

# Brain-Based Research & Rules for Engagement



Presentation & Power Point By:  
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# 3 Essential Questions

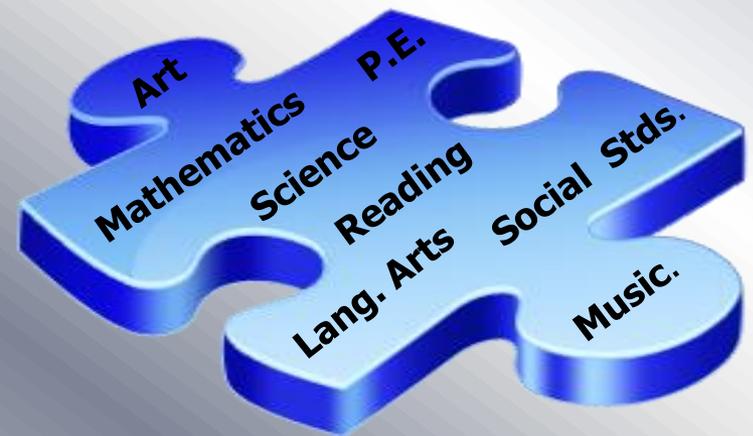
1. How do you keep students engaged?
2. How do you motivate students to learn?
3. How do you increase student achievement?



**“It’s during the darkest moments that we must focus to see the light” ~ Aristotle**

# Presentation Agenda

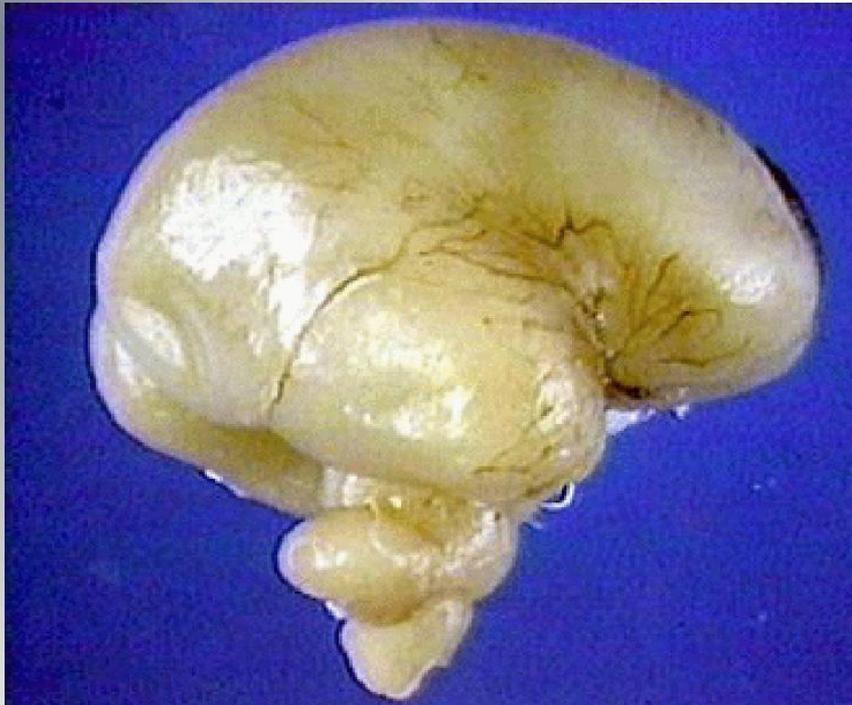
- Brain Physiology
- Rules for Engagement
- Ingredients for Motivation



