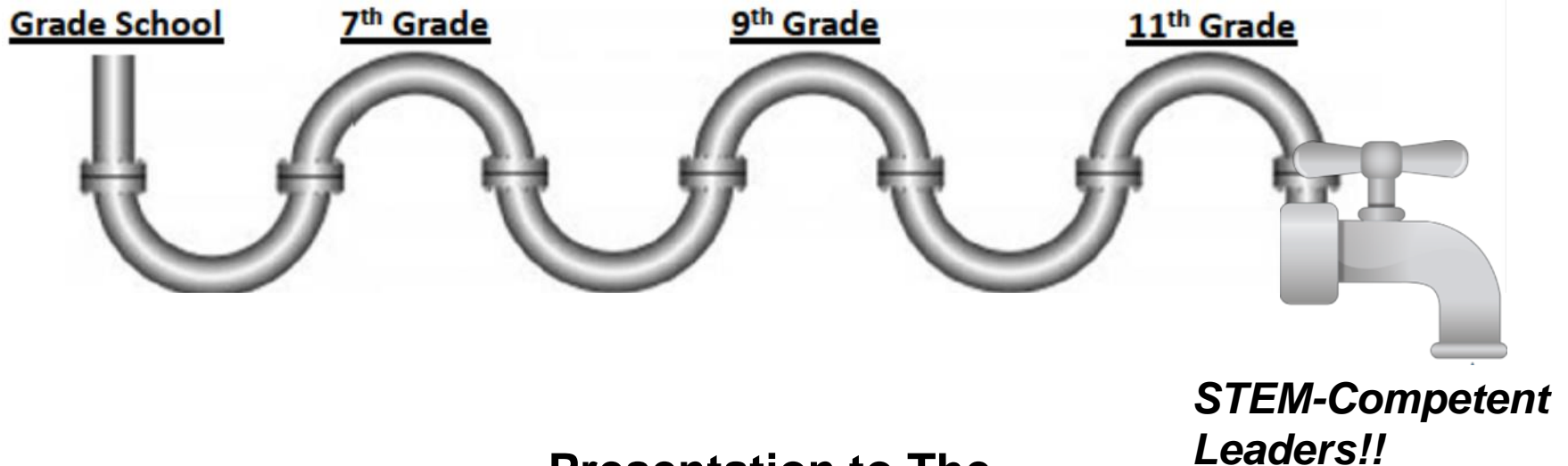


# Building a Bigger Pipeline



**Presentation to The  
U.S. Army Mad Scientist Conference  
Fort Leavenworth, KS  
27 October, 2015**

# Why Am I Here?



I Ran Into A Mad Scientist....

# U.S. Army Mad Scientist Conference

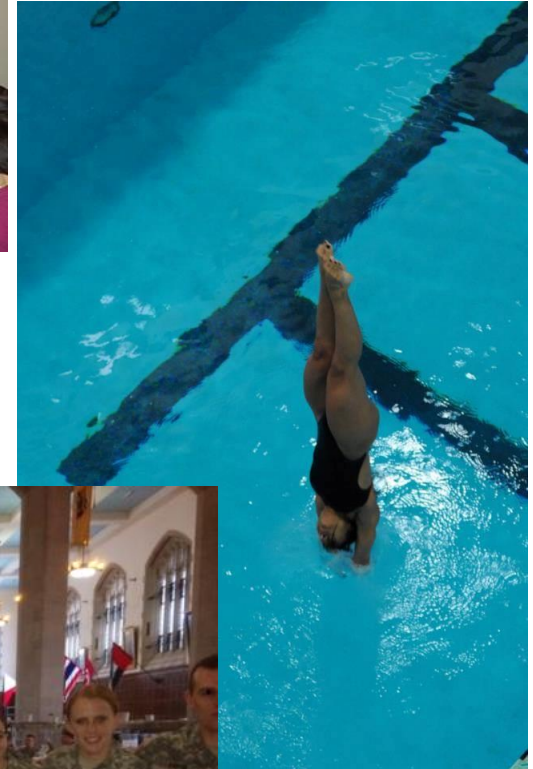
## Priscilla (Pat ) Walker Locke



*Pat Locke, USMA 1980*



# U.S. Army Mad Scientist Conference



**Pat Locke, USMA 1980**

The Race Riots  
23-27 July, 1967  
Detroit





1967

D E T R O I T

8 Mile Road

Telegraph Road

7 Mile Road

State Fairgrounds

My Elementary School

Where I Lived

Highland Park

Davison

Hamtramck

Hoover

Van Dyke

Gratiot Ave.

