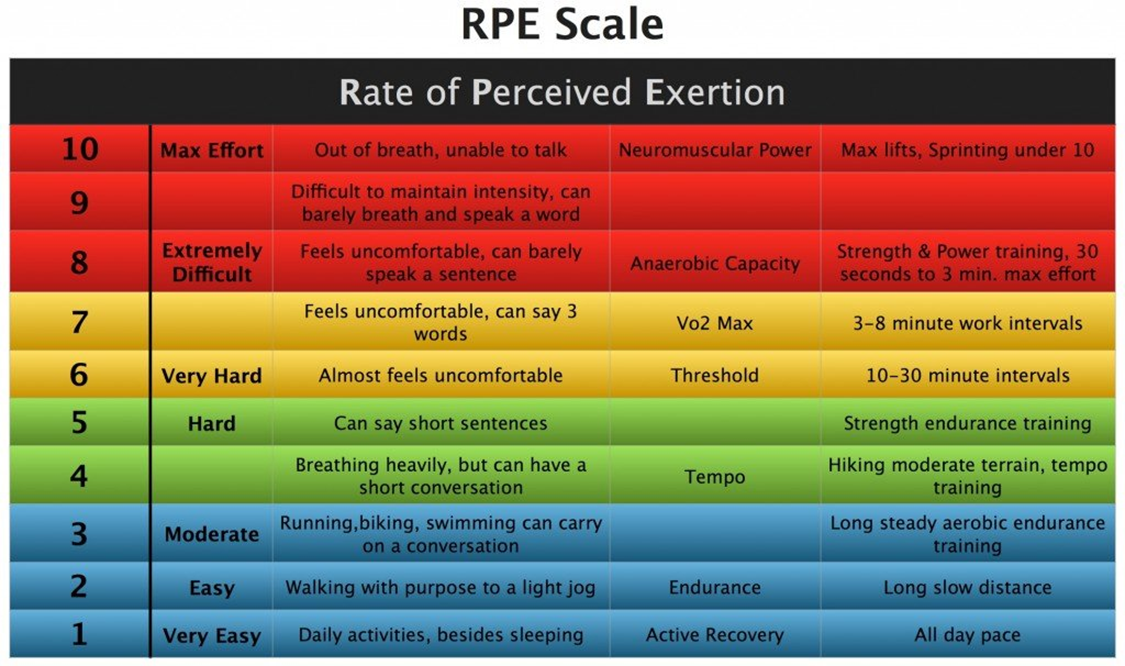
**Raven Cross Country**

**2020 Summer Workout Schedule**

**Volume Recommendations:**

Time and repetition ranges are noted for several workout sessions. When 4 separate run times are indicated, it is recommended that 1st-year athletes choose the shortest duration, 2nd-year athletes choose the next longest duration, and so on. When only 3 run times are indicated, it is recommended that 1st-year athletes choose the shortest duration, 2nd-year athletes choose the next longest duration, and 3rd & 4th-year athletes choose the longest duration. When a range of repetitions is indicated, it is recommended that 1st-year athletes do the fewest repetitions, 2nd-year athletes do 1 additional repetition, and 3rd & 4th-year athletes do the most repetitions.



**Pace (RPE) Rate of Perceived Exertion Explanations:**

**RECOVERY/MODERATE/MANTENANCE: RPE = 1-3**; This is approximately 2 minutes slower per mile than 5k date pace. For example, an athlete with a 5k date pace of 6 minutes per mile should run at a velocity of about 8 minutes per mile for RECOVERY effort. These runs can range in length from 25 to 50 minutes. The objective of a RECOVERY run is to provide gentle aerobic stimuli with minimal musculoskeletal stress in order to promote optimal tissue repair. While “jogging” is often synonymous with careless, mechanically inefficient movement patters, RECOVERY pace running should be conducted with mindful mechanical efficiency in order to reinforce optimal movement patterns.

**EASY/MODERATE/TEMPO: RPE = 3-4;** This is similar to RECOVERY run effort. EASY pace running is used prior to, following, and/or in between higher intensity efforts like workout segments or races. Preceding a workout or race, athletes should begin at a RPE of 3 and gradually increase effort to a 4 over the course of the proscribed run time. Following or in between higher intensity efforts, athletes should begin at a RPE of 4 and either maintain or gradually reduce effort to a 3 over the course of the proscribed run time. Note: While “jogging” is often synonymous with careless, mechanically inefficient movement patters,EASY pace running should be conducted with mindful mechanical efficiency in order to reinforce optimal movement patterns.

