



ESSENTIAL MTB SKILLS

Pocket Guide





www.minnesotacycling.org

info@minnesotacycling.org

Cover photo: TMB Images

Principles of Skill Instruction

Method of teaching each skill

- Name the Skill
- Explain where, when, and why it is used
- Explain teaching points with static demonstration
- Provide a moving demonstration
- Prompt for questions
- Provide feedback while students practice
- Prompt for remaining questions
- Offer progressions if appropriate

Principles of Skill Instruction

Ten Fundamental Elements

- Neutral & Ready Position
- Bike / Body Separation
- Pedal Position
- Eye Movement
- Braking
- Steering
- Speed
- Gear and Cadence
- Timing & Coordination
- Pressure Control



3 Common Elements

Head up, eyes scanning ahead

1 finger on each brake lever

Level pedals when not pedaling



Frequent Errors & Corrections

Not staying on trail?	The bike follows your eyes.
Braking Late and/or skidding?	The bike follows your eyes.
Hitting object with pedal?	Level pedals
Trouble keeping balance?	Level pedals

Neutral Position

Standing tall & relaxed

Slight bent elbows & knees

Heavy feet, light hands



Neutral Position - Errors & Corrections

Rider too far forward or back	Stay balanced w/ weight in feet
Legs or arms locked or too bent	Tall and relaxed
Pedals uneven	Weight pedals evenly

Ready Position

**Deep bend in elbows & knees
(athletic stance)**

Elbows out

Heavy feet, light hands



Ready Position - Errors & Corrections

Too tall	Suggest deeper crouch
Elbows down	Suggest elbows out as if doing push-ups
Too far forward or back	Suggest heavy feet, light hands.
Lacking attention or commitment	Ask if they are prepared to execute a skill

Progressions:

High & Low Ready Position

Braking

Ready Position

Pull both brakes evenly

**Drop heel of forward
foot for bracing**



Braking - Errors & Corrections

Having trouble slowing	-Brakes working properly? -Able to reach brake levers?
Skidding rear tire	-Not enough heel drop -Weight too far forward -Apply more front brake
Body moving forward	More heel drop for bracing

Progressions:

- Add speed
- Move hips down & back
- “Watch the Cliff”

-Cardboard Slide

Bike/Body Separation – Forward & Back

Low Ready Position

Forward – Bend Elbows, move shoulders forward

Back – Extend arms, move hips back



Forward & Back - Errors & Corrections

Rider too far back, locked arms	Maintain at least a slight bend in elbows
Trouble with Balance	Increase rolling speed
Too tall	Lower shoulders while bending elbows

Progressions & Gameplay:

- Change speed & frequency
- Use undulating terrain, ramps, or pump track

Bike/Body Separation – Side to Side

Wide knees

Lean bike

Hinge at elbows



Side to Side - Errors & Corrections

Moving hips or shoulders	Keep torso still, hinge at elbows
Not able to lean much	Widen knees, lower seat
Not riding in a straight line	Don't steer, increase speed, ensure weight is in the feet

Progressions & Gameplay:

- Increase frequency & duration of lean
- Use skinny feature
- Stand near their path, forcing rider to move handlebars as if you are a tree

Intro to Cornering

Low Ready Position

Look where you want to go

Lean the bike



Intro to Cornering - Errors & Corrections

Turning Wide	-Lean more -Turn head and hips more -Line choice (outside-inside-outside)
Steering	Lean bike instead

Progressions & Gameplay:

- Flat or downhill slalom course with cones
- Move cones to exaggerate turns
- Add downslope

Tight Turns

Look through the turn

Steer with handlebars

Shoulders match handlebars



Tight Turns - Errors & Corrections

Can't stay in circle	-Exaggerate the look -Steer more and turn shoulders
Difficulty with balance	-Use Ratcheting instead of full pedal strokes

Progressions & Gameplay:

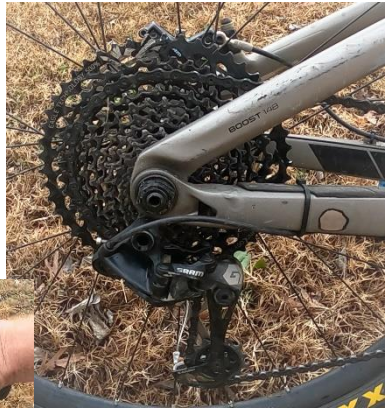
- Change direction
- Add Ratcheting
- practice seated and standing
- Add multiple people to circle
- Reduce size of circle
- Progress to game of Foot Down

Shifting

Surge

Soft pedal & shift gears

Resume pedaling normally



Shifting - Errors & Corrections

Noisy or slow shifting	- Shifter/derailleur adjusted properly? - More surge before shifting
------------------------	--

Progressions:

- Shift through all gears
- Shift without looking down
- Shift on gentle hill
- Shift front derailleur (if applicable)

Climbing – Seated Climb

Shift gears during approach

**Bend elbows, shoulders
forward**

Move hips forward on saddle



Seated Climb - Errors & Corrections

Unable to control direction	Move hips forward on saddle
Front wheel lifting	-Move hips forward on saddle -Shift to harder gear
Rear tire spinning	-Move hips back -Shift to harder gear

Progressions:

- Change steepness of grade
- Shift while climbing
- Combine with other climbing methods

Climbing – Standing Climb

Ready Position

Powerful pedal strokes

Rock bike side to side



Standing Climb - Errors & Corrections

Front wheel lifting	Move forward to distribute weight evenly on both wheels
Rear tire slips	Move back to distribute weight evenly on both wheels
Unable to continue pedaling	Shift to easier gear

Progressions:

- Change steepness of grade
- Try different gears
- Combine with other climbing methods

Climbing – Crouched Climb

Low Ready Position

Move hips forward

Hover hips over saddle



Crouched Climb - Errors & Corrections

Front wheel lifting	Move forward to distribute weight evenly on both wheels
Rear tire slips	Move back to distribute weight evenly on both wheels
Unable to continue pedaling	Shift to easier gear

Progressions:

- Change steepness of grade
- Ride over obstacles or loose/technical terrain
- Combine with other climbing methods

Climbing Dismount

Look for place to put foot down

Lock brakes

**Lean the bike towards
the landing**

Land with foot, stepping forward



Climbing Dismount - Errors & Corrections

Loss of balance	-Lean bike before taking foot off pedal -Lock brakes before taking foot off pedal -Use brakes gradually to stop
Falling backward after stopping	Step forward when landing

Progressions:

- Change steepness of grade
- Traverse across slope in each direction
- Place foot down on specific spot (cone or rock)

Climbing Restart

Lock brakes

Bring foot/pedal to power position

Stand on forward foot and release brakes



Climbing Restart - Errors & Corrections

Front wheel lifting	Move weight forward
Rear tire spinning	Shift to harder gear
Unable to get second foot on pedal before losing balance	-Shift to harder gear -Bring forward pedal to power position

Progressions:

- Change steepness of grade
- Try different gears
- Use other foot to start

Descending Dismount

Look for place to put foot down

Lock brakes

Lean the bike towards the
landing

Land with foot, stepping forward



Descending Dismount - Errors & Corrections

Loss of balance	-Lean bike before taking foot off pedal -Lock brakes before taking foot off pedal -Use brakes gradually to stop
Unable to step back	-Move hips back before stopping -Pass the intended landing spot and step back to landing

Progressions:

- Change steepness of grade
- Traverse across the slope in each direction
- Put foot down on specific spot (cone or rock)