



On-the-Bike

101

Field Guide



BUILDING STRONG MINDS, BODIES, CHARACTER, & COMMUNITIES

THIS FIELD GUIDE BELONGS TO

PHONE NUMBER

EMAIL

TEAM NAME

PURPOSE

This guide is available to NICA coaches who have completed NICA's On-the-Bike 101 course. It serves as a pocket-handly reminder to coaches, from basic risk management reminders to ride prep, plus the NICA method of instruction and teaching points for each 101 skill.

Thanks for being an awesome NICA coach! Ride on.

Questions? Visit [**nationalmtb.org/coach-help/**](https://nationalmtb.org/coach-help/)

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COVER PHOTO FROM THE WISCONSIN INTERSCHOLASTIC CYCLING LEAGUE

ABCDE BIKE SAFETY CHECK

AIR: Tire air pressure should always be adjusted to respond to the terrain

BRAKES: Brakes are working properly, bolts are tight, and levers are positioned correctly

CHAIN: Chain is clean and lubricated

DRIVETRAIN: Cassette, chainring, and cranks are inspected to ensure they are tight and that there are no broken teeth or damaged links; make sure chain shifts smoothly

EVERYTHING ELSE: Check quick-release levers, thru axles, and any other bolts



Photo by Aaron Puttcamp

tips for **TRAIL RIDES**

Safety

Always communicate possible risks and discuss behavior expectations with your ride group. Be clear and concise.

Ride

Ride responsibly, stop often, and monitor your group. Check in on athletes and other coaches. Be aware of your surroundings.

Reflect

End your trail rides intentionally. Ask your group: Did you achieve your goals? What positive experiences did you have?

at each ride stop:

“CODL”

COUNT your group at the beginning of every ride; at each stop, count to ensure all riders are present.

OBSERVE your group for behavior signaling a possible problem.

DESCRIBE the route and features ahead before restarting your ride.

LOOK both ways on the trail to ensure it is safe to resume riding with the group.

NICA METHOD OF INSTRUCTION

TELL IT

Name and describe the skill

Name the skill: Announce what you plan to teach; ensure you have riders' attention.

Describe: When, where, and why the skill is used.

SHOW IT

Static & moving demonstrations

Static: Explain the teaching points with a static demo.

Moving: Demonstrate the skill being performed.

Prompt for questions: Ask student-athletes "What questions do you have?"
—allow for 7 seconds of wait time.

DO IT

Practice & progressions

Have student-athletes practice the skill; provide progressions when appropriate.

REVIEW IT

Prompt for questions & connect to future learning

"What questions do you have?" — allow 7 seconds of wait time

TEN FUNDAMENTAL ELEMENTS

These foundational elements help with movement analysis. If something looks amiss, consider the following:

- **Neutral & ready position**
- **Bike-body separation**
- **Pedal position**
- **Eye movement**
- **Braking**
- **Steering**
- **Speed**
- **Gear & cadence**
- **Timing & coordination**
- **Pressure control**

the three key **ESSENTIALS**

Level pedals

Athletic stance,
evenly weighted

Fingers covering the brakes

One finger on each
brake lever

Head up

Eyes scanning ahead

NEUTRAL POSITION

- **WHERE:** Easy terrain
- **WHY:** Balance & traction, energy conservation

TEACHING POINTS

- **STATIC DEMO:** Next to bike, slight bend in elbows & knees
- **DEMO:** Bounce and look relaxed
- **APPROACH:** Slow jog

The goal is to maintain a relaxed position while standing and coasting, keeping equal weight on the front and rear wheels through weighting the feet.

NEUTRAL POSITION

TEACHING POINTS

- Standing tall and relaxed
- Slight bend in knees and elbows
- Weight in the feet:
“heavy feet,
light hands!”



READY POSITION

- **WHERE:** Challenging terrain
- **WHY:** Maximize balance, strength, traction, control, range of motion, and minimize response time

TEACHING POINTS

- **STATIC DEMO:** Show athletic stance, push-up demo
- **DEMO:** Approach in a neutral position and transition smoothly into ready position when you enter demo zone
- **APPROACH:** Slow jog

The goal is to maintain balance, maximize strength, and minimize response time by weighting the feet and bending the elbows and knees.

READY POSITION

TEACHING POINTS

- Deep bend in elbows and knees (athletic stance)
- Weight in the feet: “heavy feet, light hands!”
- Elbows out



BRAKING

- **WHERE:** Anywhere required!
- **WHY:** To reduce speed or stop without skidding

TEACHING POINTS

- **STATIC DEMO:** While next to bike, show heel drop with foot on pedal
- **DEMO:** Brake with front foot nearest athletes to show heel drop
- **APPROACH:** Ready position, jogging pace

The goals are to utilize both brakes in a safe, controlled manner to reduce speed and to come to a complete stop from a range of speeds using proper technique.

