PHYSICAL FITNESS STANDARDS: A LEGAL, ETHICAL, AND PRACTICAL PERSPECTIVE

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GUIDING QUESTIONS

- Why does this matter to me?
- Why does this matter to my program?
- Why does this matter to my profession?

TODAY YOU WILL…

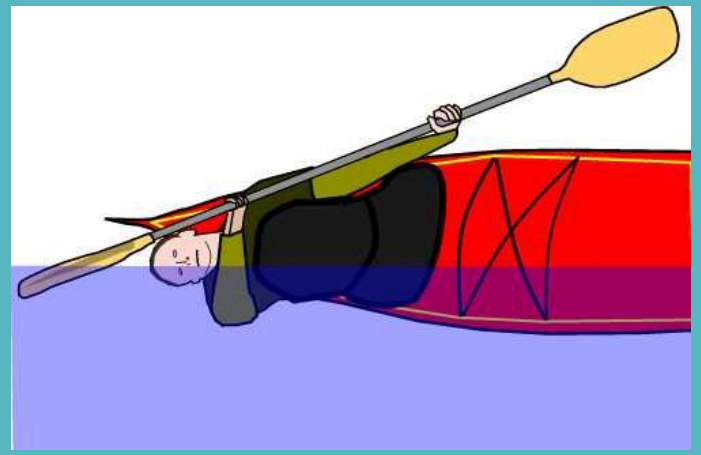
- Gain understanding of the need to have **firm evidence** when developing and implementing physical standards as requirement of employment
- Better recognize the **legal consequences** of fitness standardization in the context of the outdoor profession through an examination of prior legal precedents
- Be introduced to what **job analysis** is utilizing applied examples within the outdoor profession and their relationship within the broader field of human resources

WHY DO WE CARE ABOUT FITNESS STANDARDS

- To kill the "**yeah buts**…"
- Evidence not **intuition** should drive decisions
- We have a foundational **replication** problem within our industry
- We have a trend towards **manualization**
- Our industry **is growing**
- We may not be following the **legal parameters**

WHAT IS A STANDARD

What are some examples of standards you use in your profession?



- …an idea or thing used as a measure, norm, or model in comparative evaluations…
- …an agreed way of doing something. It could be about making a product, managing a process, delivering a service or supplying materials…

WHY DO WE HAVE STANDARDS?

- Manage the risks you face while operating in more efficient and sustainable ways
- To demonstrate the quality of what you do to your customers
- To embed best practice(s) into your organization

Why do you have standards in your organization?

STANDARDIZATION ≈ JOB ANALYSIS

- Establish and document competencies required for a job
- Identify the job-relatedness of the tasks and competencies needed to successfully perform the job
- Provide **a source of legal defensibility** of assessment and selection procedures

How many people here have conducted a job analysis?

