# Escape from Knab

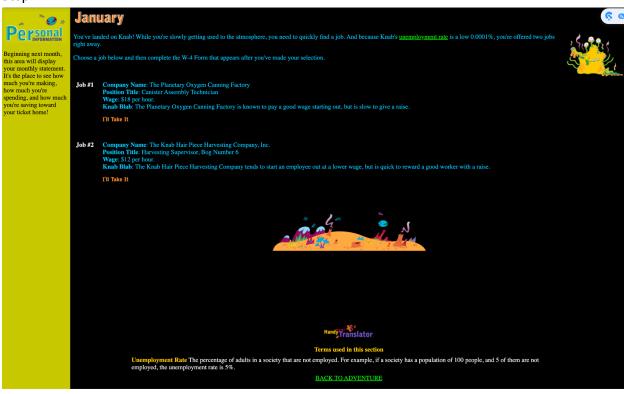
#### Intro

You've guessed the correct number of sand grains on a 25 mile long beach in Australia and won a one-way ticket to the planet Knab. While rocketing through space toward Knab you learn that the beings there, although friendly, emit a foul smell and leave a slippery slime trail as they move about.

You also discover that the next rocket back to Earth doesn't blast off until the Fourth of July, and a ticket costs \$10,000!

Earn and save enough money on the planet Knab in order to buy your return ticket to Earth on July 4th.

## Step 1



Escape from Knab is an educational simulation which takes participants through a series of financial decision- making experiences in the fun and entertaining setting of the fictitious planet, Knab where visitors discover the results of their actions and decisions.

The site is primarily a place to have fun as the simulation offers a variety of choices so each visit to Knab is different from the last. However, as participants become adept at the daily activities of living on the planet Knab their knowledge, skills, and capabilities relative to financial decision-making will increase.

Because the site design is a collaborative effort among financial professionals, educators and technoweenies, the result is an educationally sound presentation of the knowledge, skills and values required of young adults as they mature into responsible consumers and independent decision-makers.

The basic goal of the site is to develop background knowledge in preparation for real-life financial situations. The site includes the three types of knowledge necessary for a successful learning experience:

Declarative knowledge - the resources necessary for good financial decision-making as identified by financial professionals;

Procedural knowledge - the activities, skills, and assessments which focus on financial tools available in today's global marketplace;

Conditional knowledge - the context and experience applicable to real life situations. The site is designed to be used by individuals or for whole class instruction. Lesson objectives, knowledge and ideas, skills and capabilities, and underlying values are available to teachers, parents and other users of the site. Activity sheets and assessments can be easily downloaded for individual use and duplication.

An attractive feature for teachers and curriculum developers is a listing of applicable state and national curriculum standards for each component of the simulation.

## objective

Our objective of "Escape From Knab" was to use existing Internet technology to position Firstar as a provider of information and tools necessary to enable young adults to make better financial decisions.

#### LESSON BY MONTH

This section contains a break out of curriculum by the order of the months in the simulation.

Each breakout includes the concept of that month along with the objectives which address knowledge and ideas, skills and capabilities and values. The national and state standards have been researched and tied to each of the month's curriculum. Along with this information is a set of assessment sheets that the students can complete both while they are engaged in the simulation and again later as a large group to discuss at length the decisions that they made.

#### List of Sources for Standards

Benson, J., (1997). Setting higher standards: Wisconsin's academic content and performance standards, 2nd draft. Madison, WI: WI DPI.

Kendall, J. & Marzano, R. (1996). Content knowledge: A compendium of standards and benchmarks for K-12 education. Aurora, CO: McREL.

McCallum, S., (1997). Wisconsin's model academic standards (draft). Madison, WI: WI DPI.

(1997). Illinois Learning Standards. Springfield, IL: Illinois State Board of Education.

(1997). The Profile of learning . . . Minnesota's high standards: Middle level and high school level. St. Paul, MN: Minnesota Department of Children Families & Learning.

January February March April May June July

#### A WORD ABOUT READABILITY

#### A Word About Readability

Reading on a website is very different from reading text on a printed page because the text itself is three-dimensional rather than linear. Hypertext, in the form of the "Handy Pocket Translator," allows the reader to go "into the text" to get more information as a definition or further explanation. Readers of this website also have the Monthly Statement as a personal financial reference to help with decision-making. So the process of constructing meaning takes on the added dimension of instant access to information in forms that may or may not be linear text. Therefore, traditional means of measuring readability do not apply in this situation.

The site is designed for use by middle and high school students. What this means is that the text is written for a teen audience. However the density of unfamiliar concepts presented in close succession makes for difficult reading. On the other hand, the site is designed to be used

by individuals and careful attention was given to building in context clues and textual hints for users such as the "Knab Blab" that appears on several screens.

We are interested in hearing your thoughts about the difficulty of this type of reading. Please use the Feedback link above to give us your insights.

#### **CLASSROOM PRESENTATIONS**

The Escape from Knab simulation can be used in a variety of middle and high school classes in mathematics, social studies, family and consumer education or any class attempting to incorporate life skills, decision-making or Internet technology. This simulation also can be applied in School-to-Work initiatives.

In the Feedback section of the site we ask teachers to tell us how they are using the site. We hope to compile some information about its use in specific classes as time passes and more people visit the planet Knab.

In schools there are basically three methods of delivering instruction: a whole class presentation, a workshop session, or discovery learning. The following explanation provides some suggestions for using this Escape from Knab simulation utilizing each of the three methods:

#### Whole Class Presentation

Probably the most common way of delivering instruction, especially at the high school level, is through a presentation. Develop an anticipatory set to stimulate interest, to relate new information to existing knowledge, to set a purpose for learning and to communicate clear goals and direction for the lesson. The Escape from Knab simulation can be used for a whole class presentation if the classroom or lab has Internet access. Simply demonstrate the site using a large monitor or projection device.

