



Working Smarter to Maximize Achievement

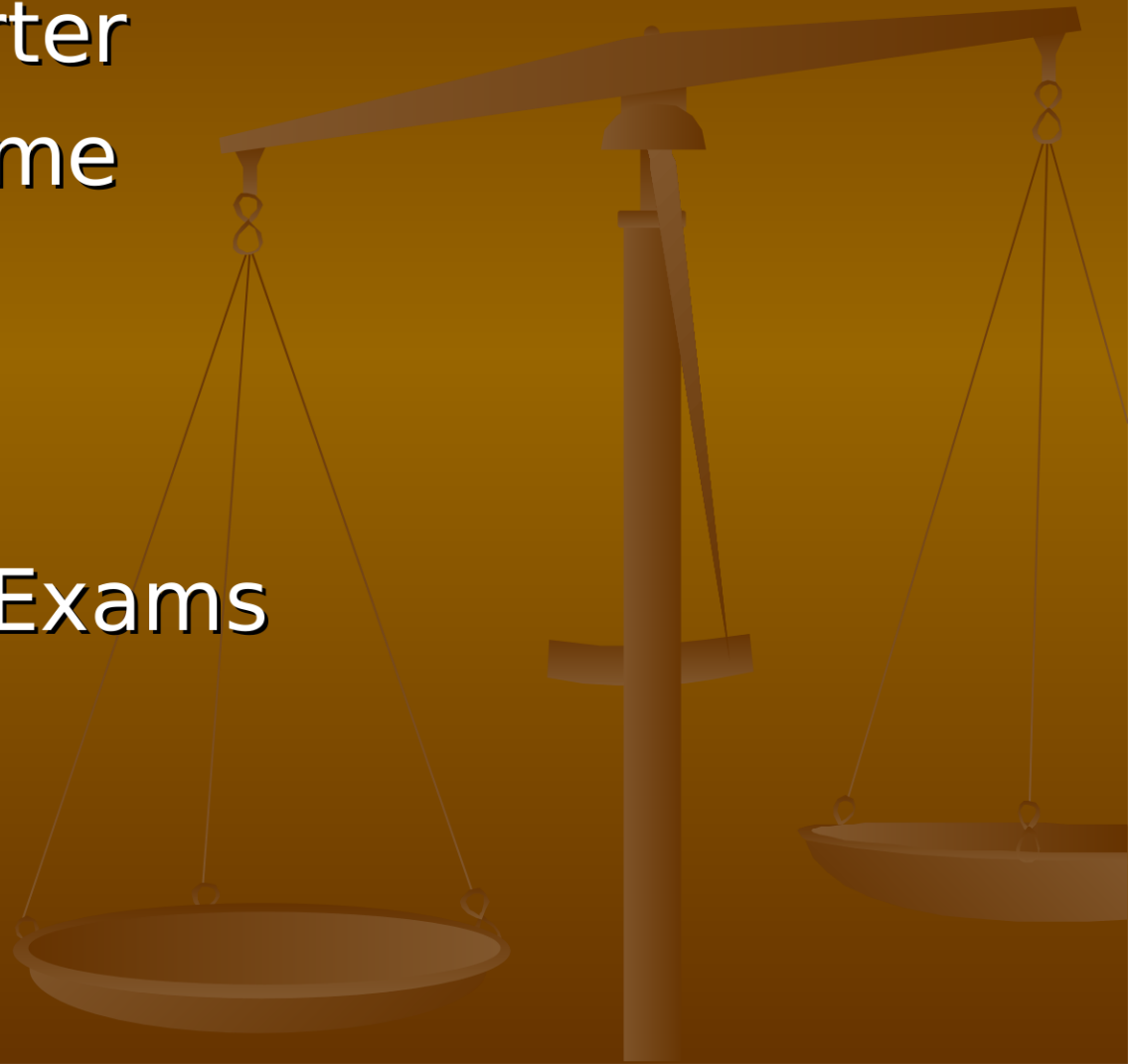
MITE²S 2004

What Study and Time
Management Strategies
Have Worked for You?



Topics

- Working Smarter
- Harnessing Time
 - By Semester
 - By Week
 - By Day
- Preparing for Exams



My Story

From Raggedy to ...



Goal

- **Mastery (Proficiency):** A level of solid academic performance that demonstrates competency in
 - Subject matter knowledge
 - The application of that knowledge to real-world or novel situations
 - Reasoning, analytical skills, and/or demonstration of the capacity to synthesize (construct/deconstruct) and evaluate



What Are Your Greatest Challenges to Mastery?



Working Smarter



- Uri Treisman, UC Berkeley
 - The Problem: Minority students were failing Calculus disproportionately
 - Many dropped out of science and engineering tracks
- Approach
 - Followed 20 Black and 20 Chinese students for 10 weeks
 - Chinese were chosen as control group
 - Captured their academic and social activities on videotape

Treisman Findings



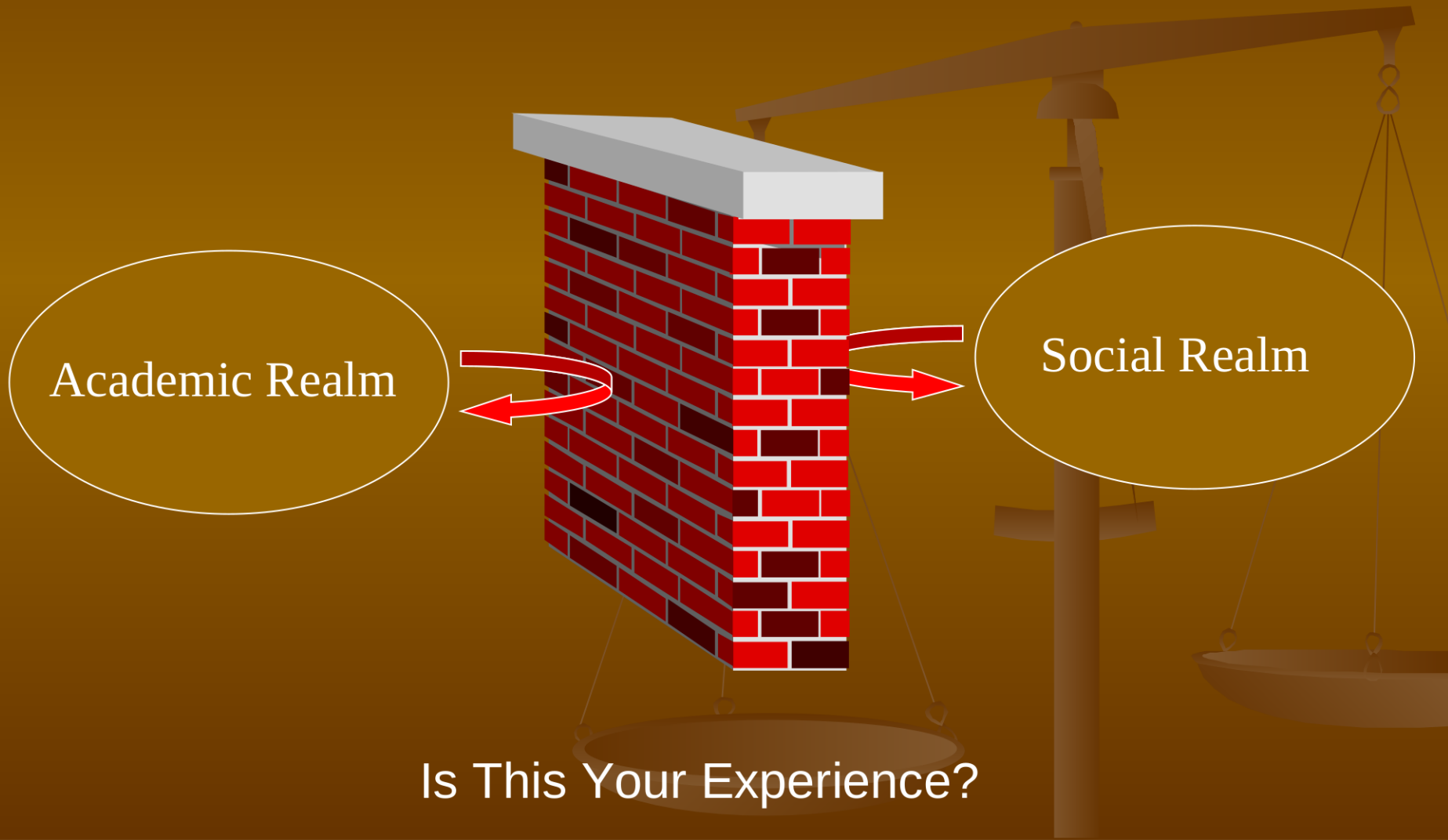
- Black Students
 - 6-8 hours studying per wk
 - 18 of 20 students studied alone
 - Same pattern for blue collar White and rural students

Treisman Findings

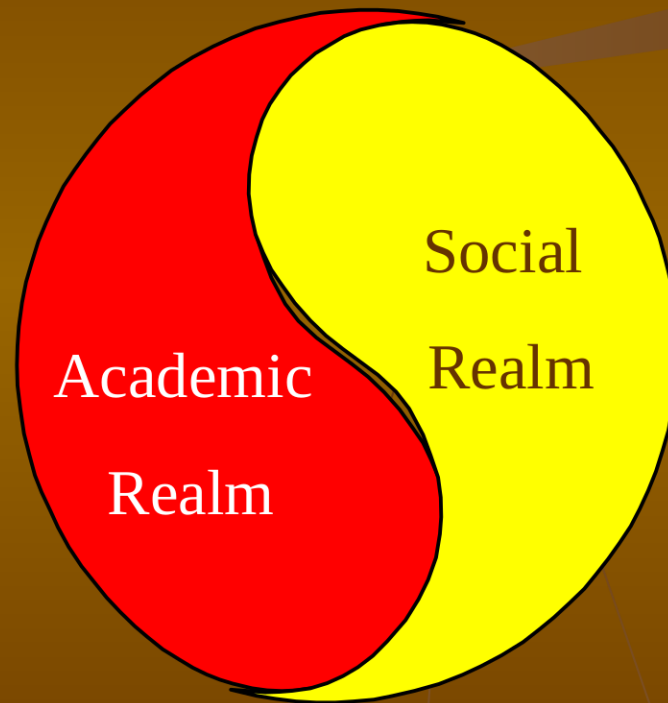
- Chinese Students
 - 8-10 hrs per wk working alone
 - **4-6 additional hrs in groups**
 - In evenings, over meals
 - Discussed HW assignments
 - Checked each other's work
 - Older student would test them
 - Regularly worked problems from old exams
 - Knew exactly where they stood in class



Treisman Findings (Black Students)



Treisman Findings (Asian Students)



STATE OF BALANCE : In all aspects of life a state of balance should exist between the opposing forces of Ying(Academic Realm) and Yang (Social Realm).

Working Smarter



- Solution: Calculus Workshops
 - Intensive, anti-remedial workshop course as adjunct to regular courses
 - Problems harder than in class
 - Emphasis on group learning and community-based life
 - Based on shared interest in mathematics
 - Challenging with HIGH EXPECTATIONS, yet emotionally supportive environment

Sound Familiar????