HOW TO DO A JOB ANALYSIS

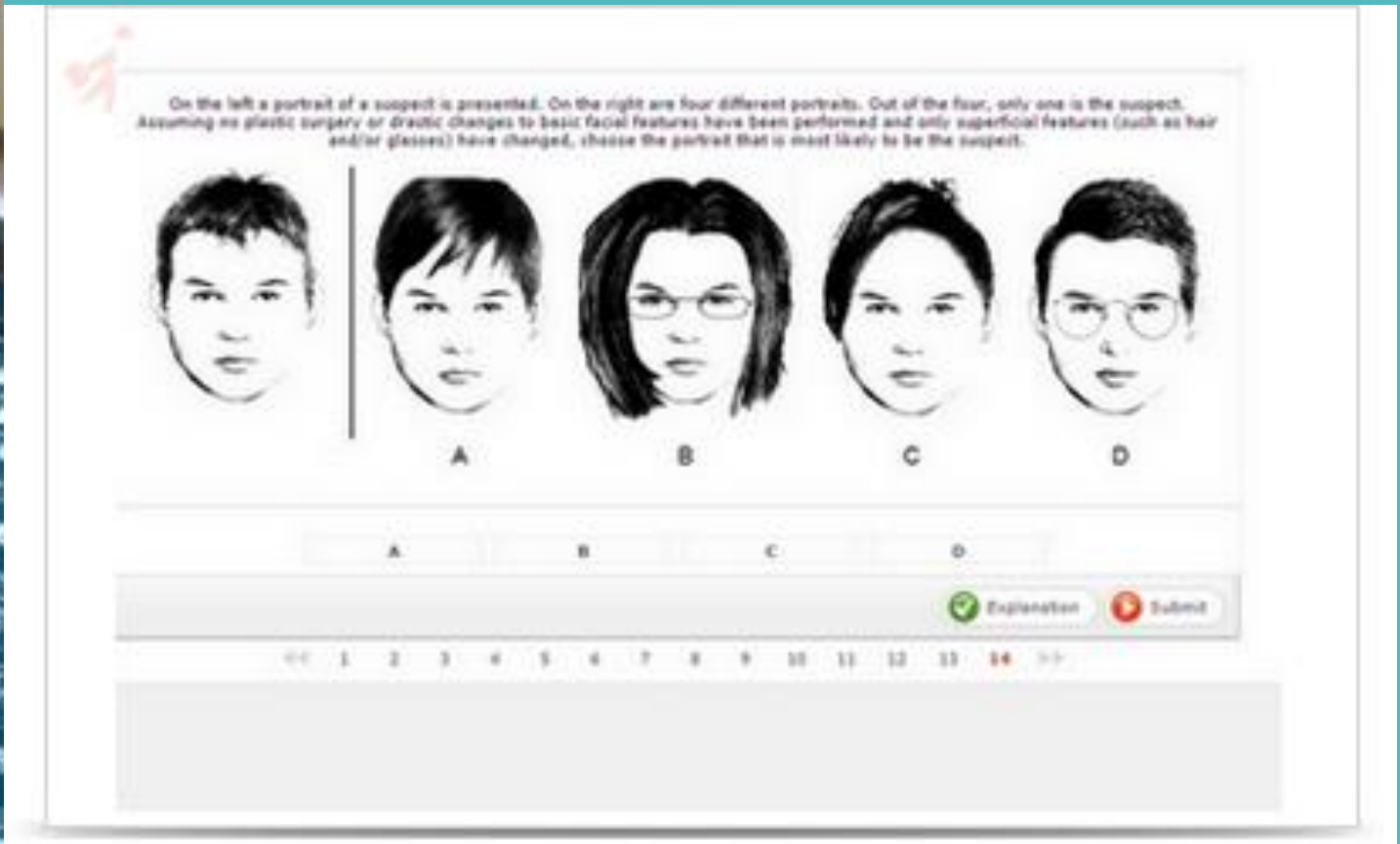
1. Tasks and competencies are collected
2. Subject Matter Experts (SMEs) rate the tasks and competencies
3. Any low-rated tasks and/or competencies are dropped

What is a SME?

(SOME) HISTORY OF JOB ANALYSIS AND STANDARD DEVELOPMENT

Why do we have this "stuff" and what problems have been uncovered?

POLICE (RACIAL BIAS IN HIRING PRACTICES)