Ford Freeway

Warren

Rouge Park

Southfield Freeway

Ford Road

Grand River Ave.

Michigan

Woodward Ave.

MT. Elliott

Cadillac Blvd.

Mack Ave.

Jefferson Ave.

Belle Isle

0 3 Mi

CANADA

Places where looting and arson occurred



Major sniper battles

Maps are hard to Read – maybe an “Aerial View”...

Pat Locke, USMA 1980



***Observation: Schools Today have much better Sprinkler Systems!***

1967





1974



# 1976

- I was a Communications Specialist at Fort Polk



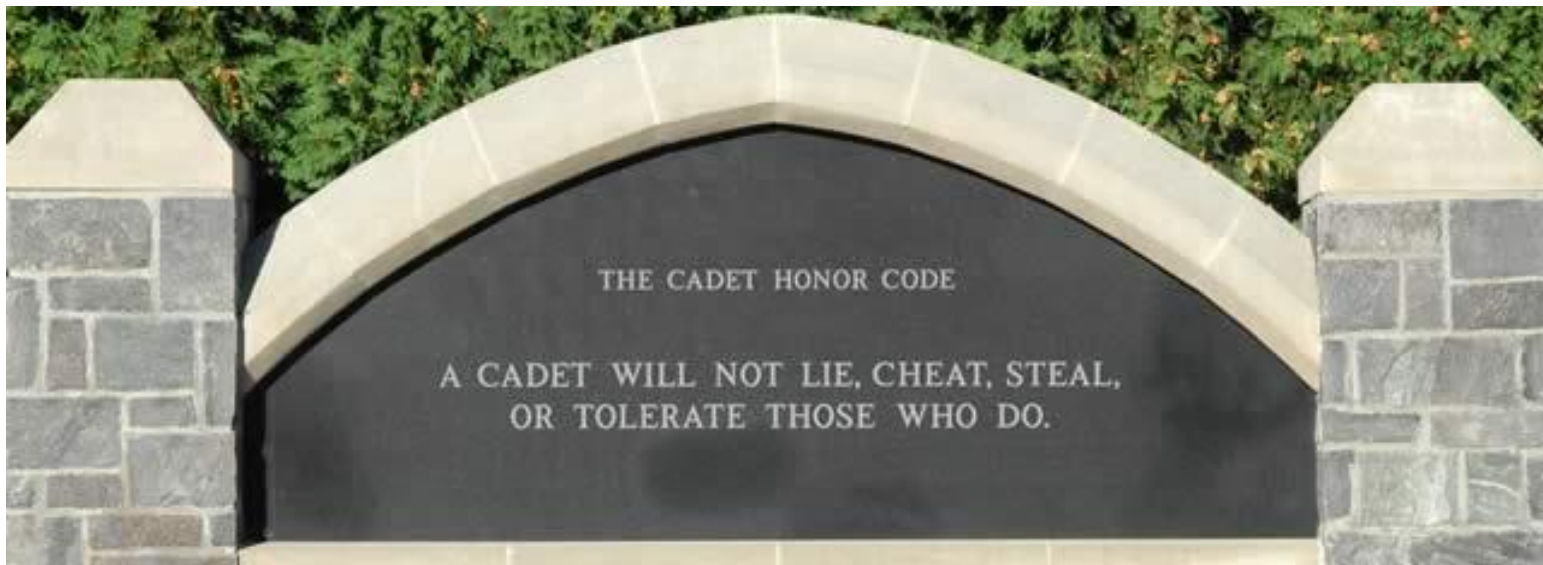
- President Ford Opened the Service Academies to Women



- My Battalion Commander Called Me in and Asked Whether I wanted to go to West Point
- My Response: "What's West Point?"



