Virginia Highway Safety Summit

May 2022

MOTORCYCLE SAFETY FOUNDATION

BMW Motorrad

HARLEY-DAVIDSON

Indian MOTORCYCLE

KTM

TRIUMPH

BRP

HONDA

Kawasaki

SUZUKI

YAMAHA

Since 1973

Session Goals

1. Overview
2. Historical Perspective
3. Developmental Underpinnings
4. Content of Basic *RiderCourses*
   - Level I Basic
   - Level II Behavioral
   - Riding Exercises

Session Goals

1. **Overview**
2. **Historical Perspective**
3. **Developmental Underpinnings**
4. **Course Examples**
5. **Content of Basic *RiderCourses***
   - **Level I Basic**
   - **Level II Behavioral**
   - **Riding Exercises**

We want riders to...?

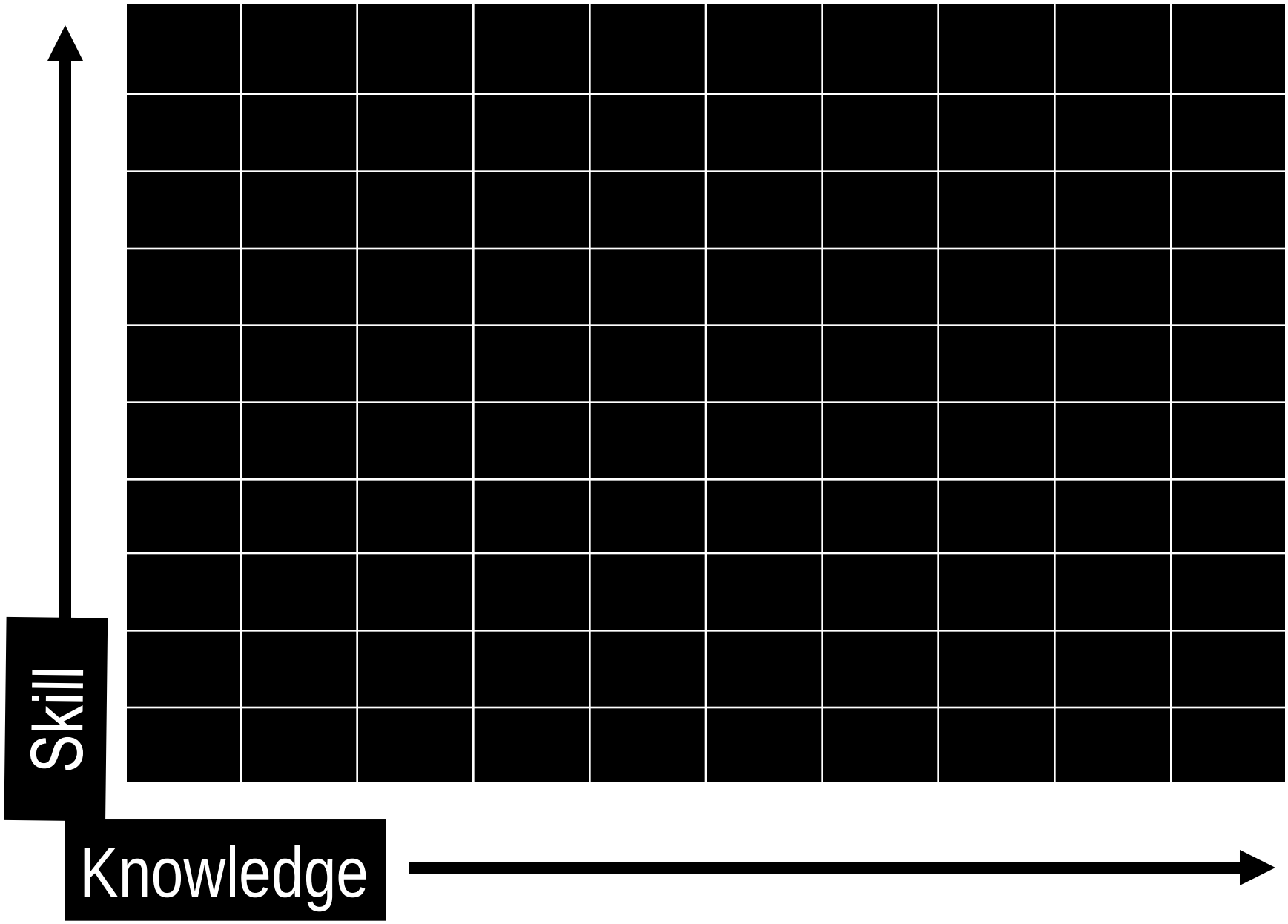
Ride Like a Pro

Ride Like a Champion

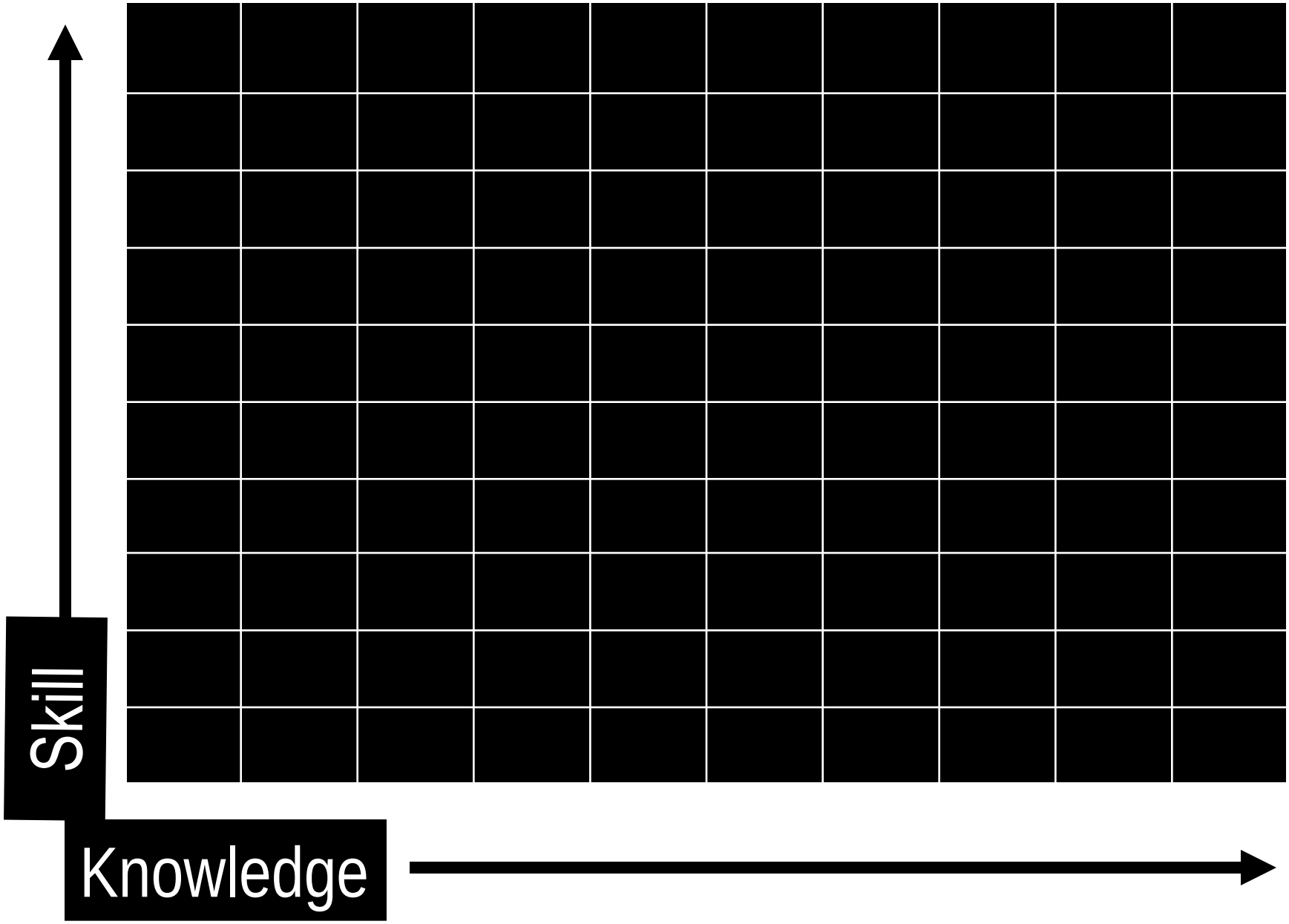
Ride Like a Safety Geek

Ride Like a Professional Safety Geek Champion

1. Where should riders be?



2. Where are BRC graduates?



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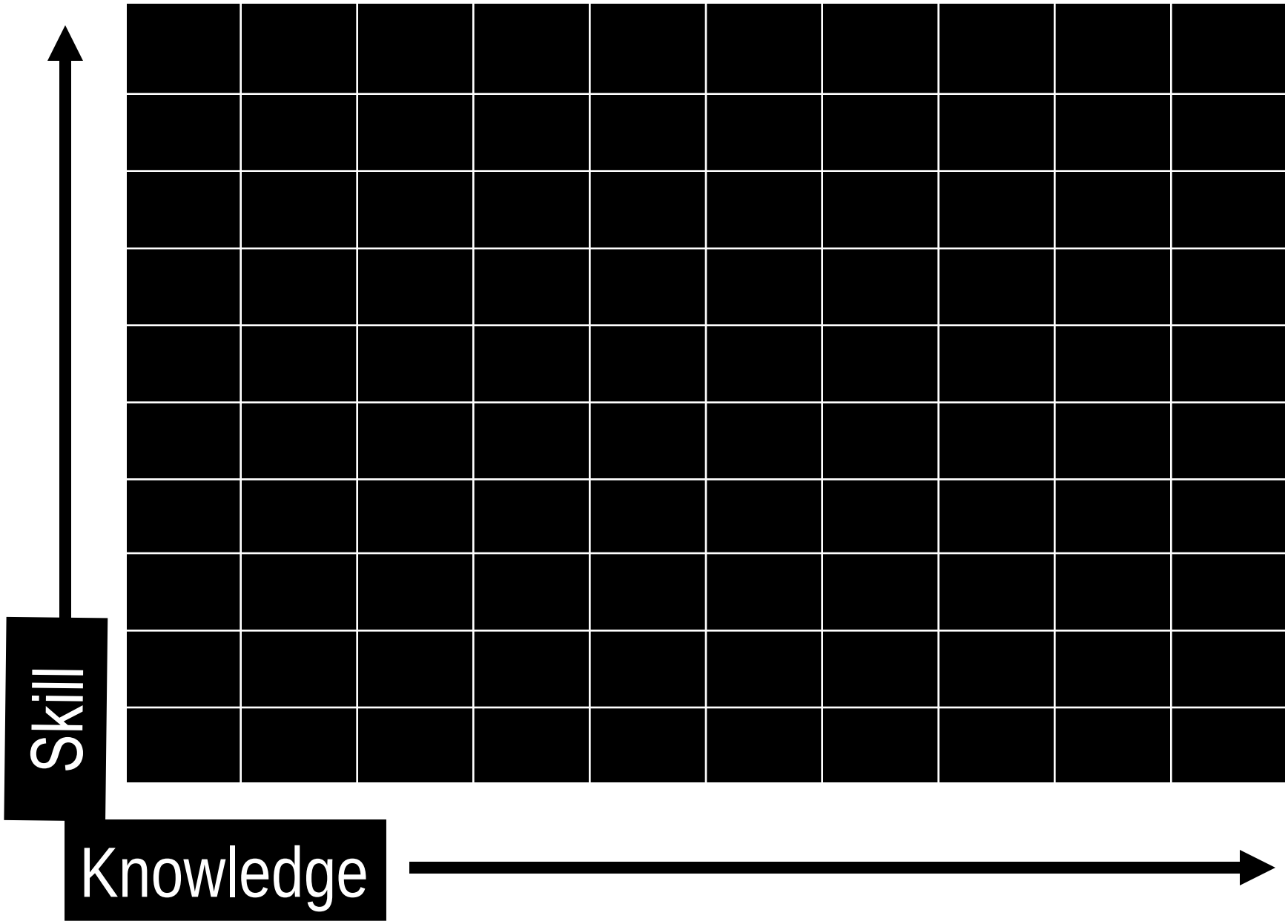
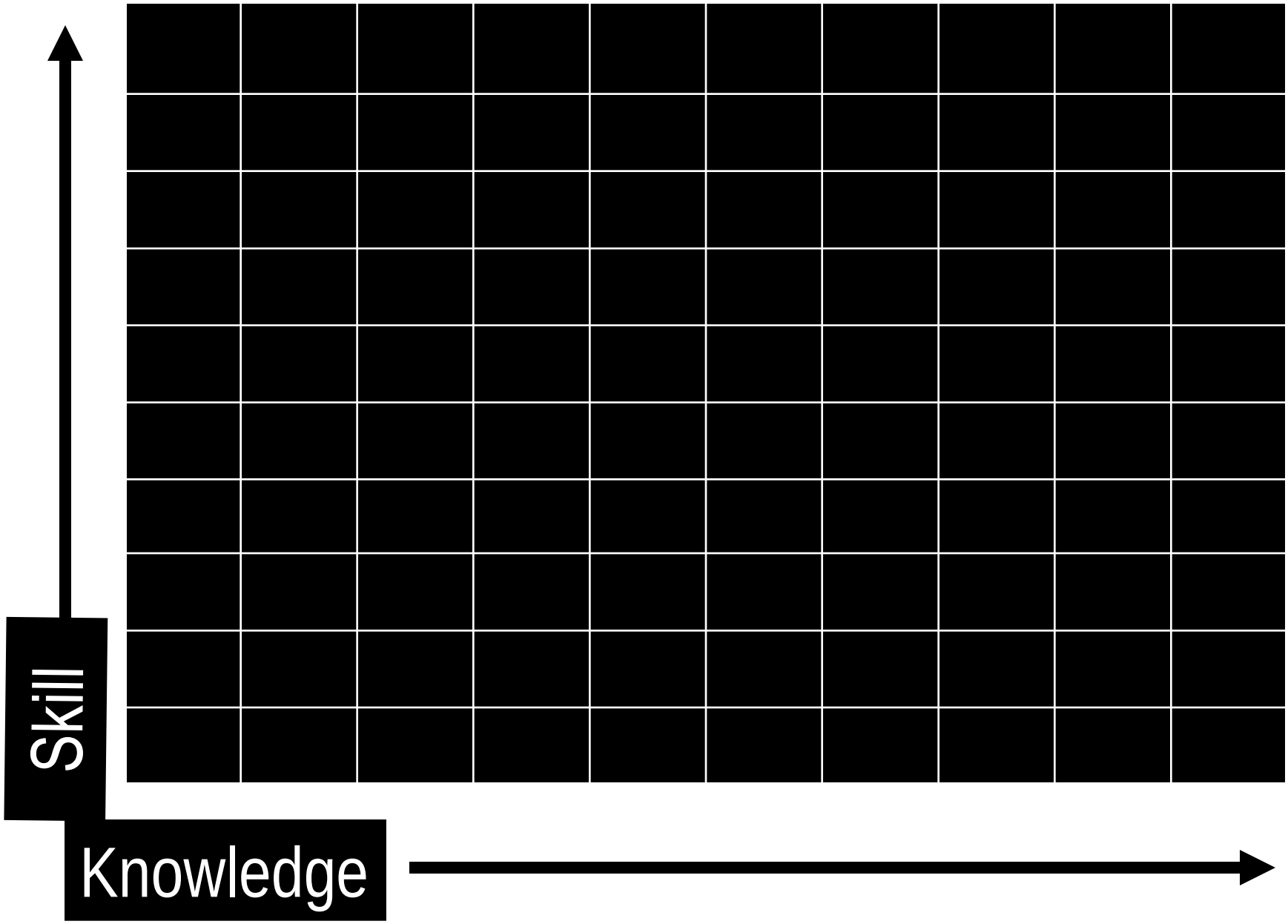
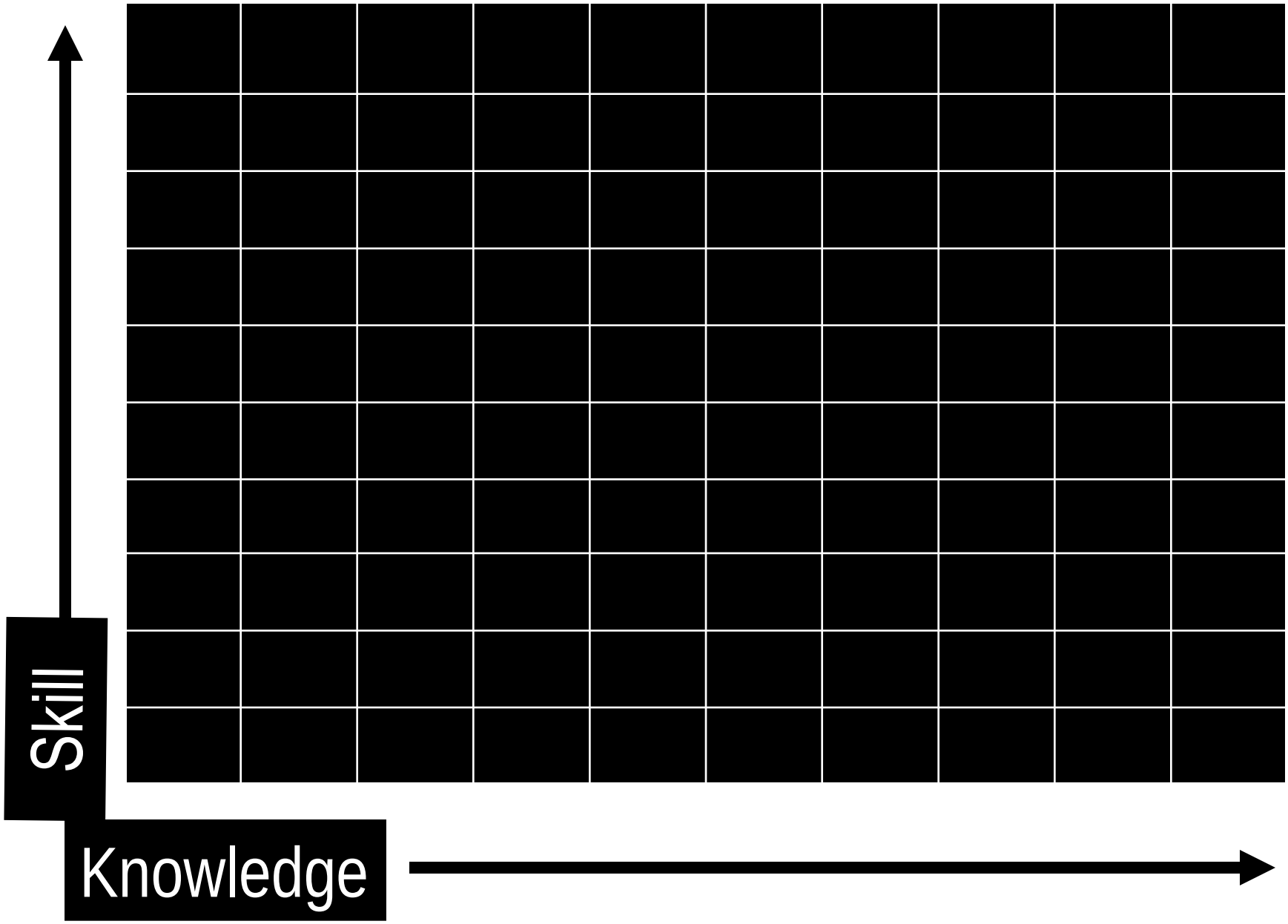