When Escape from Knab is used for a whole class presentation, the entire simulation probably will not be used. Focus on a single month since the concepts presented are complex. Use the curriculum for each month which can be downloaded from the website to help identify the skills and capabilities as well as the knowledge and concepts targeted for development in a specific month in order to identify the anticipatory set. The website itself can be a significant source of interest and a motivator for the students. Also the context of the planet Knab is meant to provide interest, motivation and fun, yet the concepts, knowledge, skills and capabilities developed are true to life. Set a clear purpose for the lesson and inform students about the expectations for learning.

The second part of a presentation is demonstration or modeling. The website provides an active demonstration. Model for the group by manipulating the various financial decisions. Discuss the

results or ramifications of different decisions as well as the concepts and terms presented in the simulation. The income/expense statement that appears on the left side of the screen beginning in February is a constant source of demonstration. In other words, "walk them through" the simulation with discussion and explanation based on the chosen lesson objectives. A list of objectives for each month are included in the website curriculum.

A presentation lesson also includes a closure activity which take the form of a summary, an application or an evaluation. For this purpose we have included the In-Depth Activity Sheets which can be downloaded from the website. The purpose of these In-Depth Activity Sheets is to provide students with practice in carrying out calculations, to further develop the concepts introduced in the simulation and to offer the teacher one type of student evaluation. These activity sheets are NOT designed to be used as a test. However, we have tried to incorporate questions that are similar to those asked of students on the newer standardized tests. So we intend the In-Depth Activity Sheets to be used as practice for these new tests. Notice that they do not include the typical yes/no or multiple choice questions. We ask students to evaluate, to explain their decisions, to list reasons, to use tables and charts--all higher level thinking activities.

To summarize the presentation type lesson using the Escape from Knab website, we suggest that you determine lesson objectives based on the website curriculum. In class spend 15-20 minutes introducing a portion of the site by connecting it to existing knowledge, developing necessary background information and setting clear goals for learning. Then use a portion of the simulation for demonstration to the whole class in order to introduce and explore selected concepts and skills. This might take another 15-20 minutes. Next, follow-up with some type of application activity of your own design or by using the appropriate In-Depth Activity Sheets provided for you.

# Workshop Session

Another way of delivering instruction in the classroom is through the workshop method which is made up of a 10-15 minute mini-lesson followed by a 20-30 minute activity period and a 5-10 minute sharing time. The way to use the Escape from Knab simulation as a workshop session is to look over the curriculum and choose a limited number of objectives, skills, and or concepts to teach and develop. Design a focused mini-lesson and after that have students go on-line to the site either in a computer lab or at classroom computers. Students can work through the simulation individually or in pairs. They can use the Activity Sheets (different from the In-Depth Activity Sheets mentioned above) which are designed to be filled out as the student is working through the simulation. Students can be directed to pay careful attention to the focus of the mini-lesson and its role in the context of the total simulation. In a brief 5-10 minute follow-up the teacher can focus the sharing time on the concepts and/or skills presented in the mini-lesson in order to bring the session to closure.

#### **Discovery Learning**

Another method of delivering instruction in the classroom is called discovery learning. In this type of situation students engage in an activity which leads them to discover facts or new

information, to draw conclusions or to make generalizations. In other words, they discover some new learnings. Simulations are a very common way of engaging in discovery learning. Spend some time introducing the website, its purpose and use to students. After that the majority of the students' time is spent on-line working through the simulation.

After some initial instruction on the use of the Escape from Knab website students can work individually or in pairs to try to earn the requisite \$10,000. Direct students who need accountability to individually or in pairs fill out the Activity Sheets while working through the simulation. Escape from Knab was designed to be completed by a teenager in about 30-40 minutes. This does not necessarily mean that the participant will earn the \$10,000 and escape but will spend about 5-6 minutes in each month. The simulation is intended to be different every time based on the participants' decision-making. There are also a few random events that occur through out the simulation.

The simulation can be used by all students in a computer lab or it can be an "approved site" for practice during lab time or study time. Even if you only have one computer in your classroom, different pairs of students can be at the website throughout various parts of the day.

There are probably many other ways to use the Escape from Knab website. We have explained just a few for your convenience. Please let us know about the interesting and creative ways you find to incorporate this site in your instruction.

Concept: Withholding Allowance

In January participants choose a Knabian job in order to establish a regular source of income. Just as in the U.S.A. they have to fill out a W-4 form in order to inform the Knabian government about their withholding allowance.

Objectives

Learners will:

Compare wages and opportunities in order to make employment decisions Understand wages and deductions
Evaluate withholding options
Determine gross and net income
Knowledge and Ideas:

Gross and net pay
Standardized deductions: FICA/State and Federal Taxes
Monthly statements
Role of government in employment
Skills and Capabilities:

Compare wages and advancement opportunities in choosing employment Prediction and estimation Fill out a W4 form Values:

Employment
Financial planning
Responsibilities of employment

National Standards: Mathematics

Uses basic estimation techniques effectively (e.g., overestimate, underestimate, range of estimations). (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 94; Mathematics Content Specs, 8, National Assessment of Educational Progress, 6; Mathematics Assessment Framework, National Assessment of Educational Progress, 26.) Solves real-world problems involving percents. (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 87; Benchmarks for Science Literacy, American Association for the Advancement of Science, 1993, 291; Mathematics Content Specs, 8, National Assessment of Educational

Progress, 8; Mathematics Assessment Framework, National Assessment of Educational Progress, 27.)

Selects and uses appropriate type of estimation (e.g., overestimate, underestimate, range of estimate) to solve real-world problems. (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 94; Mathematics Content Specs, 8, National Assessment of Educational Progress, 6-7; Mathematics Assessment Framework, National Assessment of Educational Progress, 26.) Interpolates or extrapolates from data presented in various forms (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 105-107; Mathematics Content Specs, 8, National Assessment of Educational Progress, 21; Mathematics Assessment Framework, National Assessment of Educational Progress, 36.)

