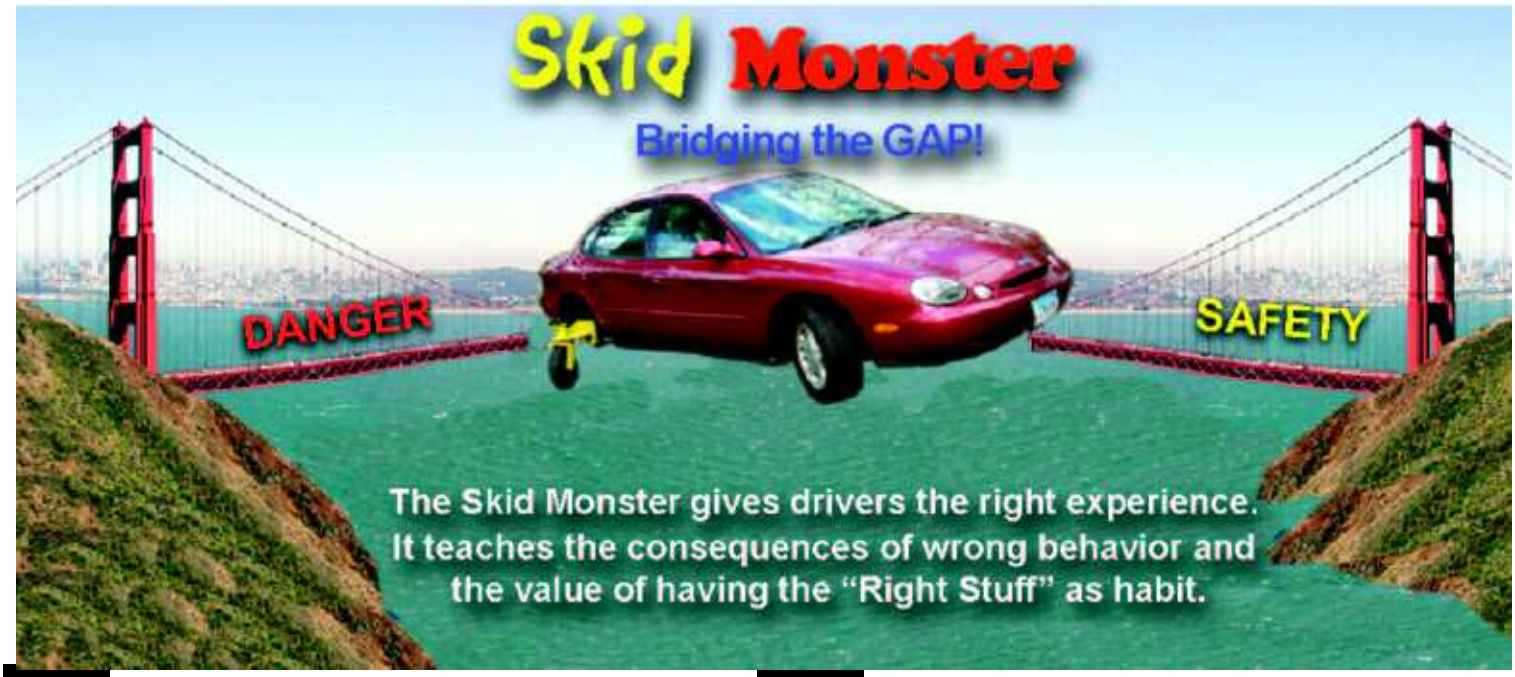
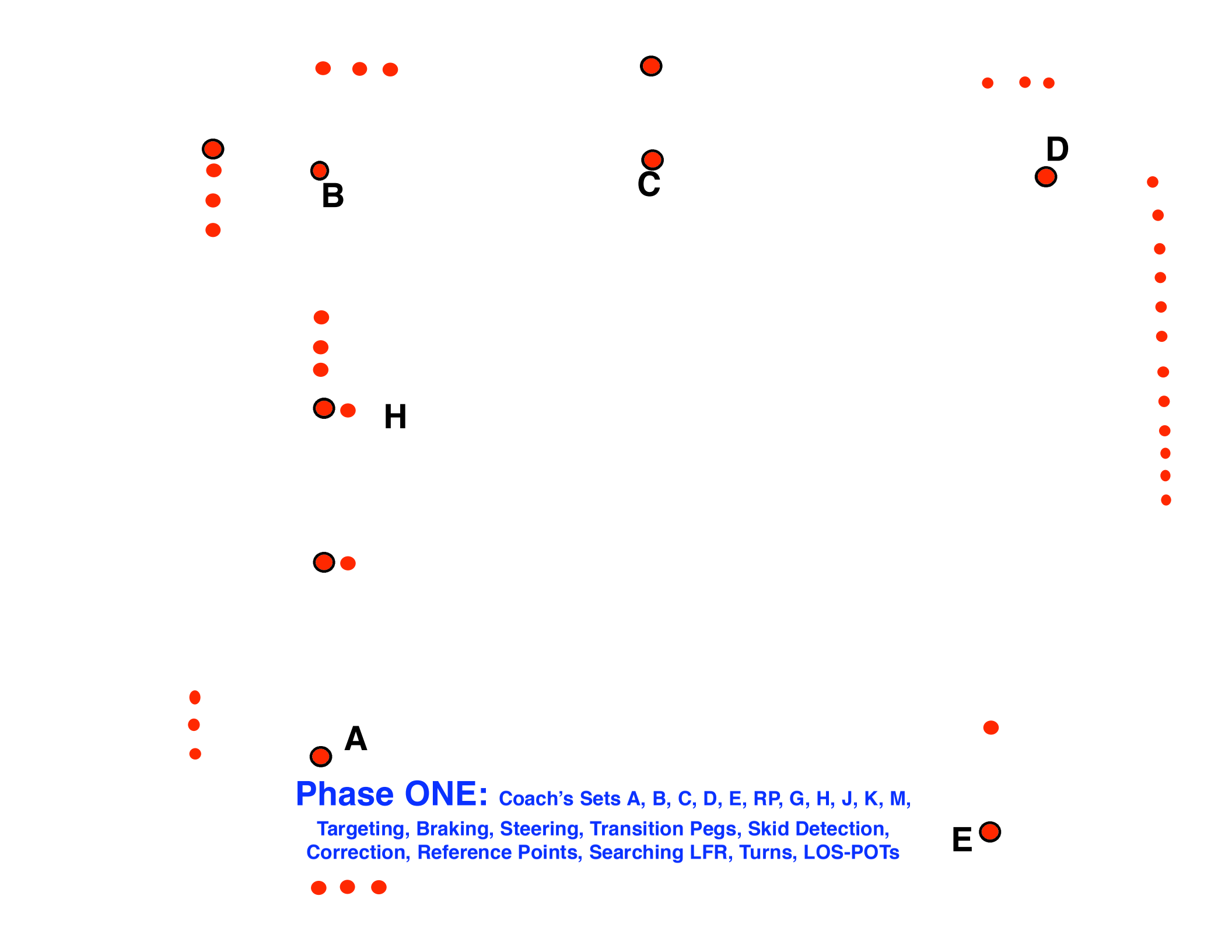
In-Car Activity Sheets