4. As a rider, where are you now?



5. Where were you on your first street ride?



Motorcyclist Safety

Holistic Approaches

E's of Traffic Safety

Education
Engineering
Enforcement
Emergency Services

Loss Reduction Model: Countermeasures

	Human Factors	Vehicle Role	Environment
Crash Prevention (Pre-Crash)	• **Rider trainin** • **Rider licensi** • **Distractions** • **Impaired rid** • **Motorist awa** • **State safety**	d ng s	• Roadway design, construction, operations, and preservation • Roadway maintenance
Injury Mitigation (Crash)	• Use of protect	tion	• Roadway design, construction, operations, and preservation
Emergency Response (Post-Crash)		• Automatic crash notification	• Education and assistance to EMS • Bystander care • Training for law enforcement • Data collection and analysis

Levels of Safety Countermeasures
Training and Education Perspective

I = Engineering, Enforcement & Emergency Services

- Licensing
- Improved pavement lines
- Improved guardrails
- Enhanced warning signs
- Helmet use
- Personal protective gear use
- Yard signs
- Safety billboards
- Overhead sign safety messages
- Motorcycle anti-lock brakes
- Selective enforcement
- Crash response time

Traffic Safety "E's"

Enforcement
Education
Engineering
Emergency Services

II = Skill training (Skill = Safety)

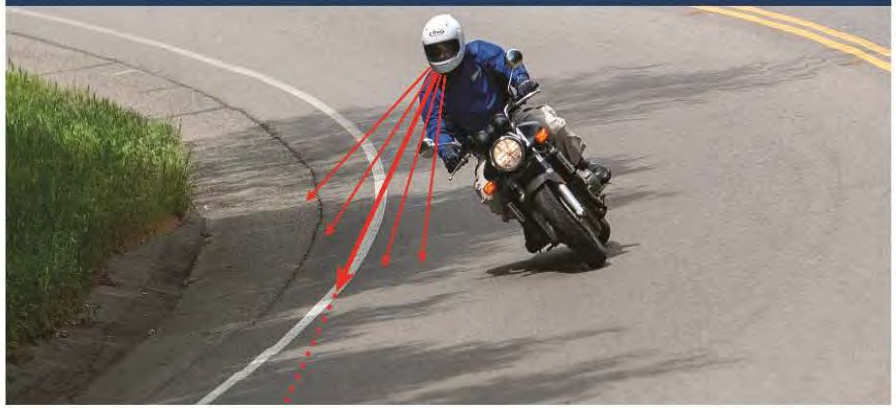
III = Skill training with safety messages (Training + Education)

IV = Skill training with behavior-related self-assessment and reflection (Training + Deeper Education)

Riding Subtasks

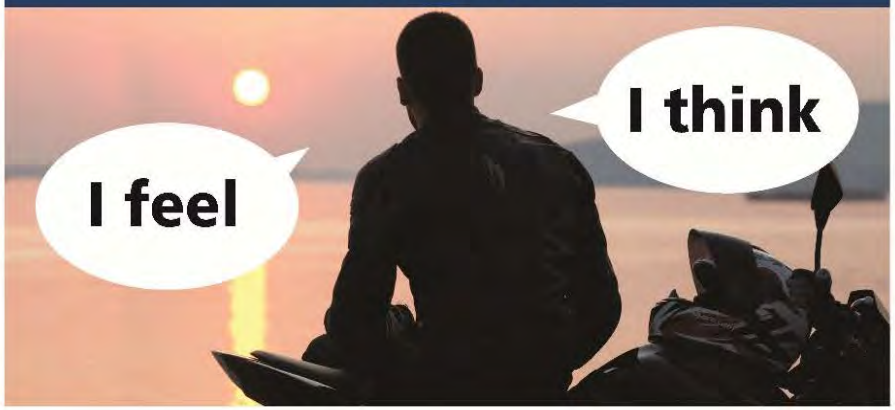
Physical

Mental/Perceptual



Social

Emotional



Driver/Rider Self-Check

Place a number from 1 (low) to 10 (high) in the space provided.

Item	You
Driver/Rider Knowledge	
Driver/Rider Skill	
Perceptual Ability in Traffic	
Degree of Cooperation in Traffic	
Likelihood of Being in a Crash	
Emotional Commitment To Safety	

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3. Developmental Underpinnings
4. Content of Basic *RiderCourses*
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MOTORCYCLE SAFETY FOUNDATION

The Human Element: *Fuel Dreams & Save Lives*

Mission

MSF is the country's leading safety resource and advocate for motorcyclists. We create world-class education and training systems for riders of every experience level. We raise public awareness of motorcycling to promote a safe riding environment.

Vision

To help motorcycle riders realize their full potential, elevating awareness of motorcycling safety in order to save lives.

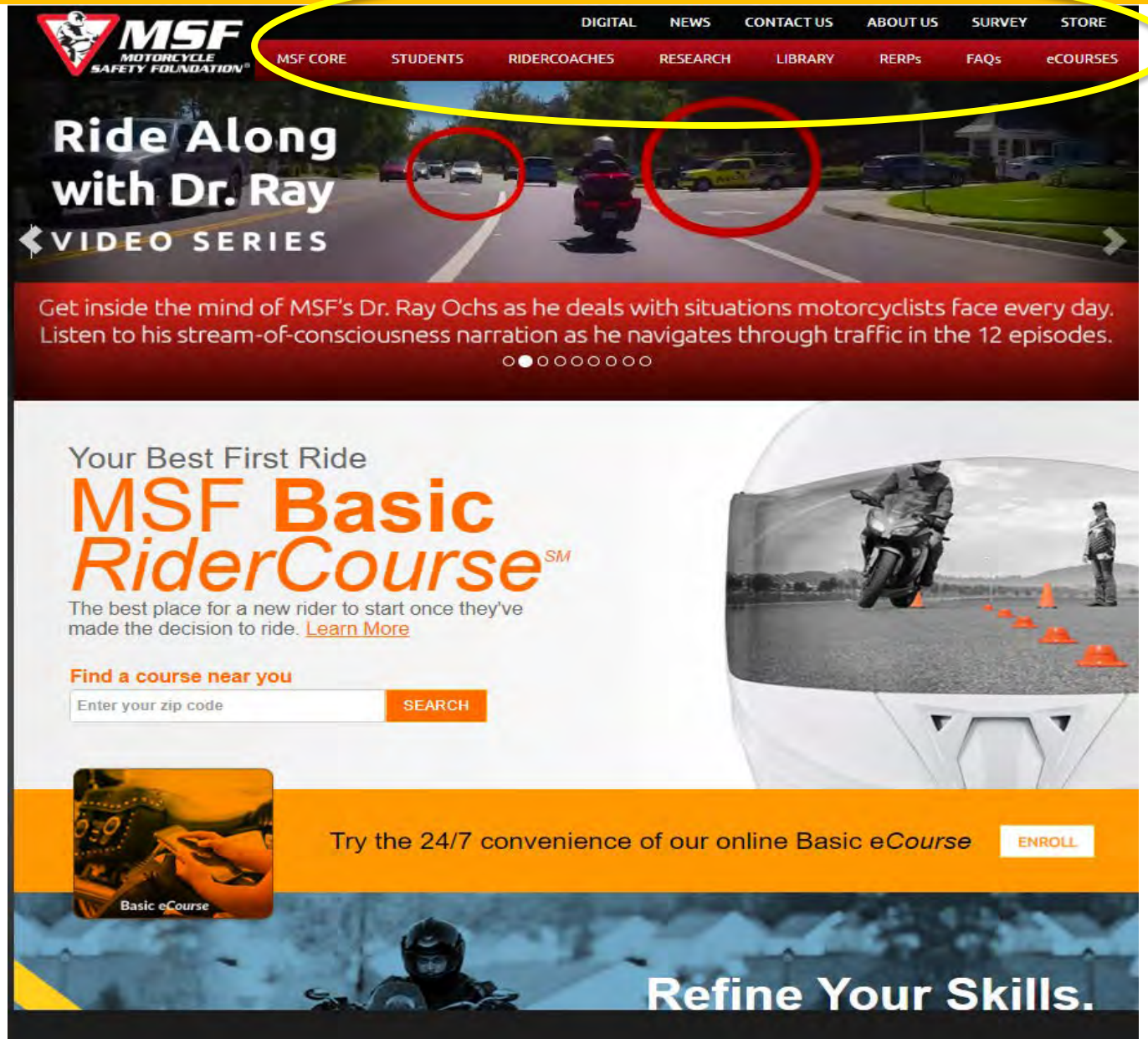
Motorcycle Safety Foundation (MSF) Mission and Vision

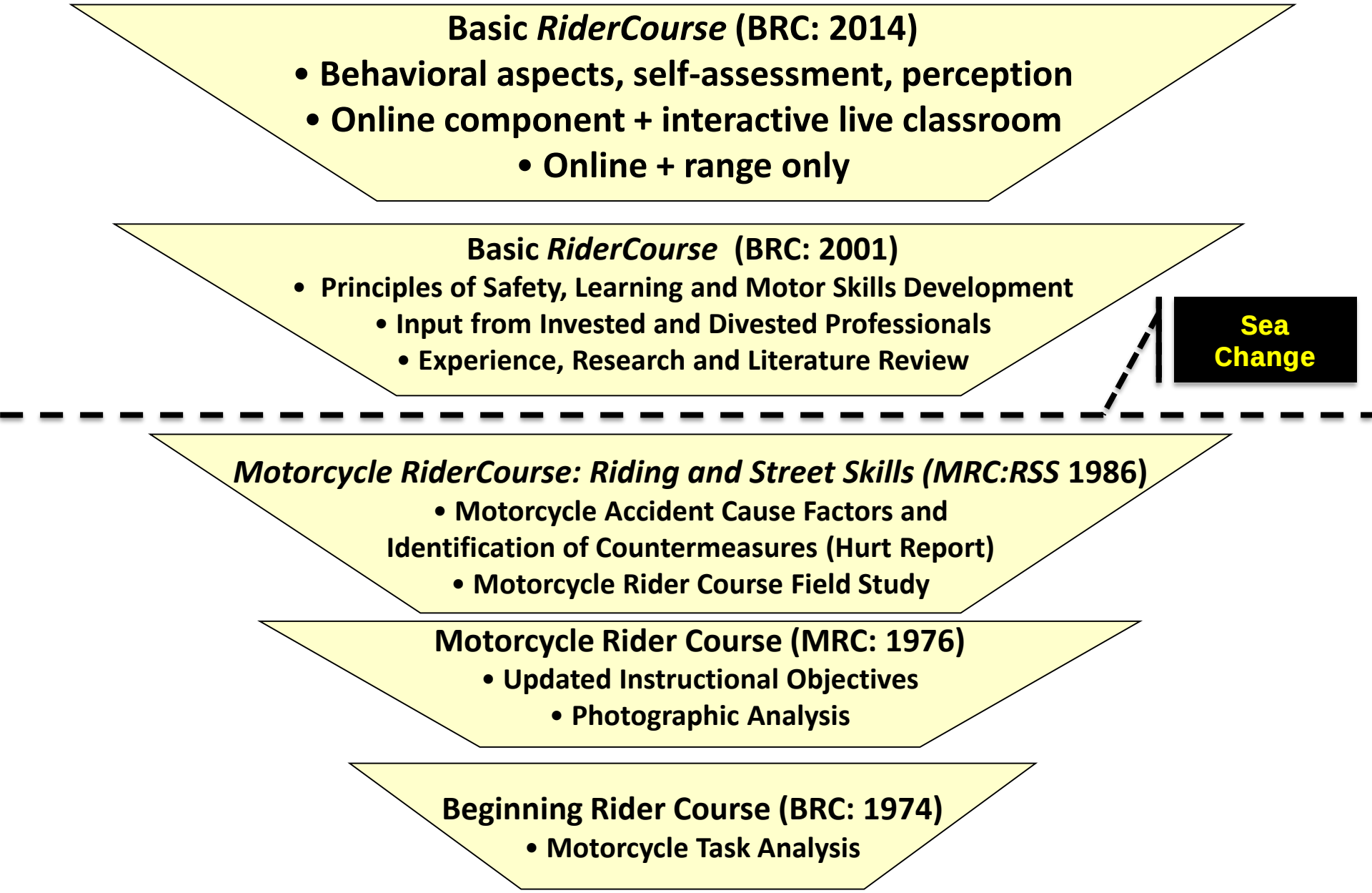
It's about:

1. Non-riders sharing the road.
2. Non-riders considering riding as a quality of life decision.
3. Riders sharing the road.
4. Riders having access to MSF's courses.
5. RiderCoaches, RiderCoach Trainers, Quality Assurance Specialists and Program Administrators fulfilling their roles.
6. Agencies and safety professionals for collaboration.

