

SPRINT RELAYS

JOHN REYES GRANDVIEW HIGH SCHOOL

NFHSCA

NEBRASKA CLINIC JULY 2023



CAREER 2003-2023

- **2003-2013 HEAD COACH THUNDERRIDGE HIGH SCHOOL**
 - 2 RELAY STATE CHAMPIONSHIPS (GIRLS 4X400-2008, GIRLS 4X200-2009)
 - 3 INDIVIDUAL STATE CHAMPIONS
 - 11 SEASONS 464.5 STATE POINTS SCORED
 - 92 PODIUM FINISHES
- **2014-2023 HEAD COACH GRANDVIEW HIGH SCHOOL**
 - 11 RELAY STATE CHAMPIONSHIPS
 - 13 INDIVIDUAL STATE CHAMPIONSHIPS
 - 9 SEASONS 924 STATE POINTS SCORED
 - 162 PODIUM FINISHES

COACHING PHILOSOPHY ALL EVENTS

- 1. Have Vision**
- 2. Have Humility**
- 3. Have Purpose (Originality)**
- 4. Have Passion**
- 5. Have FUN**

When we began our current method

- **2017 I became sprint relays coach**
- **Previously I always had an assistant handle sprint relays**
- **I rethought the event(s)**
- **I changed almost everything.**



A photograph of four female relay runners from Grandview standing in a row on a track. They are wearing black singlets with 'GRANDVIEW' and a cougar logo. The background shows a red tent and spectators.

WHAT DIDN'T CHANGE

- 1st and 3rd runners hold baton in right hand, and run on the inside of their lane.
- 2nd and 4th runners hold baton in left hand, and run on the outside of the lane.

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Grandview Relays Girls and Boys 2017,2018,2019 2021, 2022,2023

- **11 Relay State Titles**
- **6 State Runner-Up Teams (2nd)**
- **34 Sprint Relay teams compete in the State Finals**
- **BROKEN 2 STATE RECORDS**





STATE CHAMPION RELAY TEAMS GIRLS



- Girls SpMed 2017
- Girls 4x200 2017
- Girls 4x400 2017
- Girls 4x400 2018
- Girls SpMed 2021
- Girls 4x200 2021
- Girls 4x100 2023

STATE CHAMPION RELAY TEAMS BOYS

- Boys 4x100 2021
- Boys 4x200 2021
- Boys 4x100 2022
- Boys 4x200 2022





How I Interpret Our Results

- We are doing what we are supposed to do!!!
- Our school is BIG! 2,896 students
- Naturally gifted athletes.



2021 DYESTAT 4X100 DATA



- Dyestat National Duel Meet Tournament Data.
- Data includes the 32 teams in the tournament (all State Champions). The 3 fastest boy 4x100 in the nation in 2021, and traditional powerhouse programs nationally.
- Our time of 41.48 ranks 15th, but our aggregate time of 44.27 is 31st.
- Our differential or time that we gained during the 4x100 negative 2.79 seconds.

2021 and 2022 HS 4x100 Data



2021

15 teams less than 2.0 sec

12 teams between 2.0-2.25 sec

14 teams between 2.25-2.5 sec

6 teams greater than 2.5 sec

3 teams greater than 2.75 sec

2022

12 teams less than 2.0 sec

21 teams between 2.0-2.25 sec

9 teams between 2.25-2.5 sec

7 teams greater than 2.5 sec

1 team greater than 2.69 sec

Sample size 50 teams from across the country, mostly State Champion Teams and mostly Large Schools.