Constructs, reads, and interprets data in charts, tables, and graphs. (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 105-107; Mathematics Content Specs, 8, National Assessment of Educational Progress, 22; Mathematics Assessment Framework, National Assessment of Educational Progress, 37.)

National Standards: Economics

Knows that people who are unemployed usually have less income to buy goods and services than those who have jobs.

(Benchmark, declarative; Framework for Teaching Basic Economic Concepts with Scope and Sequence Guidelines, K-12, Saunders & Gilliard, 1995, 96; Economics: What and When, JCEE, 45.)

Knows the four basic categories of earned income: wages and salaries, rent, interest, and profit. (Benchmark, declarative; Framework for Teaching Basic Economic Concepts with Scope and Sequence Guidelines, K-12, Saunders & Gilliard, 1995, 94; Economics: What and When, JCEE, 45.)

Knows that the government pays for the goods and services it provides through taxing and borrowing.

(Benchmark, declarative; Framework for Teaching Basic Economic Concepts with Scope and Sequence Guidelines, K-12, Saunders & Gilliard, 1995, 95; Colorado Council on Economic Education, 7; Economics: What and When, JCEE, 37; Expectations of Excellence: Curriculum Standards for Social Studies, NCSS, 1994, 41.)

National Standards: Life Skills

Identifies important benefits and procedures of prospective employers (salary, deductions, vacation).

(Benchmark, declarative; Workplace Basics: The Essential Skills Employers Want, Carnevale, Gainer & Meltzer, 1990, 281.)

Analyzes a current job and its future possibilities.

(Benchmark, procedural; Workplace Basics: The Essential Skills Employers Want, Carnevale, Gainer & Meltzer, 1990, 284.)

Understands the rules and regulations of the Internal Revenue Service.

(Benchmark, declarative; Workplace Basics: The Essential Skills Employers Want, Carnevale, Gainer & Meltzer, 1990, 281.)

Concept: Budget

In February Knabian visitors decide what to spend on regular monthly expenses such as food, transportation and slime repellant! They get Knabian checking and savings accounts complete with direct deposit and the ability to transfer funds. Also they write their first check from the Bank of Knab. An added bonus is that from now on a monthly financial summary appears on the left side of every screen.

### Objectives

Learners will:

Gain awareness of the reality of the cost of living Recognize costs incurred by an individual

Understand financial responsibilities (expenses)

Predict regular expenditures (annual)

Assess current income and expenses

Understand the correlation between spending and saving

Evaluate monthly income/expense statement

Knowledge and Ideas:

Cost of living (food, rent, transportation, personal needs)

Basic needs

Income and expenses

Banking services: checking, savings, direct deposit, transfer funds, interest, credit card,

overdraft

Future possible expenditures (short term)

Sales tax

Skills and Capabilities:

Reading an income/expense statement Budgeting

Prediction and estimation Locating information Writing a check Values:

Self-worth
Financial planning (short term)
Awareness of individual living expenses
Awareness of place on the continuum of dependence to independence

National Standards: Mathematics

Uses basic estimation techniques effectively (e.g., overestimate, underestimate, range of estimations). (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 94; Mathematics Content Specs, 8, National Assessment of Educational Progress, 6; Mathematics Assessment Framework, National Assessment of Educational Progress, 26.)

Solves real-world problems involving percents. (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 87; Benchmarks for Science Literacy, American Association for the Advancement of Science, 1993, 291; Mathematics Content Specs, 8, National Assessment of Educational Progress, 8; Mathematics Assessment Framework, National Assessment of Educational Progress, 27.)

Interpolates or extrapolates from data presented in various forms (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 105-107; Mathematics Content Specs, 8, National Assessment of Educational Progress, 21; Mathematics Assessment Framework, National Assessment of Educational Progress, 36.)

Constructs, reads, and interprets data in charts, tables, and graphs. (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 105-107; Mathematics Content Specs, 8, National Assessment of Educational Progress, 22; Mathematics Assessment Framework, National Assessment of Educational Progress, 37.)

National Standards: Economics

Understands that since people cannot have everything they want, they must make choices about using goods and services to satisfy wants.

(Benchmark, declarative; Framework for Teaching Basic Economic Concepts with Scope and Sequence Guidelines, K-12, Saunders & Gilliard, 1995, 78; Colorado Council on Economic Education, 4; Economics: What and When, JCEE, 15; Expectations of Excellence: Curriculum Standards for Social Studies, NCSS, 1994, 41.)

Understands that choices usually involve trade-offs; people can give up buying or doing a little of one thing in order to buy or do a little of something else.

(Benchmark, declarative; Framework for Teaching Basic Economic Concepts with Scope and Sequence Guidelines, K-12, Saunders & Gilliard, 1995, 92; Colorado Council on Economic Education, 3; Economics: What and When, JCEE, 17; Expectations of Excellence: Curriculum Standards for Social Studies, NCSS, 1994, 41.)

#### National Standards--Life Skills

Identifies preferred lifestyle

(Benchmark, declarative; Workplace Basics: The Essential Skills Employers Want, Carnevale, Gainer & Meltzer, 1990, 284-285.)

Understands basic banking services (e.g., checking accounts, savings accounts).

(Benchmark, declarative; Workplace Basics: The Essential Skills Employers Want, Carnevale, Gainer & Meltzer, 1990, 281.)

Understands personal wants versus needs.

(Benchmark, procedural; Workplace Basics: The Essential Skills Employers Want, Carnevale, Gainer & Meltzer, 1990, 231.)

Makes forecasts regarding future income and expenses.

(Benchmark, procedural; Report for America 2000, SCANS, xvii.)

Uses a balance sheet to evaluate the costs and benefits of various alternatives within a decision.

(Benchmark, procedural; Geography for Life: National Geography Standards, Geography Education Standards project, 1994, 55.)

Prepares and follows a budget.

