Lesson 2.12: Saving and Compound Growth

Unit: Unit 2, Me, My Goals, My Money (Individual Growth and Life Readiness) **Topic:** 2.3 Money Basics **Grade:** 6 to 8 (written at grade 7; see Differentiation for the grade 6 support and grade 8 stretch) **Days:** 1 class period of 40 minutes **Room:** Classroom or FACS lab; no kitchen needed

Standards

- NYS module line: NYS IGLR 4. Financial Readiness e) Determine ways for saving money
- CTE theme line: CTE FCL 2. Saving, Investing, and Sharing a) Describe the purpose of saving money as it applies to their future goals
- CTE theme line: CTE FCL 2. Saving, Investing, and Sharing c) Explore different savings and investment tools and methods
- NYS FACS Learning Standard 3 (Intermediate), Key Idea: Students will understand and be able to manage personal resources of talent, time, energy, and money and make effective decisions in order to balance their obligations to work, family, and self.; Performance Indicator: Students understand the resources available to them, make informed decisions about the use of those resources, and know some ways to expand resources.
- CDOS Standard 3a Universal Foundation Skills: Basic Skills
- National FCS 3.0: 2.6.1 Judge why personal and family financial planning matters.
- National FCS 3.0: 3.3.4 Compare different ways to save and invest.

Note on the National FCS lines: the task asked for a 2.6 savings competency. The 3.0 text has no competency that names saving; 2.6.1 (the need for financial planning) is the closest 2.6 line and is printed in the IGLR module block, and 3.3.4 names savings alternatives and is confirmed in the 3.0 text. Both come from the crosswalk row for IGLR 4. e).

Enduring understanding and essential question

Big idea: Saving is paying your future self, and the earlier you start, the more your money does the work for you. Interest paid to you grows on itself; that is compound growth, and time is the ingredient you have more of than any adult. **Essential question:** Would you rather have $1,000 at 15 or $2,000 at 35?

Objectives

By the end of this lesson, students will be able to:

1. (Low) Given the three reasons to save (a goal, an emergency fund, the future), state each one with an example, and list two differences between a savings account and a jar.

2. (Mid) Given $20 a week and a stated rate, complete a five-year compound growth table by hand, computing the interest and the end balance for each year, and compare the result to the jar.
3. (High) Given the 5, 10, and 30 year results and the two savers story, judge what matters more, the amount saved or the years, and write a three-sentence "pay yourself first" plan with a weekly amount, a place, and a first goal.

Vocabulary

Tier 2 (general academic): accumulate, exponent, estimate, compare Tier 3 (FACS): savings account, emergency fund, principal, simple interest, compound interest, interest rate, pay yourself first, FDIC insured. See Vocabulary 02.md for Turkish, Portuguese, and Spanish.

Materials and setup

- Compound Growth Table, one per student: Handout 02.12 - Compound Growth Table.md
- Calculators, one per pair
- Slides: Slides 02.12 - Saving and Compound Growth
- A clear jar with $20 in ones for the do now (or a picture on slide 1)
- Setup notes: the table uses 5 percent a year so the math is clean; real savings account rates in 2026 run from under 1 percent at big banks to about 4 percent at online banks [update]; say so on slide 6. No food handled today.

Pre-assessment

Yesterday's exit cards show who can compute simple interest. The do now asks for a guess at $20 a week for 30 years with no interest; a student who writes $31,200 can multiply, and the compound number will surprise them anyway. A student who cannot get to $1,040 a year needs the weekly-to-yearly step in Step 1.

Do now and hook (Time: 4 min)

On the board: "You put $20 a week in a jar and never touch it. How much is in the jar after one year? After 30 years? Show the math."

Debrief: $1,040 a year; $31,200 in 30 years. Hook: hold up the jar. "That is the jar. Now I move the same $20 a week into an account that pays 5 percent. Guess what the 30-year number is. Write it on the top of your handout. The real number is more than double the jar, and you are going to build it by hand."

