When tuning a 1/8 scale off-road race car, it is important to make changes in a specific order to ensure that each adjustment builds upon the previous ones. **Making changes in the wrong order can lead to confusion and frustration, as it can be difficult to isolate the effects of each individual adjustment.**

The sources recommend the following order for making changes to car setup:

1. **Tires:** Tires are the most important part of the car's setup. They are the only part of the car that touches the track surface. **Choosing the right tires for the track conditions is essential for maximizing grip and performance.** [1, 2] Consider the type of surface, the condition of the surface, and the amount of grip available when selecting tires. [1-3] For example, on a high-grip track, you might choose a tire with a softer compound. On a low-grip track, you might choose a tire with a harder compound. Softer tires provide more grip but wear out faster. Harder tires provide less grip but last longer. [1, 2]
2. **Differential Oils:** Differential oils affect how much power is sent to each wheel. **Thicker oils generally make the car easier to drive, while thinner oils make the car more responsive.** [4, 5] Start with the recommended differential oil weights for your car and track conditions. Then, experiment with thicker or thinner oils to fine-tune the car's handling. For example, if the car is too loose on corner exit, you might try thickening the rear differential oil.
3. **Rear Toe:** Rear toe affects the stability of the rear end of the car. **More toe-in generally makes the car more stable, while less toe-in makes the car more responsive.** [5] Start with the recommended rear toe setting for your car and track conditions. Then, experiment with increasing or decreasing toe-in to fine-tune the car's handling. For example, if the car is oversteering on corner entry, you might try increasing rear toe-in.
4. **Anti-Squat:** Anti-squat affects how much the rear of the car squats under acceleration. **More anti-squat can make the car faster, but also more difficult to drive**. [5-8] It can make the rear end feel loose and unpredictable. Less anti-squat is generally better on bumpy tracks and for less experienced drivers. Experiment with different anti-squat settings to find a balance between speed and ease of driving.
5. **Suspension Geometry:** Suspension geometry includes settings like ride height, camber, caster, and wheelbase. **These settings affect the car's overall handling balance.** [6, 9] Start with the recommended settings for your car and track conditions. Then, make small adjustments to fine-tune the car's handling.
6. **Shocks:** Shocks affect how the car reacts to bumps and jumps. **Softer shocks make the car more comfortable to drive, while harder shocks make the car more responsive.** [5, 6] Shock settings include spring rate, oil weight, and piston hole size. Start with the recommended shock settings for your car and track conditions. Then, experiment with different settings to fine-tune the car's handling.
7. **Other Adjustments:** Once you have made the basic setup changes, you can fine-tune the car's handling with other adjustments, such as:

- Ackermann: Adjusts the steering angle of the inside and outside front wheels.
- Bump steer: Adjusts how the toe angle changes as the suspension compresses.
- Droop: Affects how far the suspension can droop before the tires lift off the ground.

It is important to make small changes at a time and to test the car after each adjustment. Keep track of the changes you make and the results you achieve so that you can develop a setup that works well for your car and driving style on different track surfaces. [10] You should **always return to the basic setup if you become lost with your setup**. [10]

The goal of tuning is to find a setup that provides the best balance between speed, ease of driving, and consistency. The optimal setup will vary depending on the track, the conditions, and the driver.