

## **Jumping – Introduction to jumping on small to medium tabletops.**

**Why** – To improve safety and efficiency on jump trails while developing essential Position & Balance, Pressure Control and Timing skills.

### **Prerequisites before starting jumping:**

**Trails** – Students should be able to clear all blue tech trails on lower mountain showing relevant bike handling skills.

**Front, Rear & Level Lift** – A successful level Lift will show the ability to perform a balanced press, good rear wheel awareness and good timing. Points to look for:

- Relaxed and even press.
- Both wheels being lifted and landing simultaneously.
- Good pedal grab and contact.
- Bike stays level throughout the maneuver.

**Drop offs** – Students comfortable in the drops at 1.4 Drop Centre. Points to look for:

- Good timing of the press.
- Balanced position in the air.
- Both wheels landing simultaneously.

**Essential Skills** – Ride with students to assess the three skills of jumping:

- Position & Balance – Rider should be able to adjust position to maintain a solid, stable stance through various terrain. Show a good range of motion.
- Pressure Control – Rider should be able to control pressure both passive and active.
- Timing & Coordination – Ability to pump rollers and “press” out of corners.

# Teaching Progression – Jumps

## Stage One: Area Intro, Jump Anatomy and Warm-up

### Area Intro and Jump Anatomy

All maneuver based lessons should start with an Area Intro. Highlight the traffic, route and which jumps are available to use. Describing the anatomy of the jump is important for safety and technical reasons. Using consistent terminology will help ensure the students understand your explanations and is a key part of your risk management.



POC. Point of commitment – point on the approach where the correct speed and stance for the jump should be attained. There should be no pedaling, braking or shifting of stance beyond this point. **Commit or abort.**

1. Approach – flat section of trail before the jump.
2. Transition – curve from the approach to the ramp. This is where the bike is loaded with pressure.
3. Ramp – part of jump from transition to the lip.
4. Lip – end of ramp. Steeper the lip, the more vertical the rider will be sent.
5. Table – the flat top of the jump between the lip and the landing.
6. Knuckle – start of the landing.
7. Landing – where riders should aim to land both wheels.

### Warm-up – Point of Commitment, Roll & Relax, Neutral

After students have been introduced to the area, they can begin to roll the jump keeping the tires on the ground. Rolling up the ramp, across the top and down the landing helps develop a

rider's range of motion, pressure control and timing skills. It will also give the rider a chance to feel most of the movement patterns required for jumping without leaving the ground.

The first goal is to learn where the POC is and to confidently be able to roll over the jump with NO brakes in a relaxed neutral position. This is essential before moving on in their development.

Practice maintaining a centered position while gradually increasing speed, ABSORBING the lip. This is a key skill development for Stage Two of the progression.

- Ride slower than the speed required to get air. (Jogging pace)
- Approach the ramp in the neutral position with arms and legs slightly extended.
- As the ramp pushes the front wheel up, flex the arms and allow the handlebars to rise. Then as the rear wheel is pushed up by the ramp, flex the legs and allow the rest of the bike to rise up to the body.
- Ride over the table in a crouched position.
- As the front wheel begins to move down the landing, extend the arms and push the wheel down the ramp.
- As rear wheel begins to roll down the landing, extend the legs, pushing the rear wheel down the ramp.
- Keep a silent upper body and have the bike up underneath the rider.

### **Teaching Points**

- Demonstrations should show a side view and emphasis should be on the flexion/extension of arms and legs.
- Have the riders relax and let the ramp push the bike to them.
- Pay close attention to their approach and wheels going up the ramp. This is where most issues will occur.

### **Assessment & Development**

Overall, look for a silent upper body, smooth movements, with both wheels staying on the ground. Provide feedback on POC, Position & Balance and absorption skills. Only progress when riders are consistent and comfortable.

Front wheel leaves the ground:

- If speed is too fast, there could be too much force to absorb → approach slower.
- Stance behind centre on approach → bounce before POC.
- Stance moving back as front wheel moves up ramp, rider could be defensive with stiff arms → relax, slow speed.
- Arms are too stiff → think rubber arms and exaggerate flexing elbows.

Rear wheel kicks or feet lifting off pedals:

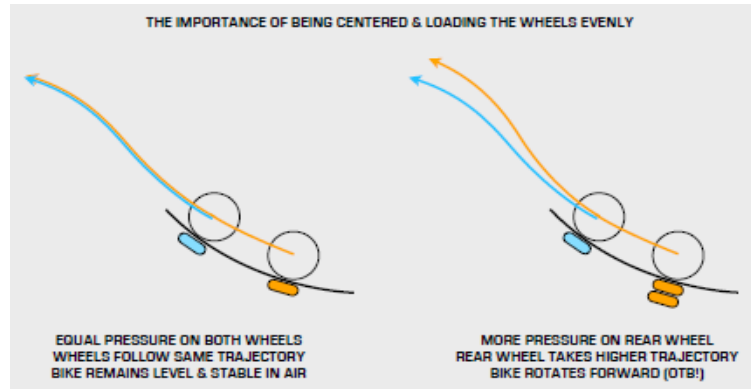
- If speed is too fast, getting thrown forward as front wheel hits ramp → approach slower.
- Stance ahead of centre on approach → bounce before POC.
- Feet leaving pedals or rear wheel pops up → watch that legs are flexing as rear wheel moves up the ramp / ensure brakes aren't being applied.

## **Stage 2: Press & Absorb (goal is consistency & stability, not making the landing)**

### **Press – to maintain a strong position and load wheels evenly.**

Riding into a jump at speeds causes the terrain (ramp) to push on the rider. Unless a rider reacts, this pressure will push the off balance making their jumping unstable. By getting low before the transition, a rider can then extend their legs to gradually push (press) the bike into the bottom of the ramp. This helps “resist” any pushing forces from the terrain so the rider can maintain a strong position.