MY CONCLUSION

- Most High School 4x100 teams run between 1.75-2.5 seconds faster than their aggregate time (83%).
- To me less than 2.0 seconds is not good (27%).
- To me 2.0-2.25 is okay (33%).
- To me 2.25-2.5 is good (23%).
- To me greater than 2.50 is great (13%).
- To me 2.70 or greater EXCELLENT!! (4%)





2022 MEN'S 4X100 NCAA D1 COMPARISON

- | | |
|---------|----------|
| 1. 2.65 | 6. 2.39 |
| 2. 2.62 | 7. 2.36 |
| 3. 2.51 | 8. 2.22 |
| 4. 2.44 | 9. 2.13 |
| 5. 2.41 | 10. 2.04 |



2021

GRANDVIEW

BOYS 4X100 PR

- 4x100 Aggregate
(10.93+10.99+11.14+11.21=44.27)
- 4x100 Time PR
41.48 Differential
2.79

2022 GRANDVIEW BOYS 4X100 PR

- League Meet that day
(10.71, 10.88, 10.96, 1
Didn't run PR 10.74)
- $10.71 + 10.88 + 10.96 + 10.74 = 43.29$
- Actual Time: 40.59
- Differential $43.29 - 40.59 = 2.70$



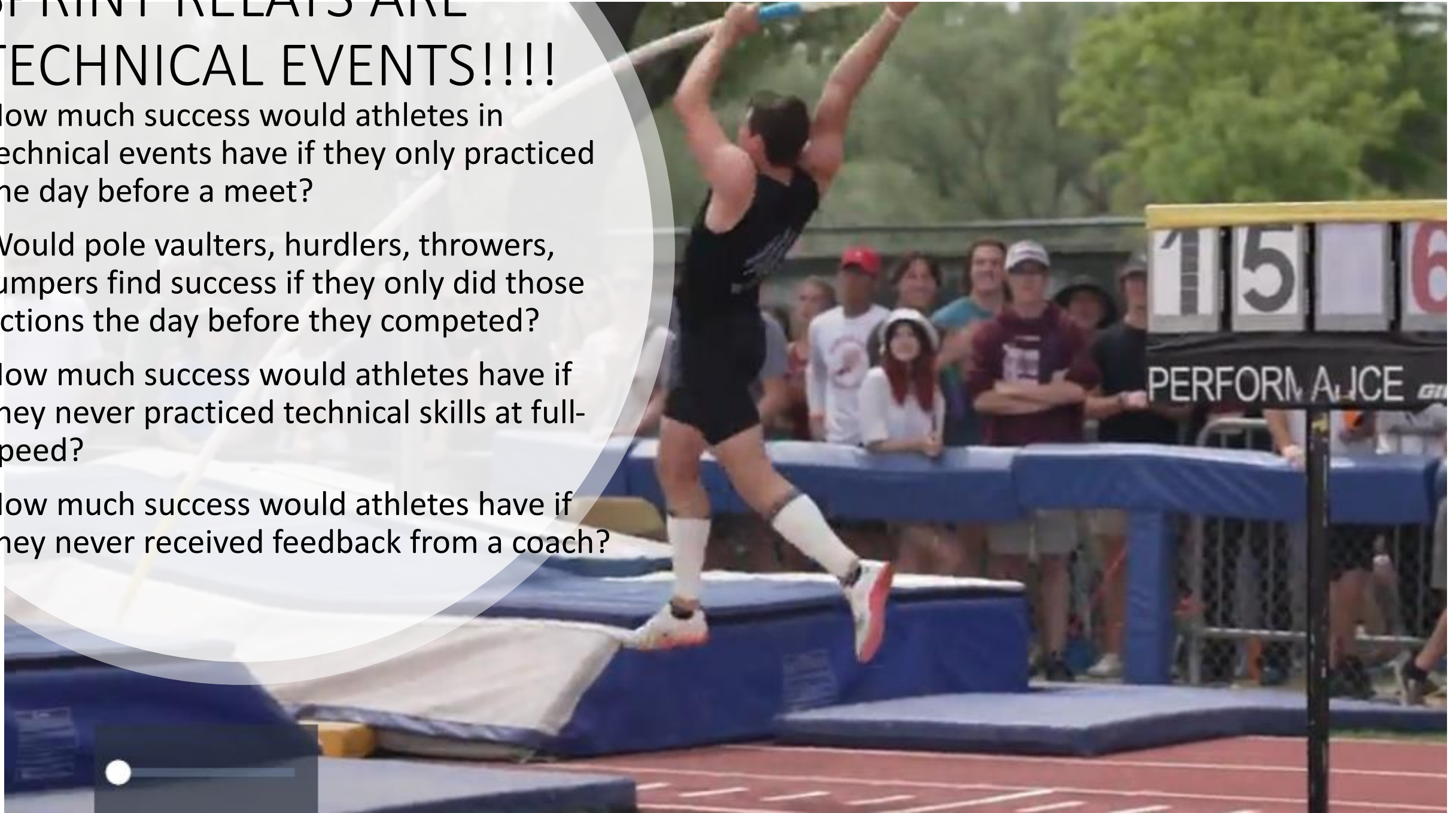
SPRINT RELAYS ARE TECHNICAL EVENTS!!!!