(Benchmark, procedural; Report for America 2000, SCANS, xviii; Workplace Basics: The Essential Skills Employers Want, Carnevale, Gainer & Meltzer, 1990, 231.)

Concept: Mortgage

March brings the decision to buy a home or rent while keeping a close eye on the monthly expense statement. Participants manipulate the downpayment and terms of the loan in order to make the best use of their financial resources.

Objectives

Learners will:

Evaluate monthly income/expense statements Investigate the impact of a major long-term expense (mortgage) Manipulate options that lead to a financial decision Investigate using savings for an expenditure Compare home-buying/renting options Knowledge and Ideas:

Cost of living (housing) Comparison shopping Income and expenses Mortgage/downpayment Relationship between the downpayment and terms of a mortgage Homeowner's Insurance Equity (resale value/appreciation) Skills and Capabilities:

Reading an income/expense statement Budgeting Prediction and estimation Locating and comparing information that leads to a financial decision Determining the cost of borrowing money (mortgage) Values:

Wants vs. needs Awareness of living expenses Financial planning (long-term) Home ownership Commitment to repayment

National Standards: Mathematics

Uses basic estimation techniques effectively (e.g., overestimate, underestimate, range of estimations). (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 94; Mathematics Content Specs, 8, National Assessment of Educational Progress, 6; Mathematics Assessment Framework, National Assessment of Educational Progress, 26.) Solves real-world problems involving percents. (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 87; Benchmarks for Science Literacy, American Association for the Advancement of

Science, 1993, 291; Mathematics Content Specs, 8, National Assessment of Educational Progress, 8; Mathematics Assessment Framework, National Assessment of Educational Progress, 27.)

Selects and uses appropriate type of estimation (e.g., overestimate, underestimate, range of estimate) to solve real-world problems. (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 94; Mathematics Content Specs, 8, National Assessment of Educational Progress, 6-7; Mathematics Assessment Framework, National Assessment of Educational Progress, 26.) Interpolates or extrapolates from data presented in various forms (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 105-107; Mathematics Content Specs, 8, National Assessment of Educational Progress, 21; Mathematics Assessment Framework, National Assessment of Educational Progress, 36.)

Constructs, reads, and interprets data in charts, tables, and graphs. (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 105-107; Mathematics Content Specs, 8, National Assessment of Educational Progress, 22; Mathematics Assessment Framework, National Assessment of Educational Progress, 37.)

National Standards: Economics

Knows that all decisions involve opportunity costs and that effective economic decision making involves weighing the costs and benefits associated with alternative choices.

(Benchmark, declarative; Framework for Teaching Basic Economic Concepts with Scope and Sequence Guidelines, K-12, Saunders & Gilliard, 1995, 92; Colorado Council on Economic Education, 4; Economics: What and When, JCEE, 17; Expectations of Excellence: Curriculum Standards for Social Studies, NCSS, 1994, 41.)

Understands that not all competition is on the basis of price for identical products and that nonprice competition includes style and quality differences, advertising, customer services, and credit policies.

(Benchmark, declarative; Framework for Teaching Basic Economic Concepts with Scope and Sequence Guidelines, K-12, Saunders & Gilliard, 1995, 94; Colorado Council on Economic Education, 6; Economics: What and When, JCEE, 32; Expectations of Excellence: Curriculum Standards for Social Studies, NCSS, 1994, 41.)

National Standards: Life Skills

Makes effective decisions about consumer products based on important criteria, including external features, performance, durability, cost, and personal tradeoffs.

(Benchmark, procedural; Benchmarks for Science Literacy, Project 2061, American Association for the Advancement of Science, 1993, 299.)

Uses sound buying principles for purchasing goods and services.

(Benchmark, procedural; Workplace Basics: The Essential Skills Employers Want, Carnevale, Gainer & Meltzer, 1990, 281-283.)

Understands basic banking services (e.g., checking accounts, savings accounts).

(Benchmark, declarative; Workplace Basics: The Essential Skills Employers Want, Carnevale, Gainer & Meltzer, 1990, 281.)

Makes forecasts regarding future income and expenses.

(Benchmark, procedural; Report for America 2000, SCANS, xvii.)

Concept: Car Loan or Lease

In April participants decdie to buy or lease a Knabian car. Which is really the better financial choice? Also they decide whether or not to buy car insurance.

Objectives:

Learners will:

Evaluate monthly income/expense statement

Understand the cost of owning a car beyond initial expenditure

Investigate using savings resources for an expenditure

Understand the concept of leasing

Evaluate purchase/lease options

Understand the ramifications of a major purchase (insurance, liability, default)

Prepare for misfortunes (insurance)

Knowledge and Ideas:

Comparison shopping

Income and expenses

Borrowing money (loan)

Equity (resale value)/depreciation

Insurance

Skills and Capabilities:

Reading an income/expense statement

Budgeting

Prediction and estimation

Locating and comparing information that leads to a financial decision

Determining the cost of borrowing money/leasing

Values:

Wants vs. needs

Awareness of expense

Financial planning

Commitment to repayment

Insurance

National Standards: Mathematics

Uses basic estimation techniques effectively (e.g., overestimate, underestimate, range of estimations). (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 94; Mathematics Content Specs, 8, National Assessment of Educational Progress, 6; Mathematics Assessment Framework, National Assessment of Educational Progress, 26.)

Solves real-world problems involving percents. (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 87; Benchmarks for Science Literacy, American Association for the Advancement of Science, 1993, 291; Mathematics Content Specs, 8, National Assessment of Educational Progress, 8; Mathematics Assessment Framework, National Assessment of Educational Progress, 27.)

Selects and uses appropriate type of estimation (e.g., overestimate, underestimate, range of estimate) to solve real-world problems. (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 94; Mathematics Content Specs, 8, National Assessment of Educational Progress, 6-7; Mathematics Assessment Framework, National Assessment of Educational Progress, 26.) Interpolates or extrapolates from data presented in various forms (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 105-107; Mathematics Content Specs, 8, National Assessment of Educational Progress, 21; Mathematics Assessment Framework, National Assessment of Educational Progress, 36.)

