set aside some of his income from raking leaves to use later. That money set aside and not spent on goods and services is saving. The other options are incorrect. Interest is a payment for the use of borrowed money. A wage is a payment for the use of labor resources. Profit is the amount of revenue left over for a business after all production costs are paid. Profit is also the income earned by entrepreneurs. [Lesson 5: TG pp. 26-32; SW pp. 27-28, 30-33, 38-39]</p>
<p>15. <i>Marisa had \$50 in her checking account. She made a withdrawal of \$10 and a deposit of \$20. What is Marisa's balance in her checking account?</i></p> <p>a. <i>\$10</i>  b. <i>\$20</i>  c. <i>\$50</i>  d. <b><i>\$60</i></b></p>	<p>Marisa withdrew \$10 from her balance of \$50 in her checking account. This gives her a new balance of \$40. She then deposits \$20 into her account, giving Marisa a new balance of \$60. [Lesson 5: TG pp. 30-31; SW pp. 32-33]</p>
<p>16. <i>A reward or penalty for how people behave is:</i></p> <p>a. <i>a tradeoff.</i>  b. <b><i>an incentive.</i></b>  c. <i>an opportunity cost.</i>  d. <i>an economic want.</i></p>	<p>An incentive is a reward or penalty that influences how people behave. Paying people a bonus for being the best seller of a product is an example of an incentive that is a reward. Fining people for violating the law is an example of an incentive that is a penalty. The other options are different concepts and not definitions of an incentive. [Lesson 5: TG pp. 28-29; SW pp. 27-28, 34]</p>

ITEM	RATIONALE
<p>17. <i>Janis wants to save \$75 for a CD player. She plans to save \$5 a month. What else does Janis need in her savings plan?</i></p> <p>a. <i>a checking account</i>  b. <i>a certificate of deposit</i>  c. <i>the number of stores selling CD players</i>  d. <b><i>the number of months that she must save</i></b></p>	<p>When deciding to save money for an item, it is important to decide how much to save each month towards the cost, and to determine how many months it is going to take to save the total amount. The other options—a checking account, certificate of deposit or the number of stores selling CD players—is irrelevant to the savings plan. [Lesson 5: TG pp. 29, 35; SW pp. 28, 38]</p>
<p>18. <i>Scott plans to save the same amount of money each week for 10 weeks to buy his mom a \$30 necklace. How much should Scott save each week?</i></p> <p>a. <i>\$1</i>  b. <i>\$2</i>  c. <b><i>\$3</i></b>  d. <i>\$4</i></p>	<p>Scott would need to save \$3 a week if it was a \$30 necklace and he had 10 weeks to buy it. The \$3 answer is found by taking \$30 and dividing it by 10. [Lesson 5: TG pp. 28-32, 35; SW pp. 28, 38]</p>
<p>19. <i>The best example of a long-term goal would be saving for a:</i></p> <p>a. <i>video game.</i>  b. <i>birthday present.</i>  c. <b><i>college education.</i></b>  d. <i>pair of basketball shoes.</i></p>	<p>Long-term goals are things people plan to do in the years ahead (more than a year). Saving for a college education is a long-term goal because people need to save money for it over a long time period. Saving for a purchase of a video game, birthday present, or basketball shoes is typically a short-term goal that does not require much time because the amount to be saved is relatively small. [Lesson 5: TG pp. 27-28; SW pp. 27-28, 37]</p>
<p>20. <i>What is the incentive for entrepreneurs to start new businesses?</i></p> <p>a. <i>tax</i>  b. <b><i>profit</i></b>  c. <i>wages</i>  d. <i>interest</i></p>	<p>Entrepreneurs are risk-takers. They start new businesses because they believe the businesses will earn a profit. Profit is the return or payment to an entrepreneur for starting a business. The other options are associated with the cost of doing business—paying taxes, wages, or interest on borrowed funds. They do not provide a payment or income to an entrepreneur. [Lesson 5: TG pp. 28-29; SW pp. 25-33. See also TG p. 10; SW pp. 12-13]</p>