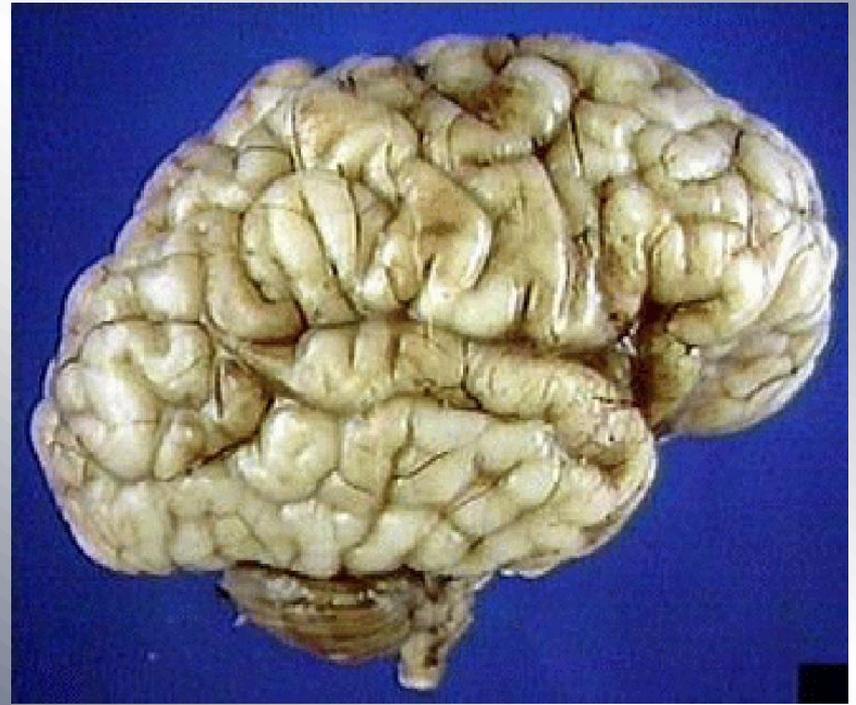
**“Things do not happened. Things are made to happen.” ~ John F. Kennedy**

# Brain Physiology

**New Born Brain**



**Brain with Experiences**



# Pre-Frontal Cortex

- ❑ Neural networks are the last to mature
- ❑ Not mature typically until the early 20's
- ❑ Most active maturation between 8-18 years old