**LSD/TEMPO/STRENGHT ENDURANCE/HARD: RPE = 4-5;** This is aerobic development pace, slightly higher in intensity than RECOVERY and EASY effort running. The purpose of Long Sustained Distance running of 40 to 90 minutes in duration is to stimulate adaptive response in various aerobic pathways, including cardio-vascular power and efficiency, mitochondrial density and efficiency, metabolic efficiency, muscle fiber size, and fatigue resistance. Given that the largest energy contribution comes from the aerobic system for races of 800m or longer, LSD paced running is the cornerstone of distance training. Extending the length of the Long Sustained Paced run over the course of the season and over the course of the high school career is essential for reaching endurance

performance potential.

**20k/THRESHOLD/VERY HARD: RPE = 6;** Often called “threshold” effort, this pace is about 30 seconds per mile slower than 5k date pace. It should be the fastest pace you can sustain for about a half-marathon (13 miles). This is the running effort at which the aerobic system is no longer able to supply the necessary energy to sustain the pace. This effort level creeps just beyond the “aerobic threshold”, the point at which lactate acid levels in the blood stream begin to increase. 20k paced running should feel “comfortably quick”, allowing maintenance of breathing rhythm and sustained mental focus. Only slightly faster than LSD pace, you should be able to sustain 20k pace with only slightly more effort and recover from it quickly. In segmented training, a rest interval of 1 minute

should be sufficient. Training at this pace promotes improved lactate recycling and fatigue buffering. These adaptations allow you to sustain faster paces for longer durations.

**10k/Vo2 MAX: RPE = 7;** Known to some as “critical velocity” (CV), this pace is about 15 seconds per mile slower than 5k date pace. 10k effort is approximately 90% of 5k effort and often used for training segments of 3 minutes in duration with relatively short recovery. Training at this pace is optimal for increasing the oxidative capacity of type II muscle fibers and improving stamina at higher velocities. This velocity is particularly beneficial due to the high adaptive stimulus with relatively low musculoskeletal stress.

**5k/ANEROBIC CAPACITY: RPE = 8;** This pace is approaching the VO2max window, wherein sustained effort becomes noticeably more difficult. Training at this pace stimulates adaptive response to the various pathways responsible for oxygen utilization and mechanical efficiency with more significant stress on the musculoskeletal system.

**3200m, 1600m & 800m/NUEROMUSCULAR: RPE = 9-10;** VO2max pace and sub-VO2max pace training. These training efforts are useful for reaching potential oxygen utilization capacity as well as developing and optimizing neuromuscular pathways, running economy, and power. In addition, training at these race paces is critical for developing race-pace awareness and race-specific mental endurance. These paces are most stressful to the musculoskeletal

system and therefore account for the smallest fraction of total volume over the training cycle.

