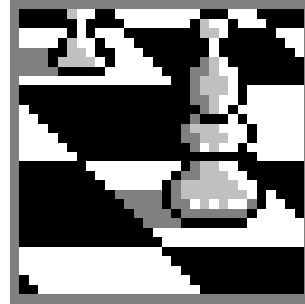


# **CRITICAL THINKING**

What It Is,  
How to Promote It,  
and a few Fun Ways to Employ It.

Teacher In-Service for Teachers @ Lake Sybelia  
Miss Kelly, Lake Sybelia Elementary  
November, 2001

# What are your goals?



Before we begin, please take a moment to jot down your goals, or your thoughts about possible goals, for the use of critical thinking in your classroom.

This is just for you.

# My Goals

To help learners to become **intentional**, **prescriptive**, and **reflective** thinkers with a collection of thinking skills at their disposal.

To design and promote an **environment** where thinking is **requested** (in what I ask of my learners), **supported** (in the way I interact with my learners), and **valued** (in the way I assess my learners).

# After this presentation

We're not inventing penicillin here – your goals for critical thinking may not change at all as a result of the next 45 minutes.

But on the other hand...

- ... your goals may change completely.
- ... your goals may be confirmed.
- ... your goals may be challenged.
- ... your goals may find new focus or priority.

Finally, your goals may find that sometimes elusive ingredient which makes most goals so much easier to attain – COMPANY.

# A Few Thoughts On Thinking

It does little good to discuss or promote critical thinking unless that effort is part of the larger effort to create thoughtful classrooms and thoughtful learners.

What we are discussing here today does not exist in a void – it is not a stand-alone tool, it's part of a greater whole.



**GOOD  
THINKING**

**- VS -**

**POOR  
THINKING**



# The Teaching of Thinking

1. Teach the thinking skill in isolation.  
(There is disagreement in the literature on this point, but I feel it is addressed by # 2 & #3.)
2. Imbed the thinking skill into a content-rich process.
3. Employ the thinking skill regularly, in meaningful ways. Our discussions should be rich with the vocabulary of cognition.

# But Don't Order Yet! There's More!

By introducing, highlighting, and exploring the skills and processes that make up *good* thinking.

By weaving the discussion and analysis of thinking into our activities and productions.

By becoming scholars of good thinkers, those people in our society and in our history who have been celebrated for their thinking abilities!

By journaling and verbalizing our thinking processes.



# Thinkers' Toolbox



Consider thinking skills as if they were tools in a toolbox – each with a specific purpose and function.

When the only tool you  
have is a hammer – you  
tend to treat every  
problem like a nail.



-- Abraham Maslow

# Teacher Strategies Which Promote Thoughtfulness

- Model verbalization of thought process.
- Require verbalization of thought process.
- Allow for active uncertainty.
- Allow adequate THINK TIME.
- Employ thinking skills across disciplines.
- Update & vary your questioning strategies.
- Find time for journaling.

In the thoughtful classroom,  
students are required to...

**DESCRIBE**

**DEFEND**

**JUSTIFY**

# Prerequisites

The ability to express your thinking is inherent upon a few important skills:

- the ability to **DESCRIBE** in detail
- the ability to deal in **SYMBOLS**
- a working knowledge of the **VOCABULARY OF THINKING**
- a working relationship with your **INNER-VOICE**



Having discussed the larger context of thinking training and the thoughtful classroom, let's focus on critical thinking...



Technically...

Critical thinking is one of the three or four generally acknowledged types of **complex-level thinking** processes.

critical thinking  
decision making  
problem solving  
creative thinking



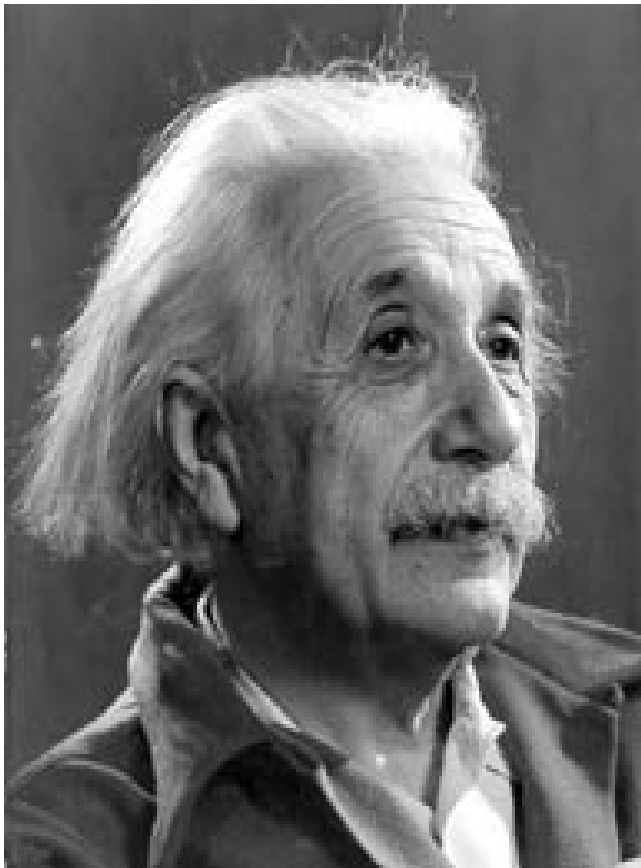
**Complex thinking** = non algorithmic, multiple solutions, involves judgment, uses multiple criteria, is effortful, and imposes meaning.