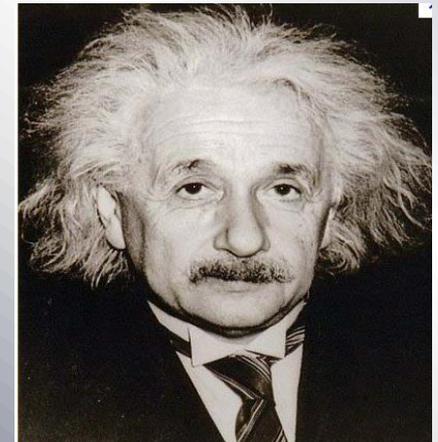
3%



10%



20%



# Twins ... Tell the Story



# Brain Break

**READ** the **COLOR** of the words aloud.  
**DO NOT** read each word.

**YELLOW BLUE ORANGE**

**BLACK RED GREEN**

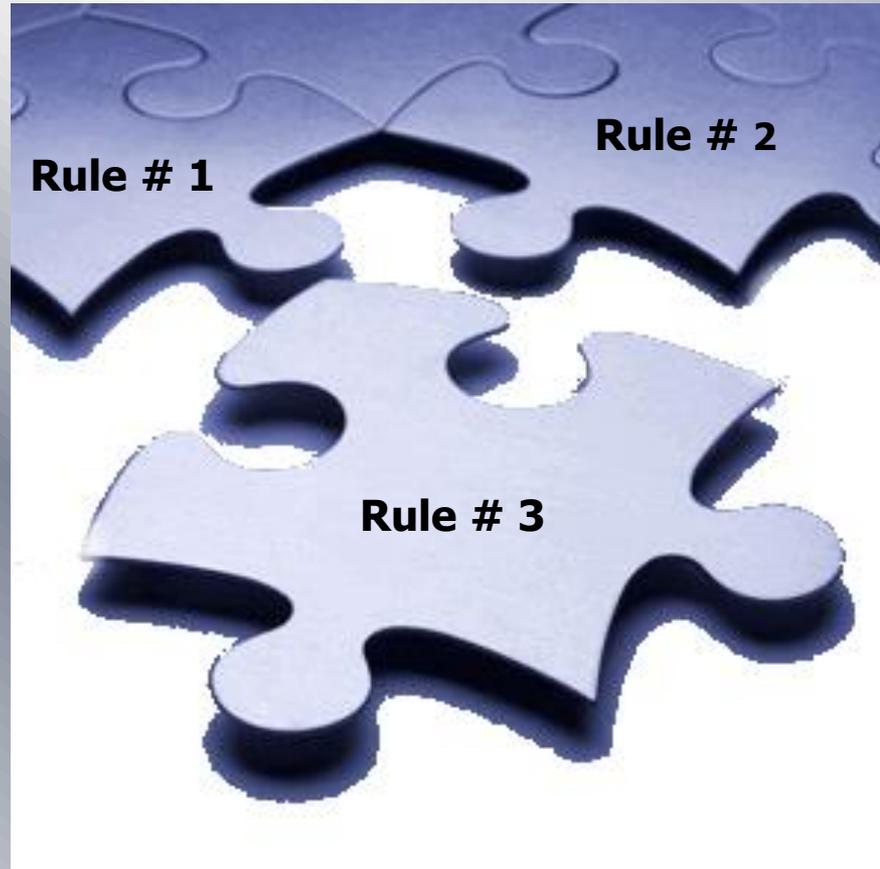
**PURPLE YELLOW RED**

**ORANGE GREEN BLACK**

**BLUE RED PURPLE**

**GREEN BLUE ORANGE**

# Rules of Engagement



# Rule # 1

## Humor



**“It’s never too late to be what you might have been.” ~ George Elliot**

WHEN WAS THE LAST TIME YOU DID  
SOMETHING FOR THE FIRST TIME?