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| **ROCKY RIVER CROSS COUNTRY** | | | | | | | | |
| **2020 RAVEN CROSS COUNTRY SUMMER WORKOUT SCHEDULE AVAILABLE FOR ALL ATHLETES** | | | | | | | | |
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| **CONDITIONING CIRCUIT #1**  100m jog between each 20-25 sec   * Standing Hamstring Stretch * Piriformis Stretch * Lunge With Spinal Twist * Triceps Stretch * Eagles On Back * Eagles On Chest * Side Leg Raises * Splits * Lying Pectoral Stretch * Forearm Stand, Side Leg Raises, Toe Twists * Superdogs * Lateral Walk Pushups   STRENGTH CIRCUIT #1  3 x 8-10 reps. Each. Heavy weight   * Step Ups * Frog Jumps * Front Lunges * Push-Up Row W/ Dumbbells * Squat-RPEss W/ Landmind * Bent Reverse Fly W/ Dumbbell * Curls * Triceps * Dumbbell Butterflies | | **CONDITIONING CIRCUIT #2**  100m jog between each 20-25 rep   * Figure Four Stretch * 90/90 Stretch * Frog Stretch * Butterfly Stretch * Scissors * Single Knee Tuck * Double Arm Circles * Leg Swing L-R Front/Back * Hands & Knees Bird Dogs * Side Crunches * Mountain Climbers * Suitcases   STRENGTH CIRCUIT #2  3 x 8-10 reps. Each. Heavy weight   * Tucks Jumps * Ski Jumps * Push Ups * Arm Curls W/Dumbbells * Dead Lift W/ Barbell * Triceps RPEss W/ Dumbbell * Shoulder Flies=3 Position * One Arm High Pulls W/ Dumbbell * Bench RPEss W/ Dumbbells | | | **CONDITIONING CIRCUIT #3**  100m jog between each 20-25 rep   * Seated Shoulder Stretch * Side Bend Stretch * Lunging Hip Flexor Stretch * V-Ups * Forearm Stand Bent Leg Raises * Sitting Bicycle * Push Up Position Bird Dogs * Piston, “H” Position To Full Extension * Leg Swing L-R Side/Side * Hurdle Trail Leg Circle L-R * Donkey Kick L-R Whip * Donkey Kick Trial Leg L-R   STRENGTH CIRCUIT #3  3 x 8-10 reps. Each. Heavy weight   * Dips * Golf Squats * Barbell Leg Raiser Crunches * Upright Rows W/ Barbell * Dbl Leg Box Jumps * Pull Ups W/ Band * 60 Secs Running Arms W/ Dumbbells * Front/Side Arm Raises W/ Dumbbell * Seated Incline Dbl Triceps RPEss | | | |
| **MONDAY** | **TUESDAY** | | **WEDNESDAY** | **THURSDAY** | | **FRIDAY** | **SATURDAY** |
| June 1  **MORNING SESSION**  Recovery Run  Conditioning #1  20-25-30 min (RPE/3) | 2  LSD Run Trail Run  35-40-45-50 mins  (RPE/4-5)  Find a Trial or Park  **CC Zoom Meeting 7:00pm** | | 3  **MORNING SESSION**  Easy/Recovery Run  20-25-30 min Recovery run (RPE/4) | 4  LSP Workout Run  Conditioning #2  Easy run (RPE/3-4) 25-30-35 min Tempo surges (RPE/6-8) | | 5  **MORNING SESSION**  Easy/Recovery Run  Conditioning #1  20-25-30 min recovery run (RPE/4) | 6  LSD Trail Run  35-45-55 mIn run (RPE/4-5) |
| June 8  **MORNING SESSION**  Recovery Run  Conditioning #1  20-25-30 min  RPE/3  4X100m Strides  **AFTERNOON SESSION**  5 min wu run (RPE/1-3)  Strength #1 | 9  LSD Run Trail Run  40-45-50-55 mins  (RPE/4-5)  Find a Trial or Park  **CC Zoom Meeting 7:00pm** | | 10  **MORNING SESSION**  Easy/Recovery Run  20-25-30 min Recovery run (RPE/4)  **AFTERNOON SESSION**  5-10 min wu run (RPE/3) Strength #2 | 11  LSP Workout Run  Conditioning #2  Easy run (RPE/3-4) 30-35-40 min Tempo surges (RPE/6-8 | | 12  **MORNING SESSION**  Easy/Recovery Run  Conditioning #1  20-25-30 min recovery run (RPE/4)  **AFTERNOON SESSION**  5-10 min wu run  Strength #2 | LSD Trail Run  40-50-60 mIn run (RPE/4-5) |