# So many definitions, so little time...

- ...requires **more than** the “comparatively” simple process of **remembering** something and involves a degree of skill;
- ... involves an element of **judgment** on the part of the thinker;
- ... involves a degree of logic and **systematic reasoning** (in comparison to creative thinking);
- ... **not defined as a series of steps**, but rather as a set of skills (unlike problem solving and decision making).
- ...implies a degree of **logic, rationality**, and some **linearity**.



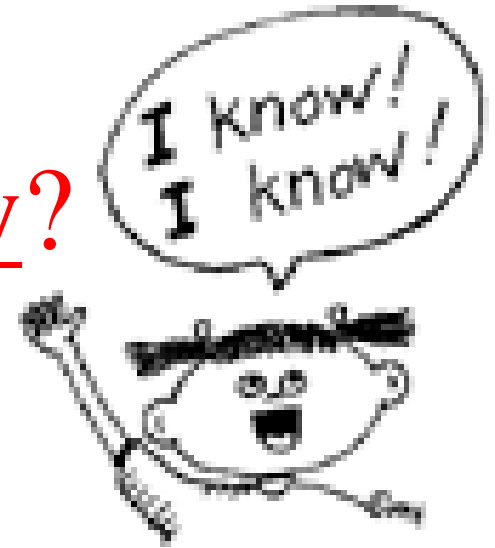
# Definitions From Official-Type People



- Critical thinking is the development of cohesive and logical **reasoning patterns**.
- Critical thinking is careful and **deliberate** determination of whether to accept, reject, or suspend judgment.
- Critical thinking is "reasonably and **reflectively** deciding what to believe or do."

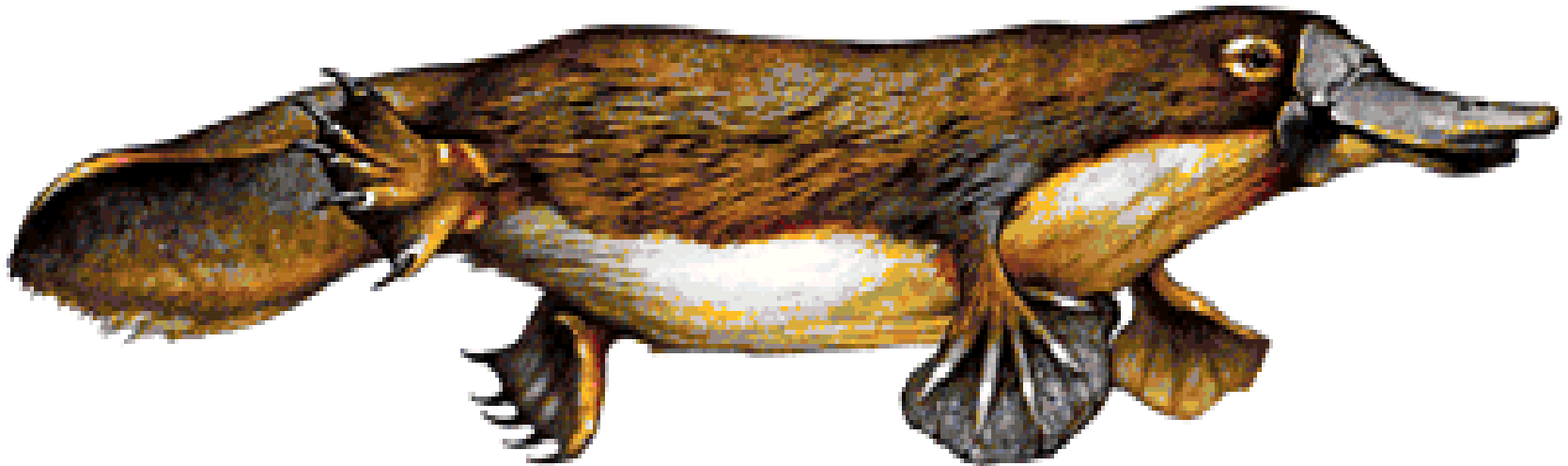
# Yeah, but what is it really?

Definitions from 3<sup>rd</sup> graders:



- "When I think of critical thinking, I think 'Get ready to use your head!'"
- "Ask different questions to yourself"
- "Some of your hardest thinking"

Definitions are fine, but sometimes we can understand something more clearly by seeing what it looks like...