Constructs, reads, and interprets data in charts, tables, and graphs. (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 105-107; Mathematics Content Specs, 8, National Assessment of Educational Progress, 22; Mathematics Assessment Framework, National Assessment of Educational Progress, 37.)

#### National Standards: Economics

Knows that all decisions involve opportunity costs and that effective economic decision making involves weighing the costs and benefits associated with alternative choices.

(Benchmark, declarative; Framework for Teaching Basic Economic Concepts with Scope and Sequence Guidelines, K-12, Saunders & Gilliard, 1995, 92; Colorado Council on Economic Education, 4; Economics: What and When, JCEE, 17; Expectations of Excellence: Curriculum Standards for Social Studies, NCSS, 1994, 41.)

Knows that banks play a key role in providing currency and other forms of money to consumers, and that banks serve as intermediaries between savers and borrowers.

(Benchmark, declarative; Framework for Teaching Basic Economic Concepts with Scope and Sequence Guidelines, K-12, Saunders & Gilliard, 1995, 79; Colorado Council on Economic Education, 6; Economics: What and When, JCEE, 24; Expectations of Excellence: Curriculum Standards for Social Studies, NCSS, 1994, 41.)

National Standards: Life Skills

Uses sound buying principles for purchasing goods and services.

(Benchmark, procedural; Workplace Basics: The Essential Skills Employers Want, Carnevale, Gainer & Meltzer, 1990, 281-283.)

Makes an accurate appraisal of basic insurance needs.

(Benchmark, procedural; Workplace Basics: The Essential Skills Employers Want, Carnevale, Gainer & Meltzer, 1990, 281-283.)

Understands the basic process of buying a car.

(Benchmark, declarative; Workplace Basics: The Essential Skills Employers Want, Carnevale, Gainer & Meltzer, 1990, 281-283.)

Makes effective decisions about consumer products based on important criteria, including external features, performance, durability, cost, and personal tradeoffs.

(Benchmark, procedural; Benchmarks for Science Literacy, Project 2061, American Association for the Advancement of Science, 1993, 299.)

Represents a problem accurately in terms of resources, constraints, and objectives.

(Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics,

National Council of Teachers of Mathematics, 1989, 23; Workplace Basics: The Essential Skills Employers Want, Carnevale, Gainer & Meltzer, 1990, 182; Workplace Basics: The Essential Skills Employers Want, Carnevale, Gainer & Meltzer, 1990, 329.)

Secures factual information needed to evaluate alternatives. (Benchmark, procedural; Expectations of Excellence: Curriculum Standards for Social Studies, NCSS, 1994, 149.)

Concept: Investing

After a few months of steady work, the opportunity to make a few investements presents itself in May. Knabian visistors must carefully consider the risk against the potential rate of return.

#### Objectives

Learners will:

Evaluate monthly income/expense statements

Plan for their future:

expenditures

investments

independence

Understand the importance of safety and security with regard to their money

Understand basic investing (stocks and real estate)

Evaluate options in terms of risk and rate of return

Knowledge and Ideas:

Financial planning

Investing

Risk

Rate of Return

Skills and Capabilities:

Comparison of investment options
Financial decision making
Values:
Financial independence
Financial security
Investing
Savings
Financial planning

National Standards: Mathematics

Uses basic estimation techniques effectively (e.g., overestimate, underestimate, range of estimations). (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 94; Mathematics Content Specs, 8, National Assessment of Educational Progress, 6; Mathematics Assessment Framework, National Assessment of Educational Progress, 26.)

Solves real-world problems involving percents. (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 87; Benchmarks for Science Literacy, American Association for the Advancement of Science, 1993, 291; Mathematics Content Specs, 8, National Assessment of Educational Progress, 8; Mathematics Assessment Framework, National Assessment of Educational Progress, 27.)

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#### **National Economics**

Understands that in every economic system consumers, producers, workers, savers, and investors seek to allocate their scarce resources to obtain the highest possible return, subject to the institutional constraints of their society.

(Benchmark, declarative; Framework for Teaching Basic Economic Concepts with Scope and Sequence Guidelines, K-12, Saunders & Gilliard, 1995, 121; Economics: What and When, JCEE, 23.)

National Standards: Life Skills

Understands basic banking services (e.g., checking accounts, savings accounts).

(Benchmark, declarative; Workplace Basics: The Essential Skills Employers Want, Carnevale,

Gainer & Meltzer, 1990, 281.) Sets explicit long-term goals.

(Benchmark, procedural; Report for America 2000, SCANS, xviii.)

Concept: Personal Financial Choices

June brings the chance to take a vacation. With time running out participants must consider how this opportunity fits into their budgets.

This could be the only chance in a lifetime! And then there is the question of how to pay for the vacation. Will it be cash, loan or credit card?

Objectives

Learners will:

Evaluate monthly income/expense statements

Make a personal choice based on financial implications

Evaluate payment options

Knowledge and Ideas:

Financial planning

Payment options (credit card, loan, savings, cash)

Financial choices

Skills and Capabilities:

Evaluating financial options

Financial decision-making

Values:

Financial independence

Financial planning

Financial choices

National Standards: Mathematics

Uses basic estimation techniques effectively (e.g., overestimate, underestimate, range of estimations).

(Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 94; Mathematics Content Specs, 8, National Assessment of Educational Progress, 6; Mathematics Assessment Framework, National Assessment of Educational Progress, 26.)

Solves real-world problems involving percents.

(Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 87; Benchmarks for Science Literacy, American Association for the Advancement of Science, 1993, 291; Mathematics Content Specs, 8, National Assessment of Educational Progress, 8; Mathematics Assessment Framework, National Assessment of Educational Progress, 27.)

