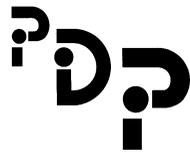


Life of Fred
Goldfish

Stanley F. Schmidt, Ph.D.



Polka Dot Publishing

A Note Before We Begin

Life of Fred: Goldfish

HOW MANY TIMES DO YOU READ THIS BOOK?

Once? A child reading the nineteen chapters and doing all the exercises will learn about a third of what is in this book.

They “get it” and then they “forget it.” That’s just the way human beings are. We are not cameras or tape recorders.

Do kids ever watch the same movie more than once? Of course. You might hear one child tell another, “*The Pirates of Kansas* is my favorite movie. I have seen it five times.”

They start to memorize every scene. They learn all the dialog.

How do teachers know the material much better than their students? They have gone over the same material many times.

In Chapter 18, we will read that 10 centimeters of dental floss is about four inches. How many readers, when they get to Chapter 19, will remember that? Not that many.

It is only when you play with an idea that it begins to “stick.” And there are many ways to play with an idea.

WAYS TO PLAY

1. Take it into the rest of your life. The back of an adult hand—is that four inches? It’s 10 cm.

2. Teach it. I, your author, have taught this material many times and know it deeply. Many parents have reported to me that their children talk about Fred at the dinner table. What are they doing? They are *teaching* it. And the result is that they learn it.

3. Your older child can read *Fred* to a younger sibling.

4. One calculus teacher wrote to me recently. She has her students rewrite parts of the *Life of Fred: Calculus* story with new adventures for

Fred that teach the same calculus. She included a large collection of their stories for me to read. The students were evidently having a lot of fun—and in the process, learning a lot of calculus.

There is a dirty word for all these Ways to Play. It is . . .

PRACTICE



The path to real learning

I have tried to make learning as much fun as possible. Enjoyment really helps learning. But one essential element of learning is repetition. That's a part of practice.

Do you remember potty training? How many kids are perfect after the first lesson?

Pistol Pete Maravich—one of the greats in basketball—would head off to the gym on Saturday mornings. He would pick at particular spot on the court and shoot baskets from that one spot . . . until the gym closed at night. The next Saturday he would pick a different spot on the court.

Most people would rather spend their Saturdays doing fun stuff, and most people can't play basketball like Pistol Pete.

THIS BOOK

One question I've often received from moms is, "If my child already knows the addition tables, where do I start in the Life of Fred Elementary Series?"

Each of the books in this series contains much more than just the addition and multiplication facts.*

For example, *Life of Fred: Cats* includes discussions of Ursa Major (Big Bear), Commutative, Asterism, Vowels, Cardinality of a Set, Loud Talkers, Hiring Freeze, One Quarter, Numerals vs. Numbers, Counting by Threes, Hoodwinked, Finding Patterns, Sheet Music for "Happy", Four Basic Emotions, Right Angles, Quarter and Half Notes, Obligate Carnivores, Adjectives and Verbs, Carbohydrates, a Quarter to Three, the Mariana Trench, 5280 Feet in a Mile, Ferdinand Magellan's Trip, What *Pacific* Means, Bacteria, Rabies in 300 B.C., Treating Cat Scratches, Capital Letters Start Sentences, Five Vowel Words: May, Me, Might, Mow, Mut, Twenty-Two English Words That Don't Contain a Vowel: *By, Cry, . . . , Tryst, and Why*, Numbers Expressed as Hundreds, Tens and Ones, Sexagesimal and Decimal Systems, Numbers that Add to 13, Morse Code, Four Major Oceans of the World, Centuries, Centenarians, and Centurions, Homonyms, Square Feet, Prepositional Phrases, 71 English Prepositions, Volume, One Meter, the Three Countries of the World that Don't Primarily Use the Metric System. What Mathematicians Do, Prime Numbers, and Less Than (<), among other things.

I urge those moms to start with *Life of Fred: Apples*. Besides learning a lot of material on a wide variety of subjects, this will give the child a pleasant way to practice—the path to real learning.

HOW THIS BOOK IS ORGANIZED

Just like the previous books in the series: Each chapter is about six pages. At the end of each chapter is a Your Turn to Play.

Have a paper and pencil handy before you sit down to read.

Each Your Turn to Play consists of about three or four questions. Have your child write out the answers—not just mentally answer them.

After all the questions are answered, then take a peek at my answers that are given on the next page. At this point your child has *earned* the right to go on to the next chapter.

Don't just read the questions and look at the answers. Your child won't learn as much taking that shortcut.