IN  
DOG  
BEERS,  
I'VE  
ONLY  
HAD  
ONE

I'M TAKING CARE OF MY  
PROCRASTINATION ISSUES;  
JUST YOU WAIT AND SEE

TODAY I WILL  
BE HAPPIER  
THAN A BIRD  
WITH A  
FRENCH FRY

## Rule # 2

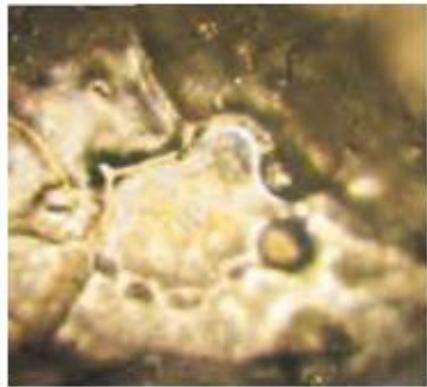
# Optimism



**“Optimism is the faith that leads to achievement. Nothing can be done without hope and confidence. ~ Helen Keller**

# Optimism in Action - Emoto

**Polluted Water  
Before + Thoughts**



**Polluted Water  
After + Thoughts**



**Hate**



**Anger**



**Thankful**

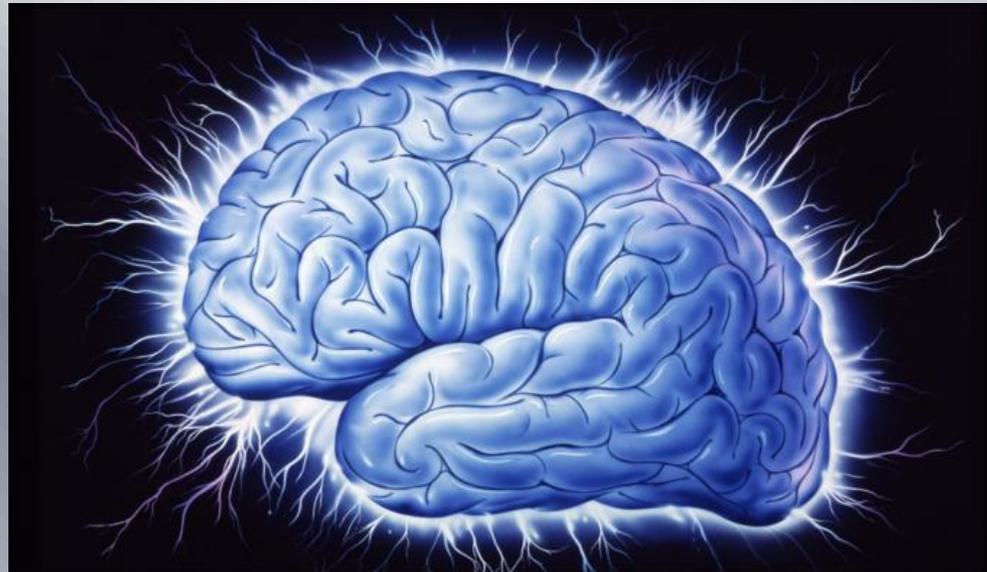


**Loving**



## Rule # 3

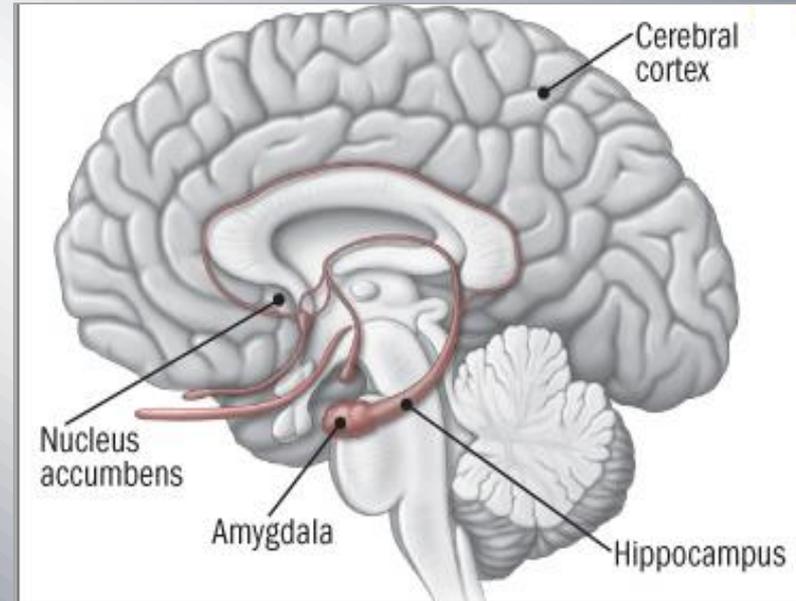
# Relevance and Choice



**“Nurture your mind with great thoughts. To believe in heroic deeds makes heroes.” ~ Benjamin Disraeli**

# Rule # 4

## Dopamine Response System

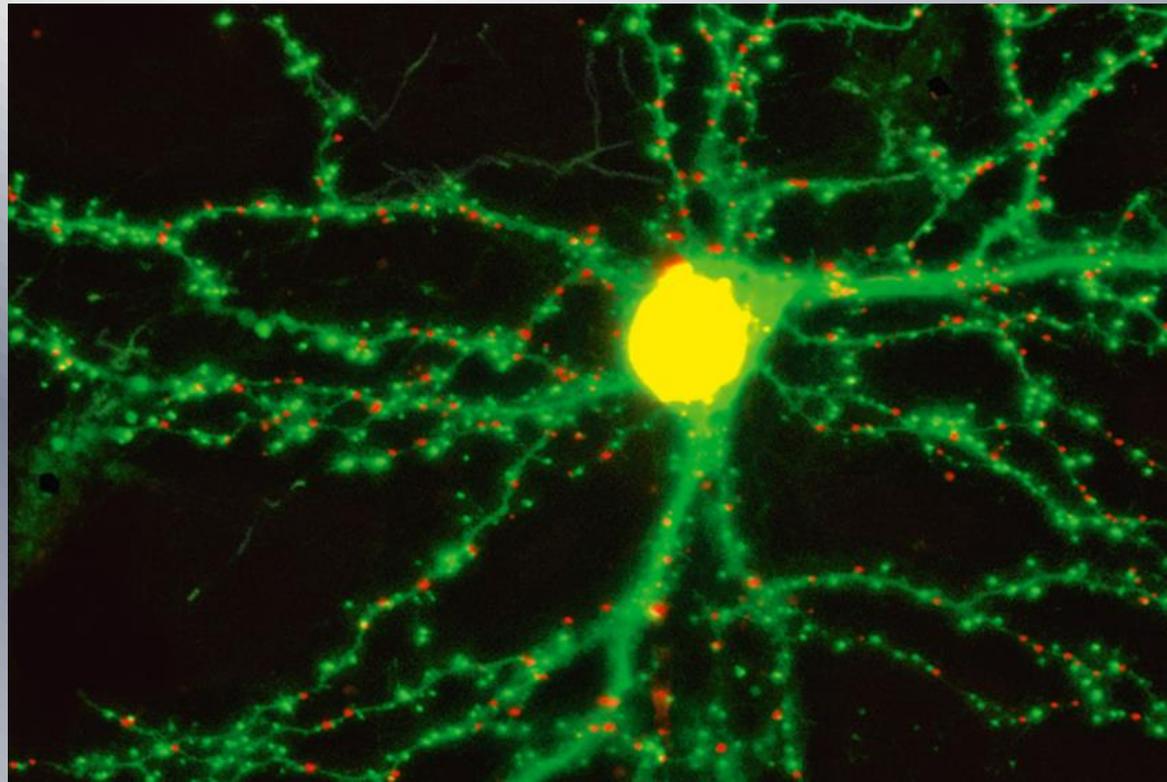


**“Everything comes together in a moment”**

~ Die Gestalt

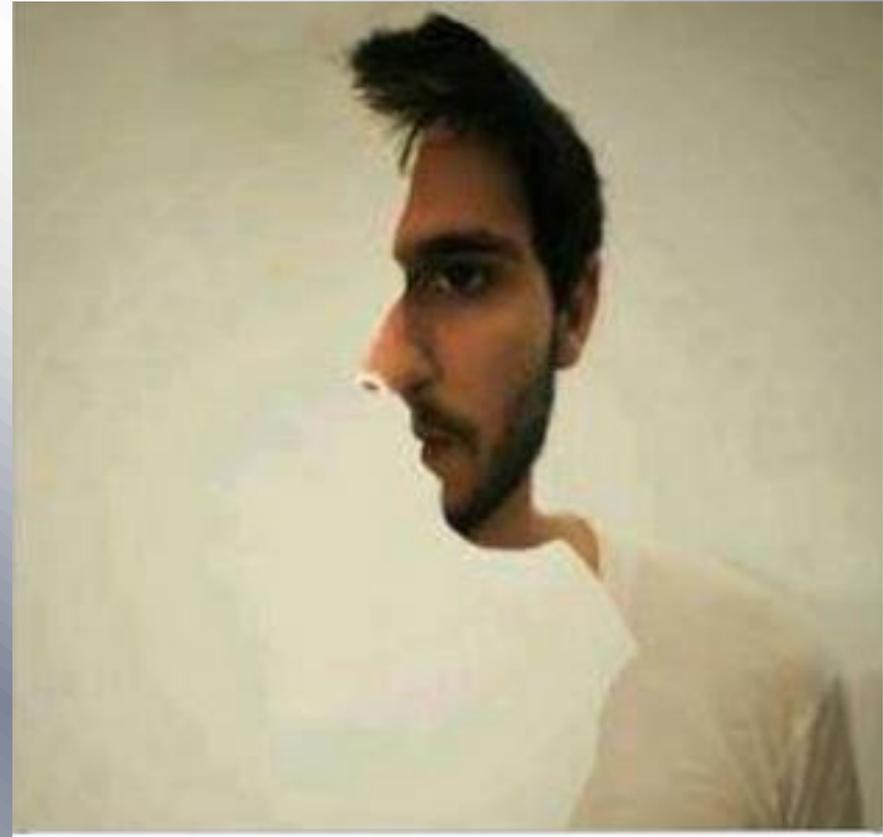
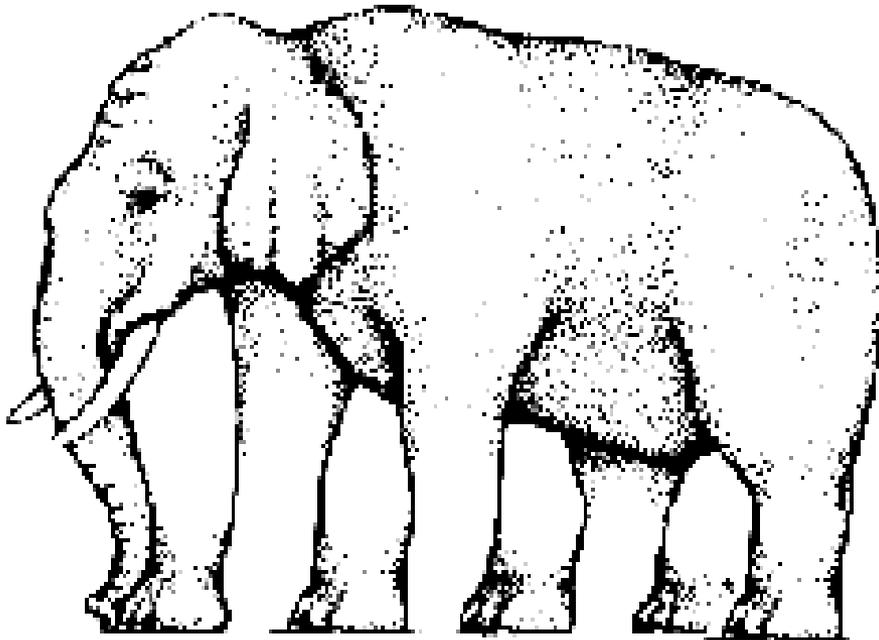
# Ingredients for Motivation