### THEME 3

- | ITEM   | RATIONALE  |
|--|--|
| <p>21. <i>Tamika paid to see a movie. At the movie, she also bought some candy. Which is true about her purchases?</i></p> <p>a. <i>The movie and the candy are both goods.</i></p> <p>b. <i>The movie and the candy are both services.</i></p> <p>c. <i>The movie is a good, and the candy is a service.</i></p> <p>d. <b><i>The movie is a service, and the candy is a good.</i></b></p> | <p>Goods are tangible things (objects) that satisfy economic wants. Candy is a consumable product that satisfies people wants for something sweet. Other examples of goods are milk, computers, and cars. Services are activities that people perform for others to satisfy economic wants. A movie provides entertainment for others. Other examples of services are plant watering, car washing, and babysitting. [Lesson 6: TG pp. 40-45; SW pp. 42-44, 80]</p> |
| <p>22. <i>What do we call a desire that can be satisfied by consuming a good or service?</i></p> <p>a. <i>tradeoff</i></p> <p>b. <i>investing</i></p> <p>c. <b><i>economic want</i></b></p> <p>d. <i>opportunity cost</i></p>  | <p>Economic want is a desire that can be satisfied by consuming a good or service. People have wants for many goods and services, and their consumption helps people meet those wants or desires. None of the other options are a correct definition of economic wants. [Lesson 7: TG pp. 47-52; SW pp. 45-46, 80]</p>   |
| <p>23. <i>Bill wants to buy a soft drink AND candy at the movies. Each item costs \$2, but he only has \$3 to spend. Bill decides to buy the soft drink. What is Bill's opportunity cost?</i></p> <p>a. <i>\$3</i></p> <p>b. <i>\$4</i></p> <p>c. <b><i>candy</i></b></p> <p>d. <i>soft drink</i></p>  | <p>Opportunity cost is the value of the next best alternative. When Bill decides to buy the soft drink, his opportunity cost is the candy. None of the other options make sense. He does not give up \$4 or \$3 because he only pays \$2 for the soft drink. The soft drink is the item he benefits from consuming; it is not a cost. [Lesson 7: TG pp. 47-52; SW pp. 45-46, 82]</p>   |
| <p>24. <i>This is Antoine's checking account register.</i></p>   |  |

Check #	Date	Item Description	Deposit	Withdrawal	Balance
	5/14/03	beginning balance			\$900 00
500	5/15/03	Messerman's Markets		50 00	850 00
	5/31	paycheck	100 00		950 00
501	6/2/03	Value Videos			

*If Antoine writes a check for \$25 at Value Videos, what is his new balance?*

- a. *\$900*
- b. ***\$925***
- c. *\$950*
- d. *\$975*

Antoine's previous balance was \$950 before he wrote a check for \$25. Now he will need to subtract the \$25 from the \$950 to get a new balance of \$925. [Lesson 8: TG pp. 56-57, 61; SW pp. 47-48]

ITEM	RATIONALE
<p>25. <i>Before you buy something using a check, what should you know about your checking account?</i></p> <p>a. <i>if you have a tax on your checking account</i></p> <p><b>b. if you have money in your checking account</b></p> <p>c. <i>the interest rate on your checking account</i></p> <p>d. <i>the PIN for your checking account</i></p>	<p>A check is a note that gives a bank permission to make a payment. It is important to always know how much money is in a checking account before writing a check to buy something. Otherwise the account will not have sufficient funds to cover the amount of the payment. The other options are unrelated to the use of a checking account for a buying decision. The other options may be important for other reasons in managing a checking account, but they are not necessary to know for a buying decision. [Lesson 8: TG pp. 56-58; SW pp. 47-49]</p>
<p>26. <i>Which of the following could you use to buy something now and pay for it later?</i></p> <p>a. <i>a check</i></p> <p><b>b. a credit card</b></p> <p>c. <i>a debit card</i></p> <p>d. <i>a money order</i></p>	<p>A credit card allows consumers the privilege of buying something now and paying for it later. It enables consumers to receive a short-term loan that must be repaid. The credit card company pays for the purchases and then turns around and bills the cardholder. A check directs a bank permission to make a payment. A debit card request is an electronic form of a check. A money order is a form of cash designated for a particular person or firm. [Lesson 8: TG pp. 57-59; SW pp. 47-52, 81]</p>
<p>27. <i>Using a movie star to sell a certain brand of toothpaste is an example of:</i></p> <p><b>a. celebrity appeal.</b></p> <p>b. <i>false advertising.</i></p> <p>c. <i>brand name loyalty.</i></p> <p>d. <i>bandwagon appeal.</i></p>	<p>Movie stars are celebrities. Businesses use them because people often admire celebrities and often want to buy the same products they do. Companies think that celebrity ads will influence consumer tastes and preferences for the product and will increase their sales. None of the other options deal with the use of celebrities. [Lesson 10: TG pp. 87, 91; SW pp. 59, 82]</p>
<p>28. <i>Jackson went to the store to buy orange juice and used unit pricing to find the least expensive brand. The brands came in different size containers. Unit pricing means that he looked at the:</i></p> <p>a. <i>features of each brand.</i></p> <p>b. <i>shape of each container.</i></p> <p>c. <i>calories per ounce of each brand.</i></p> <p><b>d. price per ounce of each container.</b></p>	<p>Unit pricing allows you to compare prices more easily by using the same unit for comparison. Orange juice brands can be compared by price per ounce. To determine this, divide the price of a can of orange juice (expressed in cents) by the number of ounces in a can. For example, if a 12-ounce can costs \$1.32, then the price per ounce would be \$0.11 (<math>132/12 = 11</math>). [Lesson 11: TG pp. 95, 98; SW pp. 62-65, 86]</p>
<p>29. <i>Zia borrowed \$2,000 from the bank to start a business. She guaranteed her loan with an offer to give the bank her car if she did not repay the loan. Which word best describes the offer of her car?</i></p> <p><b>a. collateral</b></p> <p>b. <i>interest</i></p> <p>c. <i>credit</i></p> <p>d. <i>debit</i></p>	<p>Collateral is something that is used to guarantee a loan. The lender can keep the collateral item if the loan is not repaid. The other options deal with other concepts and do not describe the situation. Interest is a payment for the use of borrowed money. Credit is money lent for a fee that must be repaid in the future. Debit is related to debt or what is owed. [Lesson 12: TG pp. 101-103; SW pp. 66-75, 82]</p>