A	Getting Ready to Drive
B	Vision & Motion Control
C	Transition Pegs Introduction
D	Targeting Practice-1
E	Targeting Practice-2
F	Demo of Transition Pegs
G	Simulated Late Exiting
H	You Put Car Off Target
I	Trainee Gets On/Off Target
J	Turns from a Stop
K	Turns While Moving
L	Turns Demonstration

M	Lane Positions
N	Constant Radius Circle - Control
O	Constant Circle - Entering Curves
P	Constant Circle - Demonstration
Q	Decreasing Radius and Exiting
R	Curves,Turns and Roundabouts
S	Precision Lane Change
T	Evasive Lane Change
U	Evasive Demo
V	Serpentine
W	Off Road Recovery
X	Vehicle Failures



Phase ONE: Coach's Sets A, B, C, D, E, RP, G, H, J, K, M,
Targeting, Braking, Steering, Transition Pegs, Skid Detection,
Correction, Reference Points, Searching LFR, Turns, LOS-POTs

Phase
1a

ebook Habits 1, 2, 3, 4, 5a

Skid Monsters: Sets A, B, RP, C, D, E

Rating: Name_____

√=Good, no coaching **X**=Needs practice

A Getting Ready to Drive

Driver Readiness

- ***Butt-in*** seating position (slide butt all the way back)
- ***Seat adjustment***: height, distance (wrist even with top of steering wheel)
- ***Safety belts on*** all occupants
- ***Heel of right foot in alignment with brake pedal***, ball of foot on brake
- Be able to ***pivot foot from brake to accelerator*** without lifting heel
- ***Balanced hand position*** on steering wheel; 9-3 preferred
- ***Windows up*** (no guillotines), doors locked

B Vision & Motion Control

Direct Vision to Target

- ***Checks the left, front and right zones before moving***
- ***Turns head on target before steering***
- ***Positions Car on Target***, avoids over correction of steering
- ***Uses Central*** to see target, ***Fringe Vision*** to see car to target)

Steering Techniques

- Uses a ***balanced hand position***
- Uses the ***Hand-Over-Hand*** or ***Pull-Push*** method effectively
- ***Knuckles and thumbs on outside***

Acceleration Techniques

- ***Sees open space before accelerating***
- ***Sets Car into motion smoothly*** (idle speed, then accelerate gradually)

Braking Techniques

- Applies the ***brake with the right foot***
- Uses ***controlled threshold braking*** efficiently without locking the wheels
- Brings the vehicle to a ***smooth stop***.
- Stops to see the base of the barrier to represent the ***tire concept***

RP Reference Point Intro

- ***Right Side Reference Point***
- ***Forward Reference Point***

C Transition Pegs Intro

All the behaviors from set B will be used, plus:

- ***Recovers steering at transition peg***
- ***Increases acceleration at transition peg***
- Holds partial braking until at the ***Transition Peg*** then goes from braking to acceleration without delay.

D Targeting Practice

Target Selection

- ***Checks the left, front and right zones before moving***
- ***Turns head on target before turning steering wheel***
- ***Positions Car on Target***, uses ***transition pegs*** effectively
- ***Uses Central and Fringe Vision*** (see target with central vision, see car to target with fringe vision)

Steering Techniques

- Uses a ***balanced hand position***
- ***Hand-Over-Hand*** and ***Pull-Push***
- ***Knuckles and thumbs on outside***

Acceleration Techniques

- ***Sees open space before accelerating***
- ***Sets Car into motion smoothly***
- Uses ***transition pegs*** effectively

Braking Techniques

- Applies the ***brake with the right foot***
- Uses ***controlled threshold braking***
- Holds the brake until at the ***transition peg*** for turns made without stopping.
- Brings the vehicle to a ***smooth stop***. (Release slight pedal pressure during last 2 seconds of braking to ease pitch force).

E Targeting-SKID Detection

Targeting From Stopped and Moving Positions – 180 degree turns

- ***Searches left, front and right*** zones before moving
- ***Smooth Acceleration*** on Starts
- On Moving Turns: ***Applies brake effectively before steering***
- ***Turns Head On Target*** before steering
- ***Detects and Corrects Skid yaw*** immediately
- ***Off pedals during skid*** (no gas, no brake)
- ***Keeps head turned towards target*** during skid recovery
- ***Steering recovery*** initiated at ***Transition Peg***
- On stops: ***Smooth Braking***, no pitch felt

Braking Techniques

- Applies the ***brake with the right foot*** (unless physically restricted)
- Uses ***controlled threshold braking*** efficiently without locking the wheels
- On Moving Turns: ***Keeps Partial Braking Pressure*** until ***Transition Peg***
- Brings the vehicle to a ***smooth stop***