# Attributes of a Critical Thinker

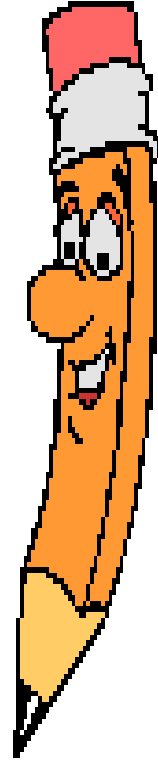
- asks pertinent questions
- assesses statements and arguments
- is able to admit a lack of understanding or information
- has a sense of curiosity
- is interested in finding new solutions
- is able to clearly define a set of criteria for analyzing ideas
- is willing to examine beliefs, assumptions, and opinions and weigh them against facts
- suspends judgment until all facts have been gathered and considered
- looks for evidence to support assumption and beliefs
- are able to adjust opinions when new facts are found
- looks for proof
- examines problems closely
- are able to reject information that is incorrect or irrelevant

# Our Favorite Critical Thinking Tasks:

Survivor List

Zooley

Things in Common



Ok, we know what it is...

how do we promote  
its use in our  
classrooms?

# Promoting Critical Thinking

- Provide opportunities (activities) for the use of critical thinking
- Questioning Strategies
- Journaling

# Provide Opportunities (Activities) for Higher Level Thinking

It's not rocket science, it just needs to be an opportunity to use more than Knowledge and Comprehension level thinking skills.



# Activities That Require Critical Thinking

When your directions include these words, your students are more likely to use critical thinking.

Classify

Combine

Compare

Elaborate

Judge

Decide

Debate

Question

Analyze

Hypothesize

Symbolize

Evaluate

Taxonomy & Skill Lists

# Questioning Strategies

Open-ended questioning is critical.

Open-ended is not limited to questions with more than one right answer, but questions with more than one path to get to the one right answer. An opportunity to use critical thinking is lost if the questioning is too narrow.

Who is the main character of this story?

Rank the characters in order of importance to the plot.

Compare the characters in this story to the positions on a chess board/football field. Which character would best represent each position?

# Using Journals To Promote Thinking & Learning

Journaling at the end of the day to debrief, to explore, to consider.

Journaling is an excellent assessment tool.

Journaling is an excellent way to bond with your students – esp. those that we see for short amounts of time.

## Journal Stamps

Sorting Hat

Come see me – I'm confused!

Glasses

I read this part carefully. I focused on this part.

Golden Snitch

Tell me more! Add details

Thunderbolt

unpacking thinking, making the invisible visible

Bee

Transfer – showing that you carried learning outside the room.

Butterfly

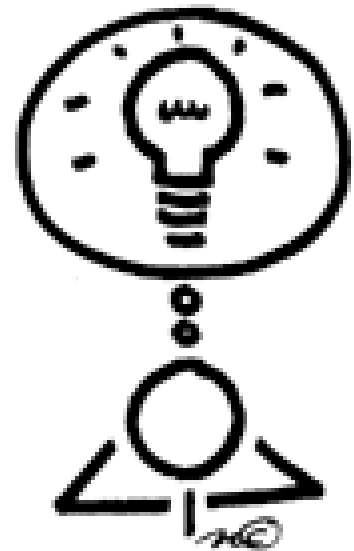
Elaborating on a topic learned.

Bear Tracks

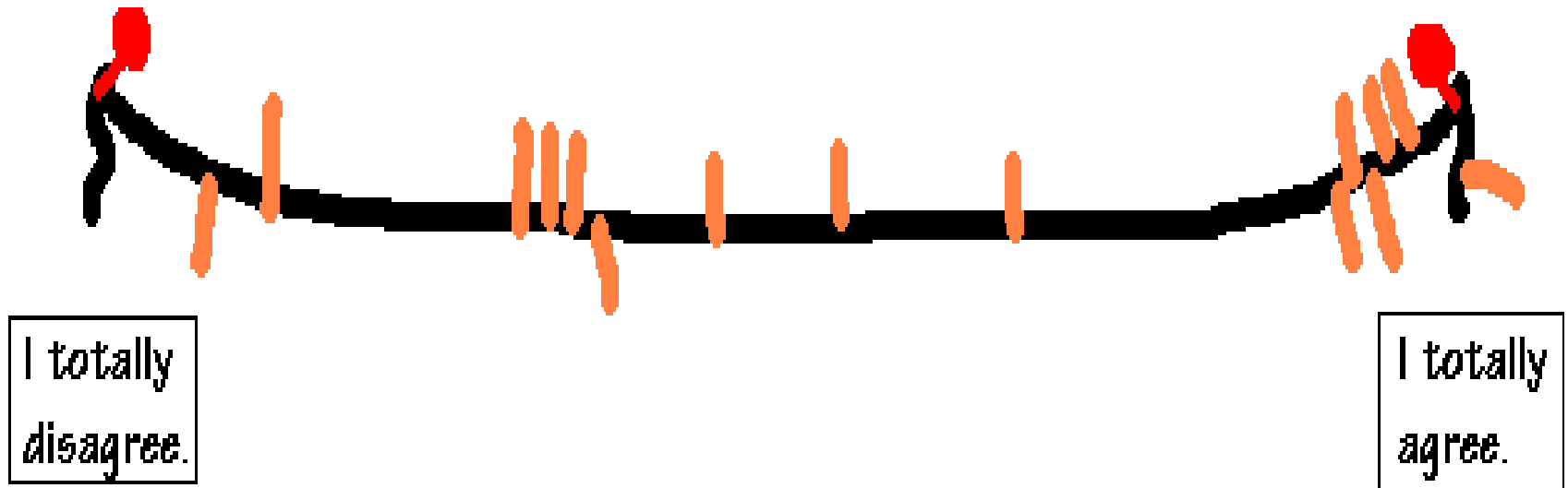
Making connections – connection disparate topics.