# What is West Point? Why Do We Care?







UNITED STATES MILITARY ACADEMY  
**WEST POINT.**

# Academic Excellence

*The  
Princeton  
Review*

**#1 Most Accessible Professors**

**#1 Everybody Plays Intramurals**

**#3 Best College Library**

**#5 Best Health Services**

**#6 Best Athletic Facilities**

**#14 Best Classroom Experience**



**#2 Public Liberal Arts College**

**#3 Best Undergrad Engineering Program**

**#2 Civil Engineering Program**

**#5 Mechanical Engineering Program**

**#6 Electrical Engineering Program**

**#17 Overall Liberal Arts College**

**Forbes**  
.com

**#1 Public College in the country**

**#1 Best Value**

**#3 Liberal Arts College**

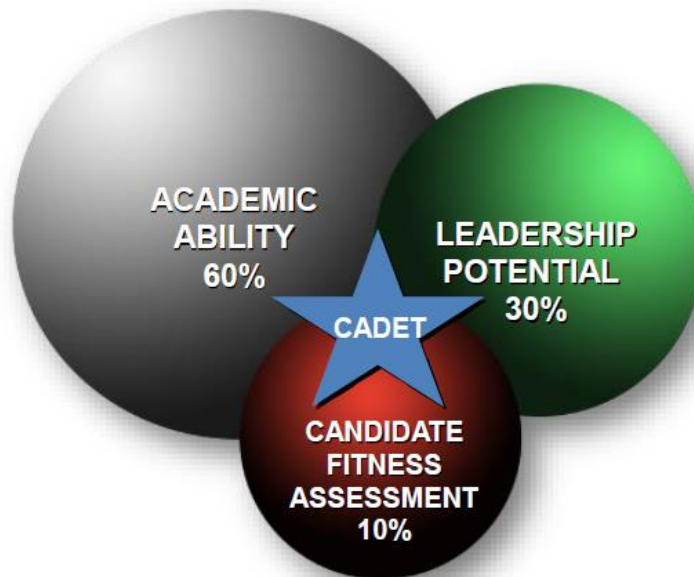
**#9 Overall College in the country**





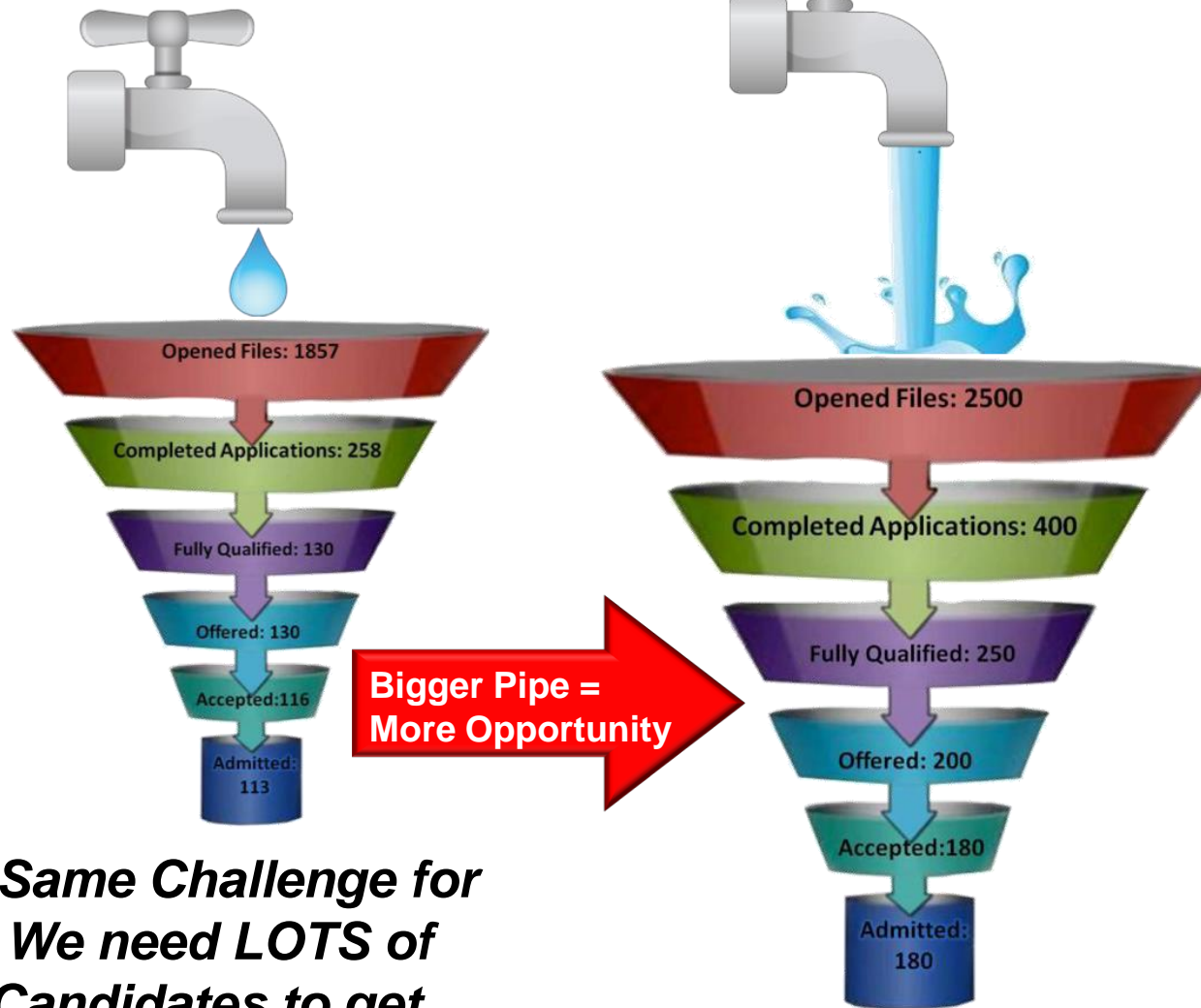
UNITED STATES MILITARY ACADEMY  
**WEST POINT.**