Phase 1b *Habits Phase One: 1, 2, 3, 4, 5, 6, 7, 9,10*

Skid Monsters: Sets G, H, J, K, Los

Rating: Name_____

√=Good, no coaching **X**=Needs practice

G Simulated Late Exiting

Observe these Behaviors first

- Applies brake and ***reduces speed before steering to new target***
- ***Turns Head On Target*** before steering

Behaviors to Maintain Control

- ***Detect and Correct Skid yaw*** immediately (stay off pedals during skid recovery)
- ***Keeps head turned towards target*** during skid recovery
- On Moving Turns: ***Keeps Partial Braking Pressure*** until ***transition peg***
- ***Steering recovery*** initiated at ***Trans. Peg*** to avoid corrective steering
- ***Smooth Acceleration*** on Starts: no pitch
- On stops: ***Smooth Braking,*** no pitch

H Car's Pulled Off Target

On Target/Off Target

- Foot off pedals as ***car moves off target***
- ***Keeps Head On Target*** as car gets off target
- ***Detect and Correct Skid yaw*** immediately (stay off pedals during skid recovery)
- ***Keeps head turned towards target*** during skid recovery

After recovery while Making Turn for New Target

- ***Keeps Partial Braking Pressure*** until ***transition peg***
- ***Steering recovery*** initiated at ***Transition Peg*** to avoid corrective steering
- ***Smooth Acceleration*** on Starts: no pitch felt forces felt
- On stops: ***Smooth Braking,*** no pitch forces

J Turns from a Stop Sign

Left and Right Turns–Stopped Position

- ***Signals for turn 5 seconds*** before stop
- Begins ***braking effectively*** on approach
- ***Checks mirror*** when foot goes on brake
- ***Makes smooth stop***
- Uses side position ***reference point***
- Uses ***reference points*** for stop position
- Selects ***Target before beginning turn***
- ***Searches intersection*** for clear left, front, right zones
- Uses forward position ***reference point***
- ***Turns head*** onto target ***before moving***
- See cones with ***peripheral vision***
- ***Accelerates*** at ***Transition Pegs***
- Uses ***effective steering*** technique
- ***Detects and correct skid yaw*** (off pedals during skid)
- ***Timely Acceleration*** when zones are open

K Turns While Moving

Left and Right Turns–Moving Position

- ***Signals for turn 5 seconds*** before stop sign
- Uses ***Target Area Searching*** when approaching the turn
- Begins ***constant braking*** during approach
- ***Check mirror*** when foot goes on brake
- ***Brake controls speed before turning*** (Use of brake to reduce speed before turning prevents skid. Stay off brake during skid.)
- ***Searches intersection*** for clear L-F-R zones
- ***Turns head*** to new target area ***before steering***
- ***Holds partial braking*** (at least 30%) ***until Transition Peg***
- ***Detects and corrects skid yaw*** without hesitation
- ***Keeps head and eye focused*** to target area
- Uses ***effective steering*** technique
- ***At Transition Peg,*** effectively ***accelerates w/o hesitation*** to straighten the car on target.

- **Demonstration of Premature Release of Brake for right or left turns**
- **Demonstration of No Use of Brake while making right or left turns**
- **Right and Left Turns Compare Speed of Success and Failure Approaches**

M Lane Positions

Introduction to Lane Position Usage

- ***Positions Car in LP2 accurately*** (demonstrates or explains which reference points are being used)
- ***Positions Car in LP1 accurately***
- ***Positions Car in LP3 accurately***

LOS LOS-POT Blockage

Use this for all situations that apply

- ***Knows LOS-POT*** means a blockage to your Line-Of-Sight and/or Path-Of-Travel
- Responds to ***LOS-POT with speed reduction***
- Responds to ***LOS-POT with lane positioning adjustment***