| June 15  **MORNING SESSION**  Recovery Run  Conditioning #1  20-25-30 min  RPE/3  4X100m Strides (  **AFTERNOON SESSION**  5 min wu run (RPE/1-3)  Strength #1 | 16  LSD Run Trail Run  45-50-55-60 mins  (RPE/4-5)  Find a Trial or Park  **CC Zoom Meeting 7:00pm** | | 17  **MORNING SESSION**  Easy/Recovery Run  25-30-35 min Recovery run (RPE/4)  **AFTERNOON SESSION**  5-10 min wu run (RPE/3) Strength #1 | 18  LSP Workout Run  Conditioning #1  Easy run (RPE/3-4) 36-40-45 min Tempo surges (RPE/6-8 | | 19  **MORNING SESSION**  Easy/Recovery Run  Conditioning #2  25-30-35 min recovery run (RPE/4)  **AFTERNOON SESSION**  5-10 min wu run  Strength #2 | LSD Trail Run  45-55-65 mIn run (RPE/4-5) |
| June 22  **MORNING SESSION**  Recovery Run  Conditioning #1  25-30-35 min  RPE/3  4X100m Strides (RPE/9)  **AFTERNOON SESSION**  5-10 min wu run (RPE/1-3)  Strength #1 | 23  LSD Run Trail Run  45-50-55-60 mins  (RPE/4-5)  Find a Trial or Park  **CC Zoom Meeting 7:00pm** | | 24  **MORNING SESSION**  Easy/Recovery Run  25-30-35 min Recovery run (RPE/4)  **AFTERNOON SESSION**  5-10 min wu run (RPE/3) Strength #2 | 25  LSP Workout Run  Conditioning #2  20 min wu run (RPE/3-4)  2 min easy/2 min (RPE/6), 1 min easy, 1 min (RPE/7)  10 min cool down run. | | 26  **MORNING SESSION**  Easy/Recovery Run  Conditioning #1  25-30-35 min recovery run (RPE/4)  4X20/60 secs on/off sprints (RPE/10)  **AFTERNOON SESSION**  5-10 min wu run (RPE/3)  Strength #1 | LSD Trail Run  50-60-70 mIn run (RPE/4-5) |
| June 29  **MORNING SESSION**  Recovery Run  Conditioning #2  25-30-35 min  RPE/4  6-8 X100m Strides (RPE/9)  **AFTERNOON SESSION**  5-10-15 min wu run (RPE/3)  Strength #2 | 30  LSD Run Trail Run  50-55-60-65 mins  (RPE/4-5)  Find a Trial or Park  **CC Zoom Meeting 7:00pm** | | July 1  **MORNING SESSION**  Easy/Recovery Run  30-35-40 min Recovery run (RPE/4)  **AFTERNOON SESSION**  5-10-15 min wu run (RPE/3-4) Strength #1 | 2  Time Trail Run  Conditioning#2  20 min wu run (RPE/3-4)  2 miles Time Trail  10 min cool down run. | | 3  **MORNING SESSION**  Easy/Recovery Run  Conditioning #2  30-35-40 min (RPE/4)  4x20/60 secs on/off sprints (RPE/10).  **AFTERNOON SESSION**  5-10-15 min wu run (RPE/3-4)  Strength #2 | 4  LSD Trail Run  60-70-80 mIn run (RPE/4-5) |
| July 6  **MORNING SESSION**  Recovery Run  Conditioning #1  25-30-35 min  (RPE/4)  6-8 X100m Strides (RPE/9)  **AFTERNOON SESSION**  5-10-15 min wu run (RPE/3-4)  Strength #1 | 7  LSD Run Trail Run  50-55-60-65 mins  (RPE/4-5)  Find a Trial or Park  **CC Zoom Meeting 7:00pm** | | 8  **MORNING SESSION**  Easy/Recovery Run  30-35-40 min Recovery run (RPE/4)  **AFTERNOON SESSION**  5-10-15 min wu run (RPE/3-4) Strength #2 | 9  LSP Workout Run  Conditioning#2  20 min wu run (RPE/3-4)  3-4x2 min easy, 3 min (RPE/6), 1 min easy, 1 min (RPE/7)  10 min cool down run | | 10  **MORNING SESSION**  Easy/Recovery Run  Conditioning #1  30-35-40 min (RPE/4)  4x20/60 secs on/off sprints (RPE/10).  **AFTERNOON SESSION**  5-10-15 min wu run (RPE/3-4)  Strength #1 | 11  LSD Trail Run  65-75-85 mIn run (RPE/4-5) |