A centred position is vital to ensure the wheels are loaded with the same amount of energy. The more energy loaded into a wheel, the higher it wants to go. (equal and opposite reaction) Evenly weighted wheels will follow the same trajectory, keeping the bike level and stable in the air.



The extension should be smooth and done as the bike moves up the ramp as opposed to a snappy punch. This will make it easier to balance against the forces acting on the bike.

Where on the ramp the press is done directly affects the arc the body and bike will take in the air, as well as how much force is applied to the bike by the ramp. This makes the timing of the press (completion) very important for effective jumping. An early press creates a lower, longer arc by creating less vertical motion. This will also result in an increased amount of force from the ramp which will need to be absorbed. A later press creates a higher, slower arc. This also results in less forces created by the ramp which need to be absorbed. This is the preferred timing for beginners. Time the press too late and the front wheel leaves the ramp before the extension is complete (no absorption) causing a large rotational force that will pitch the rider forward. (dead sailor)

The depth and intensity of the press will also affect the outcome of the jump. The greater the extension (deeper press) the greater the change in direction of motion will be. It also puts the rider in a better position to absorb the lip and therefore staying more balanced. As the intensity increases, be sure that the motion stays smooth and rider uses the legs as opposed to pulling on the bars.

As speeds increase, so will the force acting on the bike. Rider's range of motion, pressure control and timing skills will need to be more proficient.

Faster speed → start press earlier, press will be quicker (not harder), absorb earlier.

Slower speed → press closer to bottom of ramp, press gradual and harder, absorb closer to lip.

Longer ramp → gradual press, faster speed shortens ramp, still absorb lip

Steeper ramp → ramp will push harder, stay active with range of motion, even weighted wheels, absorb more of the lip.

## **Absorb – to stay lower and improve stability.**

Just before the front wheel leaves the lip, the rider begins to flex and absorb the pressure from the ramp. This will help keep them lower (safer for learning) and help prevent the rear wheel from being bucked. When the front wheel leaves the jump the rear wheel can potentially be suddenly loaded with energy since the rider's weight is now only supported by the rear wheel. Beginning to absorb just before the front wheel leaves the lip helps reduce this effect by unweighting the rear wheel at the same time.



POC – approach in a relaxed neutral position. Should you brake or hesitate after POC, slow down and roll jump.

Press – using legs in the transition of the ramp. Keep pressure even on both wheels and movements smooth.

Absorb – when the front wheel is just before the lip. Begin to relax, allowing your arms and legs to bend.

Relax in the air by staying small, ready to adjust and absorb the landing.

## **Credit Card Air – increase the speed to get small air on the jump.**

With an increase in speed comes a change in the timing. Timing of the absorb remains the same while the timing of the press will change. Gradually work the riders to a higher speed and/or stronger press to achieve credit card air. The goal is to be stable and consistent, not to make the landing.

## Teaching Points

- Emphasize that jumping is about timing and balance, not strength. Try to be smooth and relaxed.
- At the POC, relax and focus on the jump.
- Demonstrations should show a side view to better highlight the press and absorb.
- Press and absorb should be one continuous smooth movement.
- Add scoop action with the feet to help with press and absorb.
- Encourage the development of the timing and depth of the press before increasing the speed.
- Focus on technique before making the landing of the jump. Ensure the technique does not suffer in the attempt to go further.
- First attempts should aim to land on the table. With practice and confidence, the speed and/or press can be adjusted to start making the landing.
- Provide feedback based on Position & Balance, Pressure and Timing. Stable position so jump doesn't push rider around. Press with legs mostly in transition.
- If rider is deficient in certain skills, develop them on trail before bringing it back to jumping.



## Assessment & Development

Assessing jumping focuses mainly on what happens between the POC and when the rear wheel leaves the ramp. What happens in the air is a direct result of what happens in this time period. Below are some common things to watch for and the results they may produce in the air.

### Position & Balance

- Arms are too stiff → position too far back. Bike will have a nose-up look in the air. Rider think about “rubber” arms, push-up feeling to keep centred position.
- Press is directed down, not into ramp → forward rotation, nose-down look in air. Focus on press action, feeling of scooping the feet.
- Range of motion → tall position reduces the ability to press into the ramp and control pressure. Bent legs at lip → reduces the ability to absorb the pressures.

### Pressure Control

- Press: too little press (more absorption) → excess forward rotation that needs to be controlled/absorbed. Focus on a stonger press to balance against the ramp forces.
- Press: quick snappy press → quick pressure, more difficult to control. Focus on a smoother press to even out pressure.
- Absorb: legs stay long when rear wheel leaves the lip → feet “light” on pedals, forward rotation as pressure not controlled. Focus on relaxing the legs and letting the rear wheel come up to the body.
- Absorb: too much absorption before the rear wheel leaves the lip isn’t necessarily a bad thing → produce a lower arc as the rear wheel leaves the ramp early. Focus on allowing the rear to rise up on it’s own instead of pulling it up.

### Timing & Coordination

- Early press → more forces from ramp to control. If forces aren’t controlled it could lead to a forward rotation in the air. Focus on a longer press to resist against the ramp forces.
- Late press → front wheel leaves the lip before extension is complete. Results in more pressure on rear wheel causing a forward rotation. Focus on having maximum extension when front wheel is just below the lip.

### Speed

- Too slow a speed → compensating with an over aggressive press which could lead to balance issues. If rider is uncomfortable with the speed, go back to trails and work on speed confidence.
- Too fast a speed → increase in ramp forces, more difficult with Pressure Control and Timing skills. Decrease speed so rider can focus on jumping skills.