ITEM	RATIONALE
<p>30. A store loaned \$500 to Sara to buy a TV. In one year, Sara repaid the \$500 plus a fee of \$50 to pay for the cost of borrowing the money. Which word best describes the \$50 fee?</p> <p>a. <b>interest</b>  b. credit  c. debit  d. tax</p>	<p>Interest is the amount that a borrower pays for the use of borrowed money over time. Sara borrowed \$500 and paid \$50 in interest for the use of that \$500 over time. None of the other options describe the \$50 fee. Credit is money lent for a fee that must be repaid in the future. Debit is related to debt or what is owed. A tax is a required payment individuals and businesses make to government. [Lesson 13: TG pp. 106-108; SW pp. 76-79, 82]</p>
<p><b>THEME 4</b></p>	
<p>31. Sara Wilson earns an income of \$3,000 per month as an elementary school teacher. She has expenses of \$2,000 each month. The amount she has left over each month is called:</p> <p>a. profit.  b. credit.  c. <b>saving.</b>  d. budget.</p>	<p>Saving is income not spent on current consumption. Sara earns \$3,000 a month and uses \$2,000 of it for consumption. The \$1,000 left over is her saving. None of the other options define the amount left over. Profit is the amount of revenue left over for a business after all production costs have been paid. Credit is money lent for a fee that must be repaid in the future. A budget is a plan or record for managing income and expenses. [Lesson 14: TG pp. 112-114; SW pp. 88-89, 96]</p>
<p>32. Because people have limited income, they must:</p> <p>a. pay taxes.  b. <b>make choices.</b>  c. increase spending.  d. open a checking account.</p>	<p>If people had unlimited incomes they could buy whatever they wanted. Limited income means that people must make choices about what they can afford to buy. None of the other options result from limited income. People pay taxes because of government laws. Spending is likely to decrease because of limited income. Limited income does not require people to open a checking account. [Lesson 14: TG pp. 112-113; SW pp. 91-93, 96]</p>
<p>33. The Walker family went on a summer vacation in the mountains. They must have decided that the benefits of the vacation were:</p> <p>a. <b>greater than the cost.</b>  b. less than the cost.  c. equal to the cost.  d. zero.</p>	<p>A cost is something given up when an action is taken, whereas a benefit is something that is gained when an action is taken. The Walkers chose to take the vacation, so they thought the benefits outweighed the costs of staying home. The other options do not make sense. They would not take the vacation if the costs were greater than or equal to the benefits (b and c), or if the benefits were zero (d), because there is no net gain from the action. [Lesson 14: TG pp. 113-114; SW pp. 90, 97]</p>
<p>34. A wage is:</p> <p>a. payment for goods and services.  b. profit from the sale of goods.  c. interest earned on savings.  d. <b>income earned for work.</b></p>	<p>A wage is a payment made in return for supplying labor services. The wage is a form of income for a worker. Profit, interest, and income are different concepts. [Lesson 15: TG p. 116; SW pp. 94-95]</p>