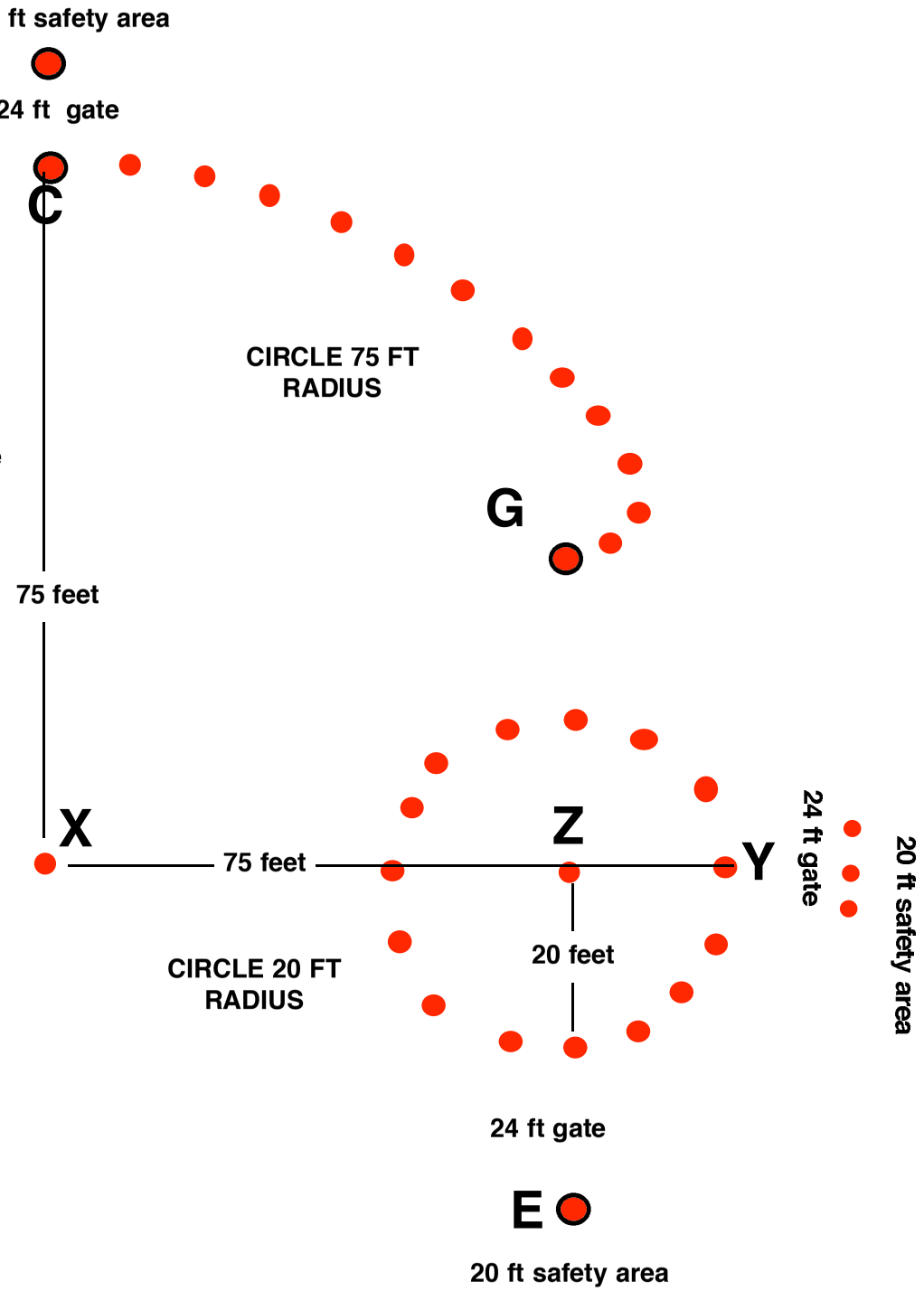
Key Behaviors to Cue for Turns

- **Select Target**
- **Search Left-Front-Right zones**
- **Turn Head**
- **Use Transition Peg**

Setting Up the Course

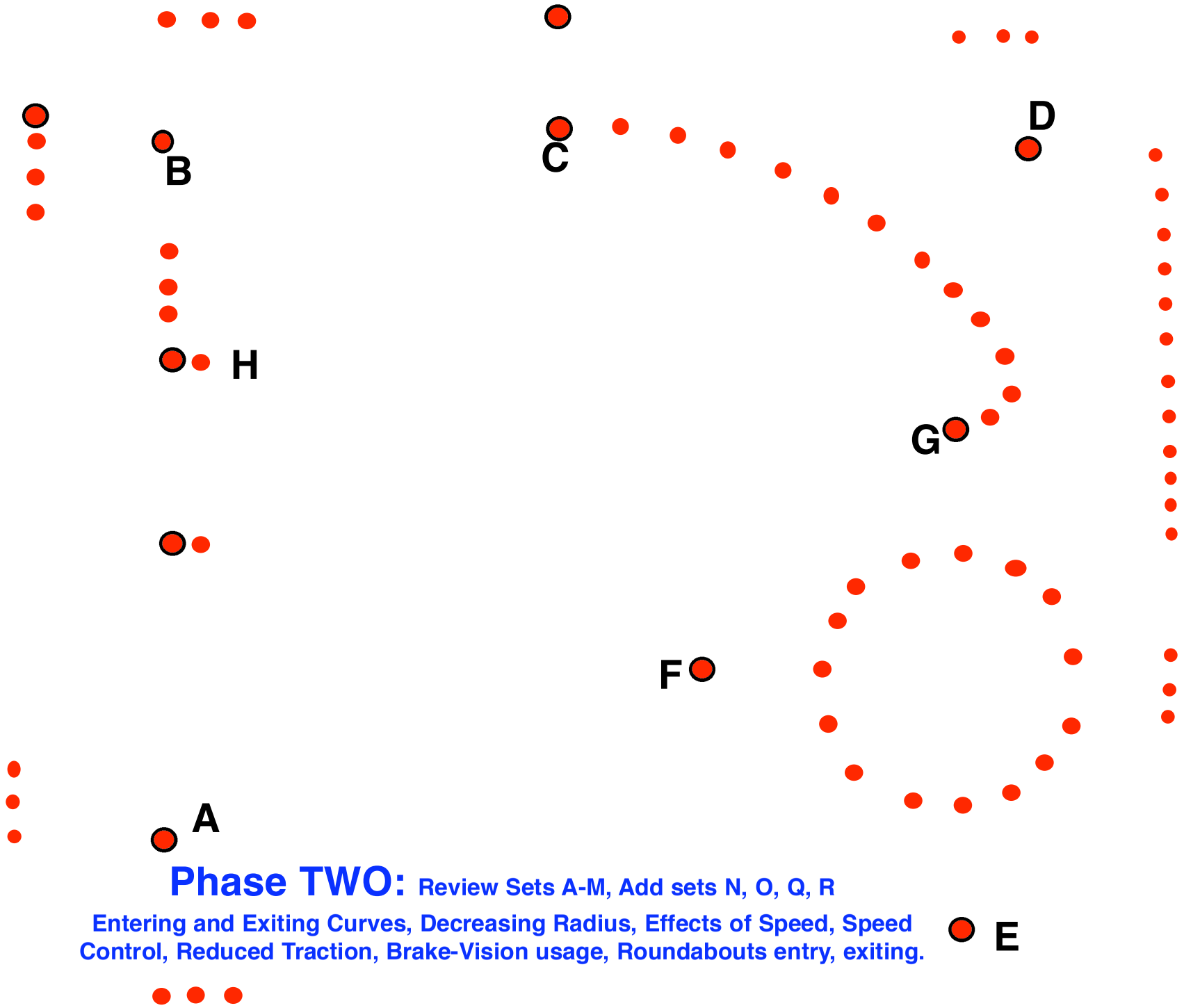
1. Begin by establishing a 20 foot safety perimeter.
2. Then measure 24 feet for C gate.
3. Then mark off 75 feet for the radius of the curve.
4. Mark off 20 foot safety area at gate Y.
5. Then measure 24 feet for gate Y.
6. Then add 75 feet towards cone X.
7. Cone X will be 119 feet from the edges.
8. Add another 20 ft, 24 ft, and 20 feet to include the size of the small radius, gate E and the safety area.
9. The total width needed for this design is 183 feet. If your area is smaller, reduce the radii of the curves, or the width of the gates.

