How to Create an Exciting Tour de France Program in Your Indoor Cycling Studio



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Please refer your instructor peers and friends to purchase their own copy of *How to Create an Exciting Tour de France Program in Your Cycling Studio* at www.indoorcyclingassociation.com.

CREATING AN EXCITING

Tour de France Program

Finally! Everything you need at your fingertips to create a very exciting Tour de France program at your club! In the accompanying video to this handbook, you'll learn most of the important information you need to know about the Tour de France in order to simulate the exciting stages in your class profiles. This handbook is a written description of what is in the PowerPoint presentation on ICA, and a *lot more*!

Le Tour de France—History and Strategy

The Tour de France is one of the most grueling athletic events in the world, as well as one of the most popular. There are only two athletic events that have a greater worldwide viewership: the Olympics and World Cup Football/Soccer. (Sorry United States, the Super Bowl doesn't even come close.)



(Photo: Lucien Petit-Breton, the first cyclist to win two Tours, in 1907 and 1908.)

The Tour de France was started in 1903 by Henri Desgrange, editor of the newspaper *L'Auto* (ancestor to the present *L'Equipe* magazine). It was founded as a means to boost the circulation of the newspaper to compete with main rival *Le Vélo*, which was sponsoring the most famous bicycle events in France at the time—the Bordeaux-Paris and the Paris-Brest races. The yellow jersey (*le maillot jaune*) was first introduced in 1919 so the leader of the race would stand out from the rest of the riders. The yellow color came simply from the yellow color of the newspaper.

The Tour de France is a "stage race," meaning it is divided into a number of stages over three weeks. Each stage is a race held on one day. The amount of time it takes each rider to complete each stage is recorded and accumulated. Every year the Tour has a different course, one year proceeding clockwise with the Alpes arriving before the Pyrenées, and the next year counterclockwise, arriving at the Pyrenées first. Often, the race takes excursions for a day or two into other countries, such as Belgium, Italy, Switzerland, or Spain. In 2007, the Tour started in London and in 2010 it began in Rotterdam.

In each Tour, there are 21 teams, 198 riders, 350 people accompanying the teams, 15 million spectators lining the road, 2 billion TV viewers, 170 broadcasting countries, and 75 channels.

You may not realize it, but cities and villages pay the Tour de France organizing committee for the privilege of being a starting *(le départ)* or ending *(l'arrivée*) point of a stage. It is money well spent, because the organizing committee and their support services, the teams and their support, and, of course, tens of thousands of fans descend upon the towns for a night or two, utilizing hotels, restaurants, markets, and other services and providing a huge influx to town tax coffers. The marketing impact can be enormous, with millions of viewers around the world watching on television. For



(Photo by Jennifer Sage, 2004 Tour de France, in the Alpes)

this reason, many of the cities will do whatever they can in the way of promotion, so that the helicopters flying overhead will transmit to the world through the television cameras what a clean, welcoming, beautiful, and culturally important city this is.

On the other hand, some regions with already well-established tourism sectors actually dislike having the Tour come through, as it displaces many of their longtime loyal customers who are used to staying for a week or longer. This is why some cities may choose to not welcome the Tour. When the Tour passes through, hotels and restaurants are booked for one night, or perhaps two at the most if there is both an arrival and departure plus a rest day in the same location.

The 2013 Route
2013 is the 100th edition and 109th anniversary of the TDF (though only the 99th actual Tour—the race was stopped for both World Wars). There are six days in the high mountains (of which only four are mountaintop finishes, a large number this year), five medium mountain stages, seven flat stages in the plains, two individual time trials, one team time trial, and 3,497 kilometers (2,168 miles) of the toughest race on earth. There are two rest days. Fortunately, this year the team time trial is returning after an absence last year. This year the race is very heavy on epic climbs—different from last year's Tour, which focused more on long individual time trials.

The 2013 route starts in Corsica, a large island in the Mediterranean. This is the first time the Tour de France has visited this beautiful vacation destination. Corsica has been a part of France since 1769. A little trivia: Only three months after the island became French, Napoleon Bonaparte was born in Ajaccio. The history of France might have changed had he been born with a different nationality!