Working Smarter: Harnessing Time



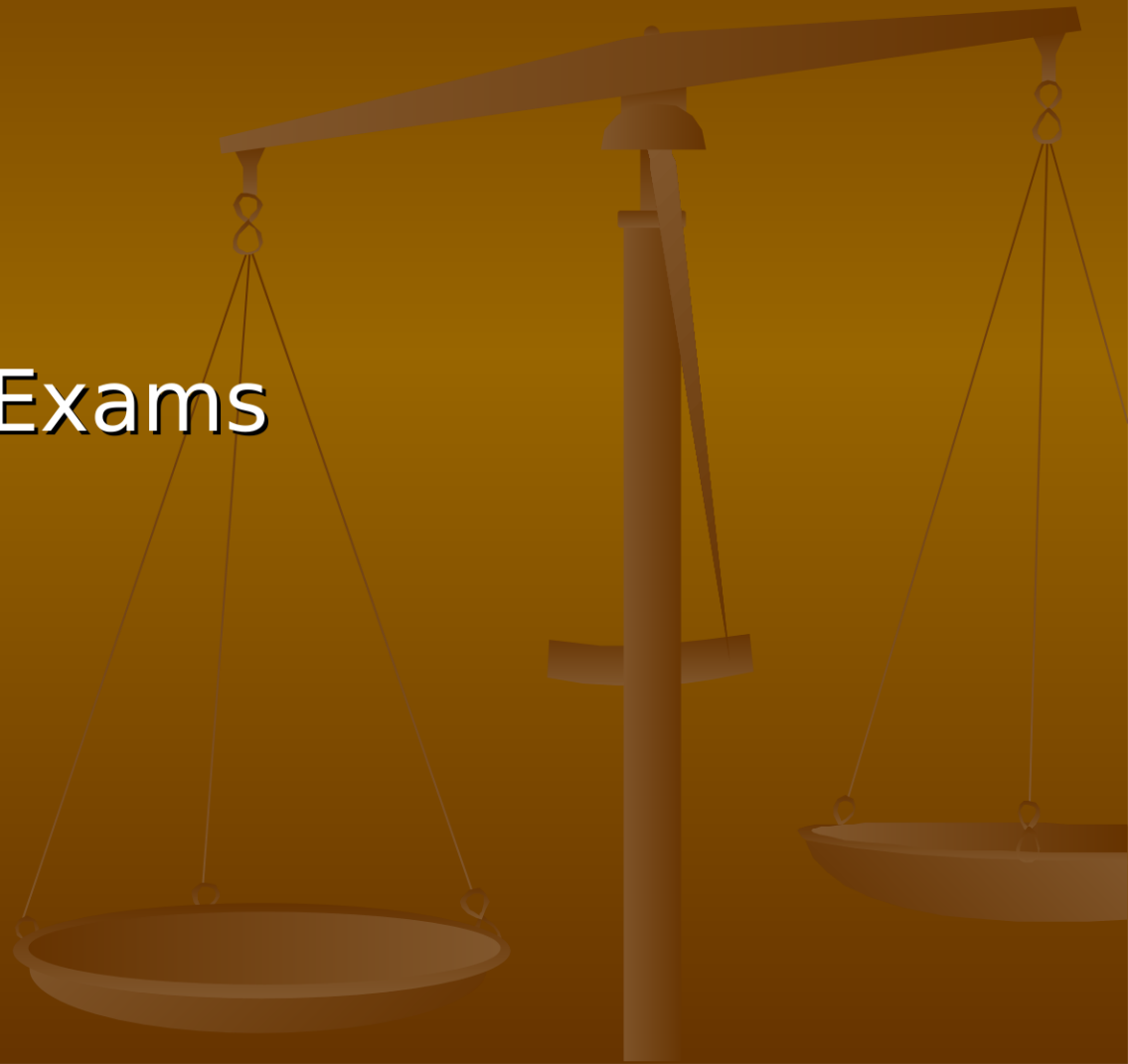
1. Get a Planner with a Calendar and To Do List
2. First Things First: Set goals and priorities
 - Steven Covey: To Live, To Love, To Learn, To Leave a Legacy
3. Get appropriate amount of sleep
 - 6-8 hours keeps you at optimal mental capacity
4. Eat balanced meals
 - Carbohydrate overloads makes you “loopy”
 - Go easy on caffeine, sugar and other mood-swinging foods
5. Keep room and belongings organized
6. Maximize your periods of peak efficiency

Weekly Planner



Harnessing Time

- By Semester
- By Week
- By Day
- Preparing for Exams



Harnessing Time: By Semester



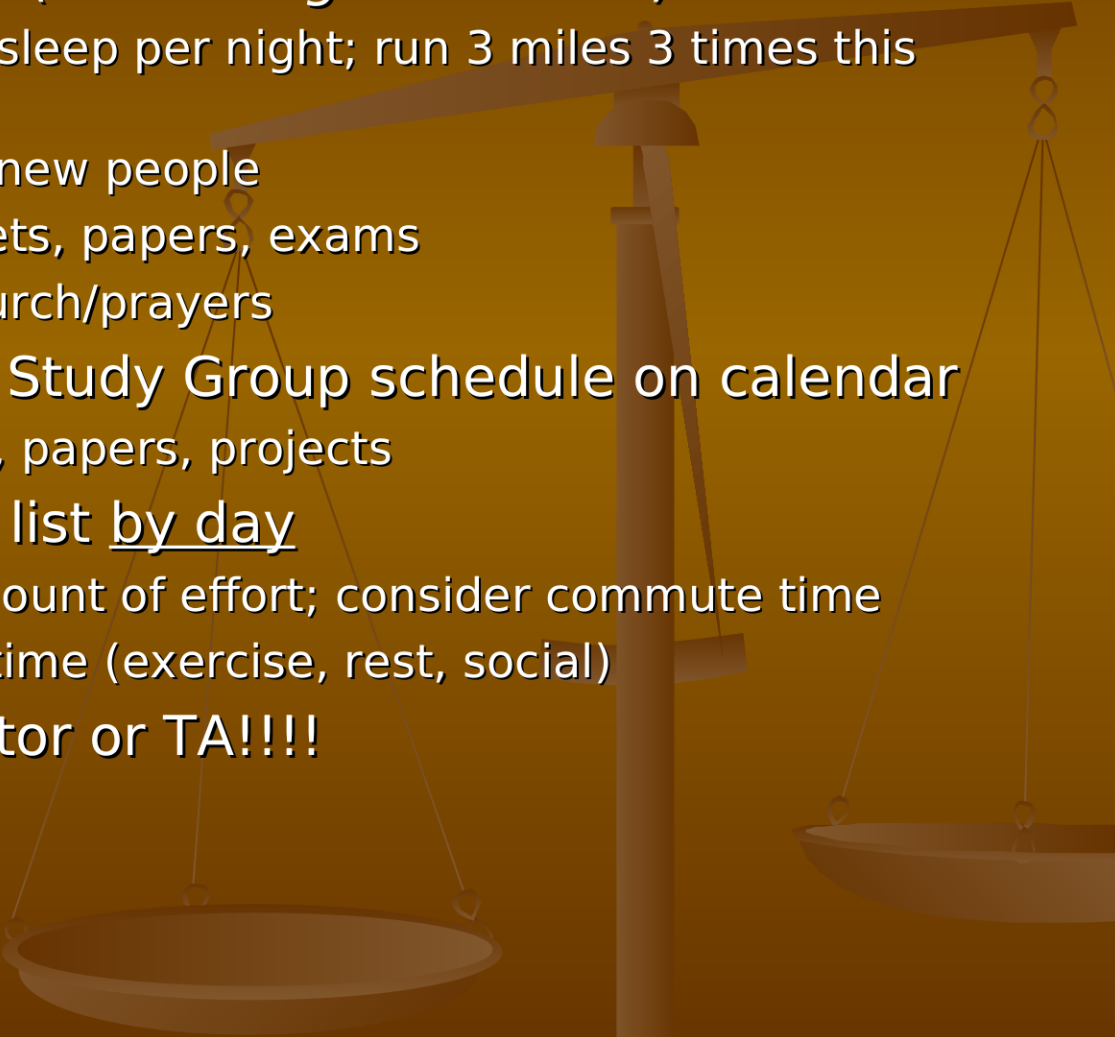
1. Collect all syllabi
2. Record all key dates in your planner
 - Problem sets
 - Projects
 - Papers
 - Exams
3. Identify and anticipate crunch weeks
4. Gather reading material

Harnessing Time: By Semester



5. Understand course learning objectives and curriculum plan
 - May require having an audience with instructor
 - Be **Reflective** not **Reflexive**
6. Form study groups
 - Set meeting times and locations
 - Same time and place
 - No more than 4-5 per study group

Harnessing Time: By Week

1. Define weekly goals (*First Things First*-LLLL)
 - **“Live”**: Get 6 hours sleep per night; run 3 miles 3 times this week
 - **“Love”**: Meet three new people
 - **“Learn”**: Problem sets, papers, exams
 - **“Legacy”**: Go to church/prayers
 2. Place deadlines and Study Group schedule on calendar
 - Problem sets, exams, papers, projects
 3. Prepare your To-Do list by day
 - Be realistic about amount of effort; consider commute time
 - Prioritize your down time (exercise, rest, social)
 4. Go see your Instructor or TA!!!!
- 

Harnessing Time: By Day

1. Spend 5-10 minutes per day to plan your schedule

- At end (or start) of day
- Review *First Things First* goals for the day
- Review and adjust schedule
- See “Daily Schedule”

2. Before class

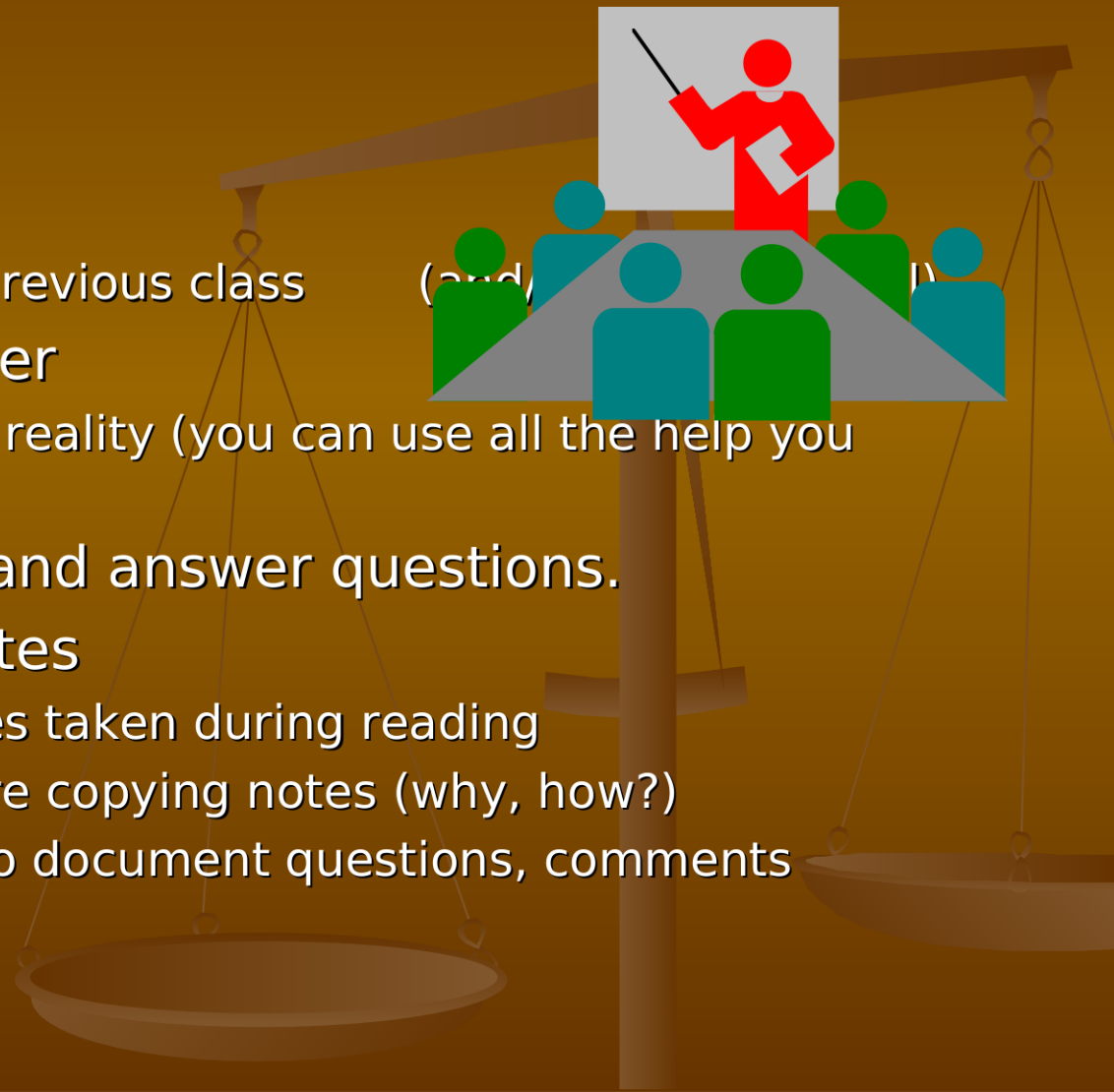
- Do the reading (if applicable)
 - Take notes while you read
- Review notes of last class