# A few think-tivities for you

- The Opinion Continuum
- QOTD: The Question of the Day
- Quote-ology
- What's So Funny?
- What's Your Rank?
- Monsters, Inc.
- Species Spies

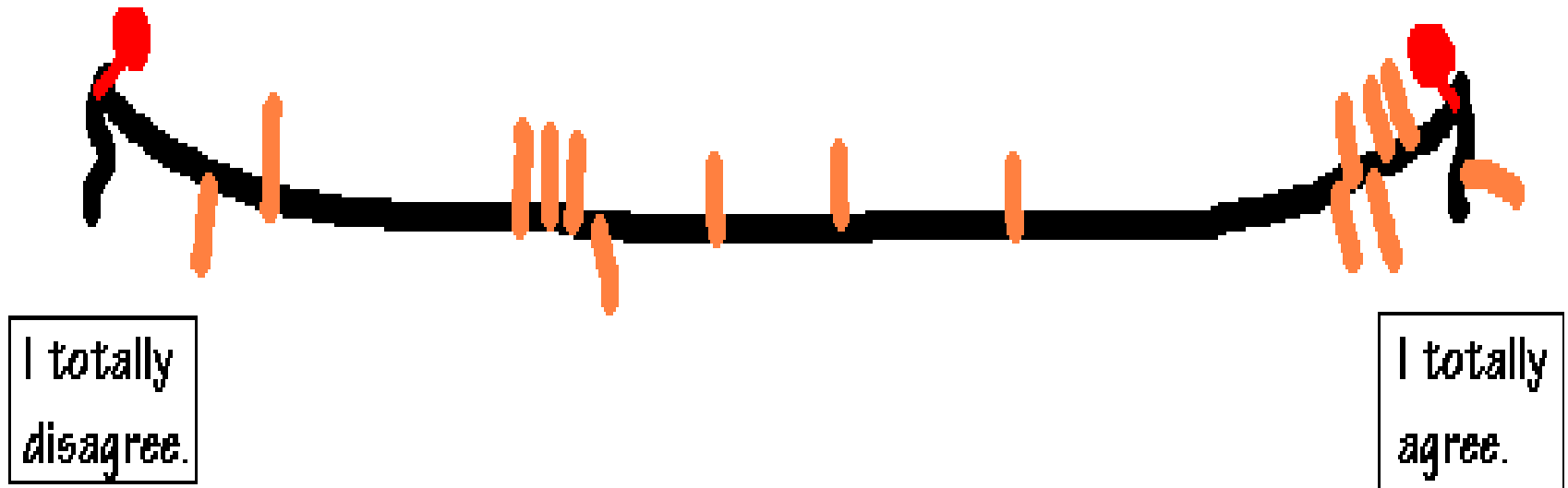


# The Opinion Continuum



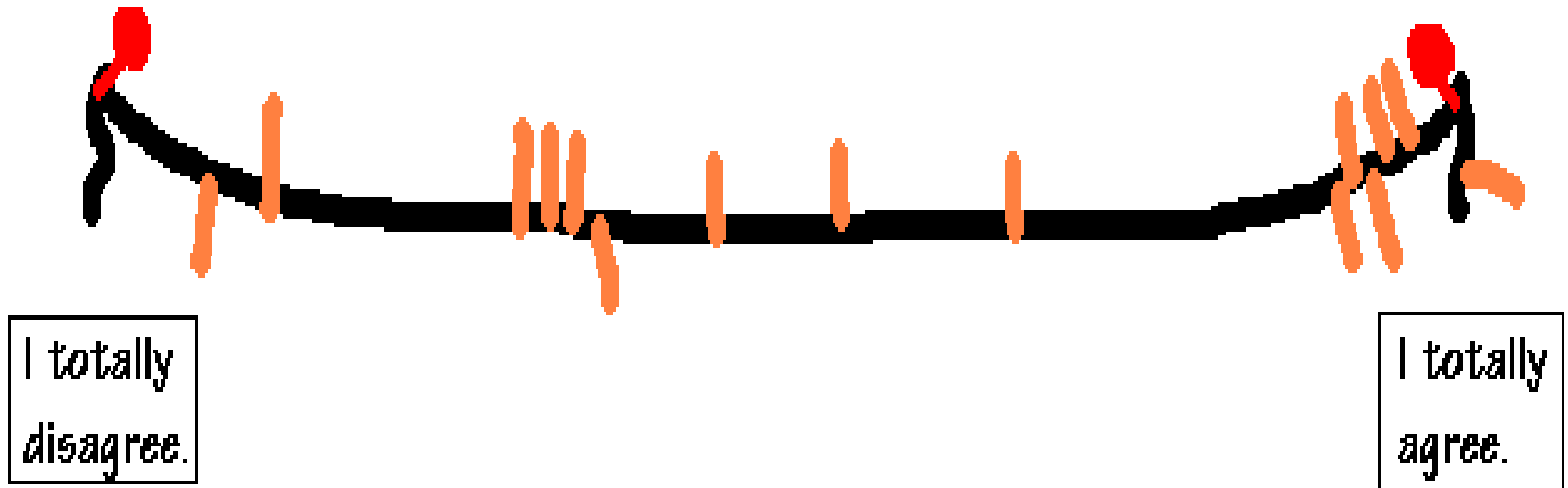
The government should  
regulate allowance.