Corsica is a very hilly island, so the first three days of the 2013 Tour are different from typical tours, which normally start out on much flatter terrain for the first week. This is actually changing the traditional start of the Tour. While these stages will still most likely be contested as a bunch sprint, there will be a lot more fatigue felt by the riders from the mountains on stages 2 and 3.

The Elephant in the Room: Doping and Cycling
I won't go into detail on this subject, but I also don't want to ignore the elephant in the room because cycling has gone through a tumultuous year, and you may come across students who ask you about this topic or who comment that all cyclists are dopers so why bother?

Lance Armstrong was stripped of his seven Tour de France titles in October of 2012 by the UCI, the International Cycling Union, after a successful case presented by the US Anti-Doping Agency. Eleven riders gave testimony that implicated Lance, while also admitting to their own doping. These riders were given a six-month ban.

This past year was considered by some as a dark period for the sport of cycling. Of course, you may have your own opinion, but for what it's worth I'll give you mine. I was a staunch fan of Lance and all his teams throughout most of his career, and even followed him to the 2004, 2005, and 2007 Tours, wrote his name on the pavement, and loyally wore yellow bracelets up both arms. However, by 2009 I realized he was most likely guilty of doping and I was disgusted by how he treated other people, including other riders, teammates, the media, past friends, and anyone who doubted him or

accused him. Lance Armstrong was the godfather of cycling, and kept the *omertà* strong until the end. I'd even go so far as to say I despised the man. But I never gave up on cycling.

Nevertheless, while I dislike the person he is, I can still appreciate his talents as an athlete and an amazing cyclist. In my Tour de France profiles, including in this ICA TDF program, I occasionally refer to his past successes and his team's strategies. You can take away his titles, but you can't completely erase the past! It's up to you whether you choose to mention him, his teams, or any of his past successes in your profiles.

I, for one, believe in the future of cycling. Cycling is the most tested sport in the world. Because of that, they will catch more dopers. So it's not fair to claim that cycling is dirtier than other sports; those sports simply do not test nearly as much as cycling. Testing has changed, and it is now harder for cyclists to dope and not get caught (though not impossible). In the past few years, cycling has developed the biological passport program, which analyzes the history of a cyclist throughout his career. When drastic and unlikely changes in performance occur that can't be answered through training, there will be a red flag.

Because of this, and because of the disgust that so many riders, teams, sponsors, and others in the industry have with the way things have been going, there is a tidal wave of change—positive change—going on in cycling. I believe the future looks bright. Most (certainly not all) riders won't stand for it anymore, and they have been very vocal about ostracizing riders who have tested positive. Two riders in the Giro d'Italia this year tested positive and the outcry amongst the peloton was tremendous. This is a very new thing! The *omertà,* the pressure to keep silent amongst the peloton, is disappearing!

Anyway, all that is to say, please don't be disillusioned with cycling! Inspire your students to not be dismayed and to continue to appreciate the wonderful aspects of cycling—truly one of the most difficult and inspirational sports in existence.

The Grand Winners of the Tour de France

Cyclists who have won the Tour de France 5 times: Eddy Merckx, Bernard Hinault, Miguel Indurain, Jacques Anquetil, ~~Lance Armstrong (7)~~,
(The following descriptions from Ezines.com)

Eddy Merckx



"The Cannibal" was a nickname not chosen lightly for the immortal of professional cycling. Throughout his career, Merckx retained an insatiable appetite for victory. He attained an all-around dominance never since repeated. Not only did he win the major tours, including the Tour de France five times, he also excelled at the one-day classics and time trials. At his peak in the early 1970s Merckx won 250 races in over 650 starts. During his racing career Merckx won 445 professional races, a figure no one else has ever come close to matching.