Harnessing Time: By Day

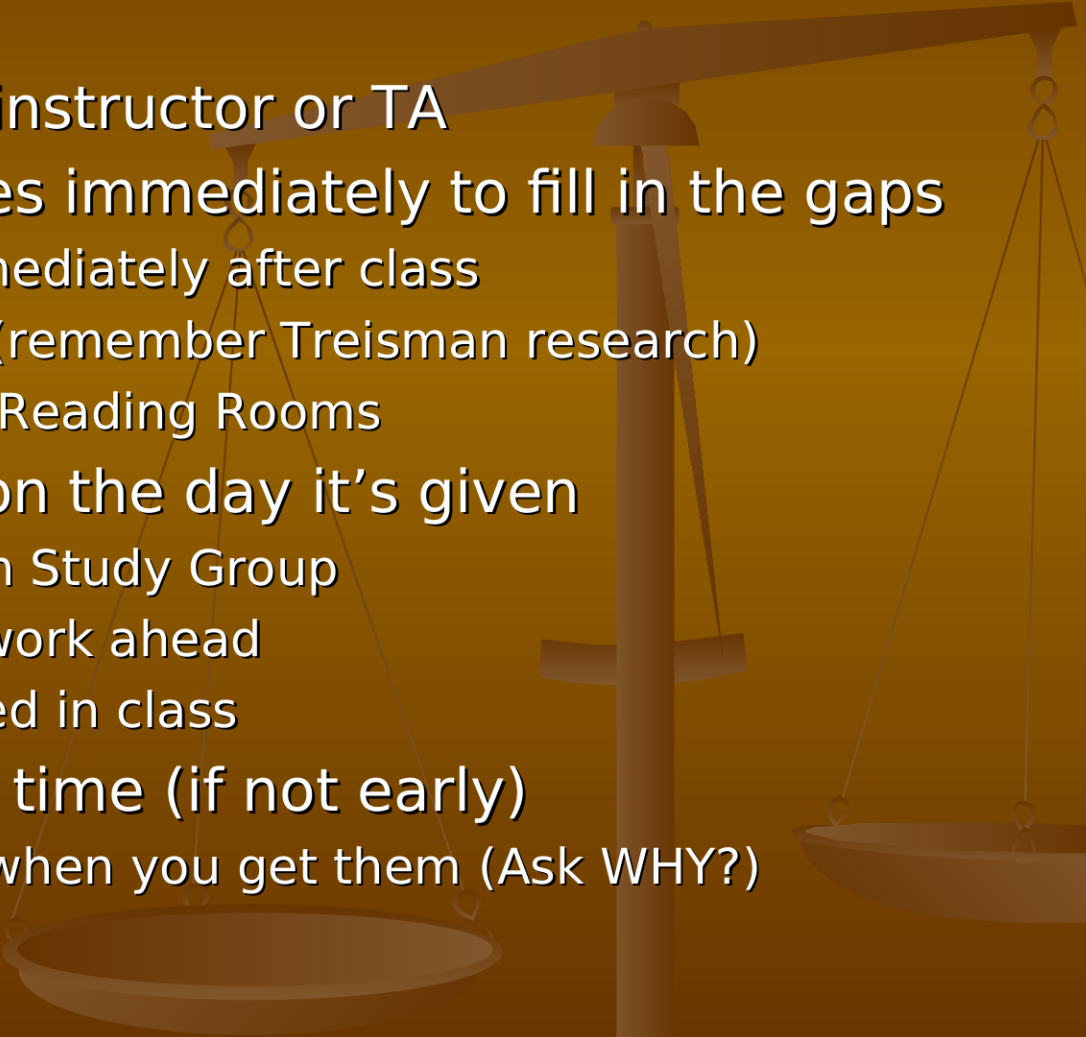
3. During class

- Show up early
 - Ask questions of previous class (and)
- Sit front and center
 - Perception equals reality (you can use all the help you can get!!!)
- Stay alert!!! Ask and answer questions.
- Take effective notes
 - Refer back to notes taken during reading
 - Stay alert as you're copying notes (why, how?)
 - Use the margins to document questions, comments



Harnessing Time: By Day

4. After Class

- Ask questions of instructor or TA
 - Review class notes immediately to fill in the gaps
 - Over lunch or immediately after class
 - Work with others (remember Treisman research)
 - Use Libraries and Reading Rooms
 - Start homework on the day it's given
 - First alone, then in Study Group
 - Prepares you for work ahead
 - Keeps you engaged in class
 - Turn in all HW on time (if not early)
 - Review solutions when you get them (Ask WHY?)
- 

Harnessing Time: Preparing for Exams



- Give yourself 2 days
 - Synthesize material
 - Deepens understanding
 - Avoids cramming
 - Get questions answered
- Two Days Before
 - Gather supporting mat'ls
 - Class notes, texts, dedicated notebook, colored pens/pencils/ and markers

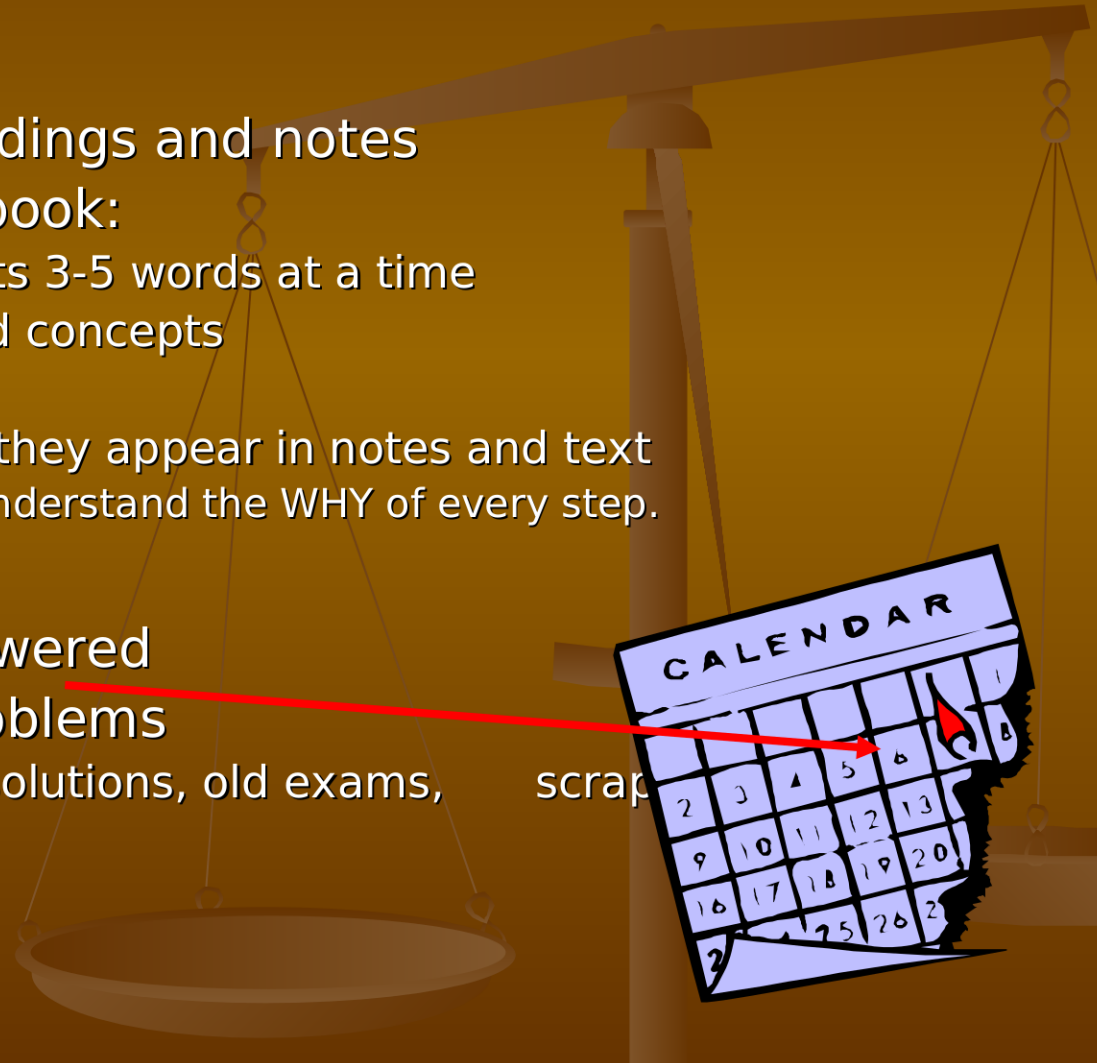
Harnessing Time: Preparing for Exams

■ Two Days Before

- Comb through readings and notes
- In dedicated notebook:
 - Capture main points 3-5 words at a time
 - Hard to understand concepts
 - Jot down questions
 - Work problems as they appear in notes and text
 - Make sure you understand the WHY of every step.