## Whole Candidate Concept



West Point seeks  
well-rounded  
candidates who  
demonstrate excellent  
academic ability,  
leadership potential,  
and overall fitness.

***It Takes Over 15 Applicants to Generate ONE Cadet!***



***This is the Same Challenge for the Army – We need LOTS of Interested Candidates to get ONE Mad Scientist!***



# So “Why” Am I Here?

Because the 3<sup>rd</sup> to 7<sup>th</sup> Graders  
of Today are the Army of 2025!

- And Unless We Focus on Building a Bigger Pipeline, the Mad Scientists of 2025 will be a Small Group!
- Which “Leads” us to “LEADS”!

# West Point “LEADS” (Leadership, Ethics And Diversity in STEM)

- In 2015 will Execute 10 Workshops, Reaching Over 2,000 Future Leaders
  - Detroit, DC, Dallas, Atlanta, Chicago, NYC, etc...

# “LEADS” has an Agenda:

- Inspire Students as Young as 6<sup>th</sup> Grade to Pursue STEM
- Inform Students on the need for “Ethical Bomb Makers”
- Introduce Students to the Military Academy and the Great Role Models that are Cadets



*Pat Locke, USMA 1980*





# Building LEADS Workshop

- 50-250 Studets (with 30-60 Educator Escorts)
- 15-25 Cadets (West Point, ROTC)
- 3-5 Departments at West Point (Math, Systems Engineering, Behavioral Science & Leadership, Admissions, Simon Center for the Professional Military Ethic)
- 5-50 Dedicated Volunteers (West Point Societies, Rotary, NSBE, Howard University, The Rocks, National Naval Officers Association, Society of American Military Engineers)
- Other Government Organizations: Cadet Command, Corps of Engineers, Office of the Surgeon General
- Venue (Conference Center, Museum, School, etc.)
- A Keynote Speaker (Who Can Relate to audience!)
- Food!
- Funding (to pay for Food / Venue)

**“LEADS” Introduces Students to the Military Academy  
and the Great Role Models that are Cadets**

# Activities at LEADS

# Technology Inspires Invention



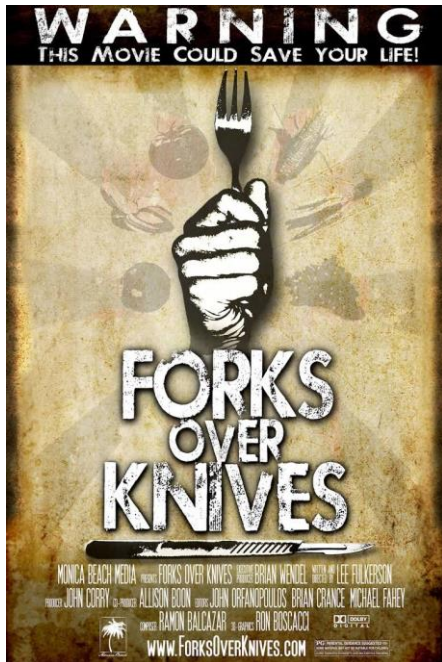
What can  
you invent  
to help  
mankind??