How much success would athletes in technical events have if they only practiced the day before a meet?

Would pole vaulters, hurdlers, throwers, jumpers find success if they only did those actions the day before they competed?

How much success would athletes have if they never practiced technical skills at full-speed?

How much success would athletes have if they never received feedback from a coach?



TREATING RELAYS AS TECHNICAL EVENTS

- We practice relay exchanges at minimum twice a week every week of the season. Our “technical speed day” ALWAYS involves hand-offs/blocks or both.
- Hand-offs are not something that we do after the workout is over.
- IT IS THE WORKOUT!
- We also perform them the day before as part of our pre-meet. If we feel that we need extra work, we do exchanges more than twice.
- We teach all sprinters and hurdlers how to do it, not just those on the 4x1 for that week.





WHAT I HAD ALWAYS BEEN TOLD TO DO

- Pass the baton towards the END of the exchange zone.
- The incoming runner CANNOT decelerate.
- The outgoing runner should reach MAXIMUM speed in the zone.
- The outgoing runner should put their hand up as HIGH as possible.
- Wait until you SEE the hand to pass the baton
- Only care about the time the baton is IN the zone.
- To practice the exchange DON'T run

RETHINKING EXCHANGES

Pass the baton towards the END of the exchange zone.

- NO! Pass the baton as soon as possible!

The incoming runner CANNOT decelerate

- IMPOSSIBLE! The incoming runner has no choice but to decelerate.

The outgoing runner should reach MAXIMUM speed in the zone.

- WHY? The outgoing runner should run a drive phase and NOT reach maximum speed. Because otherwise they can only slow down the rest of their race.

The outgoing runner should put their hand up as HIGH as possible.

- AWKWARD AND COUNTER PRODUCTIVE. If they do; they need to bend over and begin their drive phase. Or dislocate their shoulder.

Wait until you SEE the hand to pass the baton.

- WHY WAIT? The longer the outgoing runner has their hand back the slower they will run.

Only care about the time the baton is IN the zone.

- ALWAYS CARE!! That is only 90 meters (22.5%) what about the 310 meters (77.5%)?

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To practice passing
the baton DON'T
RUN!

- We do not do any drills that don't involve **running!!** Everything we do must have a specific purpose. Not running makes no sense.