**“Faith is the substance of things hoped for and the evidence of things not seen.”**  
~ Hebrews 11:1



# Ingredient #1

## Perception



# Makenna – 1 of 9 children



**“Start where you are. Use what you have. Do what you can.” ~Arthur Ashe**

## Ingredient # 2

# Challenge & Interest

53RV35 7O PR0V3  
H0W 0UR M1ND5 C4N  
D0 4M4Z1NG 7H1NG5!  
1MPR3551V3 7H1NG5!  
1N 7H3 B3G1NN1NG  
17 WA5 H4RD BU7  
N0W, 0N 7H15 LIN3  
Y0UR M1ND 1S  
R34D1NG 17  
4U70M471C4LLY  
W17H 0U7 3V3N  
7H1NK1NG 4B0U7 17,  
B3 PROUD! 0NLY  
C3R741N P30PL3 C4N  
R3AD 7H15.

**“Setting goals is the first step into  
turning the invisible into the visible.”**

~ Tony Robinson

# Ingredient #3

# GRIT



# Ingredient # 4

## Equity



**“Never doubt that a small group of thoughtful, committed citizens can change the world.**

**Indeed, it’s the only thing that ever has.”**

~ Margaret Mead

# Equity in Action

**“If I have seen further  
it is by standing on the  
shoulders of Giants.”**

~By Isaac Newton

# Ingredient # 5

## Connecting



**“ What is it you plan to do with your one wild and precious life? ~ Mary Oliver**



I choose. I learn.

Science and Math 4-10 Gr.

### Gamify Independent Practice



- 🕒 Weekly assignments created on the teacher's behalf
- 🕒 Visible results with 30 mins. per week

# Improving Life Chances



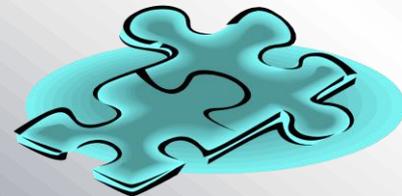
# A Final Thoughts...



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# Last Story.....

**“Anything is possible”**

~ Nina Kuhn

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# A Few Newspaper Clippings

## ILLNESS ROBBS SCHOOL OF BELOVED LEADER

By SANDRA MATHERS  
SENTINEL STAFF WRITER

OAKLAND — In 17 months, Nina Kuhn has gone from walking with a slight limp to using a power wheelchair. She can no longer button a blouse, play with her 10-year-old daughter, Makena, cook or bathe unassisted.

She breathes at only 22 percent of her lung capacity and experiences excruciating muscle spasms. Most nights,

she averages just a few hours of sleep, and she eats little.