BRAKING

TEACHING POINTS

- Ready position
- Apply brakes (toothpaste or dimmer switch)
- Forward foot heel down, or both heels as necessary



BIKE-BODY SEPARATION

FORWARD & BACK

- **WHERE:** Forward for ascending; back for descending
- **WHY:** To maintain balance and traction in undulating terrain

TEACHING POINTS

- **STATIC DEMO:** While next to bike (side view for student-athletes) move the bike forward and back
- **DEMO:** Show forward and back range of motion
- **APPROACH:** Low ready position, jogging pace, seat down

The goal is to move between a forward and back position while showing appropriate use of all other fundamental elements.

BIKE-BODY SEPARATION

FORWARD & BACK

TEACHING POINTS

- Maintain low ready position
- FORWARD: move shoulders over handlebars
- BACK: hips back, extend arms without locking elbows
- Torso moves on a level plane



BIKE-BODY SEPARATION

SIDE TO SIDE

- **WHERE:** Cornering or any narrow path, avoiding obstacles or other riders
- **WHY:** To maintain balance while staying on a specific path

TEACHING POINTS

- **STATIC DEMO:** Stand next to the bike and lean it side to side
- **MOVING DEMO:** Ride TOWARD student-athletes while leaning the bike side to side
- **APPROACH:** Ready position, jogging pace

The goal is to lean the bike from one side to the other while maintaining a balanced ready position, showing appropriate use of all other fundamental elements.

BIKE-BODY SEPARATION

SIDE TO SIDE

TEACHING POINTS

- Low ready position with wide knees
- Hinge at the elbows
- Lean bike without steering/turning
- Keep torso still



CORNERING

INTRODUCTION TO CORNERING

- **WHERE:** Flat or downhill turns at moderate to high speed
- **WHY:** To maintain balance, control, and speed through corners

TEACHING POINTS

- **STATIC DEMO:** Show movement while standing next to bike
- **DEMO:** Ride TOWARD student-athletes, then turn away
- **APPROACH:** Low ready position, jogging pace

The goal is to maintain balance while making dramatic changes in riding direction.

CORNERING

INTRODUCTION TO CORNERING

TEACHING POINTS

- **LOW** ready position
- **LOOK** in the direction of the turn
- **LEAN** the bike in the direction of turn while maintaining level pedals



SHIFTING

- **WHERE:** Changes in terrain
- **WHY:** To maintain desired cadence and pedaling efficiency

TEACHING POINTS

- **STATIC DEMO:** Walk bike forward one pedal rotation in hardest and easiest gears; push on pedal while standing next to bike and “pluck” chain to show chain tension
- **DEMO:** Side view, quiet shifting; emphasize surge
- **APPROACH:** Slow, moderate jog—shift into easier gear during incline; shift to harder gear on descent

The goal is to help the rider understand how shifting gears affects comfort and efficiency over varying terrain.

SHIFTING

TEACHING POINTS

- **SURGE** — pedal forward forcefully
- **SOFT** — reduce force on pedals
- **SHIFT** — continue soft pedaling until chain moves
- Resume pedaling

Remember to use the terms **EASIER** or **HARDER** gear, rather than “higher” or “lower” gear.

CLIMBING: Dismount

- **WHERE:** When forced to stop while climbing
- **WHY:** To come to a safe stop and provide opportunity to restart

TEACHING POINTS

- **STATIC DEMO:** While straddling bike on incline, place one foot **DOWN** and **FORWARD**
- **DEMO:** Perform climbing dismount on incline
- **APPROACH:** Jogging pace to stop, on incline

The goal is to be able to get off of the bike safely while climbing. After all, walking is a method of climbing that is often used in mountain biking!

CLIMBING: Dismount

TEACHING POINTS

- **LOOK** for place to put your foot down
- **LOCK** both brakes
- **LEAN** bike
- **LAND** with foot, stepping uphill and forward



CLIMBING: Seated

- **WHERE:** To climb easy to moderate slopes
- **WHY:** To climb efficiently in a seated, balanced position

TEACHING POINTS

- **DEMO/APPROACH:** Side view on sloped terrain; walking speed

The goal is to climb easy to moderate inclines efficiently while in a seated position.

CLIMBING: Seated

TEACHING POINTS

- Shift gears
- Shoulders forward
- Hips forward as terrain steepens



CLIMBING: Crouched

- **WHERE:** As required for steepness of grade
- **WHY:** To navigate obstacles and features using bike-body separation

TEACHING POINTS

- **DEMO/APPROACH:** Side view on sloped terrain; slow jogging pace

The goal is to develop good bike-body separation to maintain balance and traction while climbing technical terrain.

CLIMBING: Crouched

TEACHING POINTS

- Shoulders low
- Elbows out
- Move hips forward
- Hover over saddle



CLIMBING: Standing

- **WHERE:** When climbing where traction is good
- **WHY:** To rest muscles used while seated climbing on a long climb; to utilize body weight to accelerate

TEACHING POINTS

- **DEMO/APPROACH:** Side view on sloped terrain; fast walking speed

The goal is to develop good timing and coordination when rocking the bike from side to side during a standing climb.

CLIMBING: Standing

TEACHING POINTS

- Stand up
- Power pedal
- Pull



NOTES

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NATIONAL
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MADE POSSIBLE BY

TREK

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