10. Mark the placement of cone X. Use a measuring tape set to 75 feet with one person holding it at cone X and another person walking with the other end placing small cones to form the large circle.
11. Measure 20 feet from cone Y while in alignment with cone X to set the placement of cone Z.
12. The same process as used for the 75 foot radius will be used to form the 20 foot radius circle.
13. Gates E and G and F and Y, are in alignment with cone Z.
14. Once the course is laid out, cones X and Y are removed.
15. The other gates are then placed as space permits.



= 18 inch cones

= 2 inch motorcycle cones



Phase TWO: Review Sets A-M, Add sets N, O, Q, R

Entering and Exiting Curves, Decreasing Radius, Effects of Speed, Speed Control, Reduced Traction, Brake-Vision usage, Roundabouts entry, exiting.

Phase
2a

ebook Habits 5b, 6, 7, 8, 9, 10

Skid Monsters: Sets N, O, Q

Rating: Name_____

√=Good, no coaching **X**=Needs practice

N Constant Radius Circle Speed Control

Establish Speed of 10 mph, after success increase speed to 12 mph

This activity begins in the non-monster mode. **After a few revolutions switching to the MONSTER mode** represents hitting "black ice."

- Establishes ***constant speed***
- ***Detects front of the car's movement*** off its constant radius (yaw angle)
- Has ***central vision focused through curve***, not at yaw angle
- Uses ***fringe vision*** to keep car on course
- ***Takes corrective steering action*** without hesitation
- Keeps car in ***travel path***
- ***Controls speed*** of car

After correcting skid...

Stay close to the cones and keep increasing speed until you are not able to maintain a controlled yaw. **Repeat process with turns to the right.**

O Constant Radius Circle Entering Curves

Entering Curves

(**LP**=Lane Position)

This activity begins in the Monster Mode. You will start on a straight path before entering the "curve".

- Uses ***Target Area Searching*** when approaching the curve.
- Lane Position: ***Constant LEFT CURVES: approach LP3, apex LP1, exit LP1***
- Lane Position: ***Constant RIGHT CURVES: approach LP2, apex LP1, exit LP1***
- Effective use of ***speed control***
- ***Applies brake before turning*** (On brake to prevent skid, off brake during skid)
- ***Turns head to look into curve***
- ***Detects and corrects skid yaw***
- Uses ***effective steering technique***

Q Decreasing Radius Curve and Exiting Curves

Decreasing Radius Curve

- **Part 1:** You will travel in a constant radius curve. After driving around the circle a few times at the maximum controllable speed, you will turn into the inside gates of the curve.
- **Part 2:** You will do the same activity at a slower speed around the constant radius before turning into the decreasing radius gates. Compare the control you have when speed is not excessive.

- ***Detects front of the car's movement*** off its constant radius (yaw angle)
- Has ***vision focused through curve***, not at yaw angle
- ***Takes corrective steering action*** without hesitation

Exiting Curves

This activity begins in the Monster Mode. After traveling at least one or two times around the circle you will exit the circle, which will represent exiting a curve.

- Sets up correct lane position in preparation for exiting
- Lane Position for ***LEFT CURVES: apex LP1, exit LP1***
- Lane Position for ***RIGHT CURVES: apex LP1, exit LP1***
- Effective use of ***speed control***
- ***Turns head to new target area*** before steering
- ***Detects and corrects skid yaw*** without hesitation
- ***Keeps head and eyes focused*** to target area
- With car in control, ***goes from brake to acceleration effectively*** without hesitation when car is ***at Transition Peg*** (corner post, or, rear view mirror)

Phase
2b Skid Monsters: Set R

Rating: Name_____

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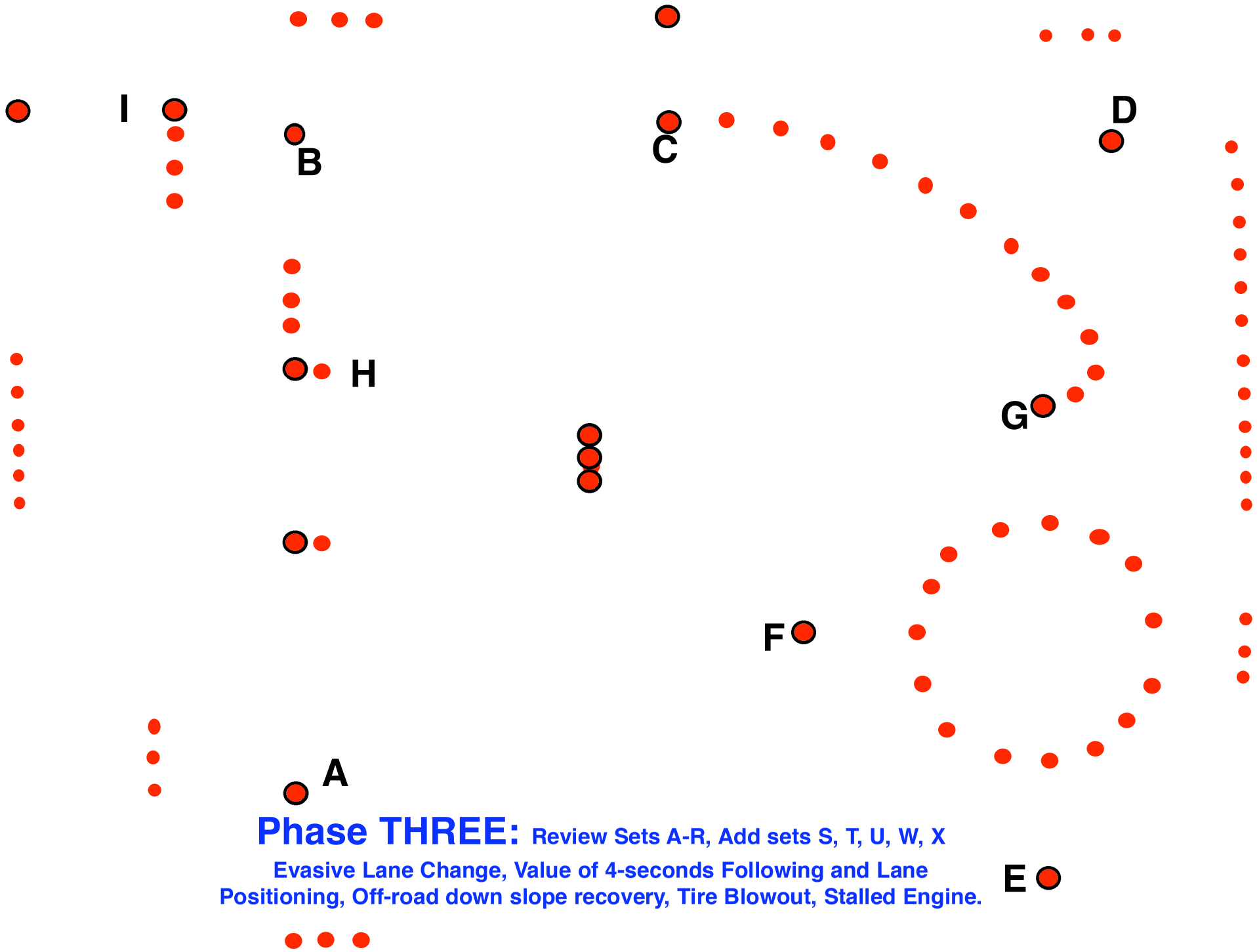
R Curves, Turns and Roundabouts