MSF Website

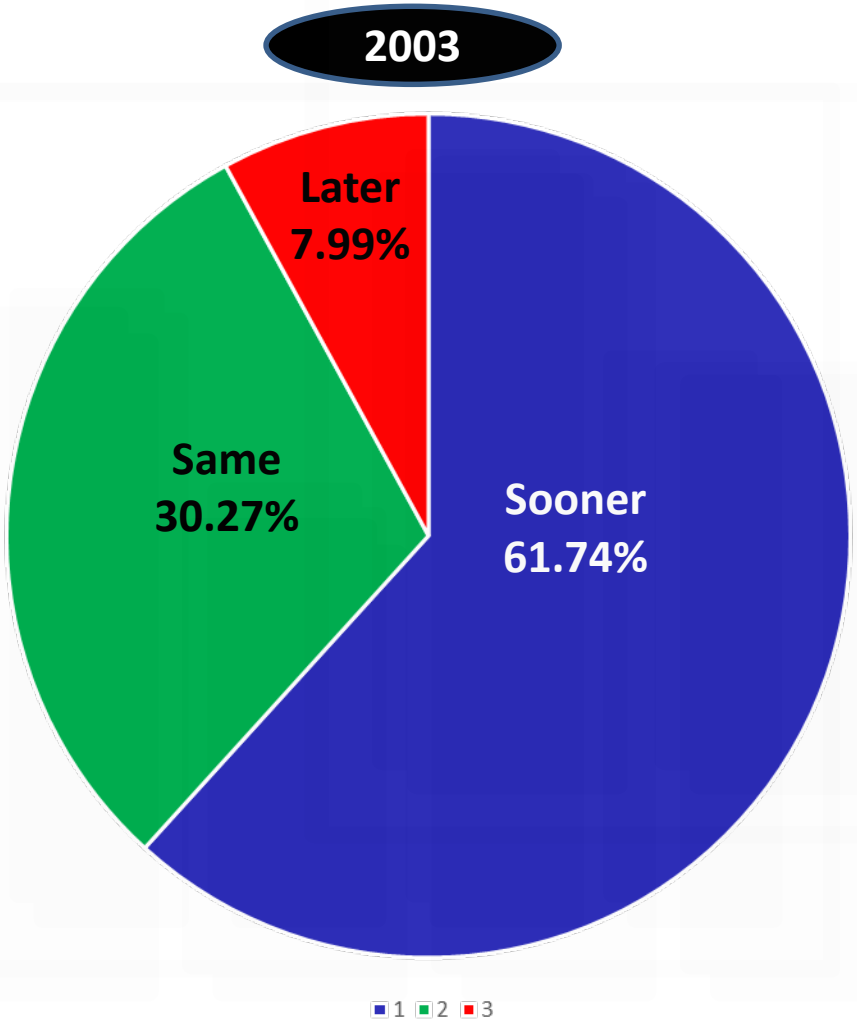
msf-usa.org

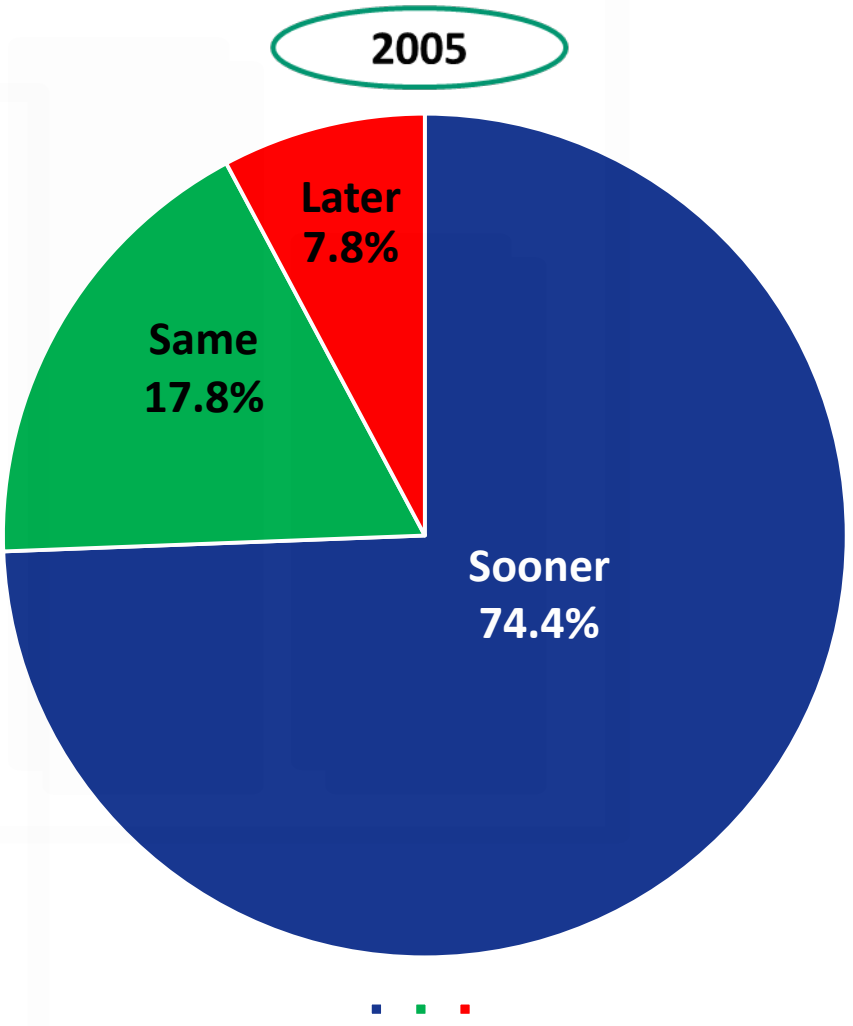




MSF's Learn-to-Ride Course

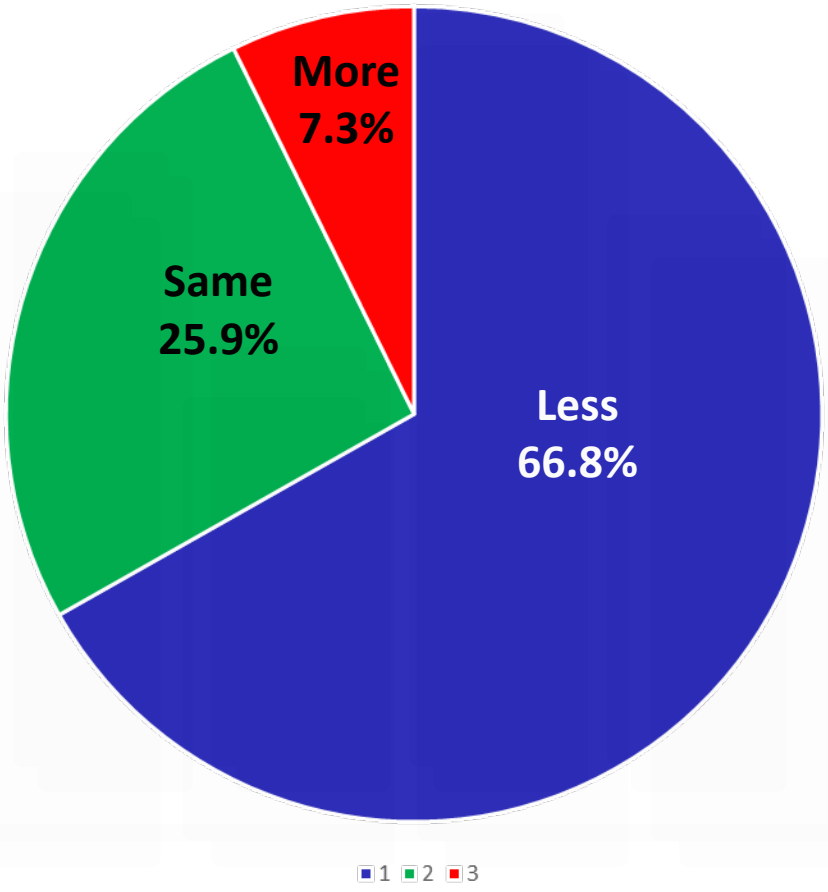
Riders Gaining Control



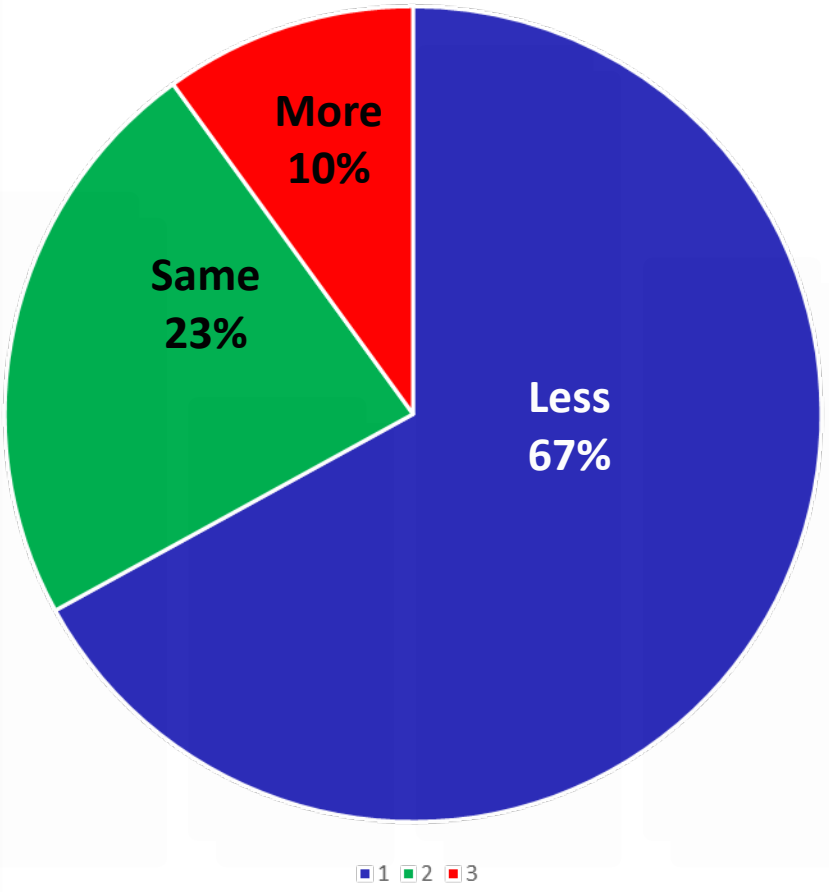


Rider Stress

2003

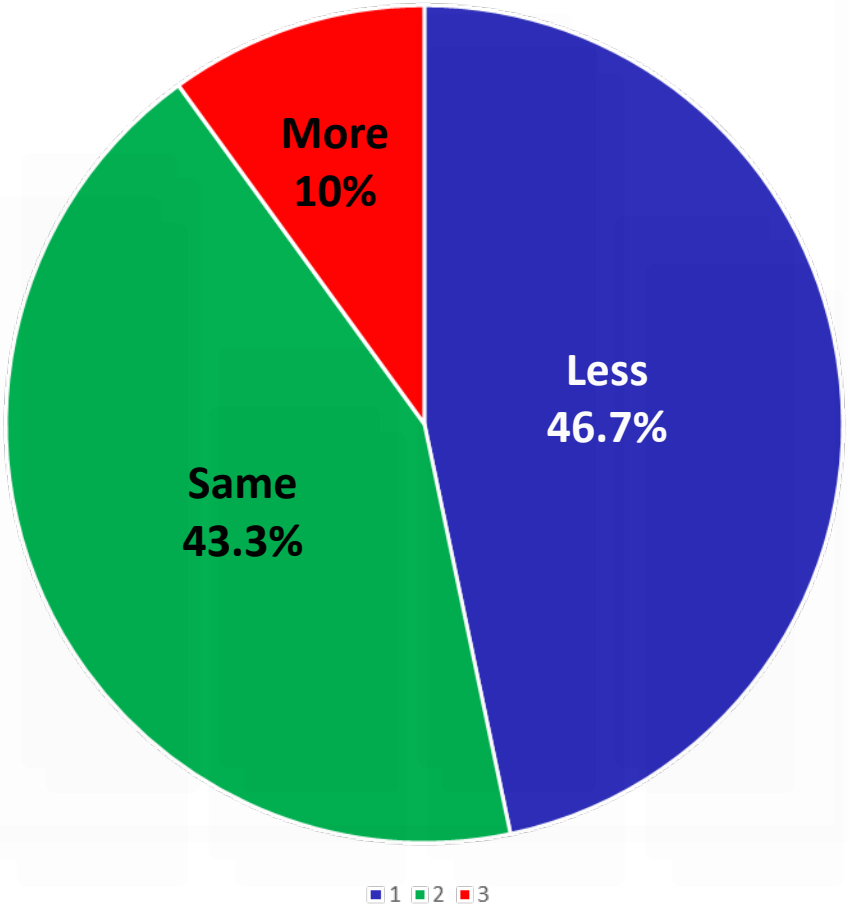


2005

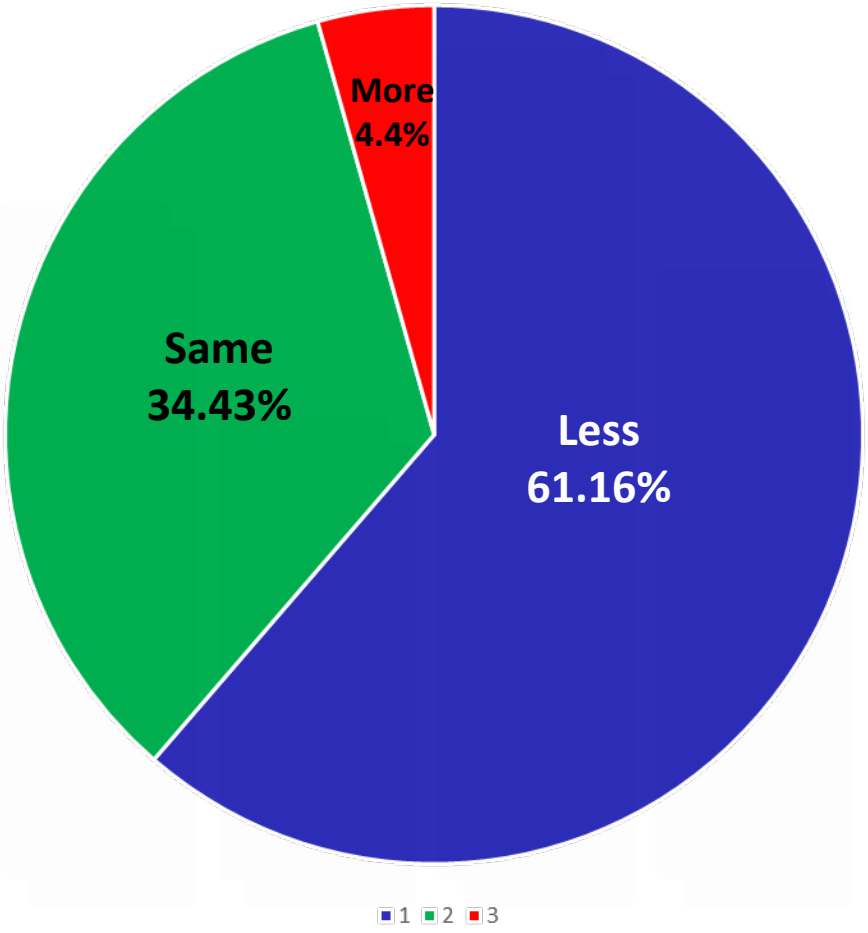


Training Incident Severity

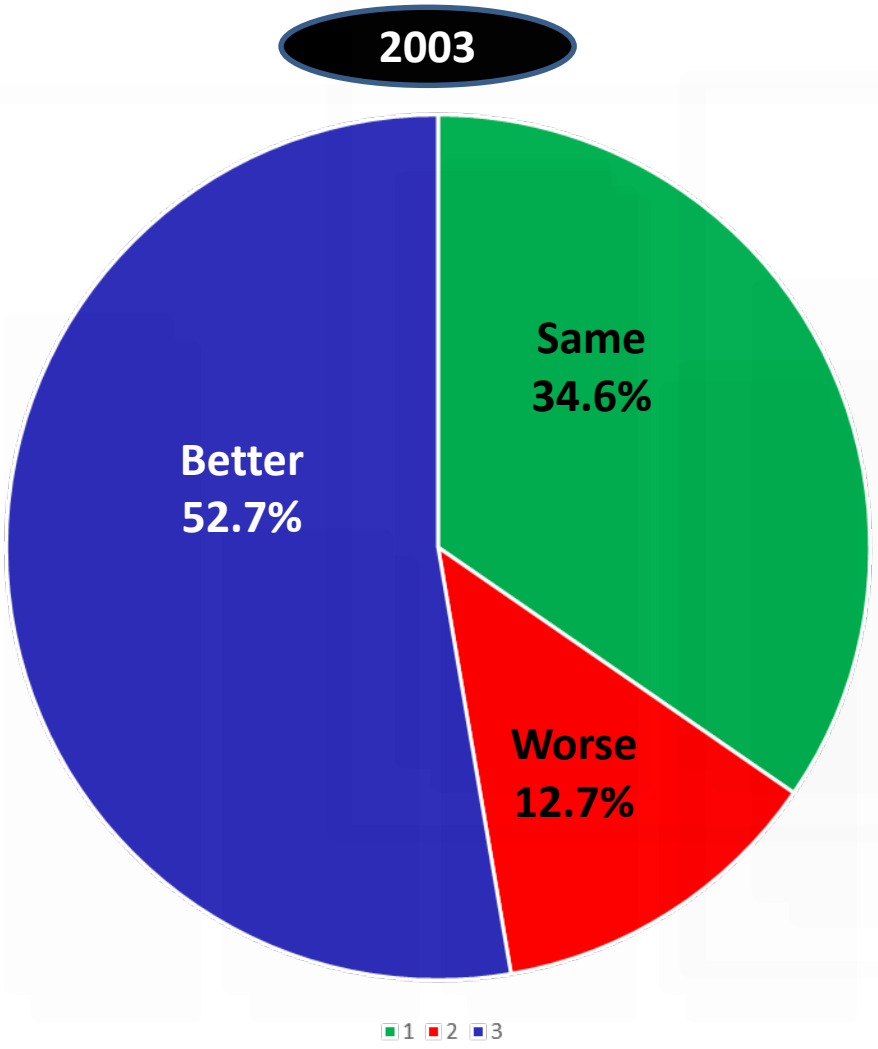
2003

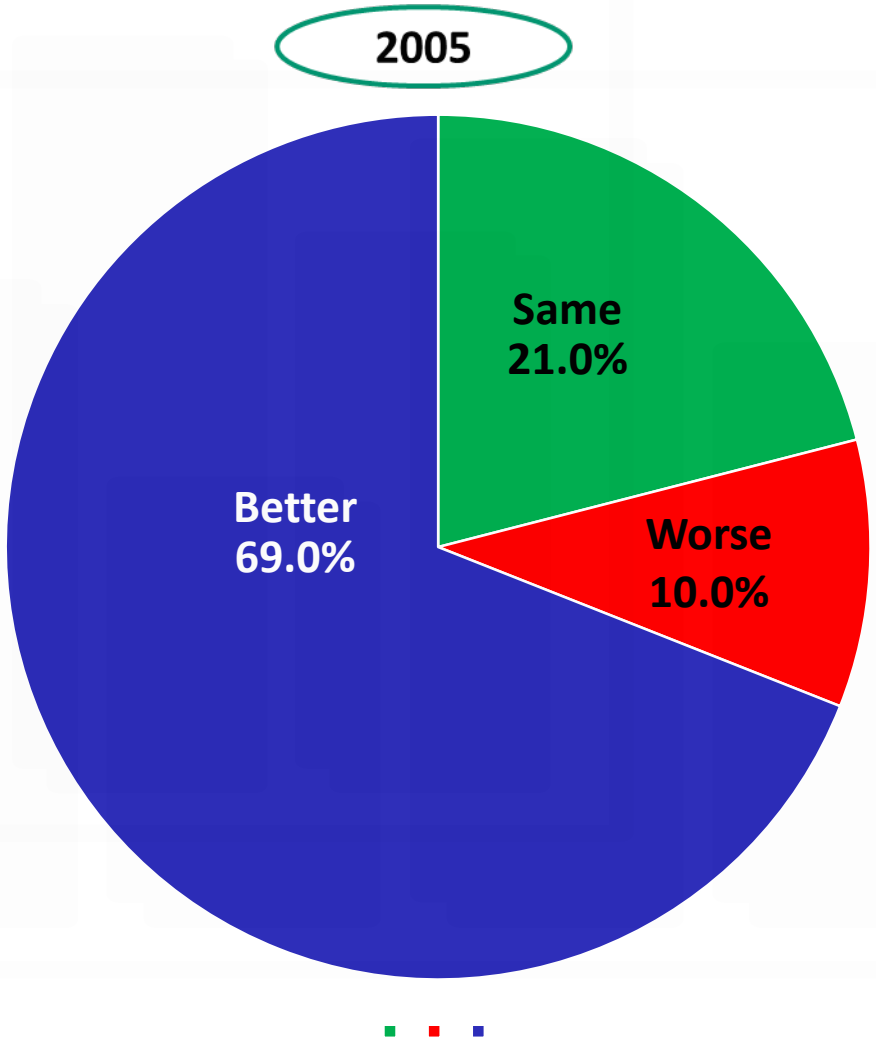


2005



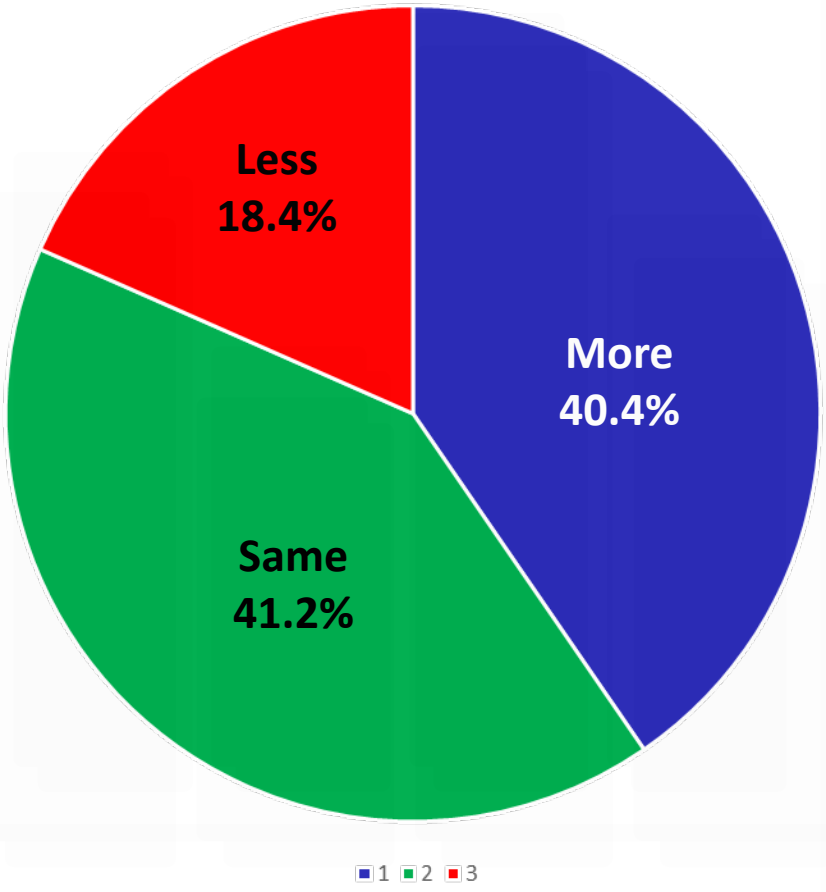
Teaching Satisfaction



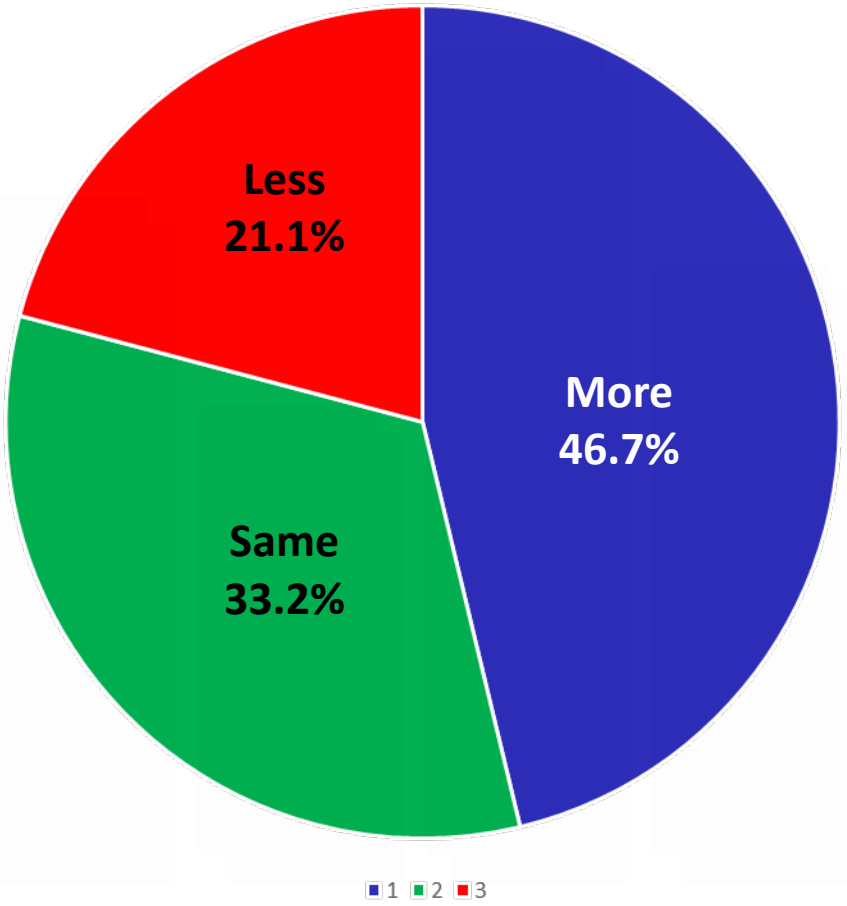


Prepared to Ride On-Street

2003



2005



THEN NOW

2-Course Approach

- Basic Course
- Advanced Course

Systems Approach

- Lifelong Learning
- Multiple Entry Points
- Safety Renewal
- Multiple courses and training opportunities