Aurora Sentinel





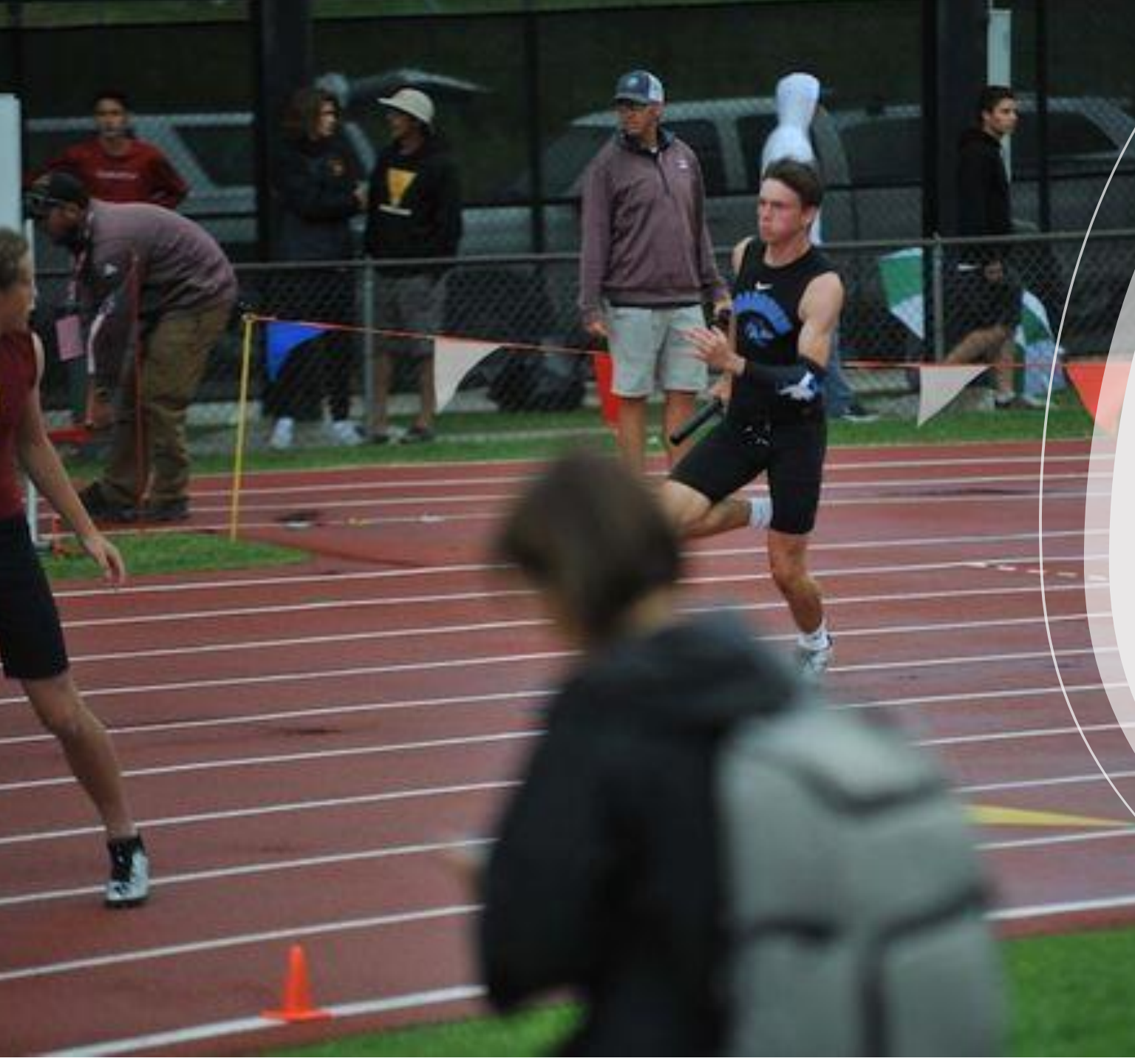
WHAT ARE ATHLETES MOST CONCERNED ABOUT IN A RELAY?

THE EXCHANGE!!!!

They DON'T focus on a drive phase.

They DON'T focus on accelerating as long as possible

They DON'T focus on their form at the end



HOW WE MAKE IT HAPPEN. INCOMING RUNNER

- All exchanges are silent we don't say "go", "stick", "hit". If we did. We are asking our athletes to add one more thing to think about other than running a "technically" sound race.