Procedure

Step	Teacher will	Students will	Time
1. Direct instruction: why save, and where	Slides 2 to 5. Three reasons to save: a goal (the SMART goal from Lesson	Fill in Part A: three reasons with an example, and the jar versus account	7 min

	2.4), an emergency fund (three to six months of fixed expenses for an adult; for a student, enough to replace a phone screen or a lost bus pass without asking), and the future (a car, college, a first apartment, retirement). Where: a jar or drawer (no growth, no protection, easy to raid), a savings account at a bank or credit union (pays interest, FDIC or NCUA insured up to $250,000, harder to raid, most banks open a youth account with an adult), and later, investments (Topic 2.4; higher growth, real risk). Pay yourself first: the savings line is the first thing out of every paycheck, moved automatically.	table.	
2. Direct instruction: simple versus compound	Slides 6 and 7. Simple interest (yesterday) pays only on the principal: $1,000 at 5 percent is $50 a year, every year. Compound interest pays on the principal and on the	Copy the three-year example into Part B. Write 1.05 to the third power as repeated multiplication.	7 min

	interest already earned: year 1, $1,050; year 2, 5 percent of $1,050 is $52.50, so $1,102.50; year 3, $1,157.63. The shortcut is an exponent: $1,000 x 1.05 x 1.05 x 1.05 is $1,000 x 1.05 to the third power. Grade 7 math: a percent as a decimal, and an exponent as repeated multiplication. Show how the same formula from Lesson 2.11 is now working for the saver instead of the borrower.		
3. Learning activity: the five-year table by hand	Part C. Pairs, calculators. $20 a week is $1,040 a year, deposited at the start of each year; the account pays 5 percent on the whole balance at the end of the year. Students complete five rows: start, deposit, balance, interest, end. Then the jar column. Then the difference. Circulate with the clipboard checklist.	Complete five rows. Compute the jar total ($5,200) and the difference.	12 min
4. The reveal and the two savers	Slides 8 to 10. Reveal the 10 and 30 year numbers ($13,735 and $72,551 against	Copy the 10 and 30 year numbers into Part D. Answer the two savers question. Write the three-	6 min

	$10,400 and $31,200 in the jar). Then the two savers: Nia puts $1,000 in at 15 and never adds to it; at 5 percent she has about $11,467 at 65. Cole puts $2,000 in at 35; at 65 he has about $8,644. Ask: what mattered more, the amount or the years? Land "pay yourself first" as the habit that makes the years happen.	sentence plan in Part E.	

Questions to ask

Monitor understanding:

- What is the difference between simple and compound interest? Which one does a savings account pay?
- What does 1.05 to the fifth power mean in words?
- Why does year 5 earn more interest than year 2 if the deposit is the same?

Deepen learning:

- Nia had half the money and ended with more. What does that tell a 13-year-old?
- A jar pays nothing but you can see it. A savings account pays 5 percent but it is a number on a screen. Which one would you actually keep filling? Why?
- The credit card in Lesson 2.11 compounded against Leo at 24 percent. The account compounds for you at 5 percent. Which direction should you want to be on, and what does that mean for the phone?

Check for understanding

Clipboard checklist during Step 3: for each pair, yes or no on "year 1 interest is $52.00," "year 2 balance before interest is $2,132.00" (the deposit was added to last year's end), and "year 5 end is $6,033.99." A pair with three yeses moves to the jar comparison. A pair whose year 2 interest is $52.00 again forgot to add the deposit to the balance; the prompt is "What does the account have in it at the start of year 2?"

LSA

Closure (Time: 4 min)

3-2-1 exit card on the bottom of the handout: 3 reasons to save, 2 differences between a jar and a savings account, 1 number: $20 a week for 30 years at 5 percent. Three students read one line aloud. Collect. Sort into "got it" and "needs more." The "needs more" pile decides whether the Money Basics Quiz review in the first two minutes of Lesson 2.13 spends its time on interest math.

Differentiation and supports

- ELL: the three reasons to save each have a picture on the slide; the words save, interest, compound, principal are on a card in English, Turkish, Portuguese, and Spanish (see Vocabulary 02.md); the table has the column headers in plain words ("what is in it," "add this year," "the bank pays," "end of year"); sentence frame for Part E: "I will save $___ a week in ***. My first goal is*** ."
- IEP and 504 (general): pairs; calculators; the table has year 1 completed as a model and the addition and multiplication set up in each cell; a student may complete years 1 to 3 and copy 4 and 5 from the board; extended time; Part E may be dictated.
- Grade 6 support: complete years 1 to 3 of the table; the jar comparison at three years ($3,120 versus $3,442.53); Part E as two sentences.
- Grade 8 stretch: redo the five-year table at 3 percent *[update]* and say how much the rate matters over five years (about $347 less); then use the exponent shortcut to check Nia's number: $1,000 x 1.05 to the 50th power. Preview of CTE FCL 2. d): compare a big bank savings account at 0.5 percent, an online bank at 4 percent, and a credit union at 3 percent [update], and say what else besides the rate should decide where the money goes (fees, minimum balance, an adult co-owner, a branch nearby).
- UDL checkpoint used: multiple means of representation (the jar you can see, the table you build, the exponent shortcut) and multiple means of engagement (the do now guess and the two savers question the class argues).
- No-kitchen or no-machine alternative: not a lab; none needed. Without calculators, round every interest amount to the nearest dollar; the teacher key gives both versions.