MSF Rider Education Training System

Start the Ride

First Ride

Dirtbike School

360 Rider

Ride Your Best

License the Ride

Basic *RiderCourse*
(All Forms for novices)

Basic *RiderCourse* 2 – License Waiver
(For experienced riders)

3-Wheel Basic RiderCourse

Improve the Ride

Street Strategies e*Course*

Human Factors e*Course*

Rider Skills Lab

Advanced *RiderCourse*

Rider Mindset
(Classroom)

AdventureBike RiderCourse

On-Street *RiderCourse*

RiderCoach Certification Courses

Basic *RiderCourse*

3-Wheel Basic *RiderCourse*

Advanced *RiderCourse*

Rider Skills Lab and Rider Mindset

AdventureBike RiderCourse

On-Street *RiderCourse*

Quality Assurance Specialist

Training Systems Initiatives

RiderCoach Trainer Preparation Course

Rider Skill Test + Examiner Training

rRETS

vRETS

IRETS

PDWs

Event Courses: Classroom

Intersection – *Motorist Awareness*

Share the Adventure – *Group Riding*

Riding Straight – *Alcohol Awareness*

Under Development

Rider Mentorship

On-Street *RiderCourse*

3-Wheel Only RiderCoach Preparation Course

Online Certification

Introductory Motorcycle Experience (First Ride)

Basic *RiderCourse* 2

BRC eP1x11 Transition

Rider Skills Lab

Menu of 23 Exercises from 5 MSF *RiderCourses*
(Skill-Building Practice Exercises)

- **Basic *RiderCourse* (BRC)**
- **Basic RiderCourse 2 (BRC2)**
- **Advanced *RiderCourse* (ARC)**
- **Basic Bike Bonding *RiderCourse* (BBBRC)**
- **Ultimate Bike Bonding *RiderCourse* (UBBRC)**
- **Circuit *RiderCourse* (CRC)**

Rider Skills Lab

Basic *RiderCourse* (BRC)

- **RSL 1 … BRC 3 – Starting and Stopping Drill (as a qualifier, if needed)**
- **RSL 2 … BRC 4 – Shifting and Stopping**
- **RSL 3 … BRC 5 – Basic Skill Practice**
- **RSL 4 … BRC 9 – Limited-Space Maneuvers**

Basic *RiderCourse* 2 (BRC2)

- **RSL 5 … BRC2 1 – Control at Low Speed**
- **RSL 6 … BRC2 2 – Stopping More Quickly (and Tight Turns from a Stop)**
- **RSL 7 … BRC2 6.1 – Low-Speed Decreasing Radius Curve**

Basic Bike-Bonding *RiderCourse* (BBBRC)

- **RSL 8 … BBB 5 – Accelerate, Then Brake for a Turn**
- **RSL 9 … BBB 9 – Control in Tighter Spaces**
- **RSL 10 … BBB 10 – Lollipops (24'-26'-28')**
- **RSL 11 … BBB 11 – Sharing the Road**

Ultimate Bike-Bonding *RiderCourse* (UBBRC)

- **RSL 12 … UBB 2 – Big Box**
- **RSL 13 … UBB 6 – Switchbacks**
- **RSL 14 … UBB 8 – Circuit Training**

Advanced *RiderCourse* (ARC)

- **RSL 15 … ARC 1 – Warm-Up with Basic Control**
- **RSL 16 … ARC 2 – Quick Stops**
- **RSL 17 … ARC 4 – Zigzag**
- **RSL 18 … ARC 5 – Circle Weaves (40'-45'-56')**
- **RSL 19 … ARC 6 – Curve Adjustments**
- **RSL 20 … ARC 7 – Curves: Sweepers and Reverse Turns**
- **RSL 21 … ARC 8 – Decreasing Radius Curves**
- **RSL 22 … ARC 10 – Multiple Curves and Swerves**

Circuit *RiderCourse* (CRC)

- **RSL 23 … CRC – Cornering Circuit**

Red = Bonding (13) Blue = Braking (3) Green = Cornering (7)

Basic *RiderCourse* (BRC)

- **RSL 1 … BRC 3 – Starting and Stopping Drill (as a qualifier, if needed)**
- **RSL 2 … BRC 4 – Shifting and Stopping**
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RETS Intellectual Foundations

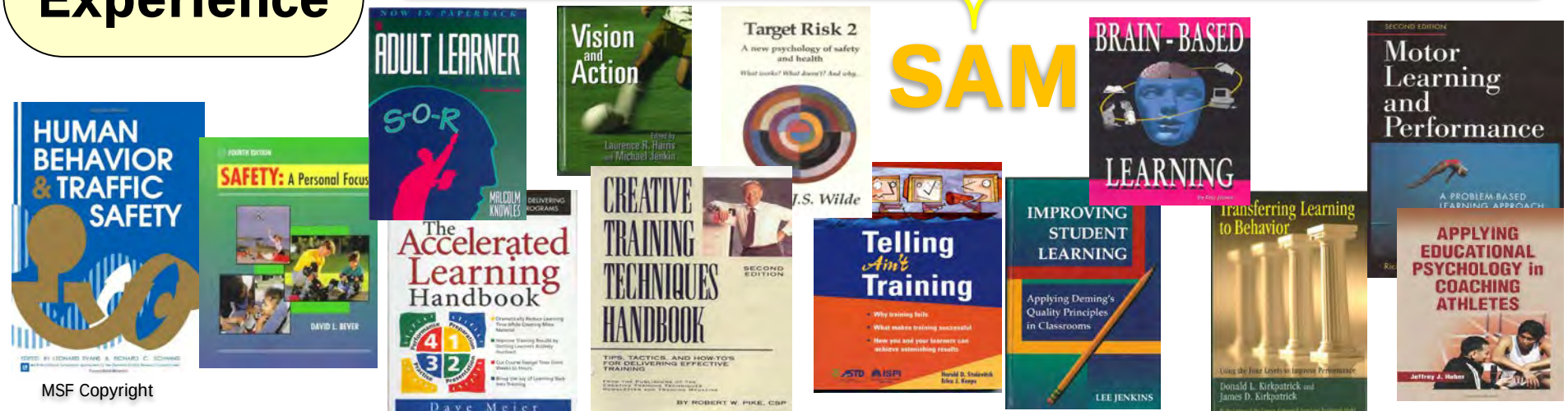
Research, Professional Literature & Experience

Safety & Risk Management Principles

Adult Learning Principles

Motor Skills Development Principles

SAM



Key Safety Principles

1. **Crashes are caused by an interaction of factors.**
2. **Riding is risky.**
3. **Riders need a strategy.**
4. **Riders need the physical skills to manage risks.**
5. **Safe riding is more a skill of the eyes and mind than of the hands and feet.**

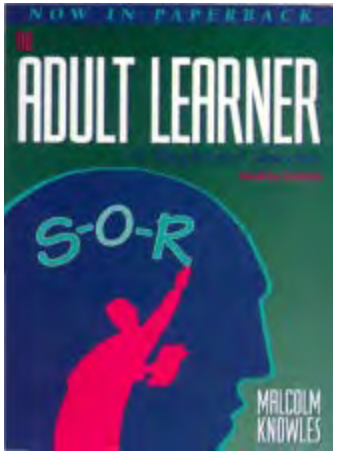
Key Adult Learning Principles

1. Learning is voluntary.

2. Past experience forms the basis for new learning.

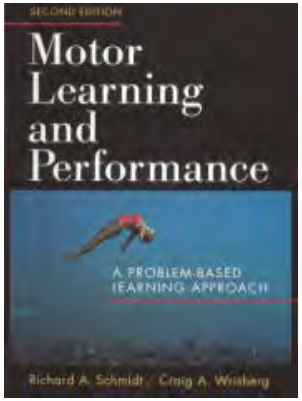
3. Mutual respect, trust, empathy and sincerity are needed.

4. Learning should be high challenge and low threat.



Key Motor Skill Principles

1. Motor skills are best learned gross-to-fine.
2. Motor skills are best developed with emphasis on accuracy first, then speed.
3. Motor skills are best learned with practice that provides feedback (knowledge of results: self and augmented).
4. Too much information, or over-coaching, can inhibit learning.
5. Random and varied practice is beneficial for learners, and is especially true for retention over time.
6. There is a sequence of learning.



Overview of Development

Research

Experience

Professional Literature Reviews

Subject Matter Experts

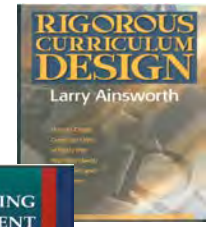
ADDIE

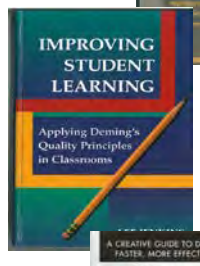
- Analyze
- Design
- Develop
- Implement
- Evaluate

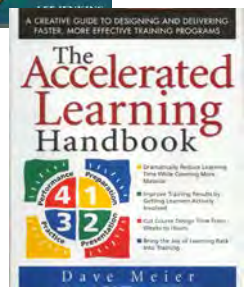
Design, Develop: Pilot Testing, Field Testing

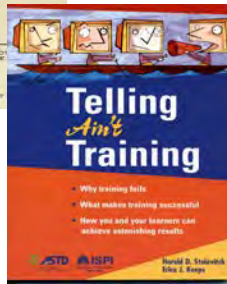
DACUM

Developing A Curriculum

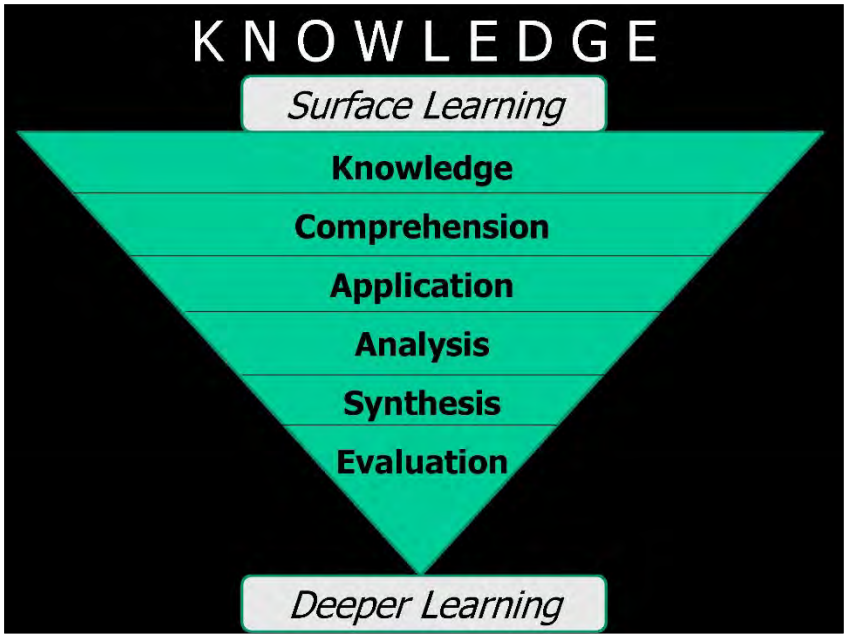


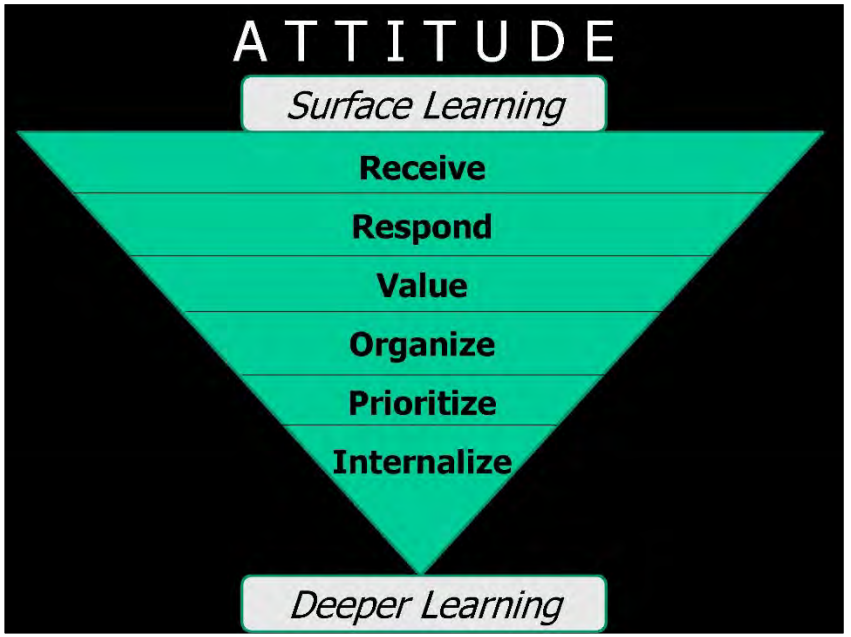


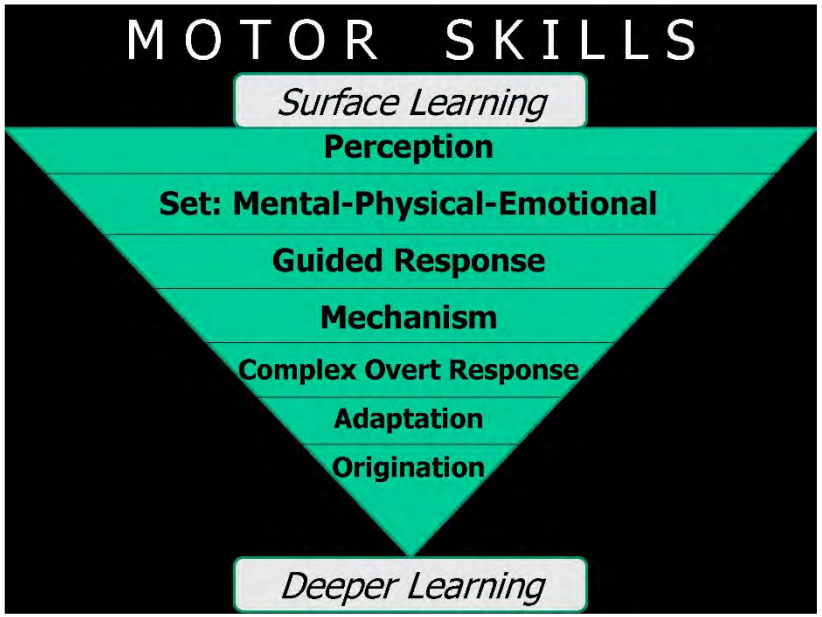




How People Learn: Surface to Deeper







How People Learn: Surface to Deeper

KNOWLEDGE

Surface Learning

Lots of content-based, learner-centered, and brain-based learning via self-assessment and group activities

Meaningful
Active Processing
Relaxed Alertness
Orchestrated Immersion

Deeper Learning

ATTITUDE

Surface Learning

Lots of motorcycling knowledge and experience related to safe, responsible riding with emphasis on personal safety values and priorities

Deeper Learning

MOTOR SKILLS

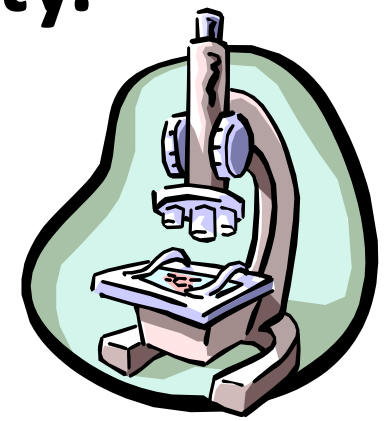
Surface Learning

Simple-to-complex practice toward knowledge of results via first-hand and augmented feedback

Deeper Learning

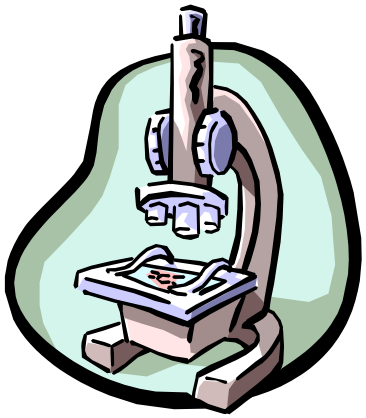
System Quality

Conformance to mission specifications and goal achievement within publicly accepted standards of accountability and integrity.



System Quality

- Participant Satisfaction
- Gains In Knowledge
- Gains In Skill
- Training Itself Is Safe
- Graduate Input After Experience
- RiderCoach Satisfaction



Positive Rider Outcomes
(Program Evaluation)

1. **Reaction** (Likes course and RiderCoaches)
2. **Learning** (Improvement: knowledge, skill, self)
3. **Performance** (Can do: knowledge, skill, attitude)
4. **Behavior** (Actually do: actively minimize risk)
5. **Results** (Less crashing, injuries, fatalities)

360 Rider: *Ride Your Best*

1. Start Right
2. Get Licensed
3. Ride More

New MSF initiative that focuses attention from pre-novice through experienced riders.

Toward a reduction in motorcycle violations, crashes, injuries and fatalities.

A Rider's Learning Journey

Decision to Ride and Formal Training/Education

1. Complete the MSF website survey as a self-check to see if riding is for you.

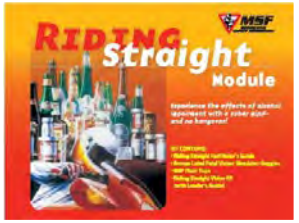
    1. Are you a higher risk-taker than others you know?
    2. Can you ride a bicycle?
    3. Can you drive a manual-shift car?
    4. Do you see well?
    5. Are you mechanically inclined?
    6. Are you safety-minded?
    7. Do you respect machinery and other equipment that has risk?
    8. Can you focus?
    9. Can you handle your car in an emergency?
    10. Are you willing to invest some time in learning to ride the right way before hopping on a bike?

A Rider's Learning Journey

Decision to Ride and Formal Training/Education

1. Complete the MSF website survey as a self-check to see if riding is for you.
2. Complete the Introductory Motorcycle Experience (IME) to confirm desire.
3. Complete the Basic *RiderCourse* (BRC) to get the basics on a training motorcycle. **[LICENSE or ENDORSEMENT]**
4. Complete the BRC2 to get the basics on a personal motorcycle.
5. To build and maintain skill and confidence, experience any or all:
   a. **Rider Skills Lab** (Informal; Menu of 23 skill-building practice exercises).
      - Enroll many times; it could be different each time.
      - May last from 30 minutes to a full day.
   b. Advanced *RiderCourse* (ARC).
   c. Rider Mindset Program (Classroom only).

6. Other.
   a. 3-Wheel Basic *RiderCourse*.
   b. *AdventureBike RiderCourse*.
   c. *Dirtbike School*.
   d. Host-An-Event Kits (Public education programs)



Rider Levels

Level 0 = Self taught and/or rides without a license

Level I = Completes a learn-to-ride course & licensed

Level II = I + Completes additional courses

Level III = II + Reflects on experiences to improve

Level IV = III + Lifelong learner & subconsciously safe

Is the license test enough?

Is a basic rider course enough?

Accomplish deeper and longer-lasting learning?