■ One Day Before

- Get questions answered
- Gather sample problems
 - Problem sets and solutions, old exams, scrap



Harnessing Time: Preparing for Exams

- One Day Before
 - Model the test environment
 - No distractions or extraneous noises
 - Reduces anxiety. Can you handle silence?
 - Work problems!!!!
 - Problem sets
 - Recitation and lecture problems
 - Get with others and test each other

Maximize Achievement



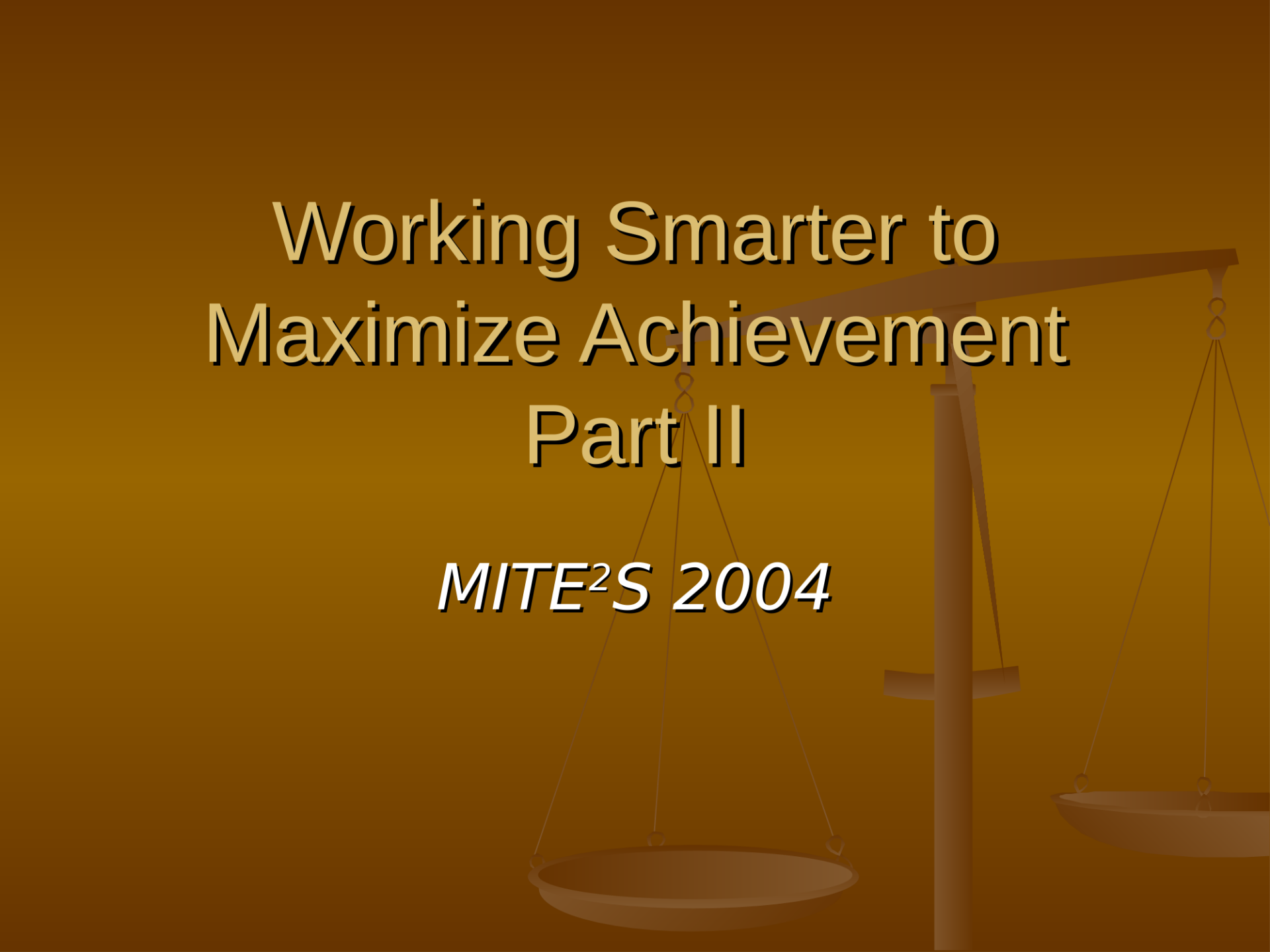
- Small academic communities most effective for maximizing achievement
 - Blend academic and social worlds
- Work Smarter
 - Set *First Things First* goals (Live, Love, Learn, Legacy)
 - By Semester
 - Weekly
 - Daily (before, during, and after class)
 - Exam Preparation
 - Plan for two days preparation
 - Work problems
 - Model the test environment



Reflection...

Jot Down

- What you've learned
- Immediate steps to applying it



Working Smarter to Maximize Achievement Part II

MITE²S 2004

Review Part I



Your Challenges

■ Structural

- Bad Teaching/Classes
- Having Time to do HW

■ Academic

- Re-reading own papers

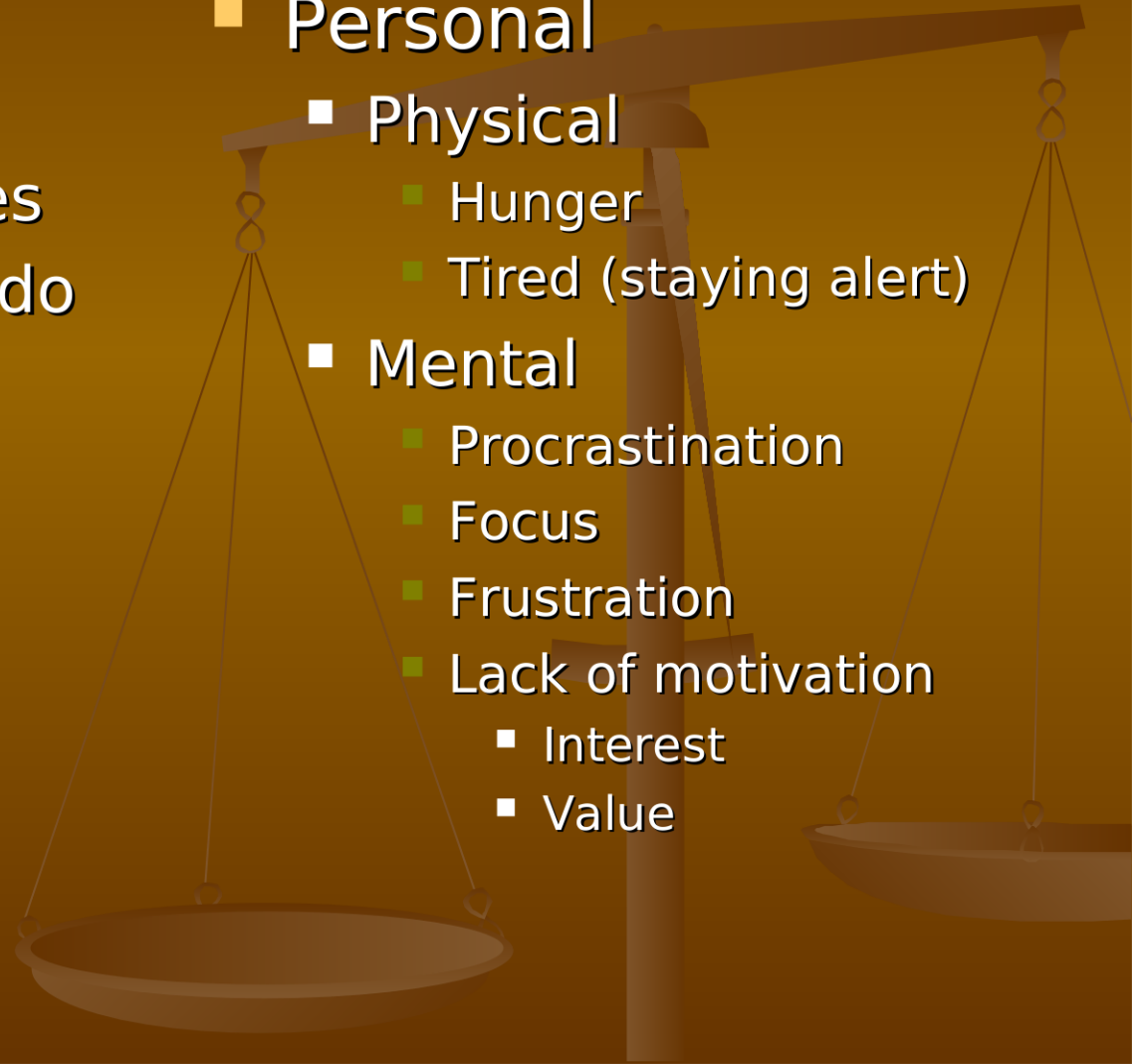
■ Personal

■ Physical

- Hunger
- Tired (staying alert)

■ Mental

- Procrastination
- Focus
- Frustration
- Lack of motivation
 - Interest
 - Value



Working Smarter: Harnessing Time



1. Get a Planner with a Calendar and To Do List
2. First Things First: Set goals and priorities
 - Steven Covey: To Live, To Love, To Learn, To Leave a Legacy
3. Get appropriate amount of sleep
 - 6-8 hours keeps you at optimal mental capacity
4. Eat balanced meals
 - Carbohydrate overloads makes you “loopy”
 - Go easy on caffeine, sugar and other mood-swinging foods
5. Keep room and belongings organized
6. Maximize your periods of peak efficiency

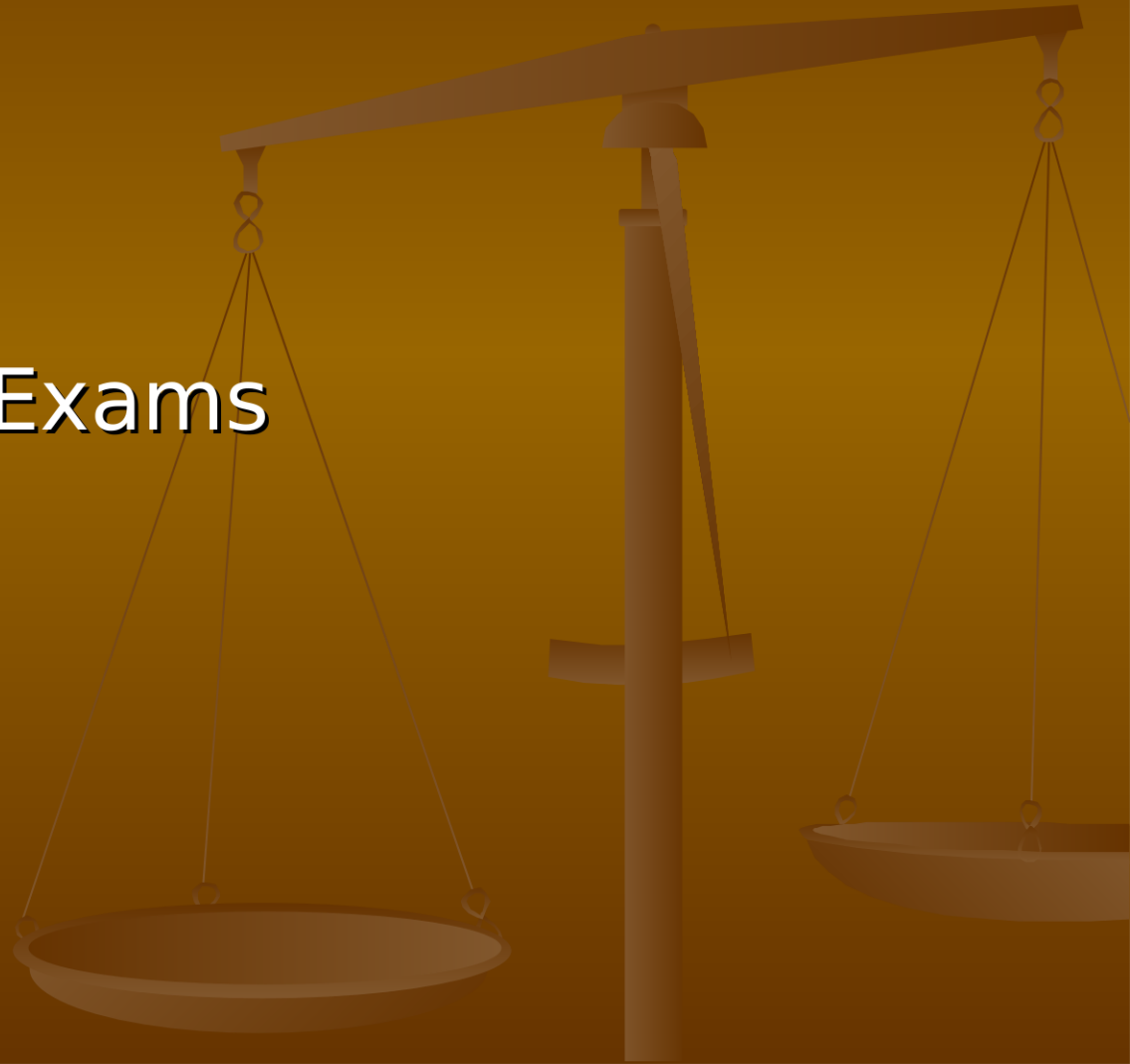
Weekly Planner

<http://mit.edu/arc/learning/>



Harnessing Time

- By Semester
- By Week
- By Day
- Preparing for Exams



Harnessing Time: By Semester



1. Collect all syllabi
2. Record all key dates in your planner
 - Problem sets
 - Projects
 - Papers
 - Exams
3. Identify and anticipate crunch weeks
4. Gather reading material