HOW WE MAKE IT HAPPEN. INCOMING RUNNER

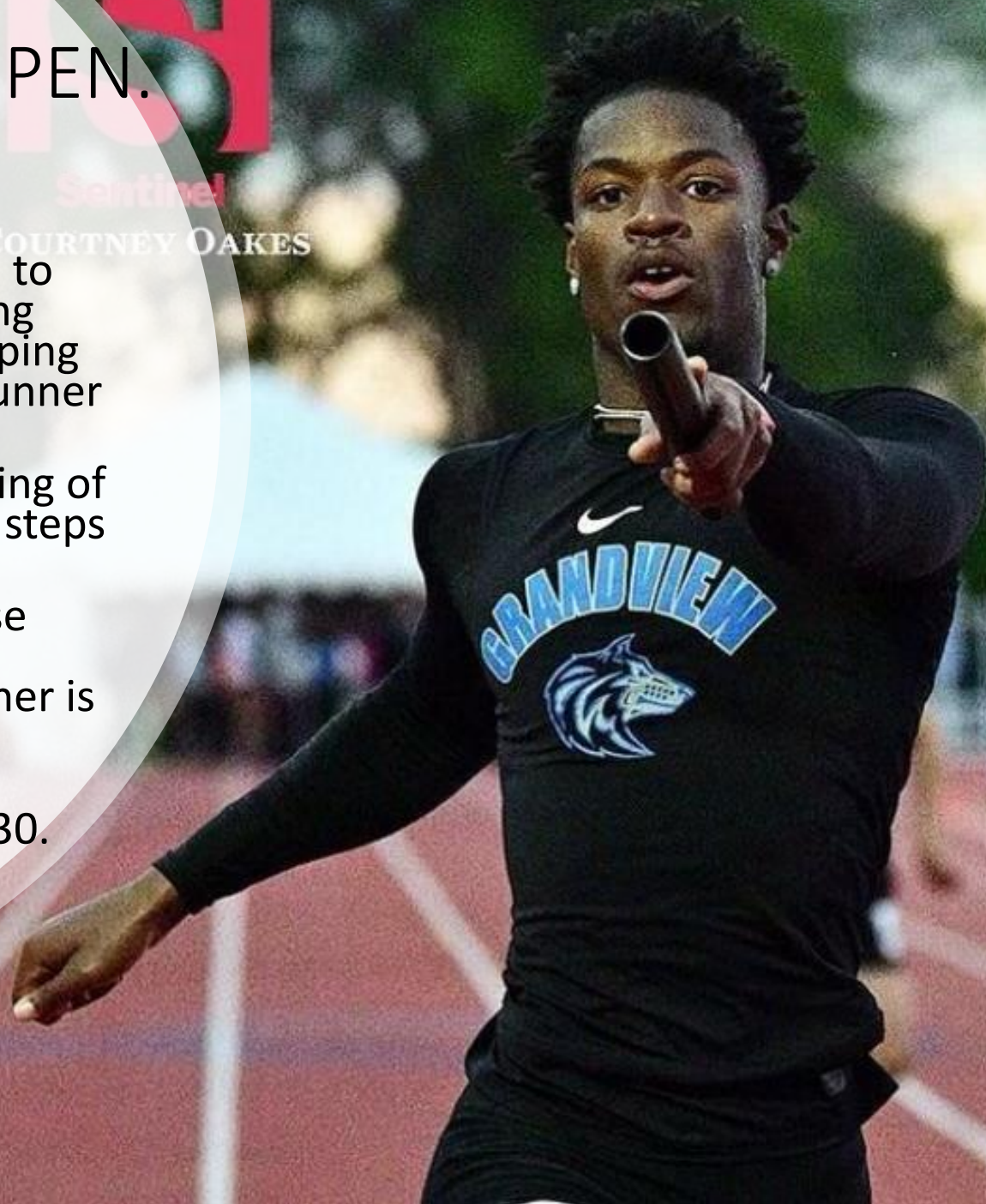
- How to pass the baton:
 - The baton is vertical.
Perpendicular to the ground.
 - The incoming runner will push the baton forward at a slightly downward angle.



HOW WE MAKE IT HAPPEN. OUTGOING RUNNER.