Selects and uses appropriate type of estimation (e.g., overestimate, underestimate, range of estimate) to solve real-world problems.

(Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 94; Mathematics Content Specs, 8, National Assessment of Educational Progress, 6-7; Mathematics Assessment Framework, National Assessment of Educational Progress, 26.)

Interpolates or extrapolates from data presented in various forms

(Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 105-107; Mathematics Content Specs, 8, National Assessment of Educational Progress, 21; Mathematics Assessment Framework, National Assessment of Educational Progress, 36.)

Constructs, reads, and interprets data in charts, tables, plots, and graphs. (Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 105-107; Mathematics Content Specs, 8, National Assessment of Educational Progress, 22; Mathematics Assessment Framework,

National Assessment of Educational Progress, 37.)

#### National Standards: Economics

Understands that since people cannot have everything they want, they must make choices about using goods and services to satisfy wants.

(Benchmark, declarative; Framework for Teaching Basic Economic Concepts with Scope and Sequence Guidelines, K-12, Saunders & Gilliard, 1995, 78; Colorado Council on Economic Education, 4; Economics: What and When, JCEE, 15; Expectations of Excellence: Curriculum Standards for Social Studies, NCSS, 1994, 41.)

Understands that choices usually involve trade-offs; people can give up buying or doing a little of one thing in order to buy or do a little of something else.

(Benchmark, declarative; Framework for Teaching Basic Economic Concepts with Scope and Sequence Guidelines, K-12, Saunders & Gilliard, 1995, 92; Colorado Council on Economic Education, 3; Economics: What and When, JCEE, 17; Expectations of Excellence: Curriculum Standards for Social Studies, NCSS, 1994, 41.)

National Standards: Life Skills

Understands basic banking services (e.g., checking accounts, savings accounts).

(Benchmark, declarative; Workplace Basics: The Essential Skills Employers Want, Carnevale,

Gainer & Meltzer, 1990, 281.)

Uses a balance sheet to evaluate the costs and benefits of various alternatives within a decision.

(Benchmark, procedural; Geography for Life: National Geography Standards, Geography Education Standards project, 1994, 55.)

Concept: Liquidation

The target date for going home to Earth is July 4th. Knabian visitors "cash out" by liquidating assets and paying off liabilities. Will there be enough money to purchase the \$10,000 ticket home? It all depends on good financial decision-making!

Objectives

Learners will:

Gain awareness of the reality of the cost of living

Understand financial responsibilities (expenses)

Predict outcome of financial decisions

Assess current income and expenses, assets and liabilities

Understand the correlation between spending and saving

Evaluate monthly income/expense statement

Realize the results of financial decision-making

Understand the ramifications of finanacial decisions over a period of time

Appreciate the value of financial planning

Knowledge and Ideas:

Income and expenses

Assets/Liabilities

Appreciation/Depreciation

Return on investments

Liquidation

Skills and Capabilities:

Reading an income/expense statement

Prediction and estimation

Converting assets to cash

Satisfying debts

Recognizing return on investments

Values:

Self-worth
Financial planning
Financial decision-making

National Standards: Mathematics

Uses basic estimation techniques effectively (e.g., overestimate, underestimate, range of estimations).

(Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 94; Mathematics Content Specs, 8, National Assessment of Educational Progress, 6; Mathematics Assessment Framework, National Assessment of Educational Progress, 26.)

Solves real-world problems involving percents.

(Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 87; Benchmarks for Science Literacy, American Association for the Advancement of Science, 1993, 291; Mathematics Content Specs, 8, National Assessment of Educational Progress, 8; Mathematics Assessment Framework, National Assessment of Educational Progress, 27.)

Interpolates or extrapolates from data presented in various forms

(Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 105-107; Mathematics Content Specs, 8, National Assessment of Educational Progress, 21; Mathematics Assessment Framework, National Assessment of Educational Progress, 36.)

Constructs, reads, and interprets data in charts, tables, plots, and graphs.

(Benchmark, procedural; Curriculum and Evaluation Standards for School Mathematics, National Council of Teachers of Mathematics, 1989, 105-107; Mathematics Content Specs, 8, National Assessment of Educational Progress, 22; Mathematics Assessment Framework, National Assessment of Educational Progress, 37.)

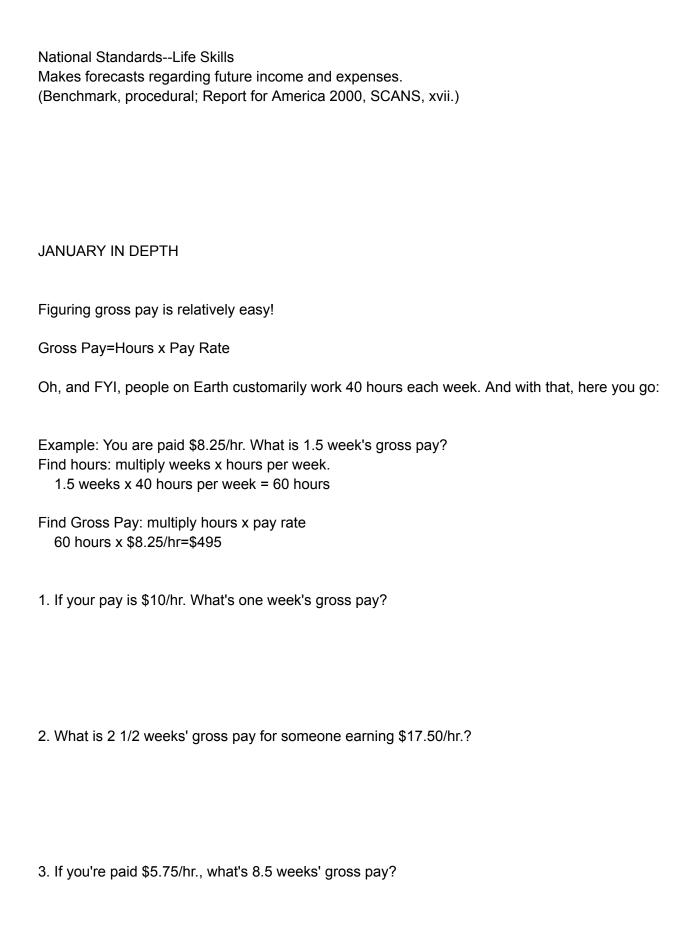
National Standards: Economics

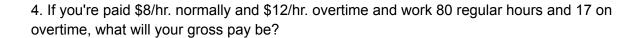
Understands that since people cannot have everything they want, they must make choices about using goods and services to satisfy wants.