Assessment

Objective	Standards met	Learning task	Assessment (formative or summative; tool)
1. State three reasons to save; jar versus account	IGLR 4. e); FCL 2. a) and c); National FCS 3.3.4	Part A, Step 1	Formative; Part A checked; the Money Basics Quiz item 12 scenario includes a savings choice (Lesson 2.13)
2. Complete the five-year compound table by hand	FCL 2. c); CDOS 3a Basic Skills; Std 3 PI B	Part C, Step 3	Formative; clipboard checklist; table scored

			complete, partial, or missing for daily work; summative on the Money Basics Quiz item 11 (interest math)
3. Judge amount versus years; write the pay-yourself-first plan	IGLR 4. e); FCL 2. a); National FCS 2.6.1	Parts D and E, Step 4	Formative; Part E scored complete (amount, place, goal), partial, or missing; the plan is the savings line students carry into the Project 02 budget revision

Homework

None. Optional: ask an adult at home whether they have a savings account and what it pays. Do not bring the number to school; just say whether it was more or less than 5 percent.

Connections

Math: exponents as repeated multiplication and percent of a number; this table is a ready-made grade 7 exponent lesson, and the math teacher can run the 3 percent version. ClassroomStreet: the savings account is the "safe" choice students compare to stocks in Topic 2.4 (Lesson 2.14, safe versus risky). Community: *[Sal: a credit union youth account visit fits here or in Lesson 2.10; ask them to bring the real rate and the real fee sheet.]*

Sources

- NYS Middle Level CTE FACS Content Module 01, Individual Growth and Life Readiness (nyctecenter.org, June 2018), line 4. e). Copy in 02 Standards/NYS Module PDFs/.
- NYS Middle Level CTE Theme Module 03, Financial and Consumer Literacy, lines 2. a) and 2. c). Same folder.
- NYS Learning Standards for Health, Physical Education, and Family and Consumer Sciences (1996), Standard 3, Intermediate. Wording per 02 Standards/STANDARDS SOURCES - web research.md.
- National Standards for Family and Consumer Sciences Education 3.0 (LEAD FCS Education, 2018), competencies 2.6.1 and 3.3.4.
- FDIC insurance limit of $250,000 per depositor per bank (fdic.gov); NCUA is the equivalent for credit unions. Savings rates in 2026 are marked [update].
- The table and the two savers numbers were computed for this lesson at 5 percent compounded yearly with the deposit at the start of each year; the teacher key shows the arithmetic.

- Sal's own materials: The Magic of Compound Interest packet (Brentwood South, 2026, Lesson Dups/Unit_4_Financial_Literacy/education_teachingwork_the_magic_of_compound_interest_2026_04.docx) supplied the year-by-year table format and the early saver versus late saver story; the story was rebuilt with new names and ages and the table moved from a one-time $100 to $20 a week so it matches the budget from Lesson 2.9. The Savings Challenge packet in the same folder is the source for "pay yourself first."

Teacher notes

- If time runs short, cut the table to three years and give years 4 and 5 from the slide. Never cut the two savers; it is the sentence students repeat at home.
- Common mistake: forgetting to add the new deposit before computing interest, so every year earns $52. The clipboard check catches it at year 2.
- Second common mistake: rounding. Tell students to keep two decimal places and round only at the end; the key accepts answers within $1 of the printed number.
- Be honest about the rate. 5 percent is for clean math. A big bank pays much less and an online bank pays close to it [update]; the grade 8 stretch has students find out which.
- *[Sal: your Series 6 years are the credential here. One minute on what "the eighth wonder of the world" line sounded like in a sales meeting, and why it is still true even when it is a pitch.]*