* If you just wanted to learn that, a couple packs of flash cards would do the trick.

Contents

Chapter 1	Which Pet?	13
	the I-need-a-pet stage that five-year-olds go through	
	finding a pet that everyone is happy with	
	elapsed time: 7 a.m. to 5 p.m.	
	union of sets	
Chapter 2	Manias.	19
	going crazy about many different things	
	drawing to scale	
	solving $3y = 12$	
	digits in a number	
Chapter 3	Mail.	25
	three 4-inch books make a foot	
	when you go nuts about something . . .	
	five meanings of “lifetime guarantee”	
	concurrent lines	
	alliteration	
Chapter 4	Map.	31
	similes	
	posting bail	
	what being pardoned means	
	showing that 3×5 equals 5×3	
Chapter 5	To the Pet Store.	37
	not holding grudges	
	when dolls write up Christmas lists	
	how multiplication makes our work easier	
	three \$26 lambs = \$78	
Chapter 6	Selecting a Pet.	43
	don’t wave your money around	
	the advanced form of Which of These Is Not Like the Others?	
	spelling coyote	
	finding patterns in numbers	

Chapter 7	Zillions of Pets..... 49
	bacteria
	keeping your word
	picking your friends and a spouse
	counting by twenties
	polygons
	sequences of numbers
Chapter 8	One in the Bag. 55
	the crocodile smile
	when not to wear an orange shirt
	perimeters
Chapter 9	Everything Felt Cleaner. 61
	smoker's cough
	what is worse than having black spots on a lung
	north and west
	to become really good at anything
	comparative and superlative forms of adjectives
Chapter 10	Just Swim Around. 67
	career goals of a fish
	making a movie about operating a bowling alley
	in South Carolina in 1928
	definition of an acre
Chapter 11	King KITTENS. 72
	venerating auto tools
	chocolate bunny eggs
	a meter is about 39"
	the immigrants of Argentina
	homonyms: <i>aisle</i> , <i>I'll</i> , and <i>isle</i>
	three kilograms of goldfish food
	the animals that do lay eggs
Chapter 12	Duck Tears. 79
	dealing with those who lie
	lacrimal glands
	area of the base of a fish tank
	why live in the city—why live in the country
	volume of a fish tank

Chapter 13	Getting a Tank.	85
	7½ gallons = one cubic foot	
	how much does a gallon of water weigh?	
	multiplying by 10	
	writing 4-digit numbers: 5000 or 5,000	
	multiplying by 100 and by 1,000	
	a ton of Bow Wow ice cream	
Chapter 14	Plastic Books for Fish.	91
	fish don't know that multiplication is commutative	
	anthropomorphizing fish and baseball mitts	
	anthropology	
	\$7.77 for a plant—or three for \$24	
Chapter 15	Three Plants.	97
	multiplying $3 \times \$7.77$	
	decimal point	
	making estimates	
Chapter 16	Filling the Tank.	103
	seven ways that don't work	
	mental work vs. physical work	
	ordinal numbers	
	the Tragedy of the Commons	
	cardinality of a set	
Chapter 17	In the Tank.	109
	completing the missing dimensions on a map	
	being polite without lying	
	being a fish in a tank vs. a man in a jail cell	
Chapter 18	What to Tell Your Fish.	115
	fish and fountain pens	
	piano playing can be good for your nerves	
	three times facts are harder than eight times facts	
Chapter 19	End of the Day.	121
	unhappy with your looks	
	bar graphs	
Index.		125

Chapter One

Which Pet?

A little noontime nap is rare for Fred. During the week he is teaching at KITTENS from 8 to 5. His weekends are usually so filled that taking a little snooze is impossible.

Today Fred discovered that a little nap can feel very good.

He slept for 40 minutes.

If his life included music or poetry, a nap could be considered the perfect caesura.*

His doll, Kingie, had been quietly painting while Fred slept. When Fred awoke, Kingie said, “I’ve been thinking. You got me from King of French Fries when you were only about four days old. We’ve been together a little over five years now.”

“That’s true,” Fred said. “This is now my fifth February at KITTENS. The time has passed so quickly.”



* seh-ZOO-rah A caesura is a pause—such as a break in a musical phrase, or in poetry in the middle of a line.

“What I was thinking,” Kingie said, “was that during most of our time, we have not had any pets.

When you were one, we didn’t have pets.

When you were two, we didn’t have pets.

When you were three, we didn’t have pets.

When you were four, we didn’t have pets.