Compare Speed of Success and Failure

			• Uses ***Target Area Searching*** when approaching the curve.
			• LP for Constant ***LEFT CURVES: approach LP3, apex LP1, exit LP1***
			• LP for Constant ***RIGHT CURVES: approach LP2, apex LP1, exit LP1***
			• Effective use of ***speed control***
			• ***Applies brake before turning*** (On brake to prevent skid, off brake during skid)
			• ***Turns head to new target area*** before steering
			• When Braking is needed, ***holds partial brake pressure*** of 20-30% (trail braking) ***until at Transition Peg*** (corner post, rear view mirror)
			• ***Detects and corrects skid yaw*** without hesitation
			• ***Keeps head and eyes focused*** to target area
			• Uses ***effective steering technique***
			• With car in control, ***goes from brake to acceleration effectively*** without hesitation when car is ***at Transition Peg*** (corner post, rear view mirror)
			• Entering and leaving **Roundabouts** effectively. (travels counter clockwise at all times)
			• Experiences ***effects of curve's radius*** on speed control
			• Experiences ***effects of road grade and camber*** on car control
			• Experiences ***effects of One or Two Excessive miles per hour*** on control



Phase THREE: Review Sets A-R, Add sets S, T, U, W, X

Evasive Lane Change, Value of 4-seconds Following and Lane Positioning, Off-road down slope recovery, Tire Blowout, Stalled Engine.

Phase
3a

ebook Habits: Review all 1-10

Skid Monsters: Set T, Z

Rating: Name_____

√=Good, no coaching **X**=Needs practice

T Evasive Maneuver

Behaviors For Evasive Lane Change

- ***Holds the steering*** with both hands for a ***9-3 position***
- ***Focuses on target area*** — not on what is being avoided
- Makes ***initial steering*** without taking hands off the wheel
- ***Stays off the brake and the gas pedals*** while steering
- ***Takes counter steering actions*** to keep roll axis in balance
- When car goes into a skid, ***turns steering rapidly towards target***
- When ***steering is controlled***, applies ***brake or acceleration*** as needed

Behaviors For Evasive Braking

- ***Checks rearview mirror*** when foot goes on the brake
- ***Holds the steering*** with both hands for a ***9-3 position***
- ***Focuses on target area*** — not on what is being avoided
- For ***ABS brakes: applies firm pressure*** and holds pedal
- No ABS brakes: ***uses controlled threshold braking*** without locking the wheels
- If car skids, releases brake pressure and ***turns steering rapidly towards target area***

U Evasive Demonstrations

Variables You Will Experience in this Set

- Effects Speed has upon car control
- Effects Lane Positioning has upon steering inputs
- Effects Following Time has upon taking an evasive braking or steering action.

Demonstrates Value of Four-Second Following Time

- Experiences the ***effect following time*** has upon ***car control for evasive steering and braking***
- Experiences the ***effect following time*** has upon ***reducing driver stress***

Demonstrates Value of Lane Positions

- Experience the value of an ***early detection of an LOS-POT blockage***
- Experiences the importance of using the ***proper lane position***
- Experiences the importance of ***minimizing steering action***

Phase
3b Skid Monsters: Wa, Wb, Xa, Xb

Rating: Name_____

√=Good, no coaching **X**=Needs practice

Wa Off Road Recovery

Down Slope Shoulder: Off-Road

- ***Holds the steering firmly*** with both hands for a ***9-3 position***
- ***Look for targeting path*** down the slope
- ***Releases acceleration, steer away from road*** and ***brake lightly*** if possible.
- If roll forces are felt, ***turns steering more down the slope***
- Bring vehicle to a complete stop
- Relax
- Slowly move and turn perpendicular to the road as possible to climb up the slope
- Stop before entering the roadway to ***search for a gap or hole to enter.***
- When able enter traffic flow.