Shelter Box was  
invented by a  
Rotarian and helps  
natural disaster  
victims all over the  
world.

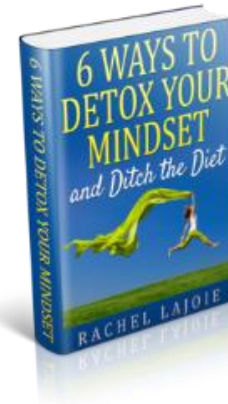
## Leaders Need a Body Fit to Carry their Big Brains

Ask me how the  
Triad  
Performance  
Initiative (TPI)  
changed my life



Performance Triad  
Sleep | Activity | Nutrition

Get the body you deserve !!!!



Rachel  
LaJoie  
Here today,  
coaches you  
to the body  
fit to carry  
the brain

Office of the Army  
Surgeon General's  
Triad Performance  
Initiative (TPI):  
*Changing How  
America Lives*



# Howard University Nanotech Van



Nanotech Primer:

<http://www.msrfce.howard.edu/primer/nanoprimer.pdf>

But You Said We Needed to Get  
to the 3<sup>rd</sup> Grade – Who Does  
That??

# National Society of Black Engineers (NSBE)



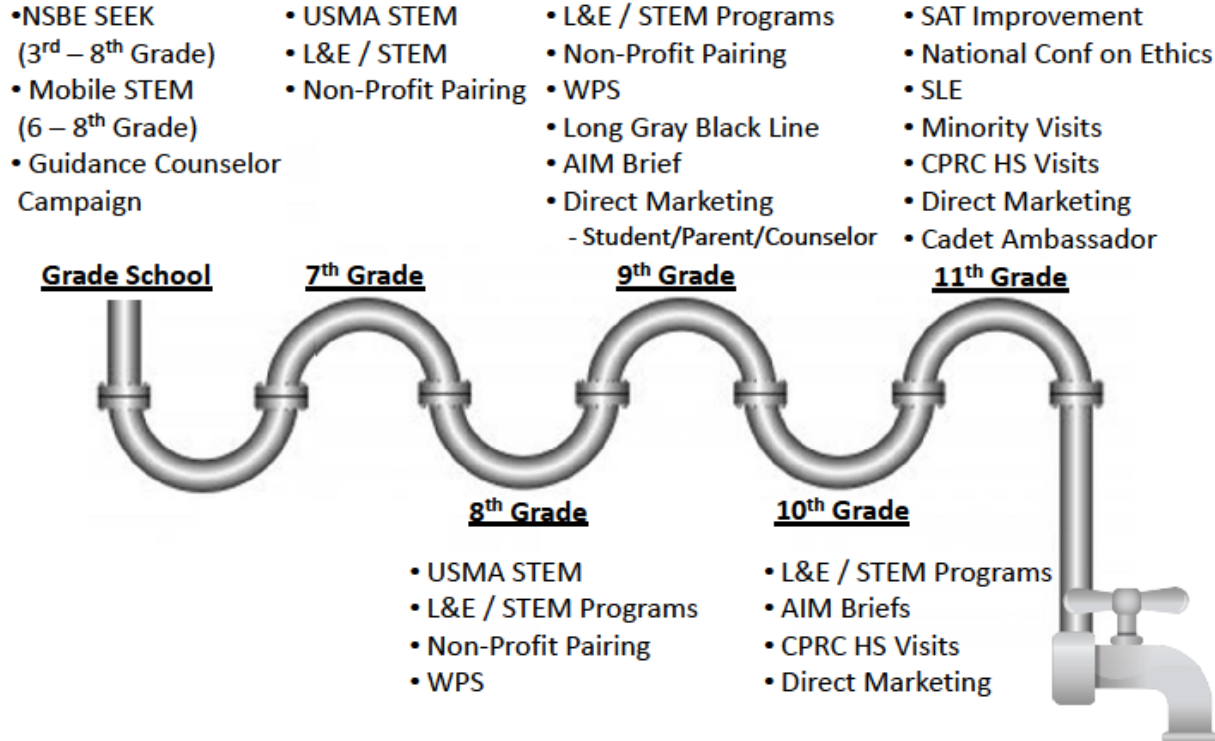
<http://www.nsbe.org/NSBE-Jr/Welcome.aspx>

# U.S. Army Mad Scientist Conference



UNITED STATES MILITARY ACADEMY  
**WEST POINT**

## *Building the AA Pipeline*



West Point Working Hard to Build a Bigger Pipeline?  
What Can We Do to Make it Better for Mad Scientists?