(Benchmark, declarative; Framework for Teaching Basic Economic Concepts with Scope and Sequence Guidelines, K-12, Saunders & Gilliard, 1995, 78; Colorado Council on Economic Education, 4; Economics: What and When, JCEE, 15; Expectations of Excellence: Curriculum Standards for Social Studies, NCSS, 1994, 41.)

Understands that choices usually involve trade-offs; people can give up buying or doing a little of one thing in order to buy or do a little of something else.

(Benchmark, declarative; Framework for Teaching Basic Economic Concepts with Scope and Sequence Guidelines, K-12, Saunders & Gilliard, 1995, 92; Colorado Council on Economic Education, 3; Economics: What and When, JCEE, 17; Expectations of Excellence: Curriculum Standards for Social Studies, NCSS, 1994, 41.)





Figuring out net pay has a few wrinkles:

Net Pay = Gross Pay - Deductions

On Knab and on Earth, deductions like Income Tax Withholding are based on your W-4 form. Deductions like Social Security are the same for everyone. Refer to the following charts for the next problems:

**DEDUCTIONS** 

S.S. = Gross Pay x 3.8%

Income Tax = Gross Pay x (See chart below)

Allowances Income Tax % 0 1 2 3 4 21 15 12 10 8

Example: Find the net pay for a person who earned \$440 with 2 allowances

Find Deductions: Compute S.S. & Income Tax.

S.S. = Gross Pay x 
$$3.8\%$$
 = \$440 x  $.038$  = \$16.72 Income Tax = Gross Pay x  $12\%$  = \$440 x  $.12$  = \$52.80

Subtract: Compute Gross Pay - S.S. - Income Tax = Net Pay

\$440 - \$16.72 -\$52.80 = \$370.48

5. Find the net pay for someone who earned \$350 with 0 allowances

6. What's the net pay for someone with 3 allowances earning \$500 gross pay?

7. You work 70 hours at \$6.75/hr and have 2 allowances. What's your net pay?

8. All right, it's 80 hours at \$6/hr. and 16 hours at \$9/hr., and you chose 1 allowance. How much will you receive on that check?

FEBRUARY IN DEPTH
1. Food, housing and transportation are expenses we have on Earth as well as on Knab. What expenses do you have? What expenses do you contribute to your household? Does everyone
have these expenses?
2. Please pay the following bills with the checks provided:
Cable-A-Go-Go
"Feed Your Head"
You
Your Address
Acct # 442234367-1
Basic Service \$12.76
Extended Service \$17.99 Premium Channel \$7.86
Franchise Fee \$1.77

Charge per FCC

\$.24

Sub Total \$40.62

State & Local Taxes (6.5%) \$2.64

Total Due \$43.26

(Pay within 10 days to avoid late fees)

Barry's Discount Long Distance
"Are You Lonely? Call Someone You Know"

You

Your Address

Acct# (414) 555-1212 9776

Calling Plan Fee \$10.00

Number Time Rate Cost (212)555-112226min. e \$7.44

 (608)555-2070
 94min d
 \$17.97

 (906)555-1443
 1min. m
 \$.57

 (847)555-6329
 5min. e
 \$.92

 (312)555-7829
 30min. d
 \$12.33

 (414)555-8220
 7min. m
 \$ 3.21

Taxable Total \$49.24

State Taxes (5%) \$ 2.50

Total due \$52.44

All-County Insurance Agency
The Good-Fingered-Neighbor-People
With-Umbrellas-of-Rock-and-Popular-Cartoon-Dogs

You

Your Address

Acct#94778223-3-01

Renter's Insurance

Policy #B44-22387 \$10.07

Auto Insurance

Policy #f244-18655 \$89.73

Total Premiums \$99.80 State & Local Taxes \$5.19

Due by the 14th of each month \$104.99

	r belov	necking and \$1000 in savings w. If you need to transfer mor	· · · · · · · · · · · · · · · · · · ·	
Number D Balance	Date	Description of Transaction	Payment/Debit (-)	Deposit/Credit(+)
Previous Balanc	ce	>		

#### MARCH IN DEPTH

When a bank loans you money to buy a house, that debt is called a mortgage. They print up a table (like the one below but longer) showing all your monthly payments, the interest being charged & the principal (the balance of the original loan). That's called an Amortization Table. Here, your annual interest rate is 8%, which means a monthly rate of .667% because the total amount of annual interest you owe the bank is divided into 12 equal payments. So each month your payment inclues paying back a portion of the principal plus interest charged by the bank for allowing you to use their money. Please take a look at your first six months of payments & fill in the blanks:

Payment

Number Balance of Loan Interest
(.00667 x Balance) Payment New Balance
(Copy to Next Line) Interest as

Percent of Payment
(Interest/Payment x 100%)

\$120,000.00

\$880.80



\$880.80

\$880.80

\$880.80

So how about interest? It really racks up. Answer the following questions.

1. What's happening to the amount of interest you're paying each month?
2. When do you think you'd break 50%? 25%? Please explain your reasoning.
3. What do you think would happen to the interest if you cut the term of the loan to 15 years? to 10? Please note your rationale.