# The Opinion Continuum



Adults should be required to get a Parenting License before they can have children.

# The Opinion Continuum



The hyper-focus on testing is a sign of things to come in education.



# Q.O.T.D.

If you had to be trapped in a book for a year, which book would you want it to be and why?

Criteria: most contemplative



# Other QOTD Questions...

**If you were a sandwich,  
what kind would you be and why?**

**If you were a ghost,  
who would you haunt and why?**

**If you had to have the same dream every night  
for the rest of your life, which dream  
would you choose and why?**

**If you could choose any item to grow on trees,  
what would you choose and why?**

# Quote-ology

Using quotes to kick-start lessons, class discussions, and/or journals can often involve explorations of symbolism, inference, judgment, etc.

Here are a few favorites...

You can only eat  
an elephant one  
bite at a time.

T.V. is  
chewing gum  
for the eyes.

-- Frank Lloyd Wright

If you get to thinkin' you're  
a person of some influence,  
try orderin' somebody else's  
dog around.

-- Will Rogers

Don't Squat With Your Spurs On

Wear your learning, like  
your watch, in a private  
pocket: and do not pull it  
out and strike it, merely to  
show that you have one.

-- Earl of Chesterfield, 1774

And, of course, no collection of quotes would be complete without this important verse...

**If you see a line,  
go stand in it.**

**Probably can't hurt nothin'.**

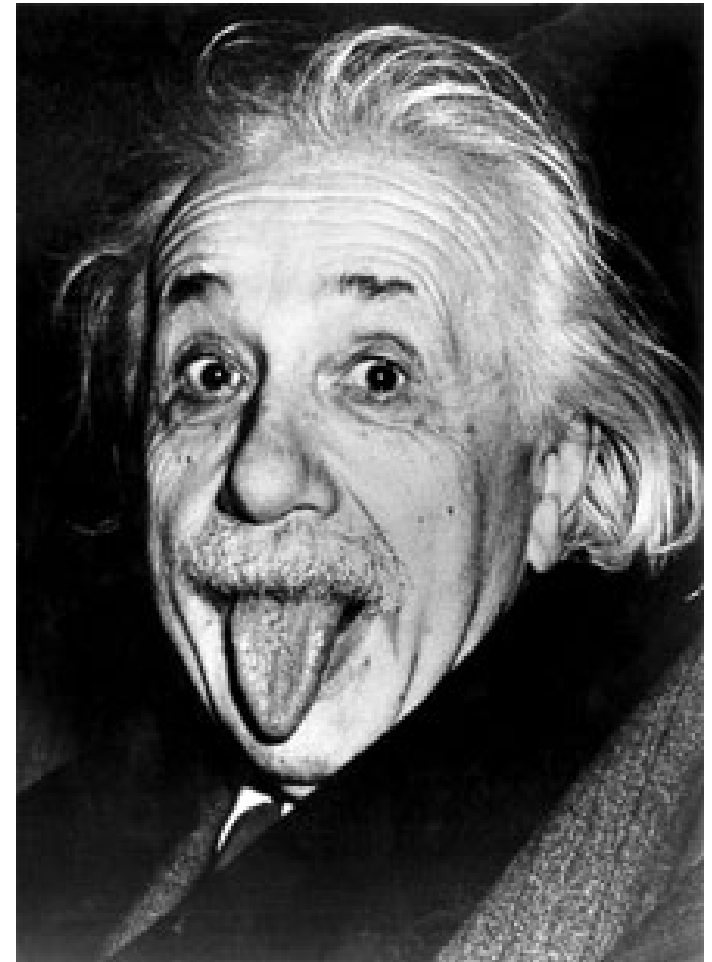
-- Forrest Gump

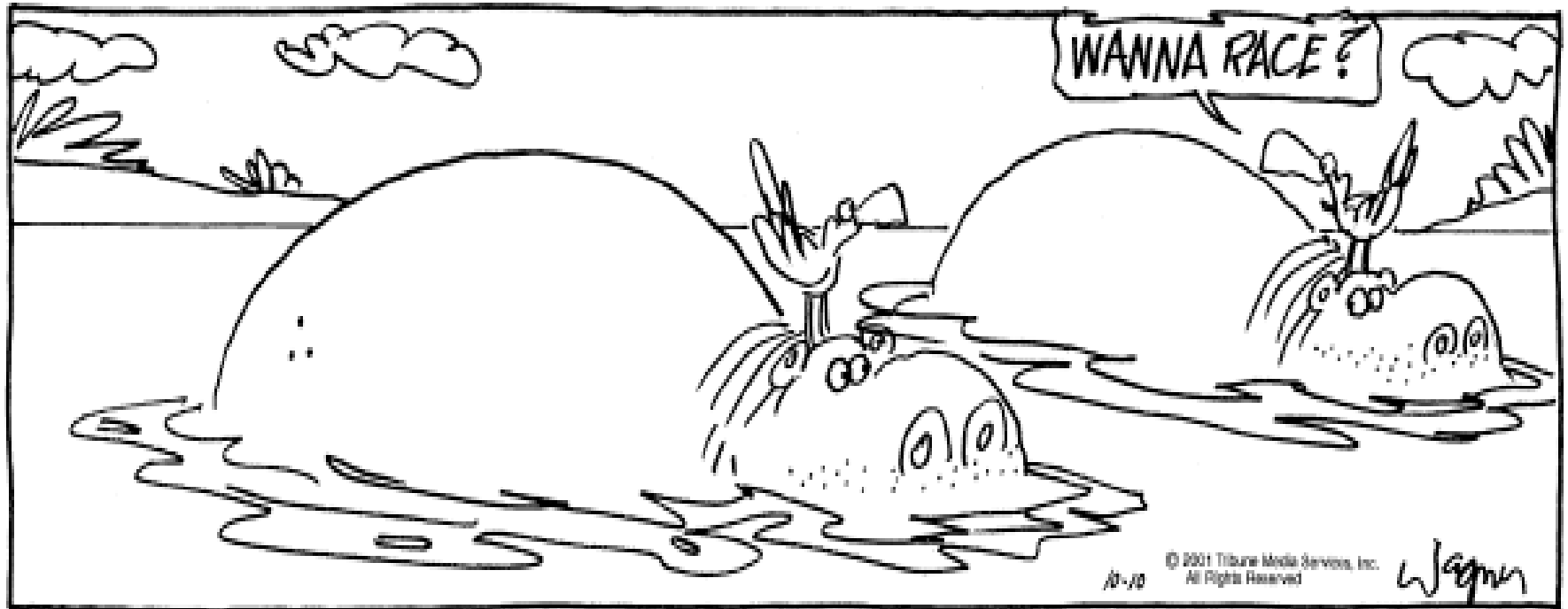


# What's So Funny?

Use comic strips to gain experience with the art of humor.

There are surprising opportunities for exercising critical thinking in humor. The development and understanding of well-developed humor generally requires the use of implication, reference, inference, symbolism, etc.





Why might someone think this is funny?