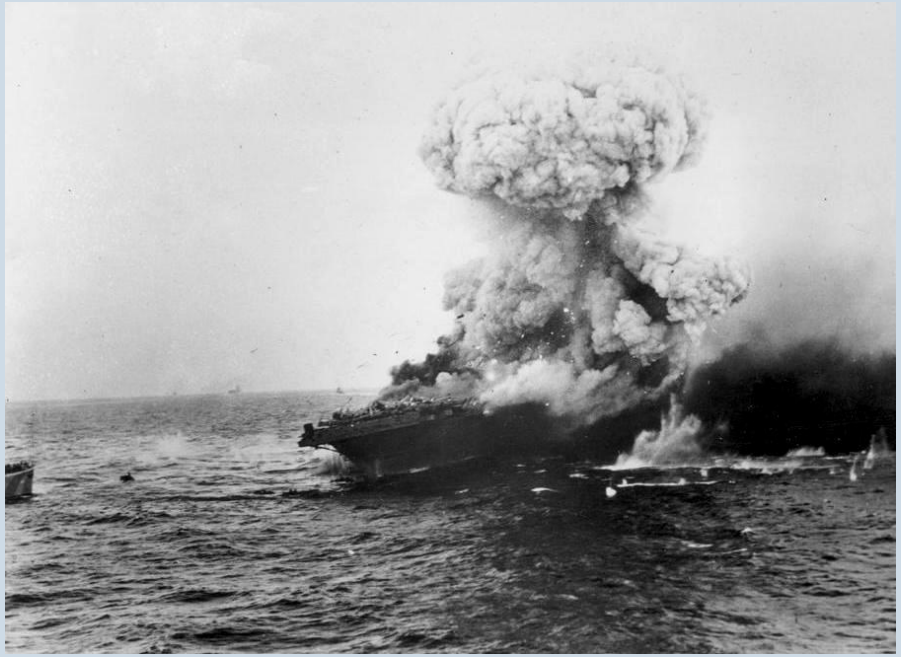


FIRE DEPARTMENT (GENDER BIAS IN HIRING PRACTICES)

MILITARY (TESTING UNRELATED TO JOB)

- Technical and non-combat positions go unfilled

OUR FIELDS MILITARY ROOTS



OUTWARD BOUND

N W E S

TO SERVE TO STRIVE AND NOT TO YIELD

TESTING FOR PHYSICAL PERFORMANCE

Some recommendations on how to do it

DEFINING PHYSICAL DEMANDS

- A **Physical Demands Analysis** (PDA) is a systematic procedure to quantify and evaluate the physical, ~~cognitive, and environmental demands~~ of the **essential and non-essential tasks** of a job.
- How many here do some type of fitness test?

BUT WAIT…

Certifications may be a "back door" method that doesn't pass legal muster

Aren't these certifications also "evidence of fitness?"

- Ability to climb 5.12+ and V7
- Strong desire to be a better clir

5. Current instructor certifications from one or more of the following: -Leave No Trace (LNT) Master Educator and/or Trainer. -American Canoe Association (ACA) Coastal Kayaking, Stand Up Paddle boarding, and/or Whitewater Kayaking Instructor. -Professional Climbing Instructors' Association (PCIA) Top Rope Climbing Instructor or PCIA Single Pitch Instructor and/or American Mountain Guides Association (AMGA) Single

- Current CWI certification (Professior
  Association, Climbing Wall Associat

•AMGA Single Pitch Instructor
•Leave No Trace Master Educator
•ACA Kayak Instructor Certification

DETERMINING ESSENTIAL TASKS

- Observations and interviews
- Task statements
  - As clear, concise, and behavioral as possible
- **Frequency** ratings for tasks
- Equipment and environmental **conditions**
- **Criticality** of tasks can be used to justify testing
- How do ya'll decide essential tasks?