ITEM	RATIONALE
<p>35. <i>A plan for managing income, spending and saving is called:</i></p> <p><b>a. a budget.</b>  b. <i>an investment.</i>  c. <i>a credit account.</i>  d. <i>an account balance.</i></p>	<p>A budget is a plan to manage income, spending, and saving. People manage money closely by keeping track of their income and expenses and comparing them to what they planned to earn or spend. The other options deal with other concepts. [Lesson 15: TG pp. 116-119; SW pp. 94-95, 96]</p>
<p>36. <i>Spending on restaurant meals is best described as:</i></p> <p>a. <i>production.</i>  b. <i>investment.</i>  <b>c. a variable expense.</b>  d. <i>a variable resource.</i></p>	<p>Variable expenses may change from week to week or month to month and are not constant. Examples of variable expenses are spending on groceries, clothing, and gasoline. The other options describe other concepts (production, investment) or are related to resources, not spending. [Lesson 15: TG pp. 117, 119; SW pp. 94-97]</p>
<p>37. <i>What are required payments to government?</i></p> <p><b>a. taxes</b>  b. <i>wages</i>  c. <i>savings</i>  d. <i>income</i></p>	<p>Taxes are revenue for government. The government typically obtains this revenue by requiring people to pay income, sales, or property taxes to government. The other options are not correct. Wages are payment for labor. Savings is an amount of money put aside in some form. Income is payment people receive for providing resources. [Lesson 15: TG pp. 117, 119; SW pp. 94-96]</p>
<p>38. <i>Which is an example of a fixed expense for a person?</i></p> <p>a. <i>clothing</i>  b. <i>gasoline</i>  c. <i>video rentals</i>  <b>d. apartment rent</b></p>	<p>Fixed expenses are those that do not vary from week to week or month to month. Examples of fixed expenses are constant payments for rent, mortgages, insurance, or car loans. Clothing, gasoline, or video rentals would be examples of variable expenses because the amount spent typically changes from week to week or month to month. [Lesson 15: TG pp. 117, 119; SW pp. 94-97]</p>
<p>39. <i>Which of the following families is saving each month?</i></p> <p>a. <i>The Smiths have \$750 in income and \$800 in expenses.</i>  b. <i>The Suiters have \$1,500 in income and \$1,500 in expenses.</i>  <b>c. The Wilburns have \$1,000 in income and \$900 in expenses.</b>  d. <i>The Jacksons have \$1,200 in income and \$1,300 in expenses.</i></p>	<p>Saving is income not spent on current consumption. Option c is correct because the Wilburns receive \$1,000 in income and spend \$900. The \$100 left over from their income is their savings for the month. In options a, b, and d the expenses for the month are either greater than or equal to income, so there is no income left over; thus, no saving. [Lesson 15: TG pp. 117-118; SW pp. 94-96]</p>

ITEM	RATIONALE
<p>40. <i>The Sorensens earn \$2,000 each month and spend \$2,100. Which is the best action they can take to balance their budget?</i></p> <p>a. <i>pay more taxes</i>  b. <b><i>reduce expenses</i></b>  c. <i>increase spending</i>  d. <i>get more credit cards</i></p>	<p>If the Sorensens' expenses are greater than their income, then they need to find a way to reduce their expenses. This can be accomplished by cutting their spending for food, clothing, housing, or other goods and services. The other options will have the opposite effect. Paying taxes and increasing spending will increase expenses, and getting more credit cards will make it easier to spend. [Lesson 15: TG pp. 117-119; SW pp. 93-95, 97]</p>

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## **Appendix 1. Staff and Committee for the FFFL Upper Elementary Test**

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## Appendix 2. Upper Elementary Schools Participating in FFFL Testing-UE Test

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### MISSOURI

Susan Gross<sup>†</sup>  
*St. Anthony of Padua School*  
*St. Louis 63111*

### TEXAS

Pat Clos  
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 Dawn McKeever  
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Patsy Foltz  
 Nancy Smashey  
*LBJ Elementary School*  
*El Paso 79912-5498*

Denetria Bates  
 Tracy Chavis-Mohammad  
 Donna Demarchos  
 Kendra Jacobsen  
 Angela Powell  
 Carmelita Suayan  
 Patty Willis  
*Northwest Intermediate School*  
*Houston 77038*

Karen Alvarez  
 Kathy Bogas  
 Peggy Kovan  
*Polk Elementary School*  
*El Paso 79912-2425*