Bernard Hinault
The epitome of a professional cyclist, Bernard Hinault was one of the most determined cyclists to ride in the peloton. When Hinault set his mind to something, it was difficult to hold him back. It was in adversity where Hinault was most successful. To give but one example, Hinault won the 1980 Liege Bastogne classic during a treacherous snowstorm. Most of the field packed it in but Hinault rode away to win alone. Hinault won the Tour de France five times between 1978 and 1985.

Miguel Indurain
In contrast to Hinault, Indurain was mild mannered and self-effacing. Yet within his modesty hid an enormous physical capacity and steely determination. Indurain was a time trial specialist. Against the clock Indurain could rarely be beaten. Yet despite weighing 82 kilos, in the high Alps and mountains Indurain was still able to defend the yellow jersey, enabling him to be crowned champion five times.

Jacques Anquetil
Jacques Anquetil was a formidable talent who like many of the great champions would take the lead during the time trials and then hang on for "grim death in the mountains." Yet he could also outclimb the best. Like in 1963 when he rode away from Federico Bahamontes, the mountain specialist, to win two crucial mountaintop stages. Jacques Anquetil was an uncompromising character who always spoke his mind. He broke the world hour record but it was never ratified because he declared it was beneath his dignity to undergo a dope test. Jaques freely admitted drug use and campaigned against the introduction of dope tests.

The Publicity Caravan



The French take silly advertising gimmicks to the highest level with their *Caravan Publicitaire*, but it must work for the sponsors because they all clamor to be a part of it! What is it? Every single kilometer of every stage is preceded by an extraordinary 200-vehicle advertising convoy, known as the Publicity Caravan, made up of about 40 companies, which have all signed up as partners to the Tour de France. It is a bizarre combination of unlikely vehicles designed to promote the product in question, ranging from mobile pork pâté pots or butane canisters on wheels to lottery companies to the national police force seeking new recruits. The vehicles toss out trinkets from key chains to caps to candy to actual wrapped-up pieces of sausages. There is even a non-alcoholic beer truck that hands out cold bottles of beer.



Fans lose all respect for each other when diving for a wayward key chain; they may already have seven or ten of them, but it doesn't matter if that means fighting over it with a young child or a 70-year-old man—they *have to have* that extra key chain! It is a carnival that gets the crowd in the right mood with 600 drivers, dancing girls, tumblers, water hoses sprayed on the crowds, and endless pop music blaring from speakers on the vehicles. Young teens are harnessed in the float-like vehicles and dance non-stop the entire day!

It is estimated that there are 15 million people who line the roads of France in the course of the Tour and the advertising convoy makes the most of it. There is a wide selection of official Tour partners including a bank, a sausage company, a department store, and a cheese firm.



The idea dates back to 1930 when the Tour switched from commercially backed teams to national entries and it was retained when the commercial teams came back again in the 1960s. It was felt at the time that the publicity caravan was as much a part of the show as was the cyclists. The caravan certainly helps entertain and enliven the crowd when it passes an hour before the riders, even if it is mindless entertainment.

[Photos: Top: The Aquarel water truck hands out bottles of water. Second: The yellow Tour de France official vehicle with dancing girls and pom poms. Third: A Gifi (home products store) rubber ducky, gnome on a red spotted mushroom, and pink pig. The TDF pig has become Jennifer Sage's avatar for her longtime moniker *Funhog*. Photos by Jennifer Sage, Tour de France 2005]

The Classifications and the Jerseys

Many people do not realize that there are several competitions within the Tour de France.



Thomas Voekler celebrating another day in yellow in 2011
Photo Steephill.tv

The Yellow Jersey and the "GC"

The most widely known competition in the Tour de France is the race for the *maillot jaune,* or yellow jersey. The yellow jersey is awarded to the rider with the fastest cumulative time over all of the stages. He is considered the leader of the "general classification," or GC. You may also hear a rider who wants that jersey referred to as a GC contender, or even a "GCer."