Wb Off Road Recovery

Level Shoulder: Off-Road Recovery

- ***Holds the steering firmly*** with both hands for a ***9-3 position***
- ***Releases acceleration*** pressure and ***stay off the brake***
- Moves into ***Lane Position 5*** to ***straddle the pavement edge***
- Checks ***left-rear zone*** and ***signal for re-entry*** into traffic (when possible)
- Focuses on the ***target area***
- ***Cuts steering wheel a quarter turn towards pavement*** without taking hands off the wheel
- Immediately ***takes counter steering action towards target area*** to keep roll axis in balance
- If car goes into a skid, ***turns steering rapidly towards target***
- When ***steering is controlled***, resumes acceleration, or initiates braking

You Should be able to Experience:

- The effects of a ***down slope shoulder*** and the limited options you have
- The importance of having ***targeting path awareness*** to get back onto the road
- The ***effect speed has*** upon control
- The ***importance of two hands on wheel*** during initial steering action
- The ***effects of excessive steering*** inputs
- Proper ***targeting techniques*** for control
- Proper techniques for ***initial steering and recovery behavior*** to re-enter the pavement

Xa Vehicle Failures

Tire Blowout

- Foot comes off the pedals as the steering wheel is moved off target to ***simulate the tire blowout***
- ***Keeps Head On Target*** as steering wheel moves car off target
- ***Detect and Correct Skid yaw*** immediately (stay off pedals during skid recovery)
- ***Keeps head turned towards target*** during skid recovery
- With car back in control, ***selects a safe location to deal with the failed tire***

Demonstration of Power Steering Loss

- Have the car going in a circle at 15 mph.
- Turn the key off.
- Steer left and right as space permits.
- Experience how the steering wheel feels.
- Use open palm shift into neutral.
- Restart engine.

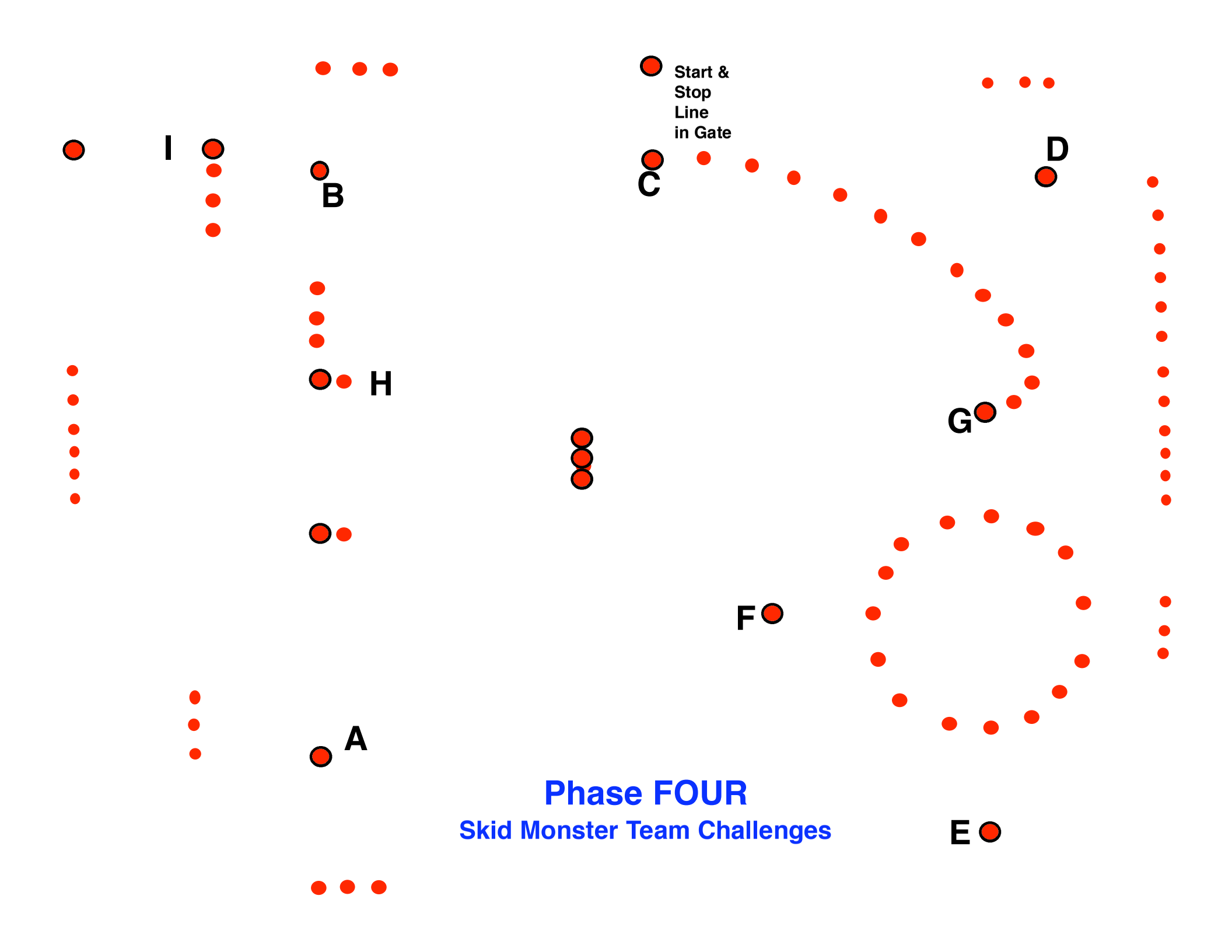
Xb Vehicle Failures

Open Palm Shift into Neutral

- Use shifter on the steering column
- Places ***hand over shift knob***
- With the ***shift knob in the palm,*** have the fingers extended, not gripping
- The ***palm presses down*** on the shift knob and ***pushes it forward*** towards the dash
- This action will allow ***the shift to stop in neutral***
- ***There is no need*** to look at the indicator

Stalled Engine

- ***Steer firmly*** during turns or ***hold steady*** on a straight away.
- Shift into neutral using ***open palm***.
- Quickly turn the key to ***restart engine*** without a need to come to a stop.
- ***Shift to Drive*** by pulling the shifter down one notch.
- Continue to drive your course.
- If the car doesn't start, ***look for escape path*** while there is still momentum.