**APRIL IN DEPTH** 

When something you own loses value, that's called depreciation. Almost always, cars depreciate as time goes on. It's a fact of life. The second you drive a car off the lot, it drops at least 10% in value. There's another tidbit about depreciation: it's usually expressed as a percent. To find percent of depreciation, use the following formula:



**Example:** You bought a new vacuum for \$100 10 years ago and sold it yesterday at your garage sale for \$10. How much did it depreciate?

Compute: (Original Value - Current Value) / Original Value x 100%

(\$100 - \$10) / \$100 x 100%

\$90 / \$100 x 100%

= 90% Depreciation

1. You can buy a car for \$12,564 in 1990 and sell it in 1995 for \$4500. How much did it depreciate in 5 years?

2. The PC with a 286 microprocessor your parents bought back in the 80's for \$1500 is now worth \$50. How much did that depreciate?

3. Brenda and Joe are young entrepreneurs. Over the years their parents bought them \$500 worth of Girlie Dolls and Army Guys. Last week they sold the lot at their garage sale for \$25. So while Brenda and Joe saw pure profit, their parents saw how much depreciation?

4. Your uncle's rusted pick-up originally sold for \$15,997 in 1989. Consider the following chart and calculate 1) the overall depreciation and 2) the depreciation from each year to the next.

Year	Value
'90	\$11,774
'91	\$10,435
'92	\$9,878
'93	\$7,392

5. Please list the steps you used to do part 2 of question #4:

# **MAY IN DEPTH**

When you lose money on an investment, that's loss. When you make money on an investment, that's profit. When you express profit as a percent, that's return. Use the following formulae to calculate this next batch of problems.



**Example:** Dave buys a comic book for \$2.50 when he's 7 years old. Ten years later, he sells it for \$42.50. What's his profit & return?

Find Profit: Subtract Final Value - Original Value

\$42.50 - \$2.50 = **\$40.00 Profit** 

\$40.00 / \$2.50 x 100 = **1600% Return** 

1. You buy 1500 shares of Save-A-Dolphin Tuna for \$7500. Ten months later you sell your shares for \$8750. What was your profit? What was your return?

2. In 1970, your grandparents bought your family part ownership in a small home computer outlet for \$90,000. Now the other owner wants to buy you out for \$1.6 million. How much profit, what's your return and have you thanked those grandparents lately?

3. Your Aunt Salley bought her trailer back in '82 for \$20,000. Now that she's condo, she sells it for \$11,000. What's her loss, besides her sense of commu	-
4. Dominique bought a painting ten years ago and had it appraised, or valued every few years. Using the following chart, find her overall return:	d,
5. Please write down the steps you used to find your answer to #4.	

# JUNE IN DEPTH

So it's a month before you leave and you're seriously considering putting a vacation on your credit card? Well, we looked at interest a little bit in March. Now we'll look a little deeper. Interest is often compounded or broken up and applied in smaller amounts. Credit cards use compounded interest, so do banks, and almost every other lending institution. Here's the deal: Annual interest rates are broken down to smaller segments of time.

# Compounded Monthly Interest Rate = Annual Interest Rate / 12

We saw this in March, where an annual interest rate of 8% became a monthly rate of .667% (8% / 12). Then, each month a total balance was added up and the interest rate applied. Set up similar tables to model the following situations:

1. You buy a \$2500 big screen TV for no money down at 15% annual interest, compounded monthly, with no payments for the first six months. Sounds like a good deal, but how much will you owe at the end of that first 6 months? Create a table showing month number, current balance, interest, and new balance for each month.

2. You put a \$560 mountain bike on your credit card, which charges 16.8% annual interest compounded monthly. The next month, you start paying \$50 a month. How long until you pay that off, if you make no other charges? Create a table showing

month number, current balance, interest, payment and new balance for each month.

# **ACTIVITY SHEET**

# January

1. Which job did you choose? (check one)



List your reasons for making that choice:

2. How many allowances did you take on your W-4 form?









Do you think you'll owe taxes at the end of your stay? Why or why not?

Why does the government collect taxes on people's income?

o. What was your gross and not pay for the month of bandary.	3.	What was your	gross and	net pay for th	e month of January?
--------------------------------------------------------------	----	---------------	-----------	----------------	---------------------

_		
Gross	Net	

# **February**

4. Look at you monthly expense statement. Please note your monthly expenditures here. Describe your rationale for each figure.

Expense	Amount	Rationale
Food		
Transportation		
Slime Repellent		

5. Please fill out a cop	by of your check:	
March		
6. Using the Home Bu home.	uyer's Tool, find the most & the least you can spend on yo	our
Most	Least	
Of all the differe what you can af	ent variables, which seems to have the most impact on fford?	
Why do you thin	nk that is?	
7. Which house did yo	ou buy, or did you rent?	



X2001 Force

11. Which is	less expensive, le	asing the Force 5 or buying	g it?
Why d	lo you think that is	?	
Leas ———	e Price	Purd -	chase Price
12. Which of	f the investments s	eems safest?	
Explai	n why you think it i	s the safest investment.	
	•	n each? Describe potential wrong? Please write your r	
Investment	Amount	Risks	

	1			
14. What pro	ofit do you expect	from your inve	stments?	
June				
15. Of the valeast?	acation purchase o	options, which	will end up costir	ng the most and the
Most _		Least		
Write t	the steps you used	d to find out wh	at was the most	expensive:
16. Did you e	end up taking vaca	ation or pay?		

Explain why you made that decision:

Vacation

17. How's that h	overcraft treating yo	ou? Please provide a detailed update.
July		
	ide your final assets ofit	
Investmer	nts	
Car		-
Savings a	nd Checking	
Total		_
19. Did you esca	A	
prevented	Yes N you from leaving?	o What do you think helped you escape or
20. How would y	/ou rate your Knabi	an experience?
Bad As It Gets	Tolerable	Goodness to Infinity

1 2 3 4 5 6 7 8 9 10