Session Goals

1. Overview
2. Historical Perspective
3. Developmental Underpinnings
4. **Content of Basic *RiderCourses***
   - **Level I Basic**
   - **Level II Behavioral**
   - **Riding Exercises**

MSF e*Courses*

Basic e*Course* (Level I, e3)

- Content aligns with BRC Rider Handbook
  - 12 of 16 sections
- Video Enhancements
- 1st Person Commentary Rides
- 360° Virtual Reality

Street Strategies e*Course* (Level I, e2)

- Same as above with only 7 sections

Human Factors e*Course* (Level II, e2)

- Behavioral Self-Assessment
- Level II content: Human Factors

Combined Levels I and II

- ePackage 1: Basic with Human Factors (e5)
- ePackage 2: Street Strategies with Human Factors (e4)

BRC Variants

Level I		Level II		Range
5	x	--	x	10
e3	x	5	x	10
5	x	5	x	10
eP1	x	Included	x	11*

*Opening for Rider Skills Lab Exercises

BRC2 Variants

Level I		Level II		Range
6	x	Included	x	5
e2ss	x	3	x	5
eP2	x	Included	x	6

3WBRC Variants

Level I		Level II		Range
8	x	Included	x	6-8
eP1	x	Included	x	7-9*

*Cannot be offered as a one-day *RiderCourse*

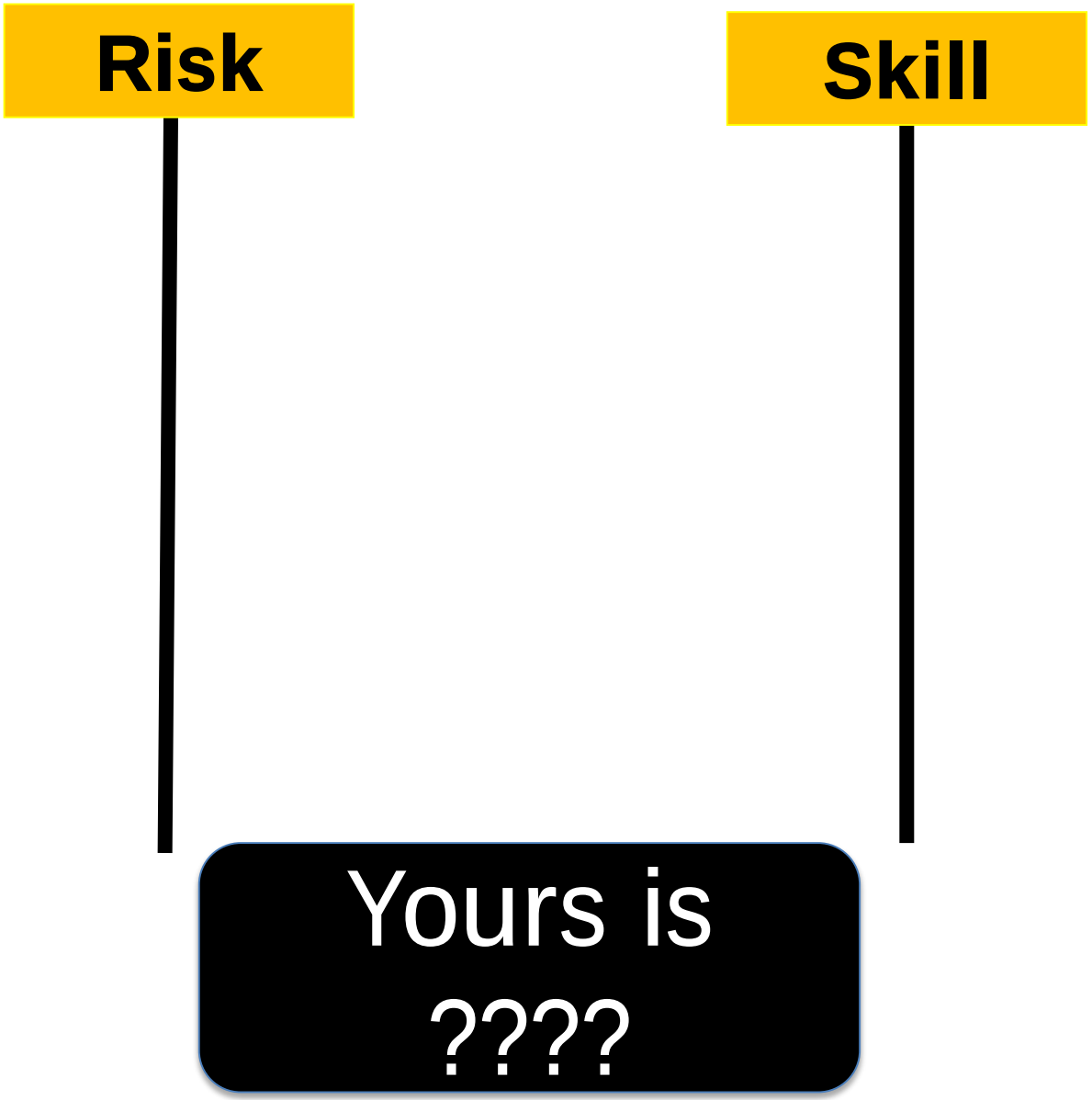
BRC Level I Classroom Topics

MSF Basic e*Course* and Rider Handbook

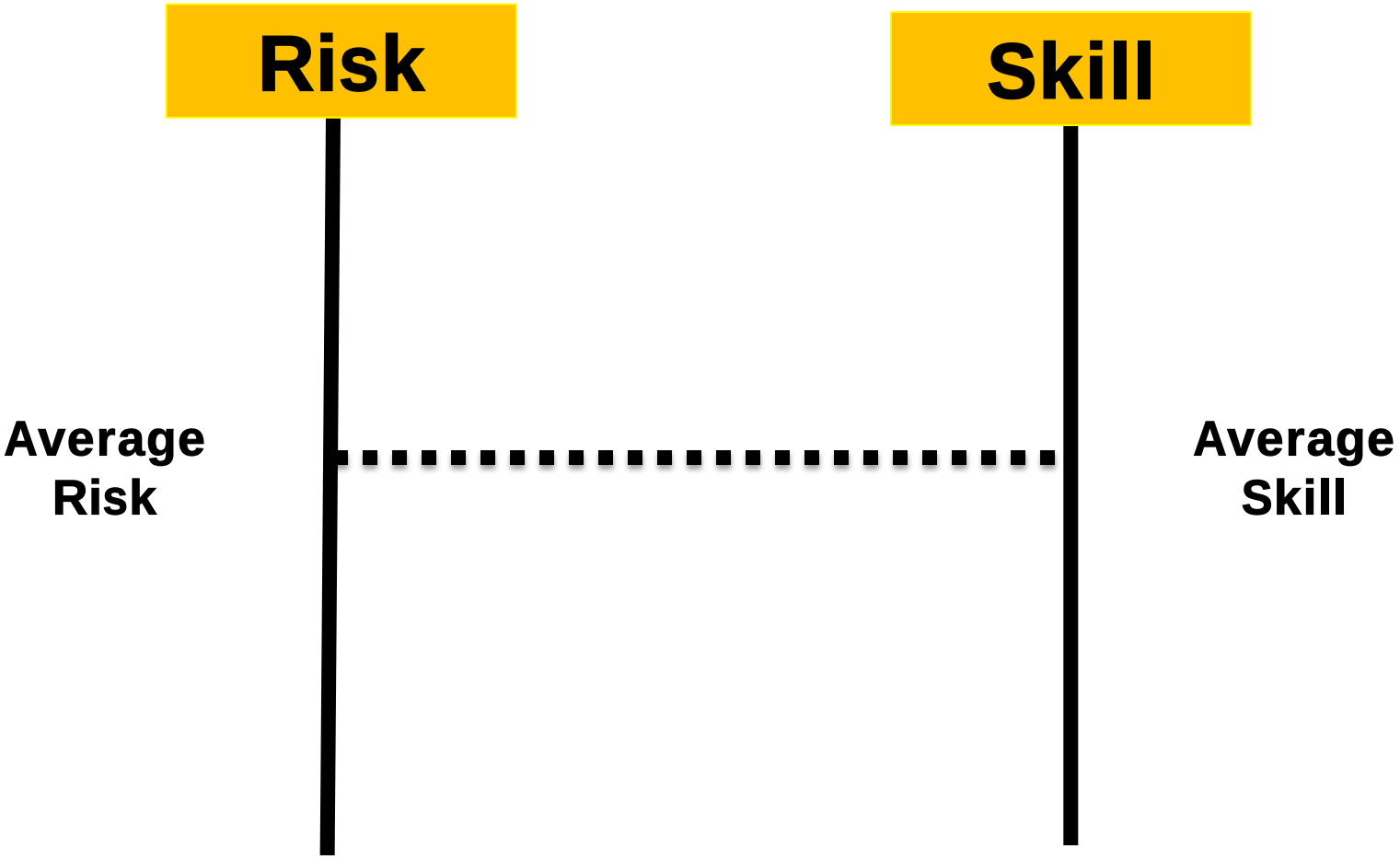
1. Course Introduction
2. Motorcycle Types
3. Controls and Equipment
6. Risk and Riding
7. Basic Street Strategies
8. Strategies for Common Situations
9. Basics for Emergencies
10. Special Riding Situations
11. Rider Impairments
14. Knowledge Test
15. Next Steps
16. Range Preparation

