WAMC Lesson Plan

Names):Howard “Kerry’ Shafer

Email Address:kshafer @ chehalisschools.org
Lesson Title: FA 2-4 Exploring Compound Interest
Text: Dave Ramsey F STEM Correlation: Lesson Length: 2-ish days

Big Idea (Cluster):Knowing $$ Money –MATH. Return on Your Investment	
Mathematics K–12 Learning Standards: A-SSE 1.A &B, F-IF 1. 2. 7.	
Matheavematical Practice(s): 1,2,3,4,5,6 & 8	
Content Objectives: Be able to calculate the “Compound Interest Formula” and make educated “Real-Life” decession’s based upon out come	Language Objectives (ELL): Compound Interest, Annual, Semiannual, Quarterly & Daily Compounding
Vocabulary:	Connections to Prior Learning
Questions to Develop Mathematical Thinking: • When can YOUR-Money Make $$$$ for You??	Common Misconceptions: • I Have enough saved away!! • REALLY?

Assessment (Formative and Summative):

- Tell ME how ? Tell ME Why?

Materials:

- Plant Growth and trees
- Lap top or Calculator

Instruction Plan:

Introduction: Exploring COMPound !! interest
FActor
When I observe students: What’s their interests & AUHhh’ss
WHY or How Does that happen??
Answers:?? TO the factor?? YES Roth IRA, Sooner & often is Better
Summarizehey are carouse ?? and I want to them ASK Questions

Career Application(s):

- Banking ;Investment Brokers; Insurance, Finacial Planner 401-K, Pensions, Roth IRA

Leadership/21st Century Skills:

21st Century Interdisciplinary themes (Check those that apply to the above activity.)
☐ Global Awareness ☒ Financial/Economic/Business/Entrepreneurial Literacy ☐ Civic Literacy
☐ Health/Safety Literacy ☐ Environmental Literacy

21st Century Skills (Check those that students will demonstrate in the above activity.)

LEARNING AND INNOVATION
Creativity and Innovation
☐ Think Creatively
☐ Work Creatively with Others
☐ Implement Innovations
Critical Thinking and Problem Solving
☒ Reason Effectively

INFORMATION, MEDIA & TECHNOLOGY SKILLS
Information Literacy
☐ Access and Evaluate Information
☒ Use and manage Information
Media Literacy

LIFE & CAREER SKILLS
Flexibility and Adaptability
☐ Adapt to Change
☐ Be Flexible
Initiative and Self-Direction
☒ Manage Goals and Time
☐ Work Independently

Productivity and Accountability
☒ Manage Projects
☒ Produce Results
Leadership and Responsibility
☐ Guide and Lead

☐ Use Systems Thinking
☒ Make Judgments and Decisions
☐ Solve Problems

Communication and Collaboration
☐ Communicate Clearly
☐ Collaborate with Others

☐ Analyze Media
☐ Create Media Products

Information, Communications and Technology (ICT Literacy)
☒ Apply Technology Effectively

☒ Be Self-Directed Learners

Social and Cross-Cultural
☐ Interact Effectively with Others
☐ Work Effectively in Diverse Teams

Others
☒ Be Responsible to Others

FA 2-4 Exploring Compound Interest Quiz

1.) How much interest would you receive with an initial Investment of $2,000.00 over 1-year at 10% compounded annually?
2.) Same question; but interest return over 2-years?
3.) Same initial question with a 10% compounded semi-annually?
4.) Same initial question with a 10% compounded quarterly?
5.) Same initial question with a 10% compounded daily?

Sunlight

Math Concept(s): Exploring Compound Interest

Source / Text: Dave Ramsey & Financial Alg.

Developed by: Kerry Shafer E-Mail: kshafer@chehalisschools,org

Date: Summer Conference 2018

Attach the following documents:

- Lab Instructions : Take students outside to study growth of Plant life ie: trees, weeds & plants. Question the Growth?? Depending on the time of Sunlight in your region per-day + or - . Ask what causes EFFECT > Out-come Give them time to interact and Engage with each other!
- Student - FA 2-4 Compounding Interest Info
- Rubric and/or Assessment Tool : Right Or Wrong & WHY ??____ is KEY!!!

Short Description (Be sure to include where in your instruction this lab takes place):

Exploring Compound Interest. 4th week of semester

Compound interest Lab - Plantime

Lab Title: Start of Compounding Interest : Previously Said above***: Start with nature ; than move on to " PxRxT= $$ Interest" %%***

Prerequisite skills: Basic Math –i/you will teach before this lesson

Lab objective:

To KNOW the VALUE of PLANTING EARLY $$$$$$ --Saving and how YOUR MONEY can Grow over the Beginning YEARS of Savings & Investing!!!!

Standards: *(Note SPECIFIC relationship to Science, Technology, and/or Engineering)*

Mathematics K–12 Learning Standards:

- A-SSE 1. A. b
- F-IF 1. 2. 7.

Standards for Mathematical Practice:

-

K-12 Learning Standards-ELA (Reading, Writing, Speaking & Listening):

- RST 11-12.7

K-12 Science Standards

-

Technology

- 3. d

Engineering

-

Leadership/21st Century Skills:

21st Century Interdisciplinary themes (Check those that apply to the above activity.)

☐ Global Awareness ☒ Financial/Economic/Business/Entrepreneurial Literacy ☐ Civic Literacy

☐ Health/Safety Literacy ☐ Environmental Literacy

21st Century Skills (Check those that students will demonstrate in the above activity.)

LEARNING AND INNOVATION	INFORMATION, MEDIA & TECHNOLOGY SKILLS	LIFE & CAREER SKILLS	**Productivity and Accountability**
Creativity and Innovation	Information Literacy	Flexibility and Adaptability	☒ Manage Projects
☐ Think Creatively	☐ Access and Evaluate Information	☐ Adapt to Change	☐ Produce Results
☐ Work Creatively with Others	☐ Use and manage Information	☐ Be Flexible	Leadership and Responsibility
☐ Implement Innovations	Media Literacy	Initiative and Self-Direction	☐ Guide and Lead Others
Critical Thinking and Problem Solving	☐ Analyze Media	☒ Manage Goals and Time	☒ Be Responsible to Others
☐ Reason Effectively	☐ Create Media Products	☐ Work Independently	
☐ Use Systems Thinking	Information, Communications and Technology (ICT Literacy)	☐ Be Self-Directed Learners	
☐ Make Judgments and Decisions	☒ Apply Technology Effectively	Social and Cross-Cultural	
☒ Solve Problems		☐ Interact Effectively with Others	
Communication and Collaboration		☒ Work Effectively in Diverse Teams	
☐ Communicate Clearly			
☐ Collaborate with Others			

Teacher Preparation: (What materials and set-up are required for this lab?)

Materials

- Plant life, calculator, paper

Set-Up Required:

- Compound Interest formula

Lab Organization Strategies:

Leadership (Connect to 21st Century Skills selected):

- See above is checked

Cooperative Learning:

- Groups of 3 students will discuss how changing one of the three #'s effects the outcome.

Expectations:

Be able to calculate various changes of Principal, Interest rate and Length of Time.

TIME-LINE

- 2-ish days

Post Lab Follow-Up/Conclusions:

Discuss real world application of learning from lab

- The sooner you start the better!
- The bigger it gets, the faster it grows!
- The more often interest is compounded the faster your investment grows!

Career Applications

- Personal finance, Investment Broker, Wealth Management,

Optional or Extension Activities

- Compare and Contrast calculating numbers with what your goals are.
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