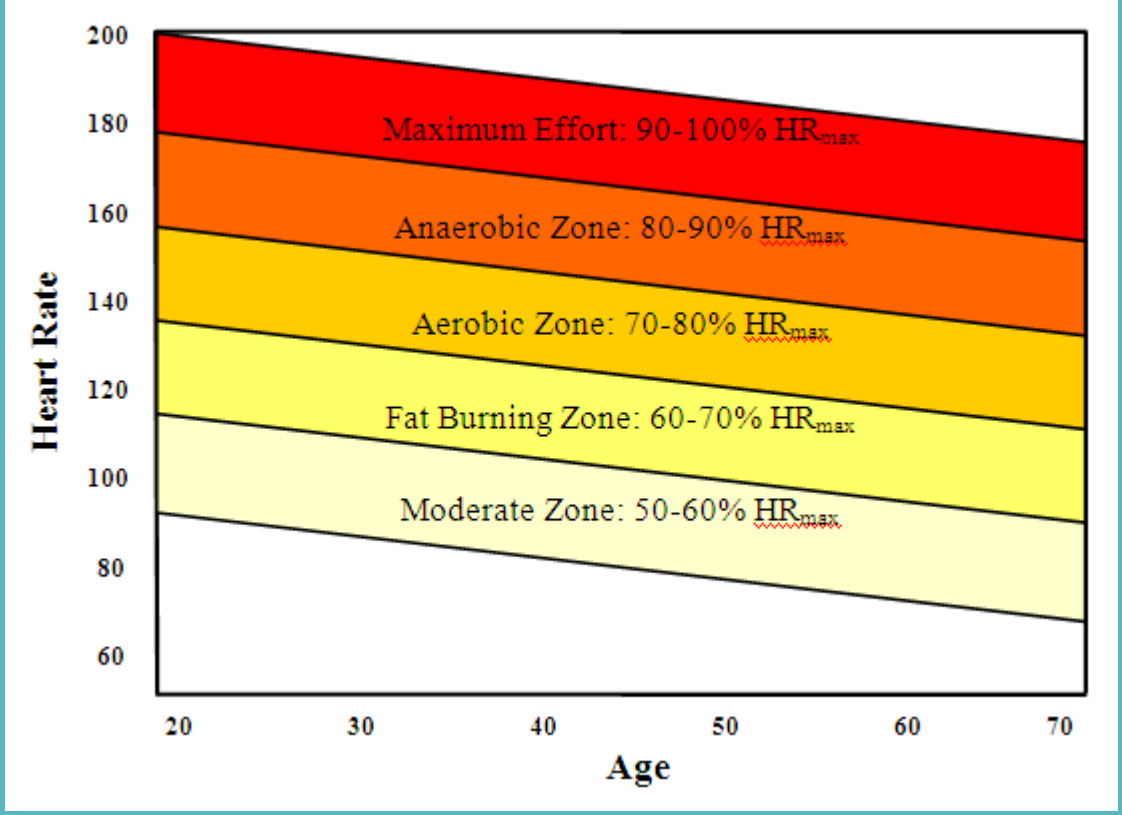
PHYSICAL DEMANDS X DURATION = PHYSICAL DEMANDS ANALYSIS

- **Physical Demands**
  - Sedentary
  - Light
  - Medium
  - Heavy
  - Very Heavy
- **Frequency**
  - Occasional
  - Frequent
  - Constant

PHYSICAL DEMAND ASSESSMENT TABLE

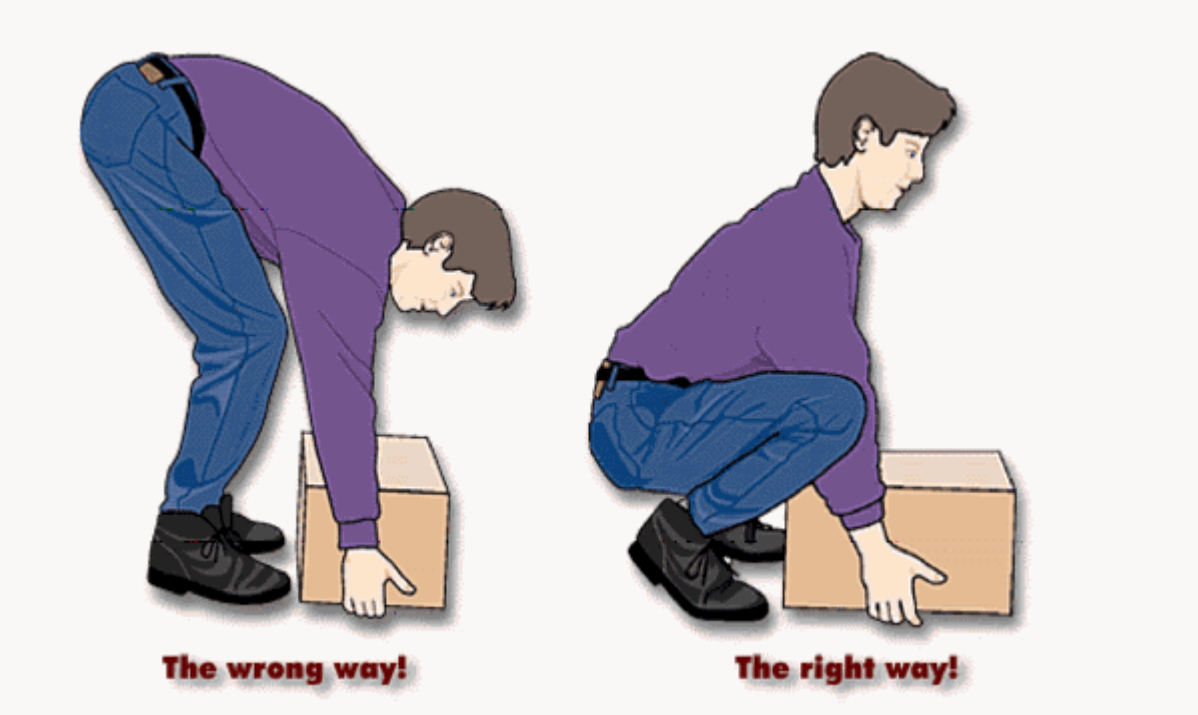
Physical Activity	Not at All	Occasional	Frequent	Constant
Kneeling	85%	11%	4%	<1%
Climbing	87%	10%	3%	<1%
Balancing	93%	5%	2%	<1%