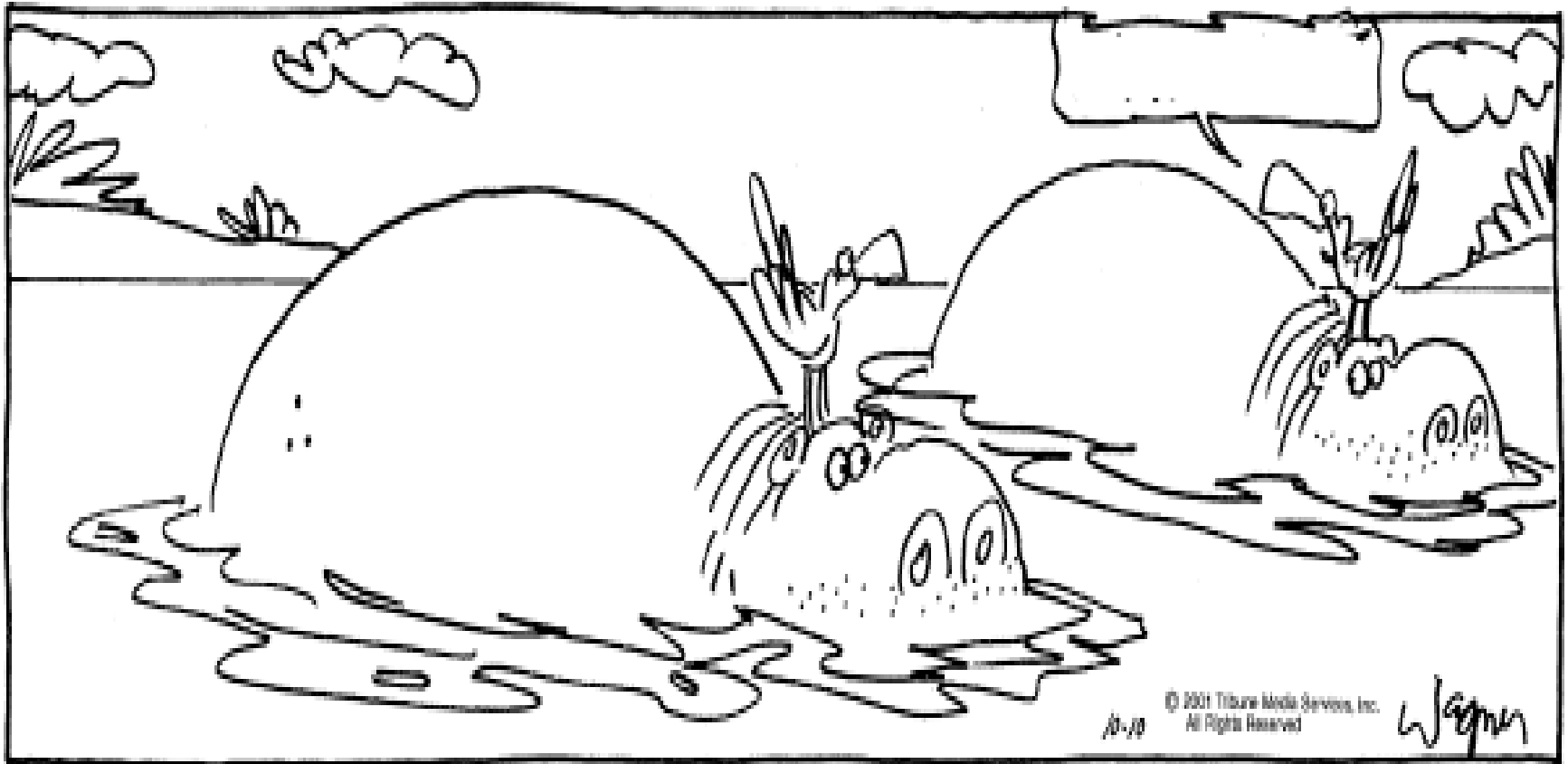
Implication that the birds are in control.

Plays on the obvious slowness of hippos.