A few big picture highlights

Risk Offset

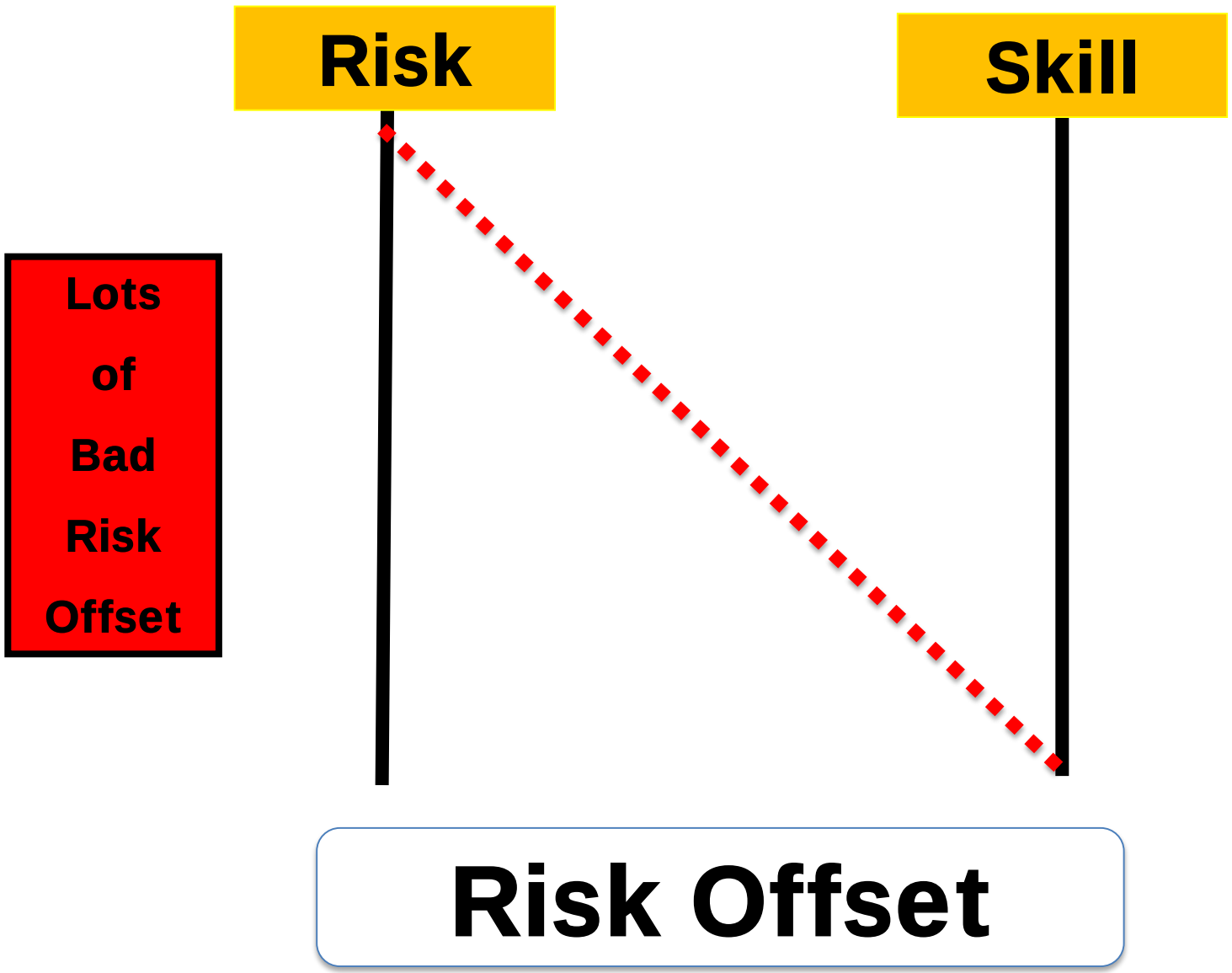


Average Riders

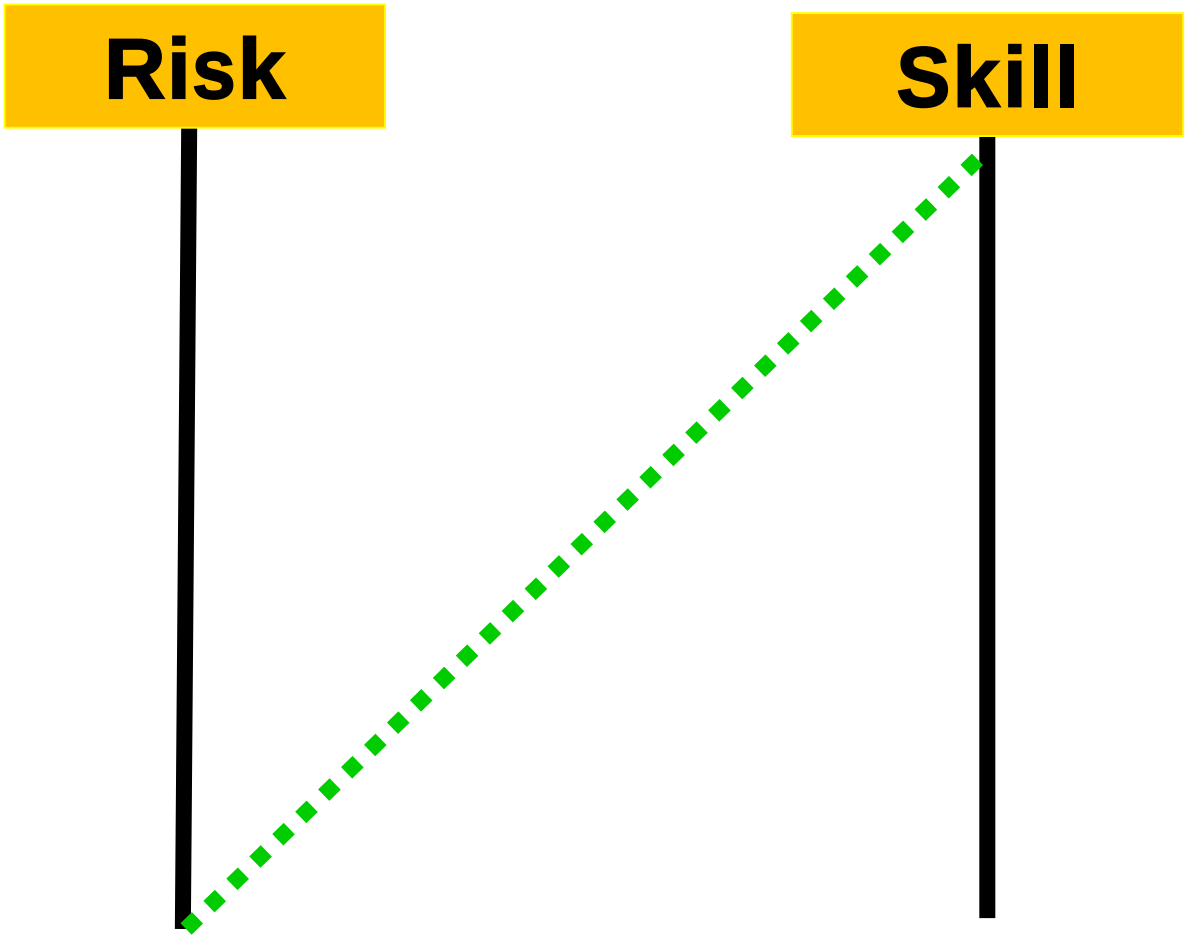


Risk Offset

Inferior Riders



Superior Riders

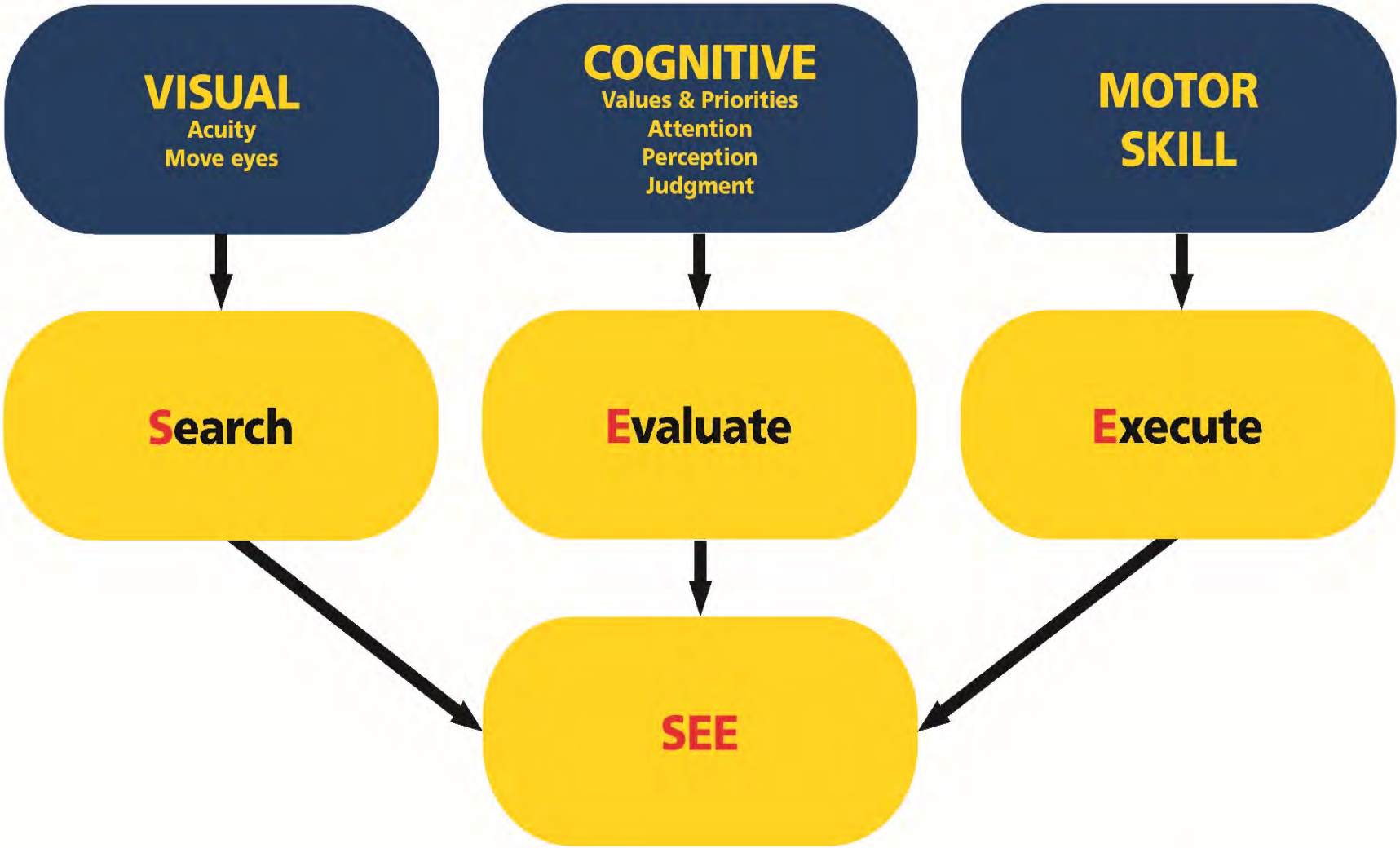


Lots Of Good Risk Offset

Ultimate Goal

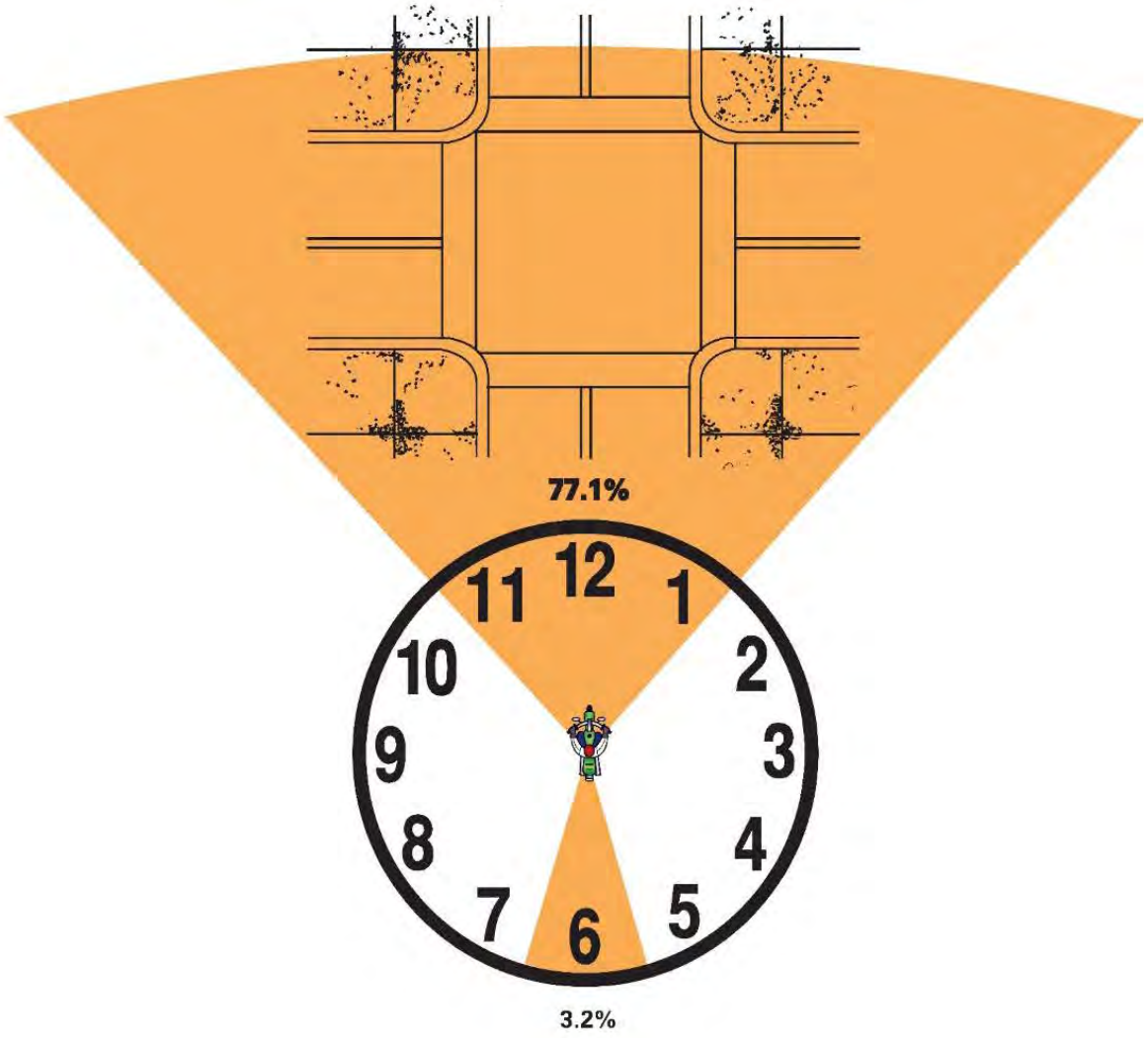
Risk Offset

SEE Chart



CLOCK FACE OF FACTORS

77.1 vs 3.2%



QUICK TIPS: Pretend You Are Invisible

If you ride a motorcycle, you know that out on the road you might as well be transparent, because car drivers often look right past you. They might notice the car or truck behind you, but you, in all your "narrowness," may not register in the visual cortex of even the most alert drivers.

That's why an oncoming car driver might turn left in front of you at an intersection.

Reality

...and what the driver sees

That's also why a driver in the next lane, even if they turn and look in your direction before changing lanes, might veer into your lane.

Reality

...and what the driver sees

Sadly, drivers might behave this way even when they're not distracted by their cell phone, GPS, satellite radio, or other form of in-car infotainment. So how do you compensate for being "invisible" to drivers?

Be as conspicuous as possible. Wear bright clothing and a light-colored helmet. Always have your headlight on, and use your high beam or an aftermarket headlight modulator during the day (where allowed).

Take an approved rider training course. Learn how to maneuver your motorcycle in normal and emergency situations, and practice braking and swerving maneuvers often. Also understand that safe riding depends as much on the mental skills of awareness and judgment as it does on the physical skill of maneuvering the machine; respond early to possible hazards instead of having to react instantly to an emergency.

Pretend you're invisible. If you assume others on the road can't see you, and any car that *can* hit you *will* hit you, you will tend to ride in a hyper-aware mindset and learn to notice every detail in your surroundings. In other words, you will take extra responsibility for your safety and ride defensively. You will vary your speed and lane position to place yourself in the best spot on the road to avoid collisions, plan escape paths in case a driver violates your right-of-way, cover your brake controls to quicken your reactions, use your horn to alert a driver who doesn't notice you, and always ride within your limits.

CAR DRIVERS ONLY SEE WHAT THEY EXPECT TO SEE, AND MOST DON'T EXPECT YOU TO BE PART OF THE TRAFFIC MIX. RIDE WITH THE RIGHT SKILLS, STRATEGIES, AND ATTITUDE. BE SEEN – BE SAFE.

FOOL'S GEAR

HEAD
Considered precious by sensible people; never exposed by the pros. When fully in view, allows immediate identification of unsafe person not using his or hers. Hand out rider education info on sight.

EYES, EARS & FACE
Exposure leads to irrritated eyes, noise-deafening windblast, and distracting impacts from bugs and road debris.

HANDS
Au naturel (not for long). Known to lock into curled position when exposed to cold; not genetically evolved to withstand abrasion.

BARE LIMBS
A phenomenon seen only in riders who think it's other people who crash. Subject to ridicule in riding circles.

FLIP FLOPS
Terminology for what sandals, toes and feet do upon contact with road surfaces, shift lever, brake pedal, or footrests.

BOTTOM LINE
Fool's gear identifies an unaware rider. Learn how to avoid embarrassment, ridicule, and injury, while gaining valuable skills and knowledge by completing an MSF *RiderCourse*SM.

800.446.9227 or msf-usa.org
or contact:

COOL GEAR

HEAD
Most important piece of protective gear a rider can use. Protects against head injury, windblast, cold, and flying objects. Full-face helmet recommended.

FACESHIELD
"Saves face." Any rider who's been hit in the face by stones, insects, or debris can tell you the benefits.

GLOVES
Keep hands comfortable, functional, and protected. There's an infinite variety for all seasons.

JACKET AND PANTS
Long sleeves and sturdy trousers resist abrasion and protect against sunburn, dehydration, or hypothermia. Some riders wear padded gear with "body armor" for more protection. Light colors in the daytime and reflectivity at night make it easier for car drivers to see you.

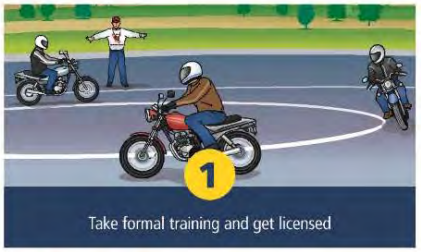
BOOTS
Provide protection against foot and ankle injuries and give you a good grip on footrests or road surfaces.

BOTTOM LINE
Dress for the ride as well as for the crash. Proper riding gear allows you to enjoy the ride in comfort and helps minimize injury.

MSF
MOTORCYCLE SAFETY FOUNDATION®

Seriously Safe Top Ten List

Take formal training and get licensed



Where all gear while riding

Ride unaffected by alcohol or drugs

Assume all others don't see you

Maintain 360° awareness

Create a space cushion all around

Enter intersections and curves with caution

Practice emergency braking and swerving

Safe aggressive riding for the racetrack

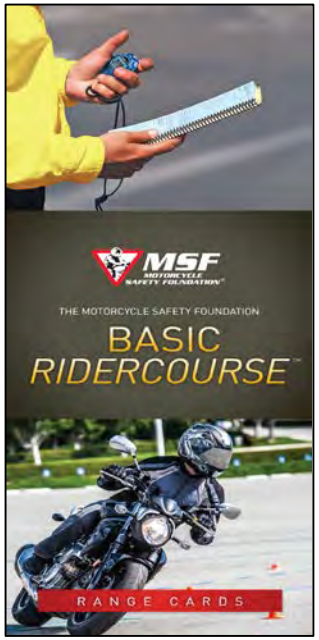
Refresh your skills and knowledge regularly

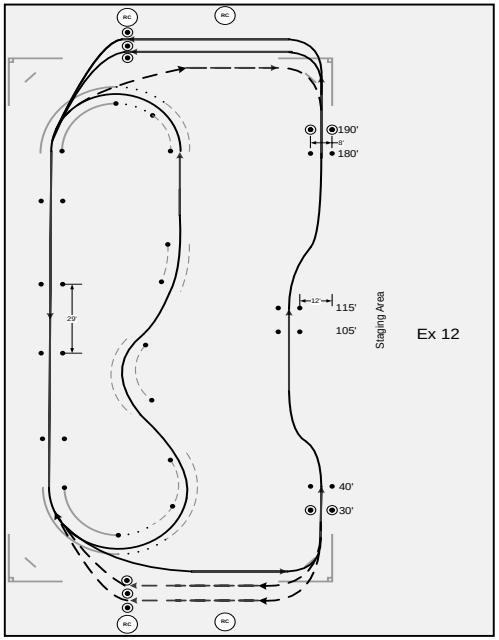
TCLOCS℠ INSPECTION CHECKLIST

T-CLOCS ITEM	WHAT TO CHECK	WHAT TO LOOK FOR	CHECK-OFF	
T-TIRES & WHEELS				
Tires	Condition	Tread depth, wear, weathering, evenly seated, bulges, embedded objects.	Front	Rear
	Air Pressure	Check when cold, adjust to load.	Front	Rear
Wheels	Spokes	Bent, broken, missing, tension, check at top of wheel: "ring" = OK — "thud" = loose spoke.	Front	Rear
	Cast	Cracks, dents.	Front	Rear
	Rims	Out of round/true = 5mm. Spin wheel, index against stationary pointer.	Front	Rear
	Bearings	Grab top and bottom of tire and flex: No freeplay (click) between hub and axle, no growl when spinning.	Front	Rear
	Seals	Cracked, cut or torn, excessive grease on outside, reddish-brown around outside.	Front	Rear
Brakes	Function	Each brake alone keeps bike from rolling.	Front	Rear
	Condition	Check pads and discs for wear.	Front	Rear
C-CONTROLS				
Handlebars	Condition	Bars are straight, turn freely, handgrips and bar ends are secure.		
Levers and Pedal	Condition	Broken, bent, cracked, mounts tight, ball ends on handlebar levers, proper adjustment.		
	Pivots	Lubricated.		
Cables	Condition	Fraying, kinks, lubrication: ends and interior.		
	Routing	No interference or pulling at steering head, suspension, no sharp angles, wire supports in place.		
Hoses	Condition	Cuts, cracks, leaks, bulges, chafing, deterioration.		
	Routing	No interference or pulling at steering head, suspension, no sharp angles, hose supports in place.		
Throttle	Operation	Moves freely, snaps closed, no revving when handlebars are turned.		
L-LIGHTS & ELECTRICS				
Battery	Condition	Terminals; clean and tight, electrolyte level, held down securely.		
	Vent Tube	Not kinked, routed properly, not plugged.		
Headlamp	Condition	Cracks, reflector, mounting and adjustment system.		
	Aim	Height and right/left.		
Tail lamp/brake lamp	Condition	Cracks, clean and tight.		
	Operation	Activates upon front brake/rear brake application.		
Turn signals	Operation	Flashes correctly.	Front left	Front right
			Rear left	Rear right
Switches	Operation	All switches function correctly: engine cut-off, hi/low beam, turn signal.		
Mirrors	Condition	Cracks, clean, tight mounts and swivel joints.		
	Aim	Adjust when seated on bike.		
Lenses & Reflectors	Condition	Cracked, broken, securely mounted, excessive condensation.		
Wiring	Condition	Fraying, chafing, insulation.		
	Routing	Pinched, no interference or pulling at steering head or suspension, wire looms and ties in place, connectors tight, clean.		
O-OIL & OTHER FLUIDS				
Levels	Engine Oil	Check warm on center stand on level ground, dipstick, sight glass.		
	Gear Oil, Shaft Drive	Transmission, rear drive, shaft.		
	Hydraulic Fluid	Brakes, clutch, reservoir or sight glass.		
	Coolant	Reservoir and/or coolant recovery tank — check only when cool.		
	Fuel	Tank or gauge.		
Leaks	Engine Oil	Gaskets, housings, seals.		
	Gear Oil, Shaft Drive	Gaskets, seals, breathers.		
	Hydraulic Fluid	Hoses, master cylinders, calipers.		
	Coolant	Radiator, hoses, tanks, fittings, pipes.		
	Fuel	Lines, fuel valve, carbs.		
C-CHASSIS				
Frame	Condition	Cracks at gussets, accessory mounts, look for paint lifting.		
	Steering-Head Bearings	No detent or tight spots through full travel, raise front wheel, check for play by pulling/pushing forks.		
	Swingarm Bushings	Raise rear wheel, check for play by pushing/pulling swingarm.		
Suspension	Front Forks	Smooth travel, equal air pressure/damping, anti-dive settings.	Left	Right
	Rear Shock(s)	Smooth travel, equal pre-load/air pressure/damping settings, linkage moves freely and is lubricated.	Left	Right
Chain or Belt	Tension	Check at tightest point.		
	Lubrication	Side plates when hot. Note: do not lubricate belts.		
	Sprockets	Teeth not hooked, securely mounted		
Fasteners	Threaded	Tight, missing bolts, nuts.		
	Clips & Cotter Pins	Broken, missing.		
S-STANDS				
Center stand	Condition	Cracks, bent.		
	Retention	Springs in place, tension to hold position.		
Side stand	Condition	Cracks, bent (safety cut-out switch or pad equipped).		
	Retention	Springs in place, tension to hold position.		

BRC Range Exercises and Skill Test

1. Motorcycle Familiarization
2. Using the Friction Zone
3. Starting and Stopping Drill
4. Shifting and Stopping
5. Basic Skill Practice
6. Pressing to Lean and Adjust Lean
7. Stopping More Quickly
8. Stopping Distance Demonstration
9. Limited-Space Maneuvers
10. Stopping in a Curve
11. Curve Judgment
12. Multiple-Curves and Lane Changes
13. Crossing an Obstacle and Swerving
14. Skill Practice





Skill Test

1. Cone Weave and Normal Stop
2. Turn From a Stop and U-Turn
3. Quick Stop
4. Obstacle Swerve
5. Curve

From the BRC RiderCoach Guide

The BRC is more than a simple skills training program. In addressing the basic knowledge, skill, attitude, habits, and values required for riding on the street, the BRC targets the **higher-order behavioral aspects** of safe riding; in other words, what riders do and why they do it. **(p29)**

BRC Level II Behavioral Activities

1. Rider Self-Assessment
2. Constructing an Intersection Crash
3. Constructing a Curve Crash
4. Driving Tendencies
5. Knowing Where to Look and What to Look For
6. Visual Acuity – Peripheral Vision – Useful Field of View – Central Vision – Reaction Time
7. Serious About Safety?
8. Safe vs. Risky Riding Behaviors
9. Key Safety Concepts (Situational Awareness)
10. Values, Judgment, and Choices

Rider Self-Assessment

For each of the six items below, place a number from 1 (low) to 10 (high) in the space provided for each item for yourself as a motorcyclist.

Item	1	2	3	4	5	6	7	8	9	10	11	12
Motorcyclist knowledge												
Motorcyclist skill												
Perceptual ability in traffic												
Cooperation in traffic												
It will happen to me (*It* being a crash)												
Emotional commitment to riding safely												

Activity 1. Pre-Riding Quiz

MSF MOTORCYCLE SAFETY FOUNDATION

PRE-RIDING QUIZ **A-1**

Name _____ Date _____

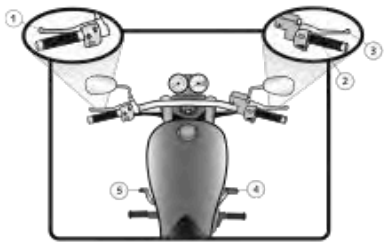
Directions: Respond to the following questions and statements.

1. I am able to ride a bicycle. Yes ___ No ___
2. T-CLOCS refers to:
   a. A pre-ride inspection routine.

Key reminders prior to the first range exercise.

Then off to the range to acquire physical skills for riding a motorcycle.

7. When stopping, squaring the bars keeps the motorcycle upright and easier to hold up. Yes ___ No ___
8. From the image below, place the number of the control in the space provided.



Shift lever ___
Rear brake pedal ___
Throttle ___
Front brake lever ___
Clutch lever ___

Activity 2. Construct a Crash Select Factors – Intersection

MSF MOTORCYCLE SAFETY FOUNDATION

SELECT FACTORS – AT AN INTERSECTION

A-2

Interaction of factors.

One factor is enough to make a difference.

There are many more factors than these.

11. High BAC	11. Overloaded	11. Night
12. Affected by medication	12. Loose tank bag	12. Manhole covers in path
13. Showing off	13. No turn signal	13. Raining
14. Trying to beat a yellow light	14. Bent handlebars	14. Slick surface
15. Looking at sidewalk activity	15. No mirrors	15. Foggy conditions

Note: Crashes usually consist of an interaction of factors. Eliminating just one factor has the potential to prevent a crash. Sometimes only one factor is enough to produce a crash. There are many more than these 45 factors and potential combinations number in the thousands. A strategy to reduce risk must be ever-present.

Activity 3. Construct a Crash Select Factors – In a Curve

MSF MOTORCYCLE SAFETY FOUNDATION

SELECT FACTORS – IN A CURVE

A-3

Interaction of factors.

One factor is enough to make a difference.