# Summary:

- STEM Remains Critical to Our Future and the Leaders of 2025 and we should collaborate on effort NOW.
- 11<sup>th</sup> Grade is Too Late – must Start very early and engage often
- Modest Efforts Today can Build a MUCH Bigger Pipeline for



# U.S. Army Mad Scientist Conference



*Pat Locke, USMA 1980*

# Be Inspiring

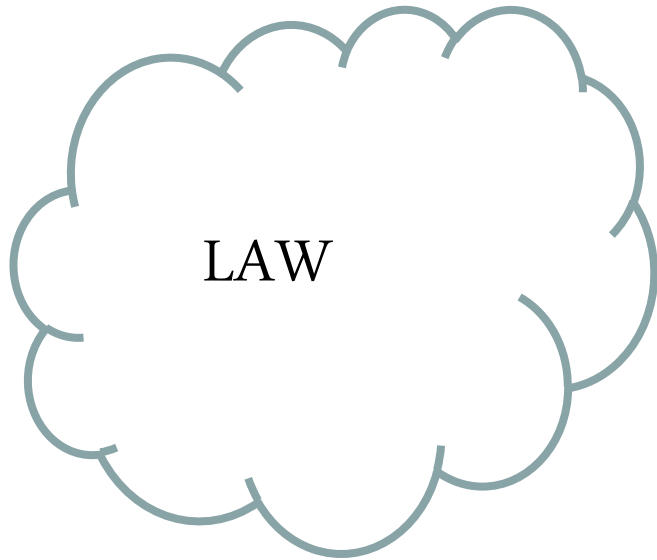


*Pat Locke, USMA 1980*

# Back Up



# Where do Ethics “Fit”?



Must Do...  
Must NOT Do

Must ...  
Go to School  
Pay Taxes  
Stop at Red Lights  
Not Steal

# Where do Ethics “Fit”?

Want to...  
Eat Candy  
Play Video Games  
Watch Glee  
Not Do Homework



Want to Do...  
Want to NOT Do

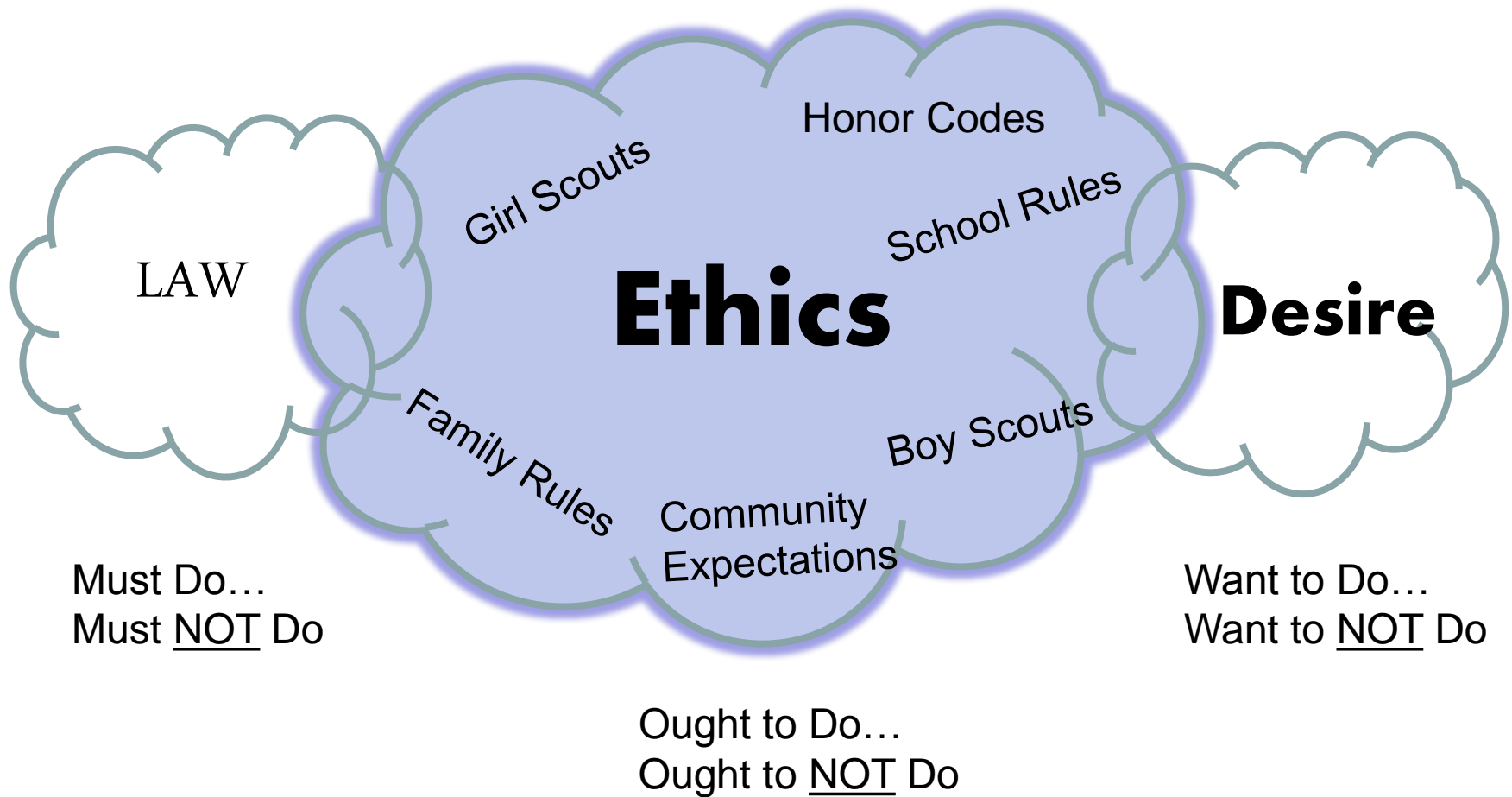
# Where do Ethics “Fit”?