What's so funny?

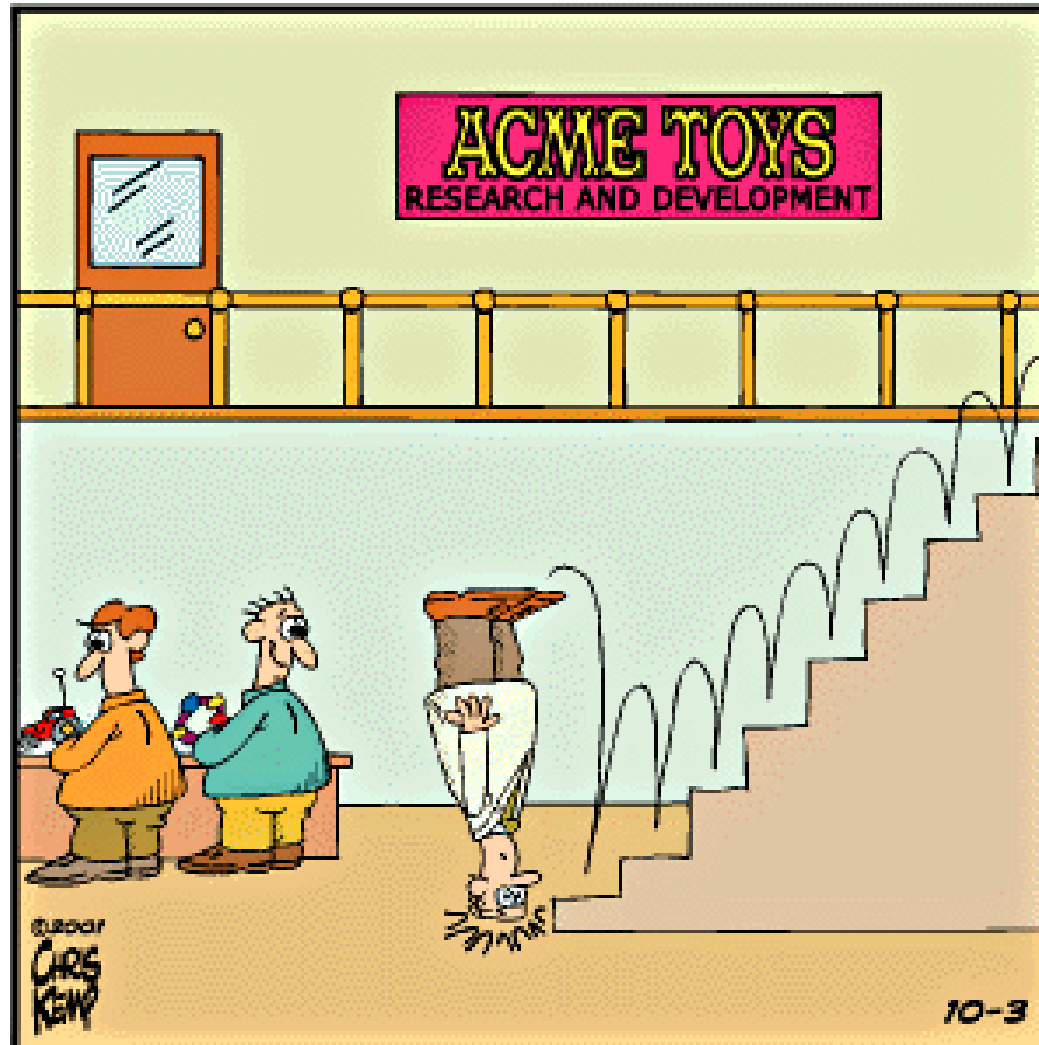
They're making it seem like the animals have the same kinds of rules as we do.