There are many more factors than these.

11. Distracted	11. No mirrors	11. Night
12. Looking at the scenery	12. Bent handlebars	12. No painted lines
13. Affected by medication	13. Overloaded	13. Raining
14. Showing off	14. Worn rear brakes	14. Unmarked decreasing-radius curve
15. Trying to keep up with others	15. Brake fade on downhill grade	15. Foggy conditions

Note: Crashes usually consist of an interaction of factors. Eliminating just one factor has the potential to prevent a crash. Sometimes only one factor is enough to produce a crash. There are many more than these 45 factors and potential combinations number in the thousands. A strategy to reduce risk must be ever-present.

Activity 4. Driving Tendencies

Human factor tendencies: Toward risk or toward safety?

Conclusion

We must honestly self-assess our personal approach to safety.

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DRIVING TENDENCIES A-4

Directions: Place an X along the line in a position that best describes your regular car driving tendencies. Imagine how someone who knows you well might score you.

Hurried	Relaxed
Impulsive	Steady
Overconfident	Confident
Easily Distracted	Focused
Rebellious	Compliant
Non-conformist	Cooperative
Disrespectful	Respectful
Reckless	Forethought
Arrogant	Humble
Risky Thrill Seeker	Safe Thrill Seeker
Irresponsible	Responsible
Stressed	Calm

People tend to drive as they live, and most drivers rate themselves as above average.
Drivers who are generally safety-minded when driving will likely be safety-minded when riding.
Warning: A temporary or momentary lapse to the left side can have negative results.

Rider Quiz

15. When dealing with glare from oncoming headlights, it's best to:

A. Focus on the lights

B. Blink quickly until the light source passes

C. Look at the right side of the roadway surface

Rider Quiz

16. Inattentional blindness refers to:

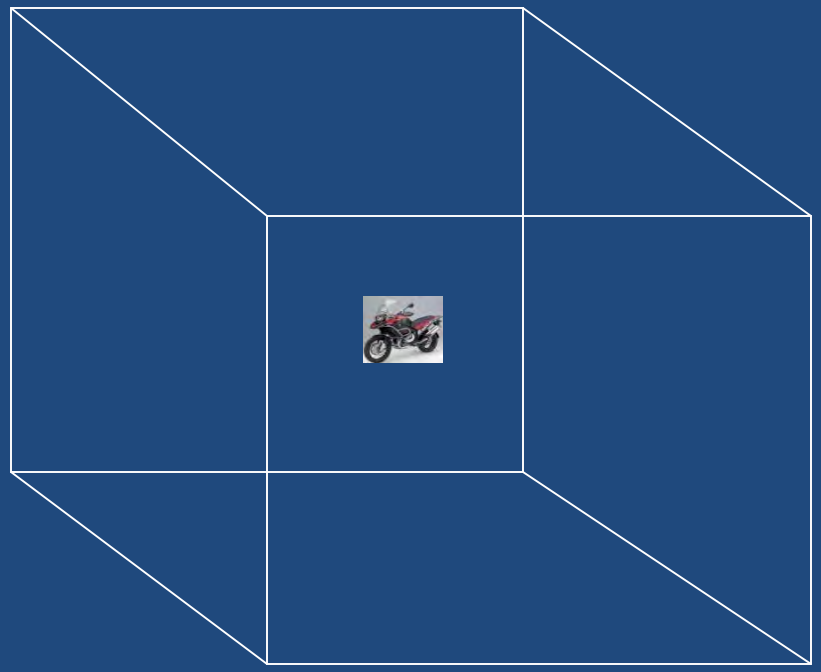
A. Looking but not seeing

B. Night blindness

C. Dozing off when riding

Front lower right surface?

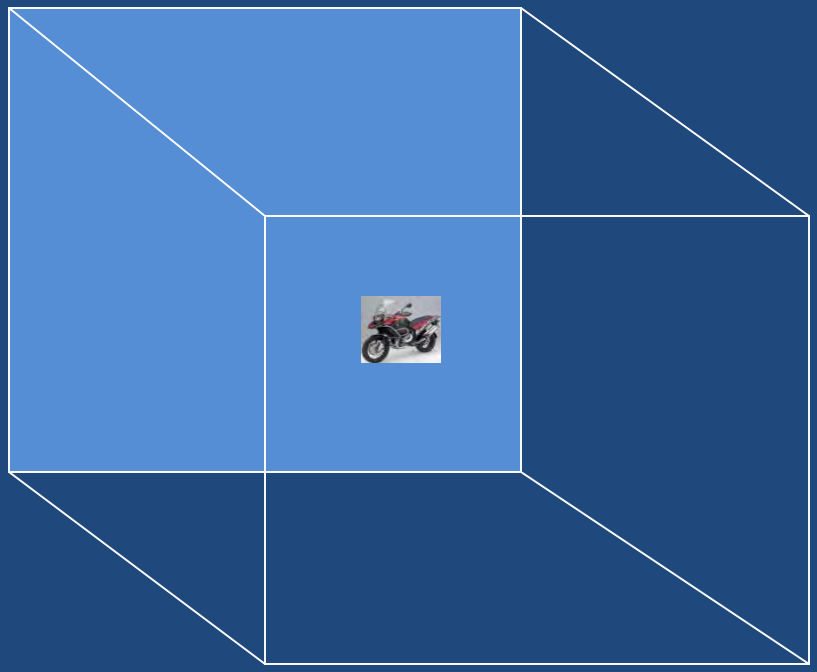
Back upper left surface?



Front upper left surface?

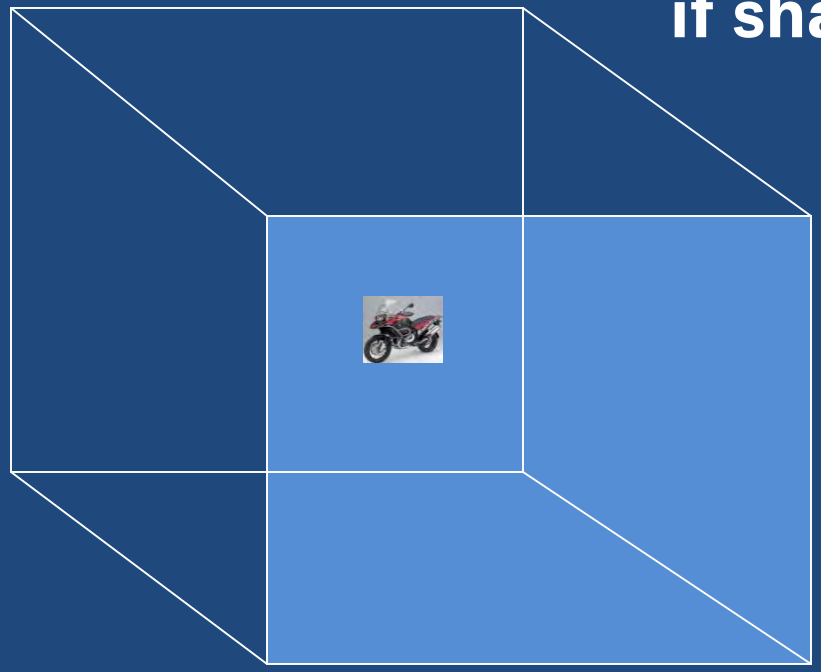
Back lower right surface?

Front lower right surface if shaded area is front.



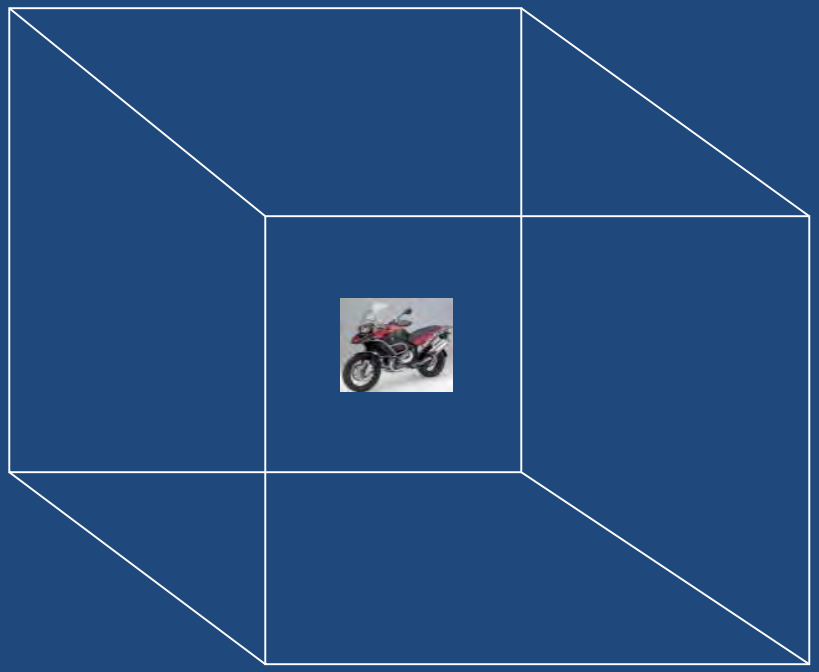
Back lower right surface if shaded area is back.

Back upper left surface
if shaded area is back.



Front upper left surface
if shaded area is front.

Where to look ... What to look for



Conclusion

For an identical traffic situation, one operator may not see a problem when another perceives a collision trap.

SEE – The Strategy

Improving Perception

VISUAL
Acuity
Far-Near & Side-to-Side

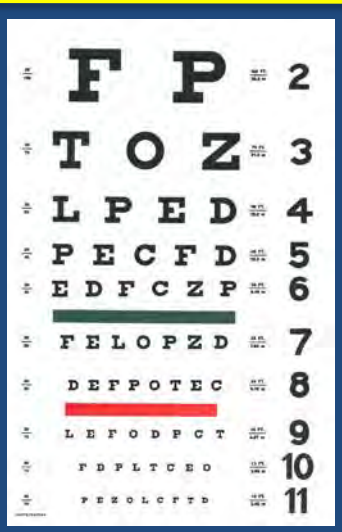
COGNITIVE
Attention
Judgment
Priority

MOTOR SKILL
Smooth
Well-timed

Search **Evaluate** **Execute**

SEE

Activity 6a. Visual Acuity



Conclusion

To perceive traps and escape paths, we must be able to see clearly.

MSF MOTORCYCLE SAFETY FOUNDATION

VISION AND REACTION TIME SCORE SHEET A-6

(NON-MEDICAL LEARNING ACTIVITY)

Date & Initials _____

Visual Acuity

Visual acuity refers to clearness of vision. Normal visual acuity is commonly referred to as 20/20, meaning you see at 20 feet what a person with normal vision sees at 20 feet. This number is used for both eyes or for each eye individually. If the second number is higher, like 20/40, this indicates weaker visual acuity (you see at 20 feet what a person with 20/20 visual acuity can see at 40 feet). If the second number is lower, like 20/15, this indicates better-than-average visual acuity (you see at 20 feet what a person with 20/20 visual acuity sees at 15 feet).

Visual acuity: **Both eyes:** _____ **Left eye:** _____ **Right eye:** _____

Peripheral Vision

Peripheral vision refers to how well you see to the sides while looking straight ahead. While central, clear vision is a three-degree cone (and our eyes move so quickly our surroundings mostly look in focus), peripheral vision can exceed 90 degrees per side.

Peripheral vision (first see the card): **Either side** _____
Useful field of view (see color of card): **Either side** _____
Central vision (see actual card): **Either side** _____

(Less than 140 degrees of total peripheral vision is considered tunnel vision.)

Reaction Time

Simple reaction time refers to how quickly a person responds to a stimulus that is anticipated. Reaction time varies among individuals and is affected by perception time. One way to check a person's general reaction time is to catch a ruler dropped between two fingers. Where the ruler is caught indicates reaction time. Try 10 times to get 10 scores.
The average catch is between the 5- and 7-inch marks.

Score for each catch: _____ _____ _____ _____ _____
_____ _____ _____ _____ _____

My average: _____ (Factors: age, fatigue, priority, and distraction)

What do you see?

You are on your motorcycle and observe this...

#1


CENTER
LANE
ONLY

1) The center lane on this road is used for:

a. Passing vehicles.

b. Making left turns from both directions.

c. Protected left turns.

1) The center lane on this road is used for:

a. Passing vehicles.

b. Making left turns from both directions.

c. Protected left turns.


CENTER
LANE
ONLY

#2

2) The chevron alignment signs inform you that:

a. The curve ahead has a decreasing radius.

b. The curve ahead is rather sharp.

c. There is no shoulder for escape.

2) The chevron alignment signs inform you that:

a. The curve ahead has a decreasing radius.

b. The curve ahead is rather sharp.

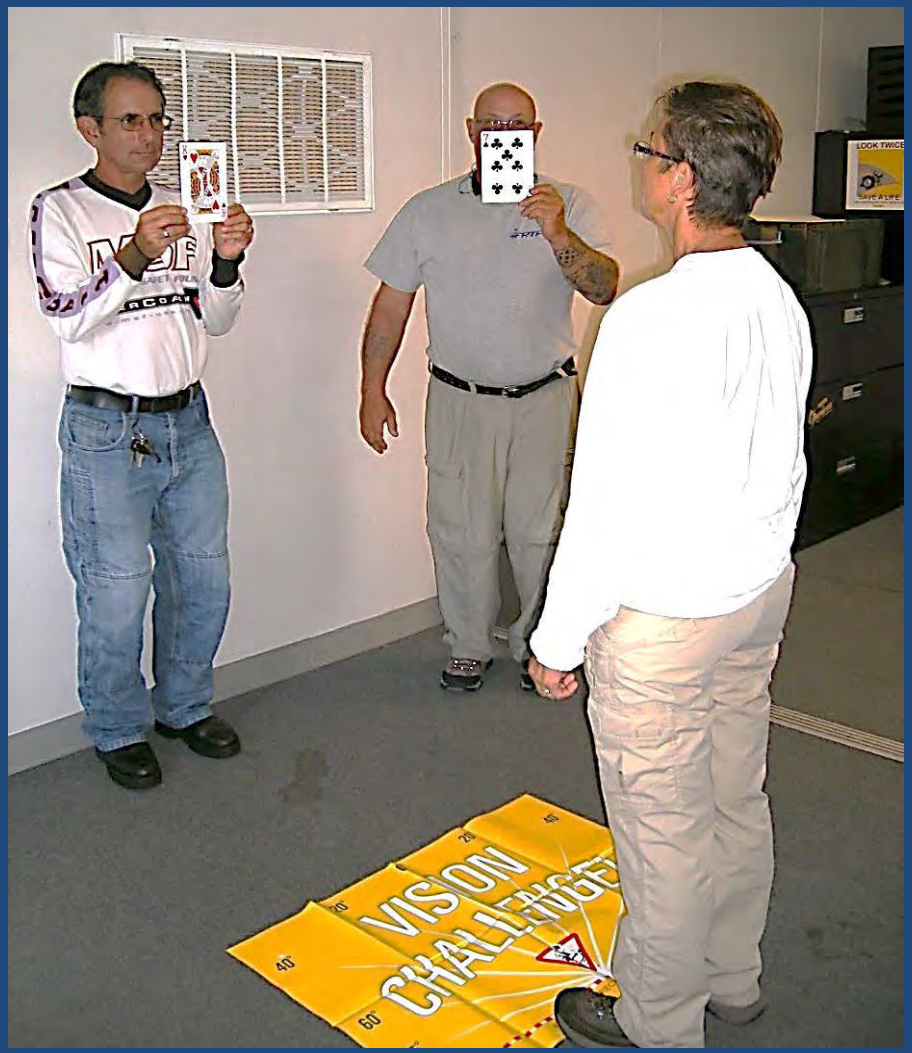
c. There is no shoulder for escape.

Activity 6b: Side / Peripheral Vision

(use A-6 to record scores)

With floor mat and cards, check:

1. **Peripheral vision**
2. **Useful field of view**
3. **Central vision**




VISION AND REACTION TIME SCORE SHEET

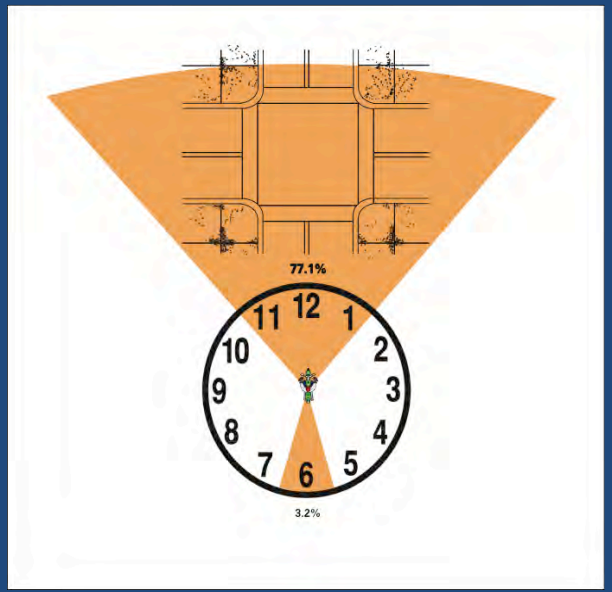
A-6

(NON-MEMORY, LEARNING ACTIVITY)

Visual Acuity

Peripheral Vision

Reaction Time

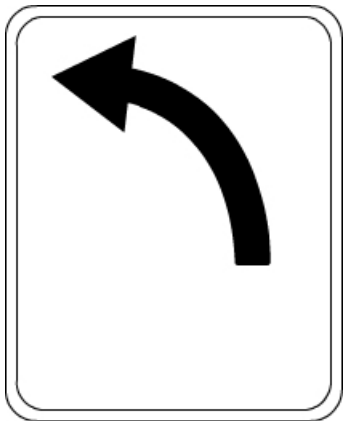


Let’s see how fast our eyes and mind can work...

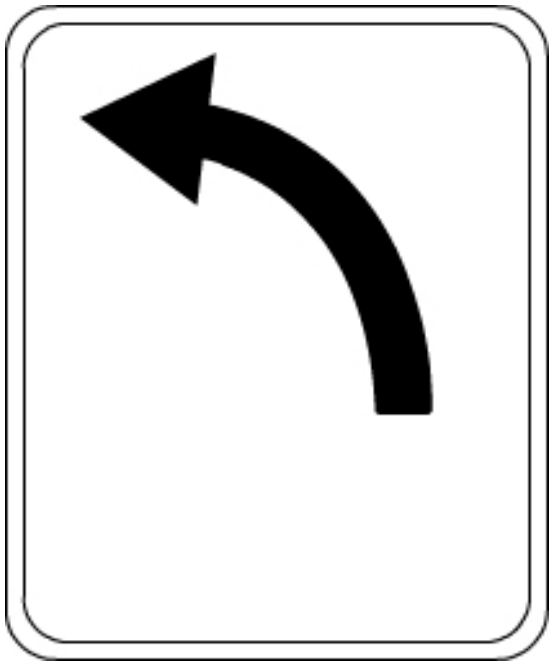
In your groups, see if you agree on the meaning of these signs.

They will appear for only a fraction of a second.

1 Sign



Left Turn Only



Next Sign

Sharp Left Turn

Next Sign

No Right Turn

2 signs

Winding Road

No U-turn

Next 2 signs

Sharp Right Turn

Narrow Bridge

Last 2 signs

Divided Highway Ends

Lane Added

Divided Highway Ends

Lane Added

Conclusion

See how quickly the eyes and mind can work if safety is a conscious priority!