Karen Flynt  
 Stephanie Weaver  
*Rogers Middle School*  
*Pearland 77581-4245*

Janice Broussard  
*Rustic Oak Elementary School*  
*Pearland 77581-4245*

Ellen Lance  
*Silverlake Elementary School*  
*Pearland 77581-4245*

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*Travis Elementary School*  
*Harlingen 78550-9112*

Jamie Sawka  
*Walt Disney Elementary School*  
*Alvin 77511-3581*

### WASHINGTON

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*Anacortes 98221*

Lynn Boice<sup>†</sup>  
 Charles Collier\*<sup>†</sup>  
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*Bellingham 98226-9516*

Steve Blum  
 Cindy Purdy  
*Kendall Elementary School*  
*Sumas 98266*

Ann King<sup>†</sup>  
 James Write<sup>†</sup>  
*Picnic Point Elementary School*  
*Edmonds 98026-3716*

Gerald Alford<sup>†</sup>  
*Silver Beach Elementary School*  
*Bellingham 98226-4499*

Tammy McDonald<sup>†</sup>  
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## Appendix 3. National Standards in Personal Finance

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### ■ 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

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Source: Jump\$tart Coalition (2002).

## Appendix 4. Voluntary National Content Standards in Economics

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**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.

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Source: NCEE (1997).

## Appendix 5. FFFL Student Objectives by Lesson and Theme: Upper Elementary

### Test Items

#### **THEME 1: Education Pays Off: Learn Something (Earning Income)**

##### LESSON 1 — Earning Income

- S1. *Define human resources, income, wages, human capital* 1, 2
- S2. *Explain that people earn income by providing resources in the market* 3
- S3. *Explain the connection between human capital and income* 4
- S4. *Identify ways in which people invest in their human capital* 5

##### LESSON 2 — Urban Mouse and Rural Mouse

- S1. *Define goods, services, entrepreneur, opportunity recognition, revenue, costs of production, income, and profit* 6, 7
- S2. *Calculate profit* 8

##### LESSON 3 — People Pay Taxes

- S1. *Define tax, income tax, sales tax, property tax, gross income, net income* 9
- S2. *Explain that people pay taxes to government and government uses taxes collected to provide goods and services* 10

#### **THEME 2: Tomorrow's Money: Getting to the End of the Rainbow (Saving)**

##### LESSON 4 — The Grasshopper and the Ant

- S1. *Define opportunity cost and interest* 11
- S2. *Analyze the tradeoffs and opportunity cost of a saving decision* 12, 13
- S3. *Identify reasons to save*
- S4. *Explain how savings can be used to satisfy future wants*
- S5. *Use the concept of opportunity cost to compare the advantages and disadvantages of saving and to make informed saving decisions*
- S6. *Explain how interest serves as an incentive to save*

##### LESSON 5 — Why? How? Where?

- S1. *Define saving, incentive, short-term goal, long-term goal, and interest* 14, 15, 16
- S2. *Explain the elements of a saving plan* 17, 18
- S3. *Give examples of short-term and long-term goals* 19
- S4. *Give examples of incentives* 20
- S5. *Compare the advantages and disadvantages of various savings options*

## Appendix 5. FFFL Student Objectives by Lesson and Theme: Upper Elementary (cont.)

### Test Items

#### **THEME 3: Spending and Credit Are Serious Business (Spending and Using Credit)**

##### LESSON 6 — Consumers Want Goods and Services

- S1. *Describe how spending for consumer goods or services satisfies wants*
- S2. *Identify consumer spending decisions* 21
- S3. *Compare and contrast individual spending with group or family spending*
- S4. *Compare similarities and differences in spending decisions*

##### LESSON 7 — To Choose is to Refuse

- S1. *Define want, opportunity cost, and income* 22
- S2. *Explain that people must make choices because they can't have everything they want*
- S3. *Identify the opportunity cost of decisions* 23
- S4. *Use the concept of opportunity cost to make more thoughtful choices among alternatives*

##### LESSON 8 — How Would You Like to Pay?

- S1. *Identify methods of paying for goods and services* 24
- S2. *Define money, check, money order, debit card, and credit card*
- S3. *Explain that checks are valuable only if there is money in the checking account* 25
- S4. *State advantages of using checks rather than cash*
- S5. *State advantages of using debit cards rather than checks or cash*
- S6. *Explain that credit cards are not considered money because they are actually a line of credit* 26
- S7. *Explain that credit card companies pay businesses for items purchased by a credit card and then bill the credit card holder for those items*
- S8. *State advantages and disadvantages of using credit*