Start &
Stop
Line
in Gate
I
B
C
D
H
G
F
A
E
Phase FOUR
Skid Monster Team Challenges

Phase 4 Skid Monsters: Skid Monster Challenge

Skid Monster Challenge

- There will be 12 challenges.
- There will be three or four teams (**POLG**).

Pink.....A team **O**range..B team
Lime... C team **Green**.. D team

RULES:

1. The driver of car one must go through all exercises on the course two times within a three minute time period.
2. The driver of car two will begin 15 seconds later and must follow the same correct path that car one takes without getting closer than 4 seconds to car one.
3. If car two finishes in less than 15 seconds, without more penalties than car one, it is the winner of that challenge.
4. Members of the team not in the challenge serve as timers and referees.

1	2	3	4	5	6
A1	C1	B2	B3	A2	C2
B1	A2	C2	A3	C3	B3

3 teams

7	8	9	10	11	12
C3	A3	B1	A	B	C
B2	C1	A1	C	A	B

Teams select drivers

1	2	3	4	5	6
A	C	B	D	B	C
B	D	C	A	D	A

4 teams

7	8	9	10	11	12
D	A	D	A	B	C
B	C	A	C	D	B

WINNERS

1	2	3	4	5	6	7	8	9	10	11	12

Penalty Points: **Each driver begins with 100 points. Place a √ for each second a violation occurs**

Car 1 - 2 Team_____

Circle starting position

1. Starts from Stopped Position

_____ Safety belt not within 3 seconds -5
_____ Smooth Start not made -2
_____ Early start before flag - 5/sec

2. Intersections

_____ Failure to yield -5
_____ Not Searching L-F-R -2/search

3. Stops

_____ Smooth Stop not made- 2
_____ Complete Stop not made -2
_____ Forward Reference 6+ inch off -2

4. Following Time/Space

_____ Not keeping 4-seconds -2/sec
_____ Not stopping to see tires -2

5. Round About

_____ Blocking round about -5
_____ Going wrong way – **Disqualified**

6. Curves

_____ Wrong Drive Line -2
_____ Head not turned -2

7. Evasive

_____ Failure to keep head on target -5
_____ Applying brake before clearing obstacle-5

8. LOS-POT Blockage

_____ Failure to search Left, Front, Right -2
_____ Failure to respond (stop) -5
_____ Failure to get best LP -5

9. Rule Violation

_____ Not belted before moving – **Disqualified**
_____ Failure to follow car one – **Disqualified**
_____ Hitting a Cone or Barrier – **Disqualified**
_____ Going Outside Course – **Disqualified**
_____ Wrong direction in roundabout – **Disqualified**
_____ Failure to yield after spinout – **Disqualified**
_____ Not stopping when flagged -2/sec
_____ 360 degree improperly executed -5 points

_____ - penalty points _____ + 2 points/sec

100 points +/-_____ = _____

SKID MONSTER CHALLENGE

Penalty Points: **Each driver begins with 100 points.**
Place a √ for each second a violation occurs

Car 1 - 2 Team_____

Circle starting position

SKID MONSTER CHALLENGE

1. Starts from Stopped Position

_____ Safety belt not within 3 seconds -5
_____ Smooth Start not made -2
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_____ Failure to yield -5
_____ Not Searching L-F-R -2/search

3. Stops

_____ Smooth Stop not made- 2
_____ Complete Stop not made -2
_____ Forward Reference 6+ inch off -2

4. Following Time/Space

_____ Not keeping 4-seconds -2/sec
_____ Not stopping to see tires -2

5. Round About

_____ Blocking round about -5
_____ Going wrong way **– Disqualified**

6. Curves

_____ Wrong Drive Line -2
_____ Head not turned -2

7. Evasive

_____ Failure to keep head on target -5
_____ Applying brake before clearing obstacle-5

8. LOS-POT Blockage

_____ Failure to search Left, Front, Right -2
_____ Failure to respond (stop) -5
_____ Failure to get best LP -5

9. Rule Violation

_____ Not belted before moving **– Disqualified**
_____ Failure to follow car one **– Disqualified**
_____ Hitting a Cone or Barrier **– Disqualified**
_____ Going Outside Course **– Disqualified**
_____ Wrong direction in roundabout **– Disqualified**
_____ Failure to yield after spinout **– Disqualified**
_____ Not stopping when flagged -2/sec
_____ 360 degree improperly executed -5 points

_____ - penalty points _____ + 2 points/sec

100 points +/-_____ = _____

Penalty Points: **Each driver begins with 100 points.**
Place a √ for each second a violation occurs

Car 1 - 2 Team_____

Circle starting position

SKID MONSTER CHALLENGE

1. Starts from Stopped Position

_____ Safety belt not within 3 seconds -5
_____ Smooth Start not made -2
_____ Early start before flag - 5/sec

2. Intersections

_____ Failure to yield -5
_____ Not Searching L-F-R -2/search

3. Stops

_____ Smooth Stop not made- 2
_____ Complete Stop not made -2
_____ Forward Reference 6+ inch off -2

4. Following Time/Space

_____ Not keeping 4-seconds -2/sec
_____ Not stopping to see tires -2

5. Round About

_____ Blocking round about -5
_____ Going wrong way **– Disqualified**

6. Curves

_____ Wrong Drive Line -2
_____ Head not turned -2

7. Evasive

_____ Failure to keep head on target -5
_____ Applying brake before clearing obstacle-5

8. LOS-POT Blockage

_____ Failure to search Left, Front, Right -2
_____ Failure to respond (stop) -5
_____ Failure to get best LP -5

9. Rule Violation

_____ Not belted before moving **– Disqualified**
_____ Failure to follow car one **– Disqualified**
_____ Hitting a Cone or Barrier **– Disqualified**
_____ Going Outside Course **– Disqualified**
_____ Wrong direction in roundabout **– Disqualified**
_____ Failure to yield after spinout **– Disqualified**
_____ Not stopping when flagged -2/sec
_____ 360 degree improperly executed -5 points

_____ - penalty points _____ + 2 points/sec

100 points +/-_____ = _____