Search & Evaluate for a Collision Trap

Instructions:

1. **A situation will show for four seconds.**
2. **The situation will be shown again for review.**

You are on your motorcycle traveling down a roadway and observe this...

Trap 1


FORD
BRONCO

Traffic Controls & Roadway Features **Highway Users** **Surface Conditions** **Escape Paths**

Trap 2


24 HR FOOD
SPEED LIMIT 45
SPINNAKER VILLAGE III
RIGHT LANE MUST TURN RIGHT
RIGHT LANE MUST TURN RIGHT
LOW 2
(702) 304-1347

Traffic Controls & Roadway Features **Highway Users** **Surface Conditions** **Escape Paths**

Conclusion

The things we teach ourselves to look for and make a priority, we perceive first. We must see traps and escape paths.

Note: If we fail to see what is plainly visible, we have what is called *inattentional blindness (the brain is not seeing)*.

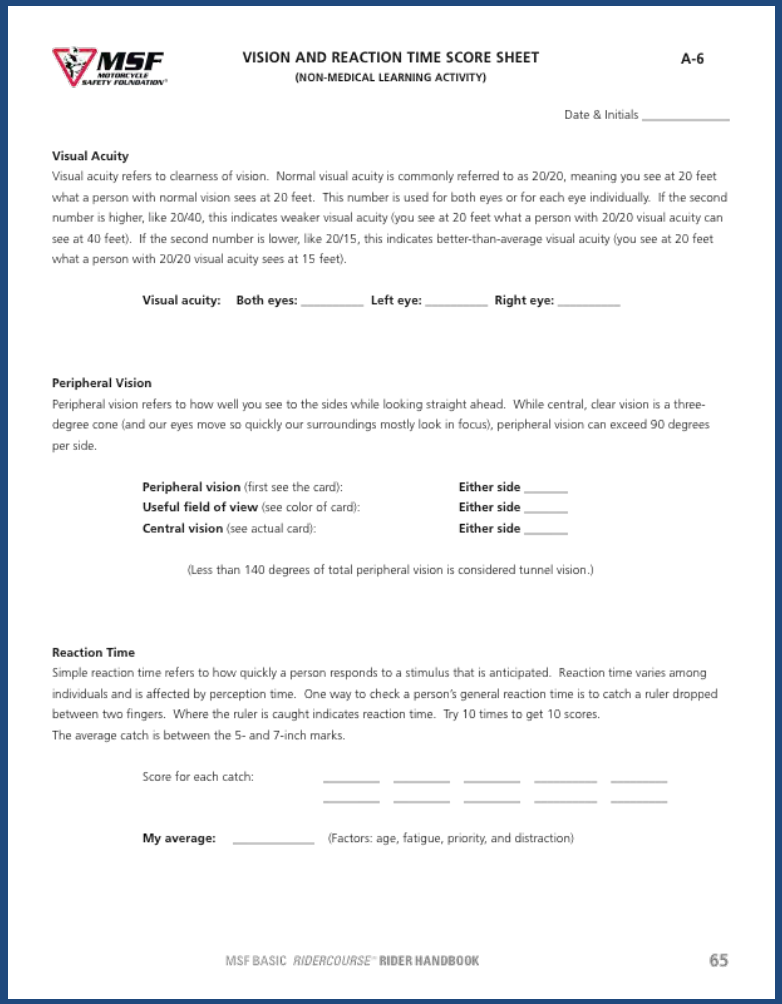
Other highway users may have it and not see us!

Activity 6c. Reaction Time

Follow RiderCoach Instructions.

Conclusion

To be a better decision-maker (survivor), it helps to consider reaction time.



MSF MOTORCYCLE SAFETY FOUNDATION

VISION AND REACTION TIME SCORE SHEET A-6
(NON-MEDICAL LEARNING ACTIVITY)

Date & Initials _____

Visual Acuity
Visual acuity refers to clearness of vision. Normal visual acuity is commonly referred to as 20/20, meaning you see at 20 feet what a person with normal vision sees at 20 feet. This number is used for both eyes or for each eye individually. If the second number is higher, like 20/40, this indicates weaker visual acuity (you see at 20 feet what a person with 20/20 visual acuity can see at 40 feet). If the second number is lower, like 20/15, this indicates better-than-average visual acuity (you see at 20 feet what a person with 20/20 visual acuity sees at 15 feet).

Visual acuity: **Both eyes:** _____ **Left eye:** _____ **Right eye:** _____

Peripheral Vision
Peripheral vision refers to how well you see to the sides while looking straight ahead. While central, clear vision is a three-degree cone (and our eyes move so quickly our surroundings mostly look in focus), peripheral vision can exceed 90 degrees per side.

Peripheral vision (first see the card): **Either side** _____
Useful field of view (see color of card): **Either side** _____
Central vision (see actual card): **Either side** _____

(Less than 140 degrees of total peripheral vision is considered tunnel vision.)

Reaction Time
Simple reaction time refers to how quickly a person responds to a stimulus that is anticipated. Reaction time varies among individuals and is affected by perception time. One way to check a person's general reaction time is to catch a ruler dropped between two fingers. Where the ruler is caught indicates reaction time. Try 10 times to get 10 scores.
The average catch is between the 5- and 7-inch marks.

Score for each catch: _____ _____ _____ _____ _____
_____ _____ _____ _____ _____

My average: _____ (Factors: age, fatigue, priority, and distraction)

MSF BASIC *RIDERCOURSE*™ RIDER HANDBOOK 65

SERIOUS ABOUT SAFETY?

As a car or truck driver, respond to the following statements.

1.	I signal for turns and lane changes.	___ Yes	___ Sometimes	___ No
2.	I stop completely at stop signs.	___ Yes	___ Sometimes	___ No
3.	I stop completely before turning right on red.	___ Yes	___ Sometimes	___ No
4.	I make decisions based on safety.	___ Yes	___ Sometimes	___ No
5.	Others consider me a courteous driver.	___ Yes	___ Sometimes	___ No
6.	I turn my head to check blind spots for lane changes.	___ Yes	___ Sometimes	___ No
7.	I buckle up.	___ Yes	___ Sometimes	___ No
8.	I honk at bad drivers.	___ Yes	___ Sometimes	___ No
9.	I use my cell phone to talk or text.	___ Yes	___ Sometimes	___ No
10.	I need to brake hard or swerve when driving normally.	___ Yes	___ Sometimes	___ No
11.	I am in a hurry when I drive.	___ Yes	___ Sometimes	___ No
12.	My friends crash and get tickets.	___ Yes	___ Sometimes	___ No

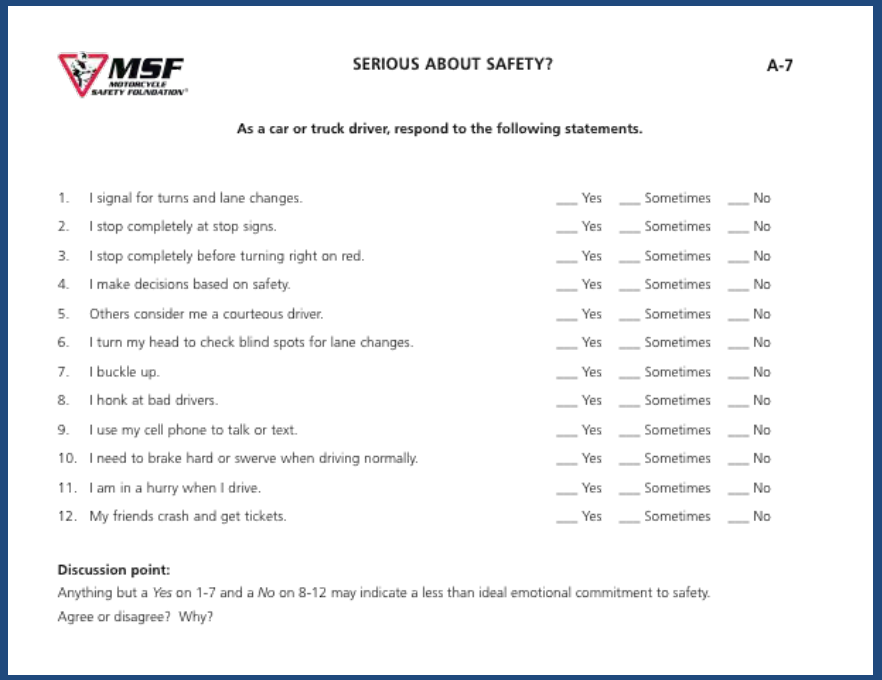
Discussion point:

Anything but a *Yes* on 1-7 and a *No* on 8-12 may indicate a less than ideal emotional commitment to safety.

Agree or disagree? Why?

Activity 7. Serious About Safety?

Follow RiderCoach Instructions.



MSF MOTORCYCLE SAFETY FOUNDATION

SERIOUS ABOUT SAFETY? A-7

As a car or truck driver, respond to the following statements.

1.	I signal for turns and lane changes.	___ Yes	___ Sometimes	___ No
2.	I stop completely at stop signs.	___ Yes	___ Sometimes	___ No
3.	I stop completely before turning right on red.	___ Yes	___ Sometimes	___ No
4.	I make decisions based on safety.	___ Yes	___ Sometimes	___ No
5.	Others consider me a courteous driver.	___ Yes	___ Sometimes	___ No
6.	I turn my head to check blind spots for lane changes.	___ Yes	___ Sometimes	___ No
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11.	I am in a hurry when I drive.	___ Yes	___ Sometimes	___ No
12.	My friends crash and get tickets.	___ Yes	___ Sometimes	___ No

Discussion point:
Anything but a *Yes* on 1-7 and a *No* on 8-12 may indicate a less than ideal emotional commitment to safety.
Agree or disagree? Why?

Conclusion

What we say we do and what we actually do may differ.

Rider Self-Assessment Wall Chart….

Emotional Commitment to Safety?

Section 12. Select Topics

1. **How does a person earn a motorcycle license?**
2. **What personal riding gear is required for riding?**
3. **What are the state requirements for motorcycles?**
4. **What is the minimum insurance requirement?**
5. **What are the consequences of a DWI conviction?**

Fatal Vision® Simulation Goggles

Follow RiderCoach Instructions

Conclusion

Alcohol affects behavior and harms the ability to Search-Evaluate-Execute.

Activity 8. Safe Riding vs Risky Riding

Seventeen Riding Behaviors

Conclusion

It is often easy to figure out what is risky and what is safe.

MSF MOTORCYCLE SAFETY FOUNDATION

SAFE RIDING VERSUS RISKY RIDING A-8

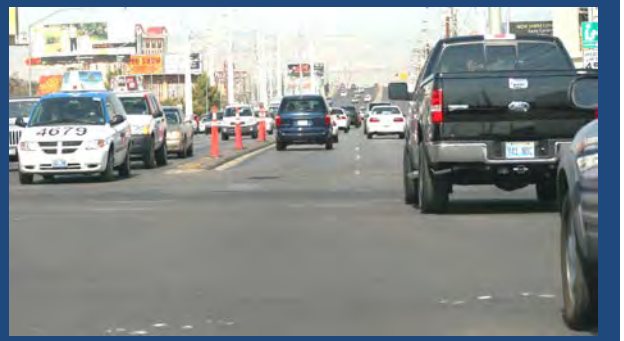
In some ways, we have a voice that informs us as to what is safe and what is not. For each of the motorcycle riding behaviors below, place in the space provided an **S** for the safety-related voice or an **R** for the risk-related voice.

1. _____ Take a curve at the suggested advisory speed.
2. _____ Keep up with faster-riding friends in curves.
3. _____ Ride at the speed limit on a freeway.
4. _____ Stop beyond the stop line at an urban intersection.
5. _____ Aggressively challenge a decreasing radius curve.
6. _____ Ride at 72 mph on a freeway where speed limit is 65 mph.
7. _____ Honk at a driver who cuts you off in traffic.
8. _____ Use a following distance of less than two seconds.
9. _____ Pass in a no-passing zone.
10. _____ Ride at a speed where traffic builds up behind you.
11. _____ Ride past a blind intersection without slowing.
12. _____ Use turn signals for turns and lane changes.
13. _____ Roll through a stop sign.
14. _____ Use high beams when an oncoming driver doesn't dim theirs.
15. _____ Park in a handicapped parking space.
16. _____ Use the street like a personal race track.
17. _____ Ride while thinking about work issues.

We become what we think about, and what we think about is shown by our behavior. Although there may be no specific answer for the voice that dominates in the above behaviors, a rider likely knows the difference between proper and improper choices.

Activity 9. Key Safety Concepts

Six Curves, Turns & Intersections



MSF MOTORCYCLE SAFETY FOUNDATION

KEY SAFETY CONCEPTS A-9

Situational Awareness 1: Curve

Group 1: What key factors could interact to form a collision trap or provide an escape path?
Group 2: In what way do the 2-4-12 second visual leads apply?
Group 3: How does search-setup-smooth apply?

Situational Awareness 2: Sharp Turn

Group 2: What key factors could interact to form a collision trap or provide an escape path?
Group 3: In what way do the 2-4-12 second visual leads apply?
Group 1: How does search-setup-smooth apply?

Situational Awareness 3: Curve

Group 3: What key factors could interact to form a collision trap or provide an escape path?
Group 1: In what way do the 2-4-12 second visual leads apply?
Group 2: How does search-setup-smooth apply?

Situational Awareness 4: Intersection

Group 1: What key factors could interact to form a collision trap or provide an escape path?
Group 2: In what way do the 2-4-12 second visual leads apply?
Group 3: How much of a time-and-space safety margin exists?

Situational Awareness 5: Intersection

Group 2: What key factors could interact to form a collision trap or provide an escape path?
Group 3: In what way do the 2-4-12 second visual leads apply?
Group 1: How much of a time-and-space safety margin exists?

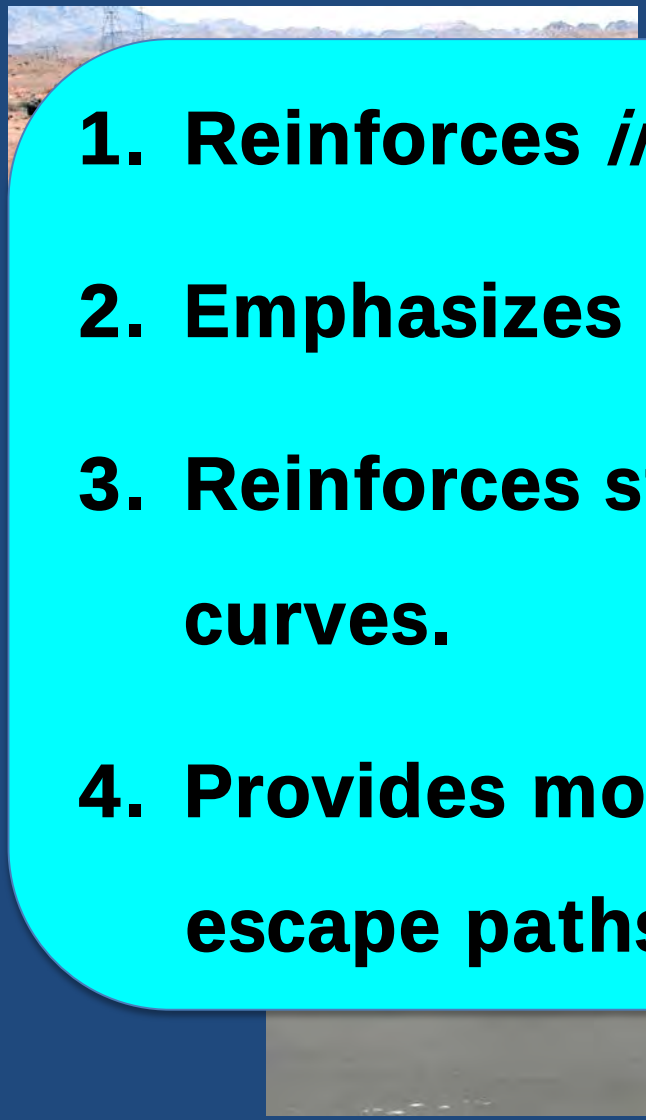
Situational Awareness 6: Curve

Group 3: What key factors could interact to form a collision trap or provide an escape path?
Group 1: In what way do the 2-4-12 second visual leads apply?
Group 2: How does search-setup-smooth apply?

TRAFFIC CONTROLS & ROADWAY FEATURES ROADWAY USERS SURFACE CONDITIONS ESCAPE PATHS

Activity 9. Key Safety Concepts

Six Curves, Turns & Intersections



MSF MOTORCYCLE SAFETY FOUNDATION

KEY SAFETY CONCEPTS A-9

1. **Reinforces *interaction of factors*.**
2. **Emphasizes 2-4-12 second eye lead times.**
3. **Reinforces strategies for intersections & curves.**
4. **Provides more examples of traps and escape paths.**

TRAFFIC CONTROLS & ROADWAY FEATURES ROADWAY USERS SURFACE CONDITIONS ESCAPE PATHS

Situational Awareness 1

Curve

Situational Awareness 2


Sharp Turn
15
15
TOW-AWAY
NO STOPPING
IN THIS
AREA

Situational Awareness 3

Curve

Conclusion

Our executive function,

what we make our brain value,

can have us stay alert and

SEE for Safety **on every ride.**

Activity 10. Values, Judgment, and Choices

Nine riding behaviors: <u>Why</u> riders do or don't do them

MSF MOTORCYCLE SAFETY FOUNDATION

VALUES, JUDGMENT, AND CHOICES A-10

Directions: For each behavior, note some reasons for a rider's choice. Then complete the statement in the last column.

Rider Behavior	Reasons to do it	Reasons not to do it	My choice is to
1. Wear a quality helmet			
2. We ad			
3. Be cu			
4. Rid			
5. Rid			
6. Be			
7. Stunt in			
8. Be affected by peers			
9. Take formal training			

Provides self-assessment of important safety messages.

Central Thread of MSF RETS

Human Factors: Transcending Simple Skills Training

Personality – Attitude – Perception – Motivation
Attention – Knowledge – Skill – Judgment – Values

1. **What is the primary cause of rider crashes?**
   - **Interaction of factors**
2. **What is a good rider?**
   - **One who reduces contributing factors**
3. **How does a good rider reduce factors?**
   - **Applies a strategy: S.E.E. (Search-Evaluate-Execute)**
4. **How long does it take to reduce risk?**
   - **It's a decision away!**
5. **What is the primary challenge to be safe and responsible?**
   - **Self-control: Choosing to have plenty of good risk offset and being mindful of collision traps**

Central Thread of MSF RETS

Human Factors: Transcending Simple Skills Training

Personality – Attitude – Perception – Motivation
Attention – Knowledge – Skill – Judgment – Values

1. **What is the primary cause of rider crashes?**
   - **Interaction of factors**
2. **What is a good rider?**
   - **One who reduces contributing factors**
3. **How does a good rider reduce factors?**
   - **Applies a strategy: S.E.E. (Search-Evaluate-Execute)**

1-3: Perception

Central Thread of MSF RETS

Human Factors: Transcending Simple Skills Training

Personality – Attitude – Perception – Motivation
Attention – Knowledge – Skill – Judgment – Values

4-5: Executive Function

4. **How long does it take to reduce risk?**
   - **It's a decision away!**

5. **What is the primary challenge to be safe and responsible?**
   - **Self-control: Choosing to have plenty of good risk offset and being mindful of collision traps**

Session Goals

1. Overview
2. Historical Perspective
3. Developmental Underpinnings
4. Content of Basic *RiderCourses*
   - Level I Basic
   - Level II Behavioral
   - Riding Exercises