Harnessing Time: By Semester



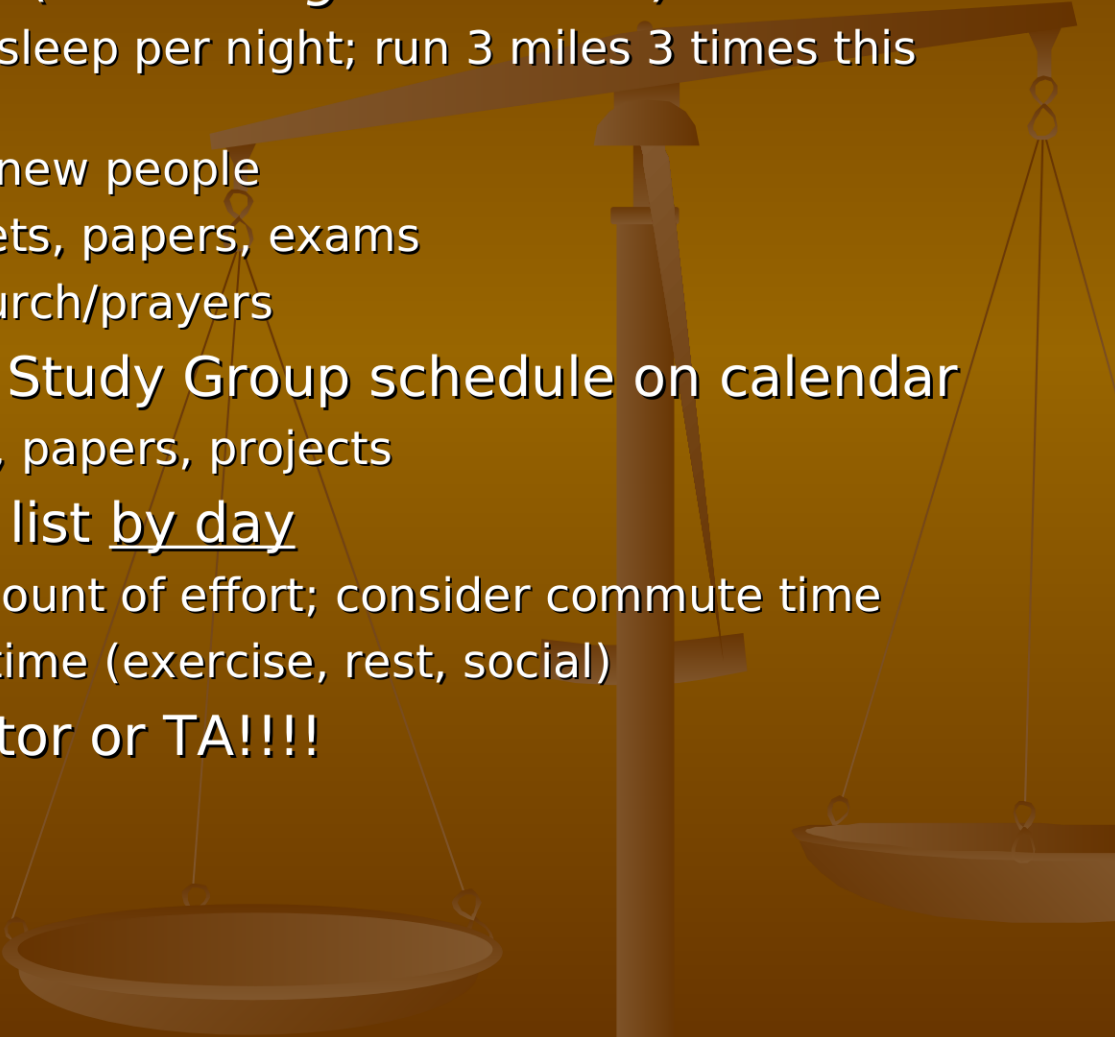
5. Understand course learning objectives and curriculum plan

- May require having an audience with instructor
- Be **Reflective** not **Reflexive**

6. Form study groups

- Set meeting times and locations
 - Same time and place
- No more than 4-5 per study group

Harnessing Time: By Week

1. Define weekly goals (*First Things First*-LLLL)
 - **“Live”**: Get 6 hours sleep per night; run 3 miles 3 times this week
 - **“Love”**: Meet three new people
 - **“Learn”**: Problem sets, papers, exams
 - **“Legacy”**: Go to church/prayers
 2. Place deadlines and Study Group schedule on calendar
 - Problem sets, exams, papers, projects
 3. Prepare your To-Do list by day
 - Be realistic about amount of effort; consider commute time
 - Prioritize your down time (exercise, rest, social)
 4. Go see your Instructor or TA!!!!
- 

Harnessing Time: By Day

1. Spend 5-10 minutes per day to plan your schedule

- At end (or start) of day
- Review *First Things First* goals for the day
- Review and adjust schedule
- See “Daily Schedule”

2. Before class

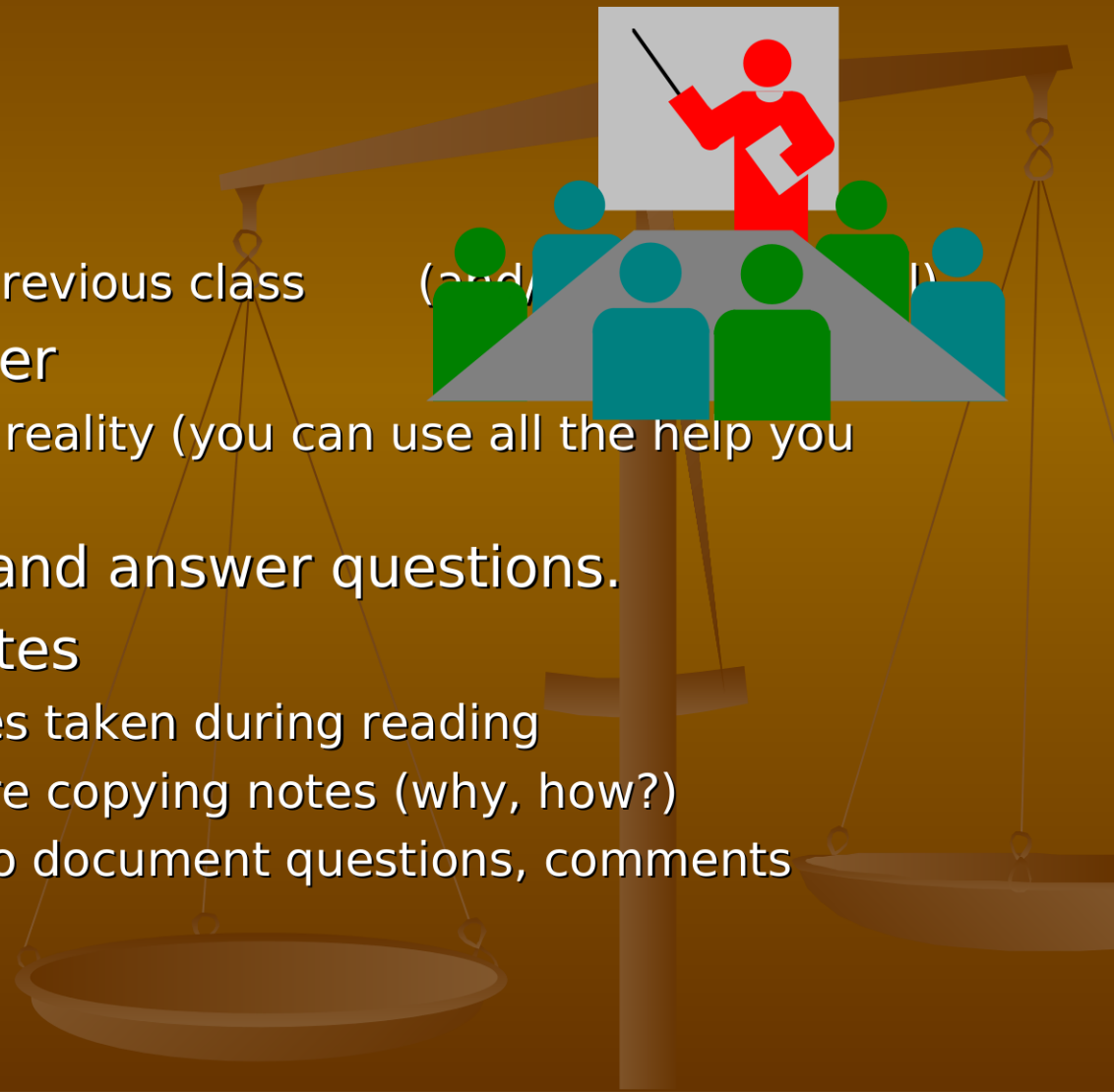
- Do the reading (if applicable)
 - Take notes while you read
- Review notes of last class