White-out the captions, make copies or an overhead, and have your kids make up their own captions..

“Hey! The lady at the store told me this was an original!”

# ODDLY ENOUGH



"CLUMSY BOB WALCOTT, THE INSPIRATION FOR THE SLINKY."

# WHAT'S YOUR RANK?

Learners can use the thinking skills of classify, evaluate, judge, etc. to create ranked lists of items.

These books have some great information for these kinds of activities:



Factastic Book of 1001 Facts

The Top 10 of Everything

Put the following in order from greatest  
to least according to popularity:

(be prepared to defend your opinion)

EPCOT @ Walt Disney World

Disneyland, CA

Disney-MGM Studios

Tokyo Disneyland

Magic Kingdom @ Walt Disney World

Disneyland, Paris

Rank the following from greatest to  
least according to who earns the  
most money:

Grant Hill

Michael Jordan

Tiger Woods

Evander Holyfield





# Which cat names are used the most?

Kitty

Fluffy

Sam

Tiger

Smokey

Tigger

How about “Lunch”? I think that’s a great name for a cat.



Just in case you're curious...

Tokyo  
California  
Magic  
Kingdom  
Paris  
EPCOT  
MGM Studios

Jordan  
Holyfield  
Woods  
Hill

Tiger  
Tigger  
Sam  
Kitty  
Shadow  
Fluffy

# Monsters, Inc.

Using a decision making  
matrix to decide,  
“Which monster is the scariest?”



# Species Spies



**Observation**

**Data Collection**

**Drawing Conclusions**

**Hypothesizing**

**Comparing**

**Elaborating**

**Substituting**

17:19:05 SEP 28, 1998



<http://apl.discovery.com/cams/elephant.html>



© 2000 Animal Planet      www.discovery.com

<http://apl.discovery.com/cams/pandavidr.html?ct=3bee7cec>

# Animal Cams Think-tivities

- Observe:
  - at pre-set times everyday or every week
  - periodically
- Record observations:
  - log book, sticker chart, etc.
- Think about it:
  - draw conclusions based on your data
  - elaborate/extend your findings to the wild
  - compare your findings to other animals
  - substitute human beings in this experiment

# The Forest and the Trees

Forest:

Universal Themes

Thinking Skills Curriculum

Developing a Culture of Thinking

Educational Philosophy

Trees:

Look for the mini-opportunities, like...





**Most teachers are already doing things that require critical thinking, but there are likely some missed opportunities as well.**

- Instead of having students put their spelling words in ABC order, try putting them in order of most frequent use.
- Instead of asking the class to open their books to the Chicken Little story on page 17, ask them to open their books to the story where we'll be talking about birds that don't fly.
- Instead of introducing the lesson by saying what you'll be studying, try asking them to HYPOTHESIZE about what you'll be doing based on what went on before. "Yesterday we practiced multiplying 2-digit numbers. Can anyone hypothesize what we might work on today?"
- Use the language of cognition – make it commonplace.

# Pitfalls and Drawbacks

- Employing good thinking takes time, a precious commodity in today's test-happy world.
- Higher-level thinking is usually “messier” than lower-level thinking.
- Higher-level thinking is often harder to evaluate.



The good news is – the more of it you do, the more efficient at managing, monitoring, and assessing it you become!

# In Closing...

How is critical thinking like Anthrax (threat of)?

- It makes things take longer.
- It's usually a little messy.
- It makes you look at things a little differently.
- Having it around puts us on alert for it.
- Ignoring it is a bad thing.
- It can be contagious.
- Having it around makes things just a little more challenging.

# Hungry For More?



# Go To Miss Kelly's Website

<http://teachers.ocps.net/kellyd2/>

Books on thinking

Websites on thinking

Q.O.T.D. Project

Opinion Continuum

Links to Quote sites