- When to leave:
 - We use two large pieces of tape to create a box. When the incoming runner is in that box either stepping in it or airborne, the outgoing runner leaves.
 - Our starting point at the beginning of the season is roughly 15 and 18 steps (Boys), 16 and 20 (Girls)
 - As we gain fitness/improve those marks change. Because with improvement the incoming runner is coming in faster.
 - By the state meet last year our furthest boys mark was 27 and 30.

COURTNEY OAKES





HOW WE MAKE IT HAPPEN. OUTGOING RUNNER.

- How we leave:
 - We have our athletes begin running focusing on doing the exact same things that they do in the open 100.
 - Drive phase, build up speed. Forward lean.
 - Feet low, lots of contact with the surface

HOW WE MAKE IT HAPPEN. OUTGOING RUNNER.



- When to put the hand back to receive the baton.
 - Our outgoing runner counts to 3. Their first 3 steps of their drive phase.
 - Outgoing runner puts the hand back in a natural running position.

HOW WE MAKE IT HAPPEN. OUTGOING RUNNER.

- Most likely the hand will be just above the waist.
- “Thumb to hip 4 fingers parallel to ground”. Creating a pocket between the thumb and index finger.



4x100 Exchange

- Baton is vertical
- Incoming runner is pushing the baton forward at a slightly downward angle
- Outgoing runner has his arm in a comfortable/natural running motion
- Outgoing runner has his thumb towards the ground





Pass it
Early!!!

- Our runners should have the baton well BEFORE the midway point of the zone.
- If they don't there is a problem.



WHAT IF WE DO IT WRONG?

- If the outgoing runner has not received the baton by the number in their lane (halfway). We have no choice but to throttle down until the baton is passed.
- If the incoming runner runs up or past the outgoing runner. Stay on your side, and stay calm. We have plenty of time.
- Fix the next practice!!!!

HOW DO WE FIX MISTAKES AS COACHES?



It is a technical Event so we must treat it like one.

We assign a coach to be at each exchange zone.

Ideally, that coach will go to that exchange zone all season.

It is a process that involves feedback from our coaches to our athletes



1:20.22



Breakdown of distance by runner with baton.

4x100

4x200

Leg 1: ~90 meters

Leg 1: ~185 meters

Leg 2: ~100 meters

Leg 2: ~200 meters

Leg 3: ~100 meters

Leg 3: ~200 meters

Leg 4: ~110 meters

Leg 4: ~215 meters

FACTS

When we ran 40.59 we broke our state record by 0.62 seconds.

We dropped 2.70 seconds from our aggregate time on that day.

Had we dropped less than 2.09 we would not have broken our state record.

And I wouldn't be sharing this with all of you.

Colorado by population is 21 out of 50

Based on milesplit data our 40.59 would be a state record in all but 7 states (TX, GA, FL, CA, AZ, LA, VA)