##### LESSON 9 — More about Methods of Payment **NOTE: These objectives are exactly the same as those for Lesson 8**

##### LESSON 10 — Why Do I Want All This Stuff?

- S1. *Explain the relationship between price and the amount of a good or service people are willing and able to buy*
- S2. *Identify types of advertising* 27
- S3. *Explain the purpose of advertising*
- S4. *Distinguish between fact and opinion*

## **Appendix 5. FFFL Student Objectives by Lesson and Theme: Upper Elementary (cont.)**

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### **Test Items**

#### LESSON 11 — This One or That One?

- S1. *Define consumer, criteria, price, unit pricing, and comparison shopping*
- S2. *Compare prices and other features of similar products* 28
- S3. *Explain why comparison shopping is a useful skill for consumers*

#### LESSON 12 — Credit is Based on Trust

- S1. *Define borrower, lender, trust, trustworthy, credit, and collateral* 29
- S2. *Generalize that borrowing and lending are based on trust between the lender and the borrower*
- S3. *Identify the personal qualities that build trust and creditworthiness*

#### LESSON 13 — Buddy, Can You Spare a Dime?

- S1. *Define credit, debt, interest, costs, and benefits* 30

### **THEME 4: Get a Plan: Get a Grip on Life (Money Management)**

#### LESSON 14 — Managing Money

- S1. *Define income, expenses, saving, costs, and benefits* 31
- S2. *Explain that because of limited income, people must make choices* 32
- S3. *Analyze the costs and benefits of alternatives* 33

#### LESSON 15 — It's a Balancing Act

- S1. *Define income, expenses, fixed expenses, variable expenses, taxes, saving, human resources, and budget* 34, 35  
36, 37
- S2. *Distinguish among fixed and variable expenses* 38
- S3. *Identify a balanced budget as income equal to expenses* 39
- S4. *Explain that income must increase, expenses must decrease, or both must occur if expenses exceed income* 40
-

**Appendix 6. Answer Form and Scoring Keys, FFFL Upper Elementary Test**

**Answer Form**

<b>1</b>	A B C D ○ ○ ○ ○	<b>11</b>	A B C D ○ ○ ○ ○	<b>21</b>	A B C D ○ ○ ○ ○	<b>31</b>	A B C D ○ ○ ○ ○
<b>2</b>	A B C D ○ ○ ○ ○	<b>12</b>	A B C D ○ ○ ○ ○	<b>22</b>	A B C D ○ ○ ○ ○	<b>32</b>	A B C D ○ ○ ○ ○
<b>3</b>	A B C D ○ ○ ○ ○	<b>13</b>	A B C D ○ ○ ○ ○	<b>23</b>	A B C D ○ ○ ○ ○	<b>33</b>	A B C D ○ ○ ○ ○
<b>4</b>	A B C D ○ ○ ○ ○	<b>14</b>	A B C D ○ ○ ○ ○	<b>24</b>	A B C D ○ ○ ○ ○	<b>34</b>	A B C D ○ ○ ○ ○
<b>5</b>	A B C D ○ ○ ○ ○	<b>15</b>	A B C D ○ ○ ○ ○	<b>25</b>	A B C D ○ ○ ○ ○	<b>35</b>	A B C D ○ ○ ○ ○
<b>6</b>	A B C D ○ ○ ○ ○	<b>16</b>	A B C D ○ ○ ○ ○	<b>26</b>	A B C D ○ ○ ○ ○	<b>36</b>	A B C D ○ ○ ○ ○
<b>7</b>	A B C D ○ ○ ○ ○	<b>17</b>	A B C D ○ ○ ○ ○	<b>27</b>	A B C D ○ ○ ○ ○	<b>37</b>	A B C D ○ ○ ○ ○
<b>8</b>	A B C D ○ ○ ○ ○	<b>18</b>	A B C D ○ ○ ○ ○	<b>28</b>	A B C D ○ ○ ○ ○	<b>38</b>	A B C D ○ ○ ○ ○
<b>9</b>	A B C D ○ ○ ○ ○	<b>19</b>	A B C D ○ ○ ○ ○	<b>29</b>	A B C D ○ ○ ○ ○	<b>39</b>	A B C D ○ ○ ○ ○
<b>10</b>	A B C D ○ ○ ○ ○	<b>20</b>	A B C D ○ ○ ○ ○	<b>30</b>	A B C D ○ ○ ○ ○	<b>40</b>	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 Upper Elementary Test (continued)**

**Scoring Key**

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



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