Ought to...  
Follow Rules  
Obey Honor Code  
Do My Homework  
Not Disrespect Anyone



Ought to Do...  
Ought to NOT Do

# Where do Ethics “Fit”?





## An Ethical Decision Making Model

- **Recognize:** Recognize there is a moral issue.
- **Identify:** All have a stake in ethical issues and some of us have a moral obligation to act.
- **Gather:** Gather relevant data. Look for the facts. Look for truths that are being withheld.
- **Test Right vs Wrong:** Here are common ways to tell if you are dealing with a right versus wrong moral issue.
  - Is it illegal?
  - Is it against your ethical guidelines of your community (
  - Gut Check: does it make you feel uneasy thinking about doing it (standing up your girlfriend for another friend) or not doing it (homework)?
  - Would you want to keep your action from going viral on YouTube?
  - Think of your highest ethical role model – would you want to keep your action hidden from your role model?
- **Test Right v. Right:** Now you have to decide which are your higher values in this situation:
  - Truth vs. Loyalty
  - Self vs. Community
  - Short-term vs. Long-term
  - Justice vs. Mercy
- **Resolve:** Resolve your dilemma using the most common Resolution Principles (Decision-Making Principles)
  - ENDS- BASED Thinking also called the Utilitarian Principle: Greatest Good for the Greatest Number
  - RULE-BASED Universal Principal or Highest Principle; (the same rule for everyone in same situation for all eternity):
  - Golden Rule: Do unto Others as you would have them do unto you or don't do to others what you would not want them to do to you. Would you want to receive the consequence of this action (or omission) ?
- **Alternatives:** After applying the resolution principles, could there be an alternative that you have not considered?
- **Act** – This is the tough one. You now have all the required thought and you know what you ought to do (ethics). Now comes the time to do it (moral courage).
- **Reflect** – This is where resiliency training comes in. After you have chosen to act the consequences will come or are about to come. Do the drill – what is the worst that can happen? And if that happens, what is the worst that can happen...and continue down a level or two.



### **Leadership for New Generations**

#### **Ethical Decision- Making Model**

- ◆ Identify Issue
- ◆ Identify Actors
- ◆ Gather Info
- ◆ Right vs. Wrong
- ◆ Right vs. Right
- ◆ Resolution
- ◆ Alternatives
- ◆ Act
- ◆ Reflect

**Character:** Habit  
**Communications:** Silence  
**Diversity:** Progress  
**Civility:** Restraint

**ETHICS:** "Ought"  
**LEADERSHIP:** "Trust"