Harnessing Time: By Day

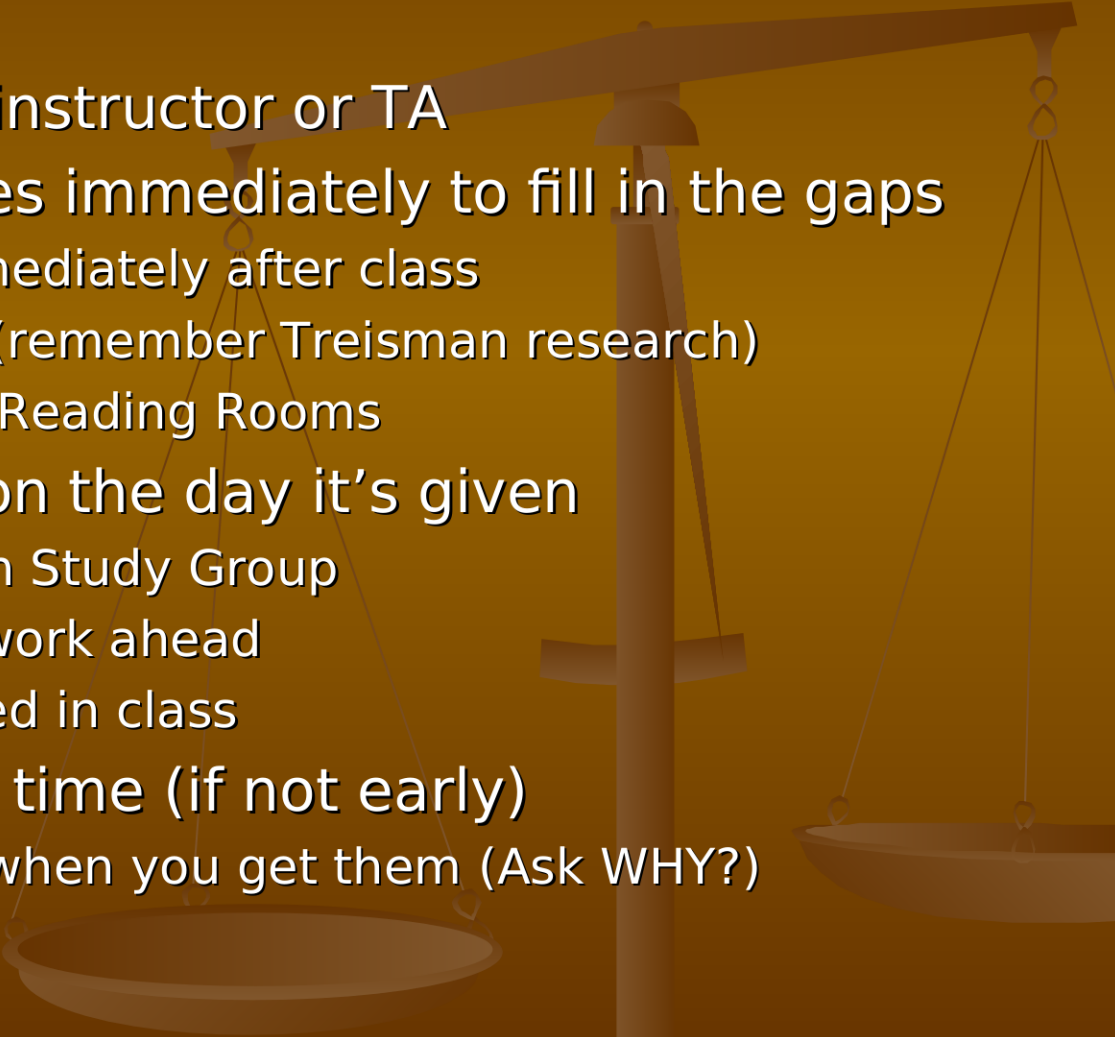
3. During class

- Show up early
 - Ask questions of previous class (and)
- Sit front and center
 - Perception equals reality (you can use all the help you can get!!!)
- Stay alert!!! Ask and answer questions.
- Take effective notes
 - Refer back to notes taken during reading
 - Stay alert as you're copying notes (why, how?)
 - Use the margins to document questions, comments



Harnessing Time: By Day

4. After Class

- Ask questions of instructor or TA
 - Review class notes immediately to fill in the gaps
 - Over lunch or immediately after class
 - Work with others (remember Treisman research)
 - Use Libraries and Reading Rooms
 - Start homework on the day it's given
 - First alone, then in Study Group
 - Prepares you for work ahead
 - Keeps you engaged in class
 - Turn in all HW on time (if not early)
 - Review solutions when you get them (Ask WHY?)
- 

Harnessing Time

What works, what hasn't?



Harnessing Time: Preparing for Exams



- Give yourself 2 days
 - Synthesize material
 - Deepens understanding
 - Avoids cramming
 - Get questions answered
- Two Days Before
 - Gather supporting mat'ls
 - Class notes, texts, dedicated notebook, colored pens/pencils/ and markers

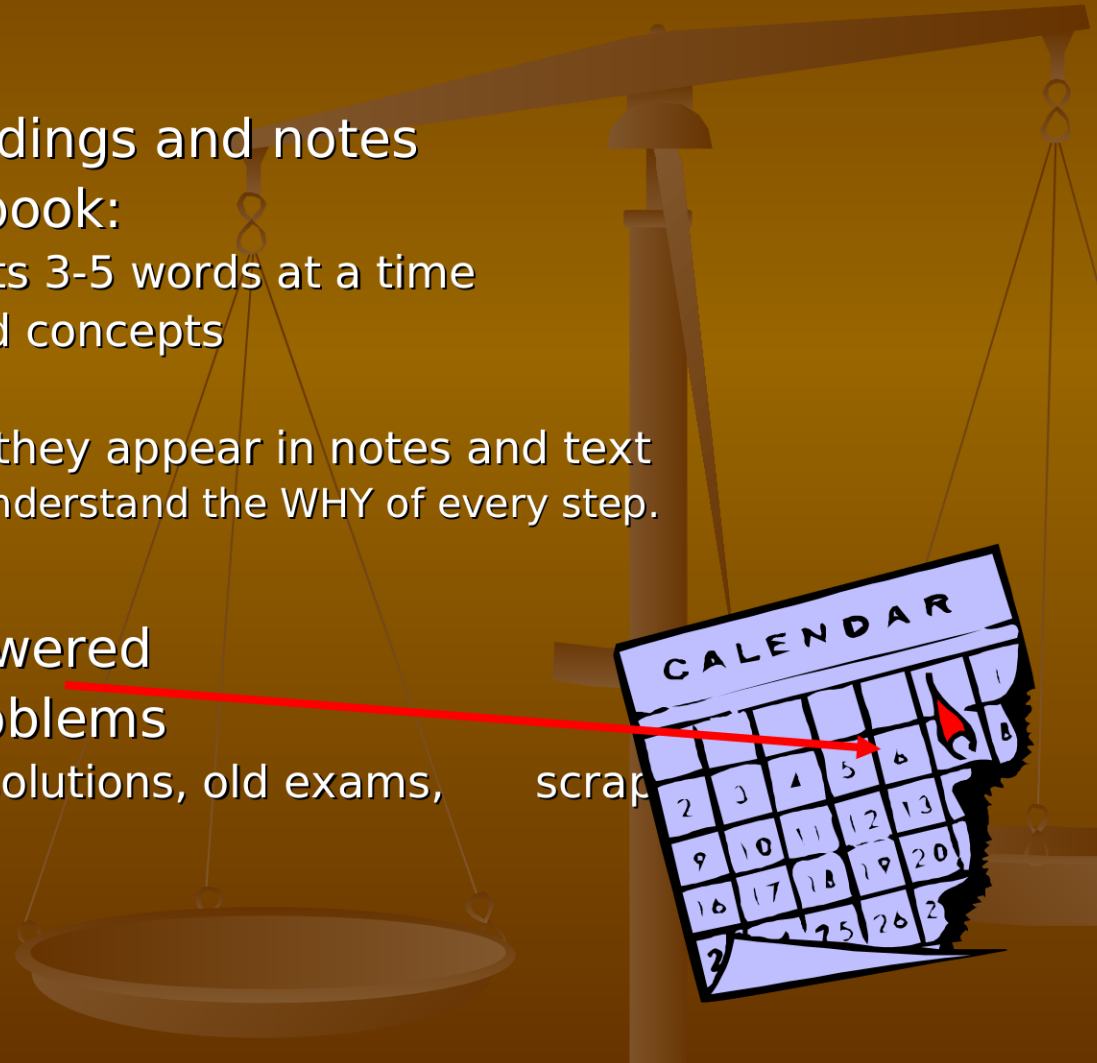
Harnessing Time: Preparing for Exams

■ Two Days Before

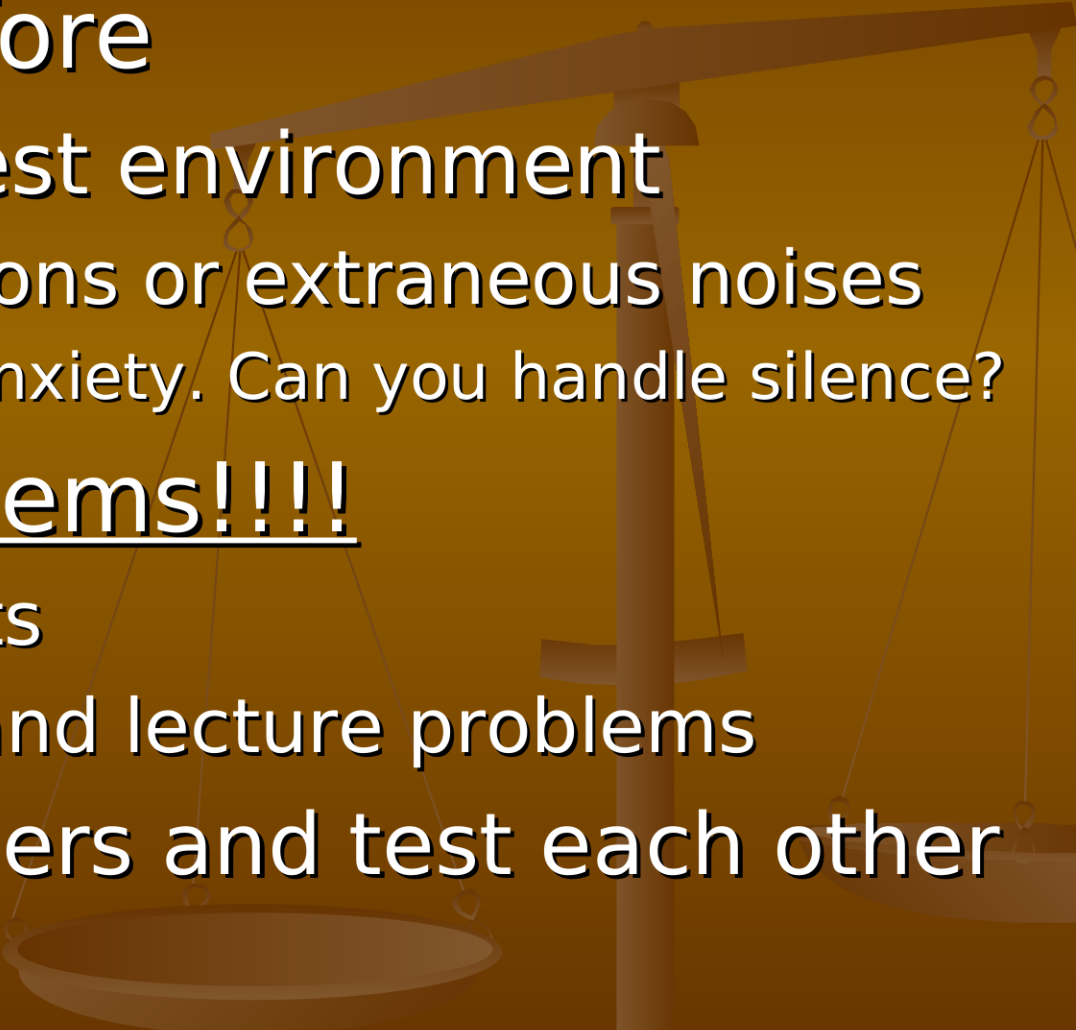
- Comb through readings and notes
- In dedicated notebook:
 - Capture main points 3-5 words at a time
 - Hard to understand concepts
 - Jot down questions
 - Work problems as they appear in notes and text
 - Make sure you understand the WHY of every step.