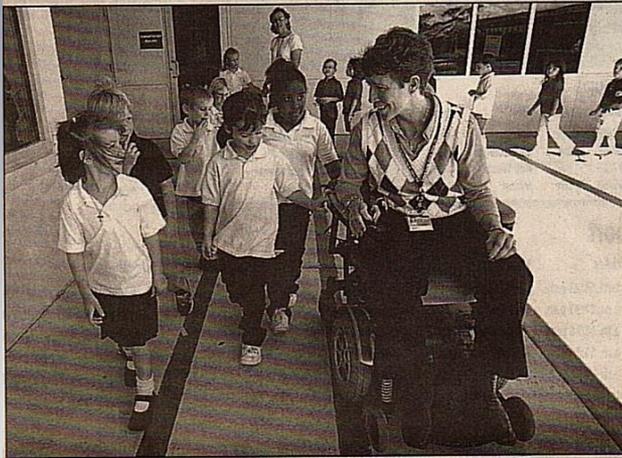
But today will be one of her hardest days yet. It is the day Kuhn bids farewell to the place she loves most, Oakland Avenue Charter School, and to hundreds of students and teachers who revere her as their friend and principal.

Kuhn, a 35-year-old single mother, has Lou Gehrig's disease, amyotrophic

PLEASE SEE PRINCIPAL, B7



Students at Oakland Avenue Charter School walk Wednesday with their principal, Nina Kuhn, who is leaving the school today because she suffers from Lou Gehrig's disease.



JULIE FLETCHER/ORLANDO SENTINEL

Illness 'has forced me to get a life'

## Faith, friends sustain ill woman

Clermont resident struck with Gehrig's disease

PETE SKIBA  
Staff Writer

CLERMONT  
Lou Gehrig's disease took a Clermont resident from in-line skates to electric wheelchair in months.

Nina Kuhn skated along a pavement in June 2003 when her legs gave way. She stumbled and fell. For a beginner, stumbling is the norm. Kuhn had experience.

"I'm a real good Rollerblader," Kuhn, 35, said. "I knew something was wrong."

Amyotrophic lateral sclerosis, given its more common name after Lou Gehrig, a baseball player who died of the disease in 1941, struck Kuhn like a genetic terrorist.

She is constantly short of breath and weak. Muscle spasms send agonizing pain through her body. Eating is difficult and speech comes haltingly.

She sleeps intermittently and because there are times she stops breathing while asleep, she wears an oxygen mask to bed.

The disease strikes the nerves, laying waste to the pathways that tell muscles to react, Clermont physician Fabio Echavarría said. The disease's paralysis is progressive and there is no cure.

Of those afflicted, 50 percent die within three years of diagnosis, 20 percent within five years. Ten percent live more than 10 years, the national ALS Association's patient information coordinator Sybill Chaiet said.

The disease's rapid progression forced Kuhn to retire from her career as neighboring Oakland's Oakland Avenue Charter School principal on Jan. 14.

Kuhn refused to retire from life.

An admitted workaholic, Kuhn has paid almost daily working visits to the charter school — her charter school. The school is almost two years old and Kuhn played a significant role in getting it running.

"We had nothing built when I hired teachers, just a pile of dirt," Kuhn said. "I had to convince teachers to move 1,000s of miles, change their lives and believe the school would be built."

Believe they did. Kuhn hired 30 teachers from across the nation. She made 30 friends.

She made sure her teachers, her students — her family — had a classroom visit from the principal every day to start the day.

Kuhn has a 1,000-watt smile that can light up any room. She takes courage and direction from her faith in God, comfort from the throng of friends.

"She (Kuhn) is still looking out for the school," school nurse and friend Nan Shearer



Staff photo by C.D. McGeonigal

Clermont resident Nina Kuhn sits at her home with her dog Grace recently. Kuhn, a former principal, was diagnosed with Lou Gehrig's disease, and has relied on faith to guide her through her ordeal.

said at Kuhn's home in the Regency Hills development. "People don't realize she is a dreamer and the school is her dream. Teachers

bought homes here near Anita's. They come by

and at holidays it is like one family at this house for those who can't go home."

Shearer's daughter, Danielle, teaches at the

Please see KUHNS, A10

# Final Thought.....

**“Don’t let challenges yield a life of  
Excuses and Explanations.  
Instead, let those events create a life of  
Enthusiasm and Exclamations!!!”**

~Nina Kuhn

**HAVE AN AMAZING  
SUMMER!!**

# Questions & Answers