ASSESSMENT



- Gather measures from on the job observation and measurement
- Biomechanical analyses (used in job design and safety)
- Physiological responses (VO2, Heart Rate)
- How could we use smartphones for this? What challenges do you see?

CLASSIFICATION OF PHYSICAL DEMANDS



1. Muscular strength
2. Endurance
3. Aerobic capacity
4. Anaerobic power
5. Equilibrium
6. Flexibility
7. Coordination and Agility

BREAKOUT

Need some volunteers in “functional” clothing…

MUSCULAR STRENGTH

- Resistance to muscular fatigue: Perform a movement multiple times
- **Isometric:** (dead lifts). Shoulder, arm, torso and leg strength
- **Isotonic:** move at a joint (lifting)
- **Isokinetic:** Angular force; speed of extending or flexing a joint

ENDURANCE

- The ability to complete a physical task within a given **time period** or **distance**
- Runs for time and/or distance
- Weight carried over distance

AEROBIC CAPACITY

- The level to which a participant is able to perform a job function without a noticeable degradation in task performance
- Aerobic capacity: If work sample, not a medical test.
- If Heart Rate or VO2 based, then medical test

ANAEROBIC POWER

- The ability of a participant to lift/carry/drag or otherwise move an object of fixed weight for a given distance or time period

EQUILIBRIUM

- The ability of a participant to manage their balance

COORDINATION AND AGILITY

- The ability to perform motor activities in a proficient sequential pattern by using neurosensory cues such as change of direction.

RECOMMENDATIONS

In general, work samples fare best in terms of validity (better than exercises to tap these broad skills)

A consistent course should produce consistent outcomes

Where could we have our course?

AN EXAMPLE OF A POLICE TEST

SCORING

- Pass/fail with no compensation (when each task or ability is critical
  - Pace versus execution
  - Set cutoff using performance data (look at performance on task as function of job performance)
  - Set same cutoff for all
- Compensatory (allow high score on one measure to compensate to some degree for a low score)
  - Less adverse impact in general
  - What skills are essential though? Why are you even testing for others?

ADVERSE IMPACT: ADDRESSING BIAS

- **Race**
  - Not a simple relationship. Differences depend not just on race but on type of test
- **Age**
  - Basic ability and job differences
- **Gender**
  - Least for tests that do not depend on muscular strength
  - Lower when body fat is taken into account
  - Still significant

BREAKOUT ONE

DESIGN YOUR OWN

This position is responsible for the delivery, coordination, administration, and evaluation of Outdoor Programs, such as trips, clinics, climbing wall, and special events. You will also be directly responsible for assisting in the training, evaluation, and supervision of adventure facilitator staff in alpine environments (≤ 4000 meters) in adverse/extreme weather environments.