■ One Day Before

- Get questions answered
- Gather sample problems
 - Problem sets and solutions, old exams, scrap



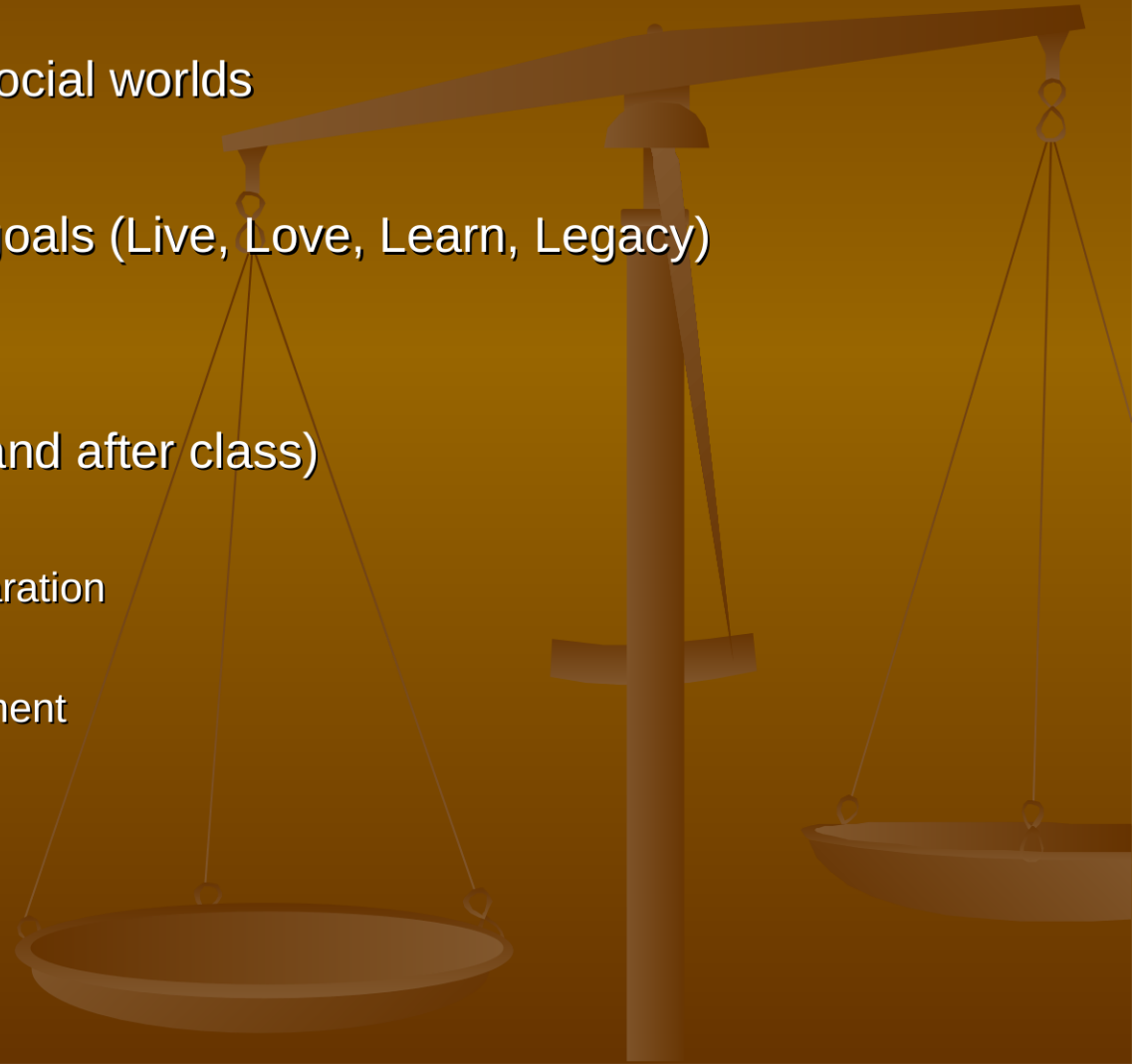
Harnessing Time: Preparing for Exams



- One Day Before
 - Model the test environment
 - No distractions or extraneous noises
 - Reduces anxiety. Can you handle silence?
 - Work problems!!!!
 - Problem sets
 - Recitation and lecture problems
 - Get with others and test each other

Maximize Achievement

- Small academic communities most effective for maximizing achievement
 - Blend academic and social worlds
- Work Smarter
 - Set *First Things First* goals (Live, Love, Learn, Legacy)
 - By Semester
 - Weekly
 - Daily (before, during, and after class)
 - Exam Preparation
 - Plan for two days preparation
 - Work problems
 - Model the test environment



Reflection...



Jot Down

- What you've learned
- Immediate steps to applying it

Innate Ability “Brains” Theory

Intelligence → Learning (Development)

“Some people have ‘em. Some people don’t.”

- The ability to learn is innate
- Distributed among individuals (The Bell Curve)
- Unequally distributed among groups of people
- Implications
 - Result: tendency to judge (rank and sort) people (ourselves)
 - Ability is fixed, can’t change outcomes (futility of more effort)
 - **Attribute** failure to limited ability; success to “Luck” or Easy Task

The Premise: Efficacy Theory

Confidence → Effective Effort → Learning (Development)

“Smart is not something you just are; smart is something you can get.”

- All people are capable of brilliance
- Important human characteristics are neither fixed nor given; capacity is built by applying Effective Effort
- Intellectual development: *All those who work can learn*
- Implications
 - Attribute Success to Hard Work
 - Attribute Failure to a need to adjust strategy

Intelligence Theories

Theory of Intelligence

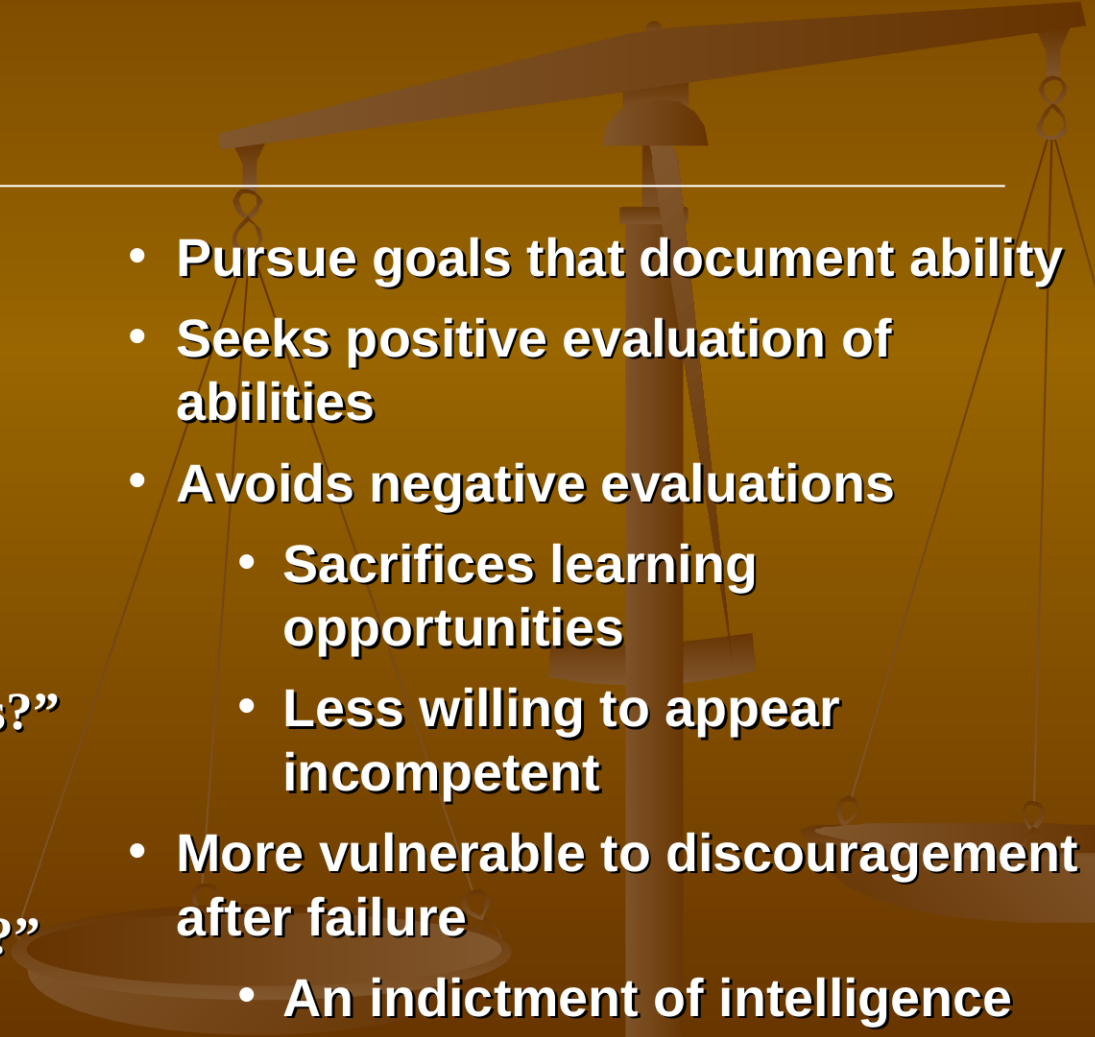
ENTITY THEORY

“Innate Ability”

(intelligence is fixed)

“Am I smart enough to do this?”

“Am I as smart as the others?”