Now that you’ve turned five, you have turned **pet crazy**.”

Fred shrugged his shoulders. “Maybe it is just a stage that five-year-olds go through. It’s the I-need-a-pet stage.”

Kingie asked, “Did you just make that up?”

Fred grinned. “I did. I’ve never read that in any book, but it sounds true. Don’t kids sometimes go through an I-need-a-pet stage?”

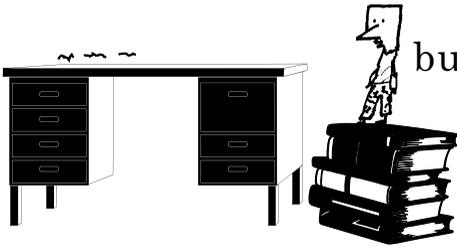
“I wouldn’t know,” said Kingie. “I’ve never had kids.”

Kingie went back to painting for a moment.

Fred got up and was putting away his sleeping bag.

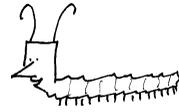
Kingie began again, “The reason I brought up this pet business is because we have never had a happy time with pets.”

“Didn’t you like the butterflies?” Fred asked. They were quiet and pretty.”



“Ha! Those stupid butterflies left those bugs on your desk. They were horrible,” Kingie almost shouted.

“I thought they were cute” Fred said. “And besides, the butterflies didn’t leave bugs. They left their eggs, which turned into friendly little caterpillars.”

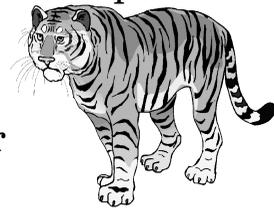


Kingie continued, “And then, after you had those bugs, you brought home a tiger!”



“It was just a little kitty,” Fred said.

“Kitty!” Kingie yelled. “I saw the picture of its mother in the newspaper. That’s why I built my fort. I needed to protect myself from your pet. And then you had 30 dogs! That was nuts. The only good pet we have had around here is that lovely mouse that you brought home from Edgewood.”



Mama missing one of her cubs

“What mouse!” Now it was Fred’s turn to shout. “I’m terrified of mice!”

Kingie explained to Fred that it had been in Fred’s backpack. The mouse had explored

Kingie's fort while Fred slept. And then it got eaten by the obligate carnivore in the hallway.

So now they were caterpillarless, catless, dogless, and mouseless.*

The pets that Fred liked—butterflies, cats, dogs—were the ones that Kingie didn't like.

And the pet that Kingie liked—mouse—was the one that Fred didn't like. 

Fred suggested, "We really need to find a pet that both of us like."

Kingie said, "Okay. But, first, let's list the pets that we don't want."

Kingie began the list. This is Kingie's handwriting.

Pets We Don't Want

1. *No bugs*

2. *No cats*

3. *No dogs*

Fred added in his handwriting . . .

4. **No mice**

5. **Nothing that looks like a mouse. No rats. No gophers. No rodents. No moles. No hamsters.**

* There really is no word like *caterpillarless*, etc. There are words like *homeless*, which Fred wasn't. He had a nice office to live in.

And there is *penniless*, which Fred currently is—or at least until his next paycheck, which will come at beginning of March.

Kingie added . . .

6. *No spiders*

7. *No moths*

8. *Nothing that crawls around on the ground. No bugs. No snakes. No worms. No beetles. No lizards.*

Fred added . . .

9. **Nothing from a zoo. No hippos. No lions. No gorillas. No elephants.**

Your Turn to Play

1. At the university, Fred teaches from 8 a.m. to 5 p.m. How many hours is that?
2. This is his fifth year at KITTENS. Is *fifth* a cardinal or an ordinal number?
3. Kingie told Fred, “When you were four, we didn’t have pets.” Is *four* a cardinal number or an ordinal number?
4. When Kingie and Fred were making their list of pets that they didn’t want, Fred wrote **No elephants**. Why do you imagine he didn’t want an elephant as a pet?
5. $\{\text{bug, cat, dog}\} \cup \{\text{bug, dog}\}$
6. Find a value for x that makes this true: $x + 3 = 12$.
7. Find a value for y that makes this true: $2y = 10$.
 $2y$ means the same as 2 times y .
 $2y$ means the same as $2 \times y$.
 $2y$ means the same as $y + y$.

..... **ANSWERS**

1. The elapsed time between 8 in the morning and 5 in the afternoon can be figured out in several different ways. My favorite way is:

first, from 8 to noon is $12 - 8 = 4$ hours,

second, from noon to 5 is 5 hours.