NONE OF THE 4 EVER RAN TRACK BEFORE HIGH SCHOOL

NO TRANSFERS, NO RECRUITED ATHLETES



WE SHOULDN'T RUN 40.59

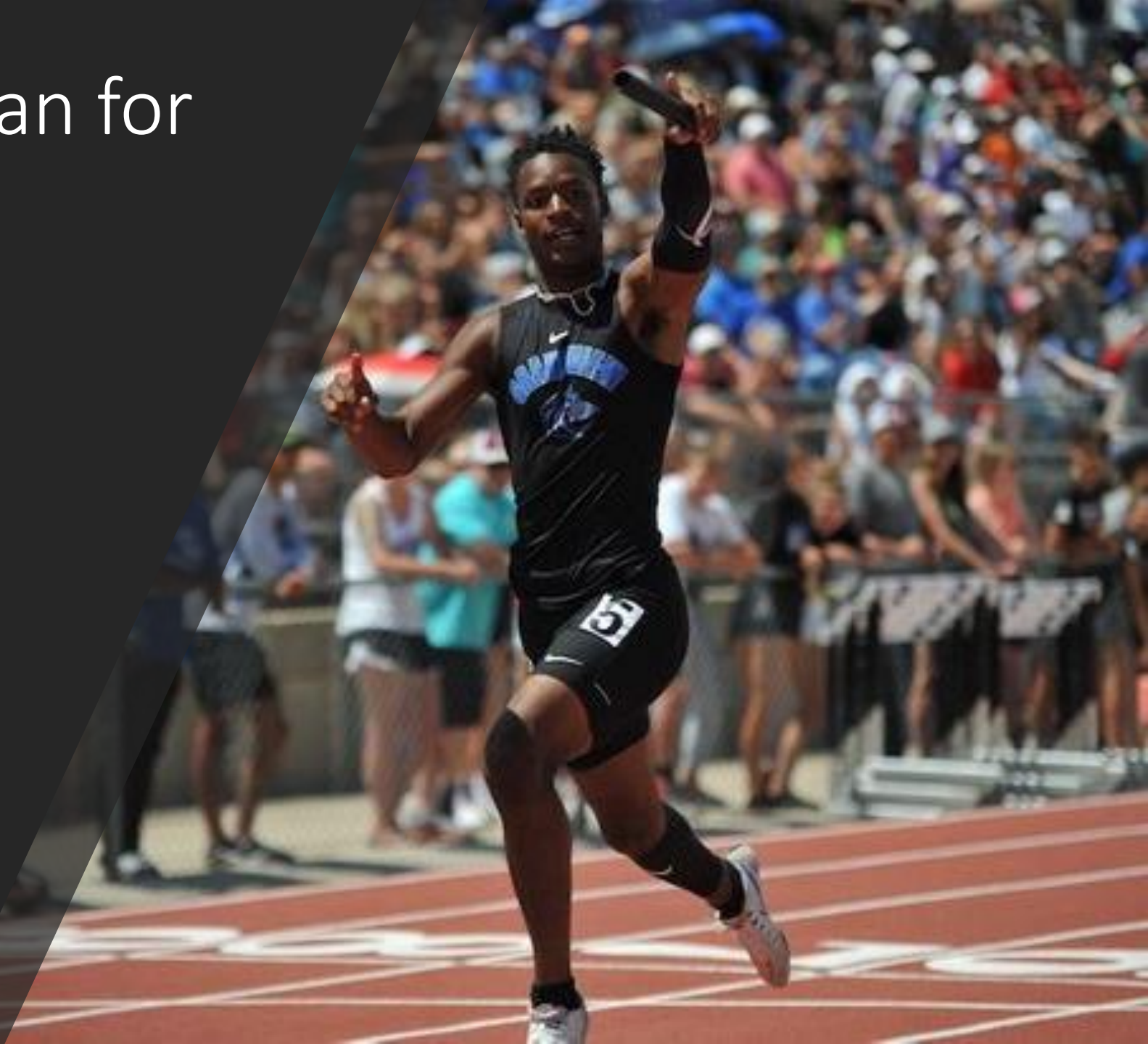


OUR BIGGEST 4x100 GOAL

| 10 Team Points!

What does it mean for the 4x200?

- 4x200 runners are slowing down even more than in the 4x100.
- Even more reason to pass the baton early!



WHAT DOES IT MEAN FOR THE 4X400 AND 4X800?

- Open exchanges:
 - We still want the baton passed early in the zone. The incoming runner is “hurting” make it end!
 - “Take something off the shelf”. Thumb up not down.
 - Pass baton vertically
 - 3 count of when to put the hand back



BUT WHAT IS
OUR ULTIMATE
GOAL?
HAVE A
POSITIVE AND
FUN
EXPERIENCE!!!



What about 2023?

- Boys 4x100 PR 41.69
- Aggregate versus actual: 2.18
- Girls 4x100 PR 47.63
- Aggregate versus actual: 2.17





2.17+2.18=RETIREMENT!!



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