This is confusing to newbies to the Tour de France, but it is entirely possible to win the Tour without ever winning a stage. The rider simply has to have the lowest overall cumulative time. Once a rider has the yellow jersey with a pretty safe time advantage, he isn't out to win stages (usually, except in specific cases where there may be a personal vendetta or goal for a particular destination, such as Alpe d'Huez or Mont Ventoux. Lance Armstrong wanted Mont Ventoux more than anything, but was denied that win throughout his reign). All the yellow jersey wearer wants to do is ride smart, stay near the front to avoid crashes, and stay close to the eventual winners of that stage. He is more concerned about preserving his place in the GC. Once a rider has the yellow jersey, his team must now defend the jersey, which means putting out additional effort to protect their leader. They are also usually the team at the front setting the highest tempo. This can be very fatiguing for a team, so a good strategy employed by many who have designs on the jersey is to wait until the mountain stages to get, and then protect, the jersey.

It's important to realize that where a rider falls in the GC will determine how he is treated during a stage. If a rider who is high up in the GC tries to break away or join a break, the other teams will be much more interested in tracking him down and "reeling him in," or preventing him from joining a break in the first place. Keep in mind that reacting to a break like this will fatigue a team even more, especially if they are trying to protect the jersey. It is part of the strategy to assess how much of a threat that rider in the break is. On the other hand, a rider who is low in the GC may be allowed to

break without a reaction by the other teams – why bother chasing after someone in 120th, or even 60th place? If you are new to the Tour de France, as you watch the Tour or look at past videos, pay attention to mention of where each rider is in the GC. It may be the single most important determinant of the Tour de France.

The yellow jersey is sponsored by Crédit Lyonnais, a French bank. Their logo is a yellow lion ("*lyon*"), which is why you see the yellow jersey winner for each stage awarded with a large stuffed yellow lion! They have lucky kids, nieces, and nephews I guess.

The Green Jersey



(Unidentified photo. Notice how this rider doesn't care if his green jersey matches his normal team kit!)

The green jersey (*maillot vert*) goes to the rider with the most "points." It is also known as the sprinter's jersey, as it most often goes to the fastest sprinter. The sponsor of the green jersey is PMU (Para-Mutual), the state-owned betting company. You will see PMU vehicles with racehorses in the publicity caravan.

Points are awarded to riders who finish first, second, etc. in the stage. The number of points awarded depends on the stage. Points awarded are as follows:

- For the "flat" stages (aka coefficient 1) 45, 35, 30, 26, 22, 20, 18, 16, 14, 12, 10, 8, 6, 4, 2 points for the first 15 riders
- For the "medium mountain" stages (coefficient 2) 30, 25, 22, 19, 17, 15, 13, 11, 9, 7, 6, 5, 4, 3, 2 points
- For the "high mountain" stages (coefficient 3 and 4): 20, 17, 15, 13, 11, 10, 9, 8, 7, 6 , 5, 4, 3, 2, 1 points
- For the individual time trial stages (coefficient 5): 20, 17, 15, 13, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1 for the first 10 riders
- For each intermediate sprint, the first 15 riders to cross will receive 20, 17, 15, 13, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1 points respectively

In addition to points for being the first to cross the finish line, there are usually one or two intermediate sprint contests throughout the stage at pre-determined locations. It used to be more, but in recent years they reduced it, presumably for simplification. These intermediate sprints encourage sprinting in the middle of the stage and create additional excitement for fans along the way. They are usually in the center of a small village along the route.

In the past few years, the green jersey has changed hands often and has been hotly contested all the way to the final stage. Top sprinters had to work harder to be in position to garner those few extra intermediate points. Keep in mind that if there is a breakaway group out ahead and they cross the intermediate points line first (especially if the break contains three or more riders), then there is no point for any rider in the peloton to try to "sprint," since no more points are available. It's possible you'll see a mini sprint among the breakaway to grab those few points, but chances are, a true sprinter is not the type of rider to be found in a breakaway group. Therefore, riders in a break typically don't care a whole lot about the green jersey points; they are out for a stage win or to improve their standings in the GC, or if it's a mountain stage, perhaps achieve KOM points.