| July 13  **MORNING SESSION**  Recovery Run  Conditioning #1  30-35-40 min  RPE/4  8-10 X100m Strides (RPE/9)  **AFTERNOON SESSION**  5-10-15 min wu run (RPE/3)  Strength #2 | 14  LSD Run Trail Run  55-60-65-70 mins  (RPE/4-5)  Find a Trial or Park  **CC Zoom Meeting 7:00pm** | | 15  **MORNING SESSION**  Easy/Recovery Run  30-35-40 min Recovery run (RPE/4)  **AFTERNOON SESSION**  5-10-20 min wu run (RPE/3-4) Strength #3 | 16  LSP Workout Run  Conditioning#2  20 min wu run (RPE/3-4)  3-4x2 min easy, 4 min (RPE/6), 1 min easy, 1 min (RPE/7)  10 min cool down run  . | | 17  **MORNING SESSION**  Easy/Recovery Run  Conditioning #3  30-35-40 min (RPE/4)  4x20/60 secs on/off sprints (RPE/10).  **AFTERNOON SESSION**  5-10-15 min wu run (RPE/3-4)  Strength #3 | 18  LSD Trail Run  65-75-85 mIn run (RPE/4-5) |
| July 20  **MORNING SESSION**  Recovery Run  Conditioning #1  30-35-40 min  RPE/4  8-10 X100m Strides (RPE/9)  **AFTERNOON SESSION**  5-10-15 min wu run (RPE/3)  Strength #3 | 21  LSD Run Trail Run  55-60-65-70 mins  (RPE/4-5)  Find a Trial or Park  **CC Zoom Meeting 7:00pm** | | 22  **MORNING SESSION**  Easy/Recovery Run  35-40-45 min Recovery run (RPE/4)  **AFTERNOON SESSION**  5-10-15 min wu run (RPE/3-4) Strength #1 | 23  LSP Workout Run  Conditioning#2  20 min wu run (RPE/3-4)  4-5x2 min easy, 3 min (RPE/6), 1 min easy, 1 min (RPE/7)  10 min cool down run | | 24  **MORNING SESSION**  Easy/Recovery Run  Conditioning #3  30-35-40 min (RPE/4)  4x30/60 secs on/off sprints (RPE/10).  **AFTERNOON SESSION**  5-10-20 min wu run (RPE/3-4)  Strength #3 | 25  LSD Trail Run  75-85-95 mIn run (RPE/4-5) |
| June 27  **MORNING SESSION**  Recovery Run  Conditioning #3  35-40-45 min  RPE/4  10-12 X100m Strides (RPE/9)  **AFTERNOON SESSION**  5-10-20 min run (RPE/3-4)  Strength #2 | 28  LSD Run Trail Run  55-60-65-70 mins  (RPE/4-5)  Find a Trial or Park  **CC Zoom Meeting 7:00pm** | | 29  **MORNING SESSION**  Easy/Recovery Run  30-35-40 min Recovery run (RPE/4)  **AFTERNOON SESSION**  5-10-20 min wu run (RPE/3-4) Strength #2 | 30  Time Trail Run  Conditioning#2  20 min wu run (RPE/3-4)  3 miles Time Trail  10 min cool down run. | | 31  **MORNING SESSION**  Easy/Recovery Run  Conditioning #3  30-35-40 min (RPE/4)  4x30/60 secs on/off sprints (RPE/10).  **AFTERNOON SESSION**  5-10-20 min wu run (RPE/3-4)  Strength #3 | August 1  LSD Trail Run  80-90-100 mIn run (RPE/4-5) |
| August 3  **MORNING SESSION**  Recovery Run  Conditioning #3  35-40-45 min  RPE/4  10-12 X100m Strides (RPE/9)  **AFTERNOON SESSION**  5-10-20 min run (RPE/3-4)  Strength #2 | 4  LSD Run Trail Run  55-60-65-70 mins  (RPE/4-5)  Find a Trial or Park  **CC Zoom Meeting 7:00pm** | | 5  **MORNING SESSION**  Easy/Recovery Run  35-40-45 min Recovery run (RPE/4)  **AFTERNOON SESSION**  5-10-20 min wu run (RPE/3-4) Strength #3 | 6  LSP Workout Run  Conditioning#2  20 min wu run (RPE/3-4)  4-5x2 min easy, 4 min (RPE/6), 1 min easy, 1 min (RPE/7)  10 min cool down run | | 7  **MORNING SESSION**  Easy/Recovery Run  Conditioning #3  30-35-40 min (RPE/4)  4x30/60 secs on/off sprints (RPE/10).  **AFTERNOON SESSION**  5-10-20 min wu run (RPE/3-4)  Strength #2 | 8  LSD Trail Run  90-100-120 mIn run (RPE/4-5) |