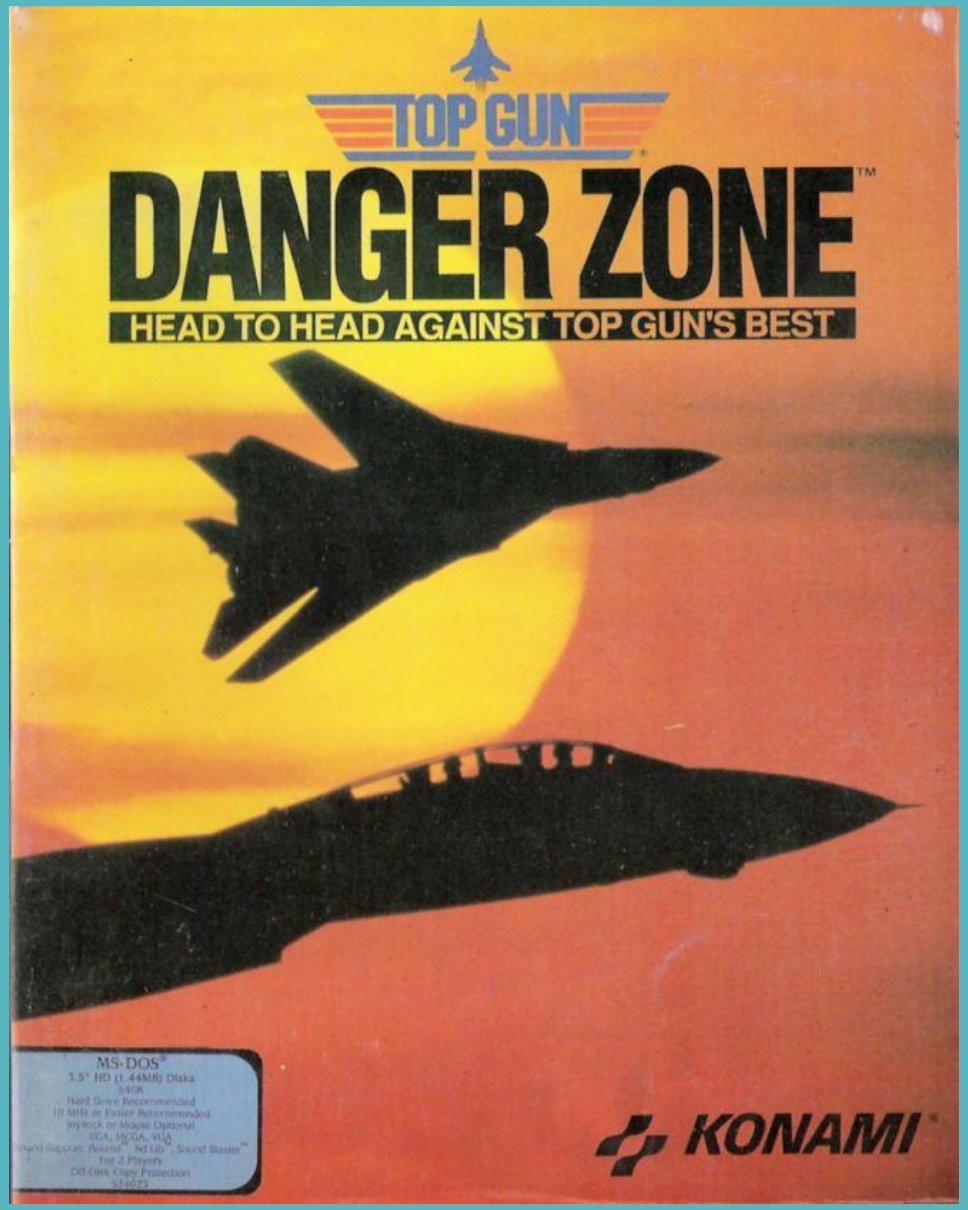
- Muscular strength
- Endurance
- Aerobic capacity
- Anaerobic power
- Equilibrium
- Flexibility
- Coordination and Agility