- 
- Pursue goals that document ability
 - Seeks positive evaluation of abilities
 - Avoids negative evaluations
 - Sacrifices learning opportunities
 - Less willing to appear incompetent
 - More vulnerable to discouragement after failure
 - An indictment of intelligence

Goal Orientation

**Theory of
Intelligence**

**Goal
Orientation**

**Behavior
Pattern**

ENTITY THEORY

“Innate Ability”

(intelligence is fixed)

**PERFORMANCE
GOAL**

(to gain positive
judgements of
competence)

- **Extrinsically motivated**
- **Mastery is means to the end**
- **Surface learning**
- **Less sophisticated learning strategies**
- **Vulnerable to perf. anxiety**

Intelligence Theories

Theory of Intelligence

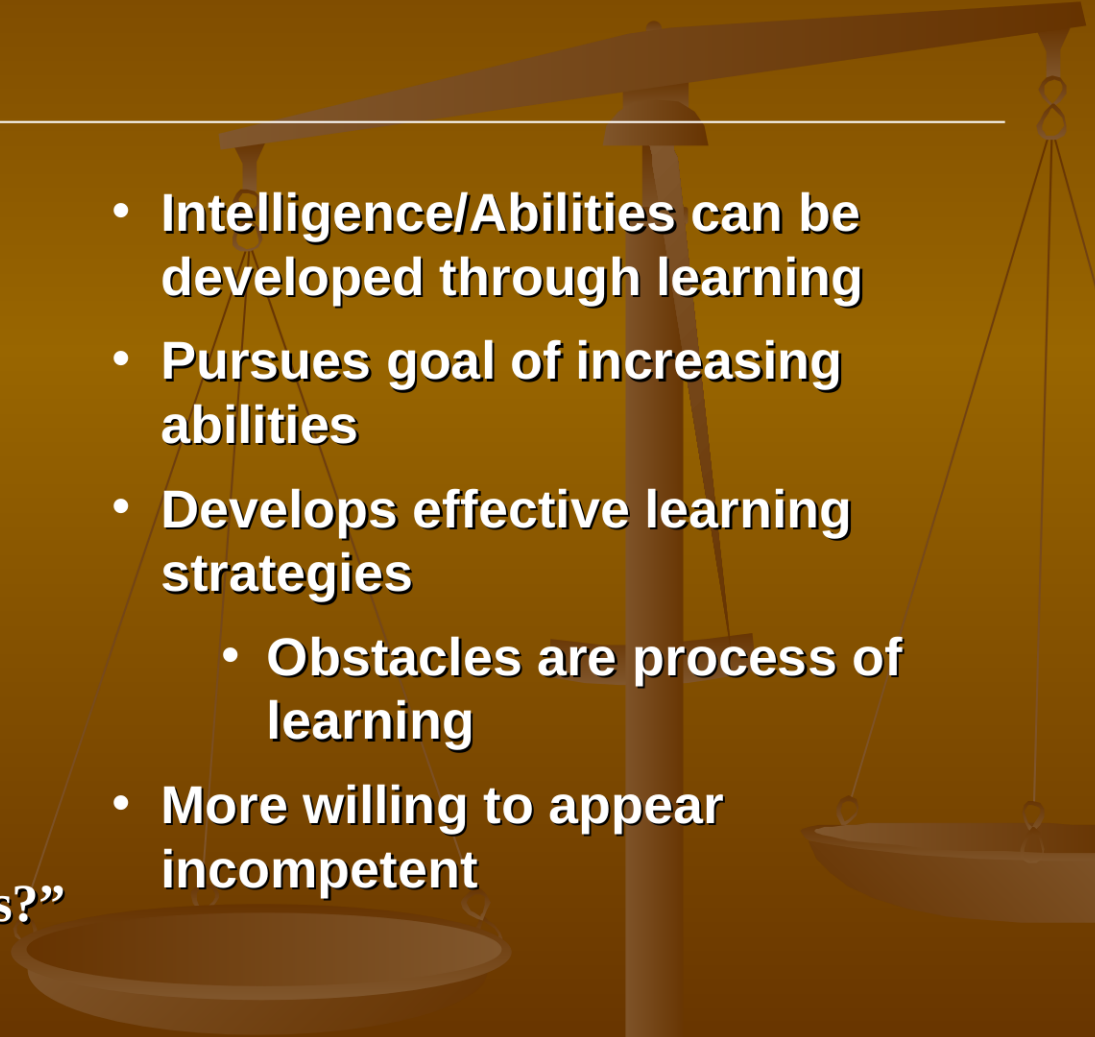
INCREMENTAL THEORY

“Efficacy Theory”

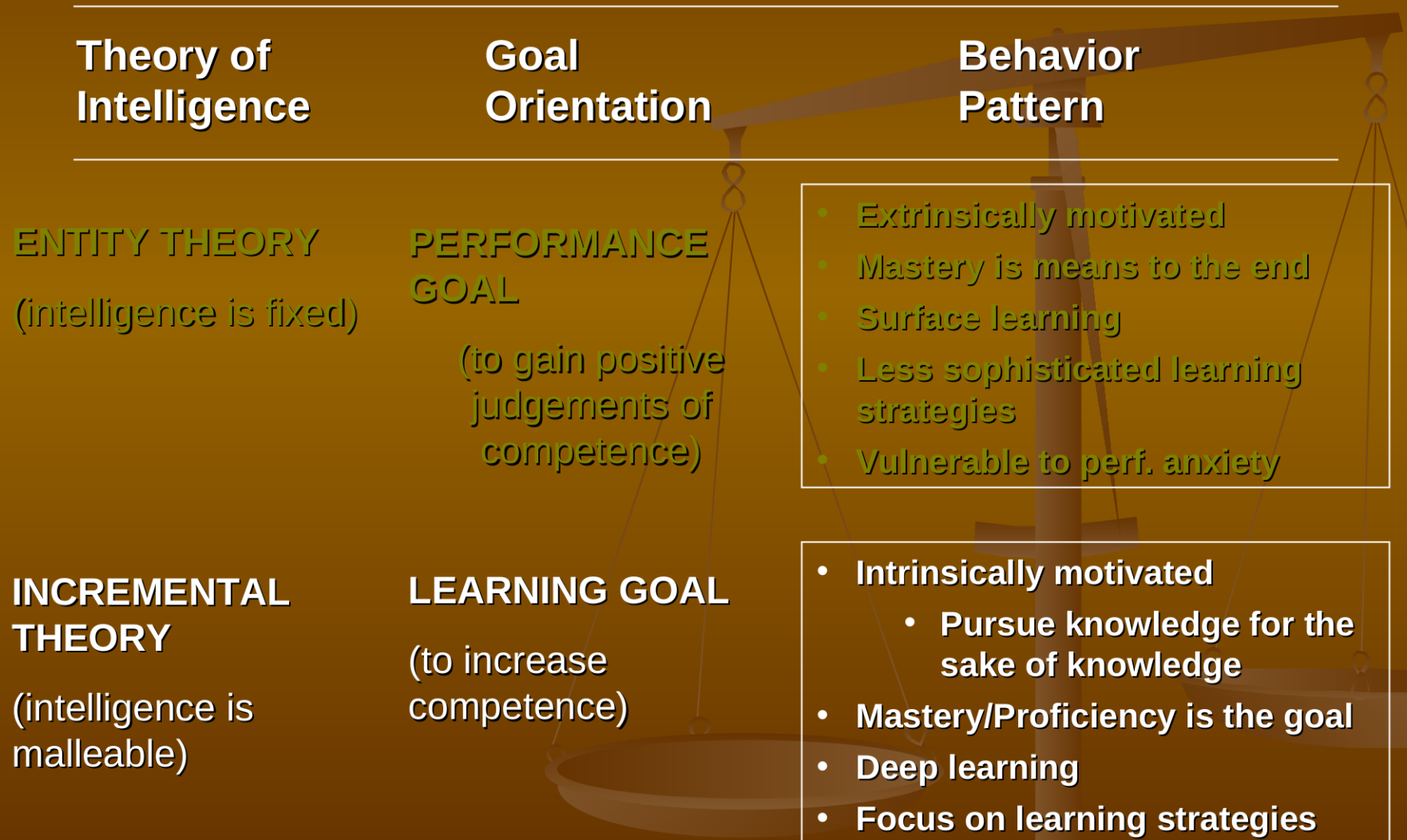
(intelligence is malleable)

“How do *I* do this?”

“What can I learn from this?”

- Intelligence/Abilities can be developed through learning
 - Pursues goal of increasing abilities
 - Develops effective learning strategies
 - Obstacles are process of learning
 - More willing to appear incompetent
- 

Goal Orientation

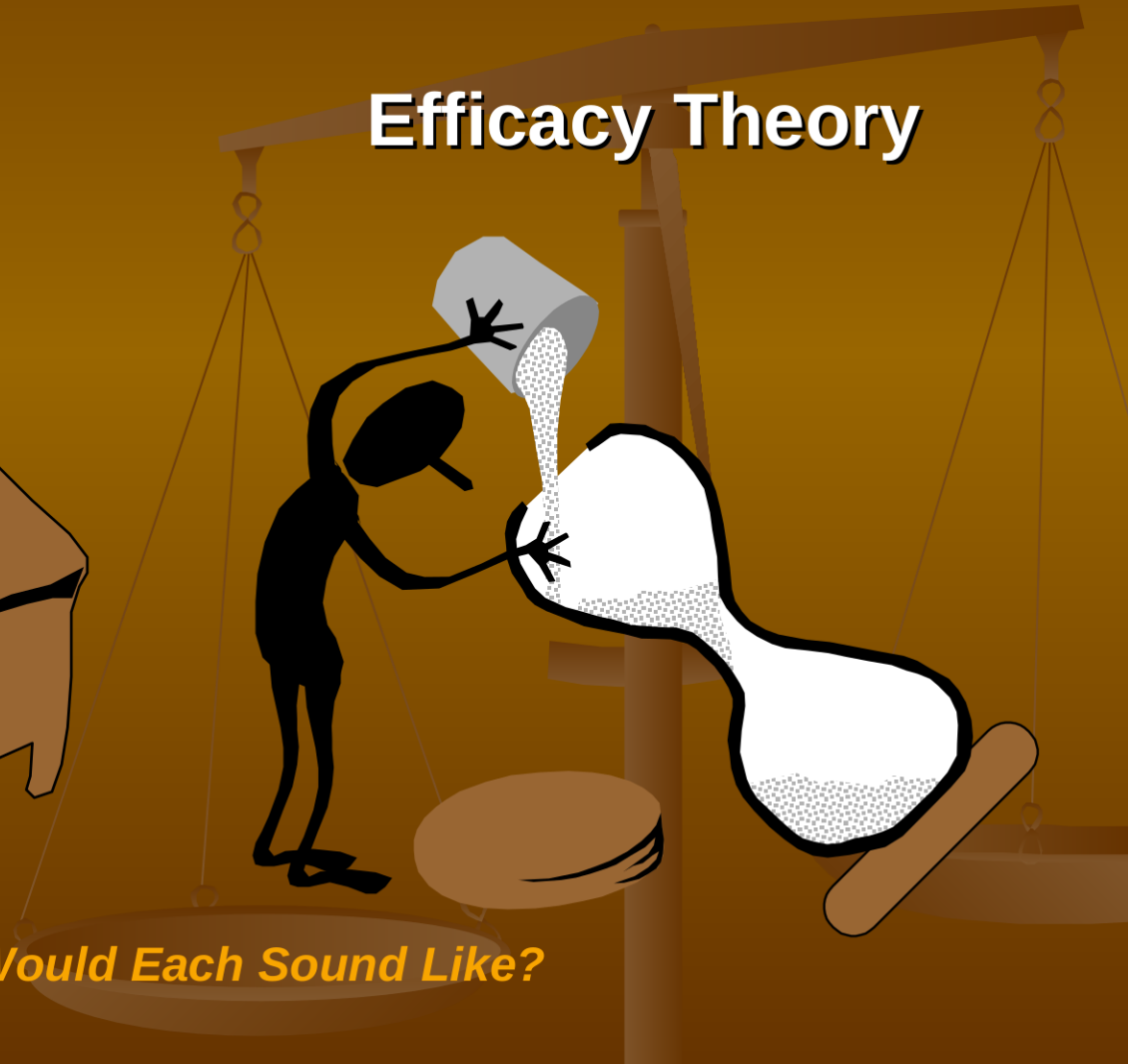


Advantages/Disadvantages of Each Theory

Innate Ability



Efficacy Theory



What Would Each Sound Like?

Maximize Achievement

- “Smart is not something you just are; smart is something you can get”
- Small academic communities most effective for maximizing achievement
 - Blend academic and social worlds
- Work Smarter
 - Set *First Things First* goals (Live, Love, Learn, Legacy)
 - By Semester
 - Weekly
 - Daily (before, during, and after class)
 - Exam Preparation
 - Plan for two days preparation
 - Work problems
 - Model the test environment