He teaches 4 hours in the morning and 5 hours in the afternoon. Each day he teaches for 9 hours.

2. *Fifth* is an ordinal number. The ordinal numbers are first, second, third, fourth, fifth, sixth, etc.

3. *Four* is a cardinal number. The cardinal numbers are used for counting the number of members of sets. The smallest cardinal number is zero.

The cardinality of $\{ \}$ is 0.

The cardinality of $\{8, 44, \mathbf{C}\}$ is 3.

4. There are many possible reasons. Here are some that I could think of:

- ✓ An elephant wouldn't fit very easily into Fred's office.
- ✓ It would cost a lot of money to feed an elephant.
- ✓ Fred didn't want to clean up after an elephant.
- ✓ It would be tough to get an elephant up the two flights of stairs to Fred's office.

5. $\{\text{bug, cat, dog}\} \cup \{\text{bug, dog}\} = \{\text{bug, cat, dog}\}$

(Remember the spelling rule for sets: *Don't list a member more than once.* $\{\text{bug, cat, dog, bug, dog}\}$ is not nice.)

6. $x + 3 = 12$ is true when x is 9.

7. $2y = 10$ is true when y is equal to 5.

Index

- acre..... 82
alliterative. 29, 30
American toothpaste. 119
anthropomorphizing fish 92
area of a rectangle 81, 83
Argentina 74, 77
Atlantic Ocean 74, 78
bacteria..... 50
bar graph. 122
caesura. 13, 50, 111
calcium..... 123
cardinal number 17, 107
cardinality.. 18, 107
carry the one in multiplication
..... 41, 42
cats are obligate carnivores. . . 40
centimeters..... 118
Chopin 116
Christmas lists that dolls write
..... 38
cm. vs. cm 118
commutative law of
multiplication..... 91
comparative form..... 63, 64
composers. 116
concurrent lines 29
count by 5s..... 35
counting by 20s 52
crocodile smile..... 56
cubic foot..... 85
cubic inches 84
cubic meters..... 84
cubic miles..... 84
deciduous teeth..... 118
decimal point 97
digits in a number..... 23
drawn to scale. 22, 31
ducky. 63
east and west on a map..... 37
elapsed time..... 23, 65, 66
estimating..... 98, 101, 102
finding missing dimensions on a
map 109-111
fish are not the same as people
..... 91
gallon of water weighs..... 86
gallons in one cubic foot. 85
game of *Which of These Is Not
Like the Others*
—advanced form
..... 44-48
Haydn..... 116
holding grudges 38
homonyms 74
keeping your word 51
kilogram..... 75
lacrimal glands..... 80
lifetime guarantee—many
meanings 28
live in the city..... 82
live in the countryside. 82
manias—one big drawback.
27, 28
memories 76
meters..... 73
multiplying by 1,000 88

Index

- multiplying by 100. 88, 89,
102, 107
- multiplying by ten 87, 89
- north on a map. 62
- one of the nicest things about
 Heaven. 62
- ordinal number. 17, 105, 107
- Pacific Ocean. 74
- pardoned before trial 34
- perfect moments in life 107
- perimeter 59, 65, 83
- pet crazy. 14
- piano playing—why do it. 116
- picking your spouse 51
- polygon 53, 54
- post bail 33
- Prof. Eldwood's *Naming Your
 Pet Fish* 64
- protein 123
- Rag-A-Fluffy dolls. 49, 50
- real thought 104, 105
- rectangle. 81
- Row of Practice. 24, 30, 42, 54,
60, 66, 71, 78, 96, 108, 114, 120
- sequences. 53, 54, 65, 70, 101
- set union. 107
- simile 32, 35, 36, 67
- smoker's cough 61
- south on a map. 39
- spendthrifts. 99
- square feet 81, 82
- square meters 82
- square miles. 84
- superlative form. 64, 112
- The Wind in the Willows*. 20
- Tragedy of the Commons. 106
- tulip mania. 20
- volume 83
- wearing a disguise 43, 58
- what fish want to do with their
 lives 68
- what was being venerated 72

If you would like to
learn more about
books written about
Fred . . .

FredGauss.com

After you have finished the *Life of Fred Elementary Series*, there are 14 hardback *Life of Fred* books that will take you all the way up into your third year of college. (for details, see the next page)

You are not done then!

It won't be long after that before you are opening up the first book in the series, *Life of Fred: Apples*, again. This time to read it to your kids.

Celebrate that good news!