TIME TO SHARE

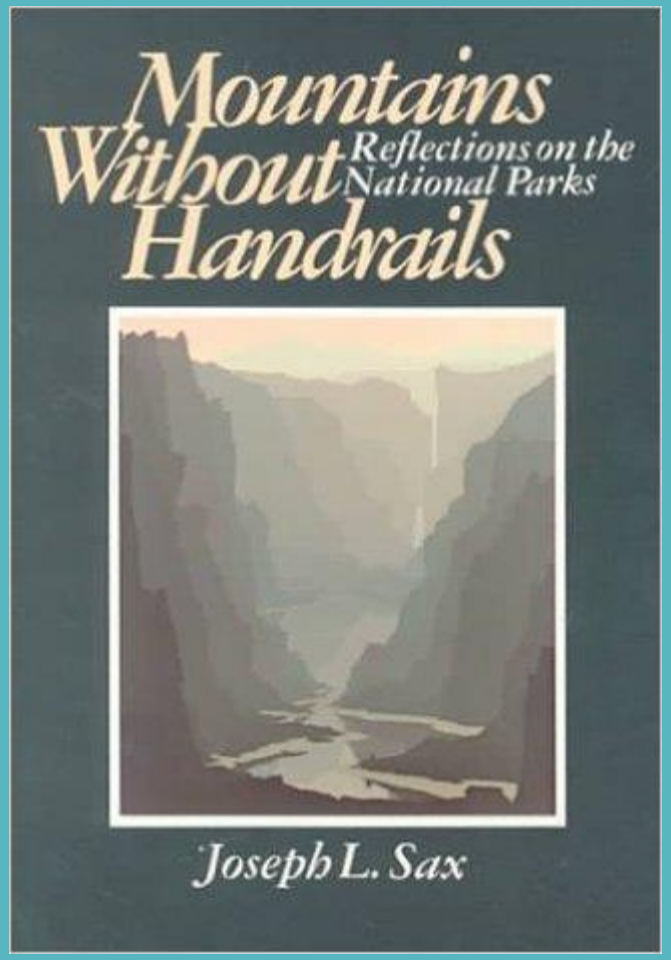
- What did you do?
- Why did you do it?
- What was challenging?
- What was easy?
- Why did they do that?
- Rip up their choice

- Muscular strength
- Endurance
- Aerobic capacity
- Anaerobic power
- Equilibrium
- Flexibility
- Coordination and Agility

BREAKOUT TWO



INCLUSIVE MISSIONS VERSUS PRACTICAL CONCERNS



- Which is more important?
  - Physical, Emotional, or Social Safety
- How has one person changed the nature of a trip due to limited physical ability?
- What is the "outcome" we are trying to accomplish?
- Is this sustainable?
  - Is this what our participants want?

INCLUSIVE VERSUS PRACTICAL?

After 6 months of preparation, and countless committee meetings you are leading a trip leader training and your goal is to climb Glacier peak (10,000 ft., 31 miles round trip, over 6 days). After 2 days it is clear that one of your students, Ryan, won't be able to continue due to his poor fitness and thus the rest of the group. As result you will not be able to conduct glacier or crevasse training. This is an essential function of your job and is a requirement of your program. Additionally, the trainees have spent $2000.00 each of their own funds. You knew from the beginning that Ryan would have challenges physically with this trip.

- How could this have been prevented?
- What are the risks of this approach?
- What are the benefits?

WHAT DID WE JUST DO?

- Gained understanding of the need to have **firm evidence** when developing and implementing physical standards as requirement of employment
- Better recognize the **legal consequences** of fitness standardization in the context of the outdoor profession
- Discovered what **job analysis** is utilizing applied examples within the outdoor profession
- Discussed the **potential dichotomy of practice and inclusivity**

QUESTIONS AND THOUGHTS?

This presentation and citations can be found now at ryangagnon.com/presentations

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