The King of the Mountain (KOM)



[Photo: Rassmussen in his KOM jersey in 2005. Only the jersey is provided by the TDF committee! He and his team created the rest of the silly outfit with polka-dot shorts, gloves, helmet, glasses, and socks! Photo by Jennifer Sage]

The red and white polka-dot jersey (*maillot á pois*) is awarded to the "King of the Mountain," also designated as KOM. At the top of each climb, there are climbers' points awarded to the first few riders to arrive; the tougher the climb, the more the points. (These points are NOT the same points as those given for the green jersey competition.) The climbs are divided into categories, from 4 (least difficult) to 1 (most difficult). Rest assured, even those Category 4 climbs will be challenging

to us mere mortals! To confuse matters, there are the *hors catégorie* climbs, or HC, which means "beyond classification," or one incredibly hard climb! The most famous, mythical climbs are all HC. (See Appendix E, page 41, for a description of how the climbs are categorized in the Tour.)

The following are the KOM points awarded for each type of climb:
Climbs rated *hors catégorie* (HC): 20, 18, 16, 14, 12, 10, 8, 7, 6, and 5
Category 1: 15, 13, 11, 9, 8, 7, 6, and 5
Category 2: 10, 9, 8, 7, 6, and 5
Category 3: 4, 3, 2, and 1
Category 4: 3, 2, and 1
For the last climb of a stage, points are doubled for HC and categories 1 and 2.

The sponsor of the KOM jersey is Carrefour, a grocery store chain. (For many years it was the grocery chain Champion, but Champion was bought out by Carrefour.)

The White Jersey



[Photo: The young Thomas Voeckler in 2004. He held the yellow jersey for almost a week until he gave it up to Lance in the Pyrenées. He then wore the white jersey for a while. Here in the Alpes, his fatigue is written across his face and soon got the best of him; he lost the jersey the following day. Photo by Jennifer Sage]

A white jersey is awarded to the best young rider, meaning the rider under 25 years of age (on January 1 of that year) who is highest up in the GC. Eyes are often turned towards the white jersey winners as potential future yellow jersey contenders. Winning the white jersey greatly increases your leverage as a rider when negotiating your next contract!

Obviously a rider can't wear two jerseys at once, so if a rider leads several classifications, they take the most prestigious jersey for themselves and the number two–ranked rider in the other competition gets to wear the other jersey. For example if a rider has both the yellow jersey and the KOM jersey they'll wear yellow, and whoever is second in the KOM jersey will sport the polka-dot jersey.

The Team Competition
There is also a team competition during the Tour de France, which is awarded to the team with the lowest overall combined time of the top three riders of each stage.

Most Combative
There's also a daily "most combative" prize awarded every day to the rider who has attacked the most or tried the hardest. It's a subjective prize, awarded by a jury instead of using points. The rider gets to wear a red race number the next day. No jersey is awarded because it is thought that if a rider is wearing a jersey for being aggressive, he will be easily visible and become a marked man by the other riders, preventing him from further courageous riding. This seems silly, because he is given a pretty visible red number to wear on his bike, and every rider is privy to who won the award the previous day!

The Lanterne Rouge
This is an unofficial "competition" and is the rider in the last place of the GC. The term refers to the lantern hung in the caboose of a railway train, which conductors would look for in order to make sure none of the couplings had become disconnected.



The *Lanterne Rouge* is actually quite famous in his own right. Read this interesting blog that focuses on the LR for each stage: www.tdflr.blogspot.com. Her tagline for the blog is: Celebrating the last-place rider in the General Classification…because you couldn't hang on his wheel for thirty seconds.

Tour de France Program

Winning a Stage

There is no special jersey for the stage winner, though there is a monetary and product award from one of the sponsors. But winning a stage can be very prestigious for a cyclist, and is a defining moment in his career. A team leader may let one of his teammates take the glory of winning a stage, especially someone who has paced him to the top of a long, hard climb. This is a noble way to pay them back for all their hard work.



Lance and Pantani cross the finish line one behind the other on Mont Ventoux in 2000. Did Lance let Pantani win? Most believe he did, and Lance acknowledged that he did, but it really pissed Pantani off. He was not amused.

Leaders in the GC have also been known to let a rival take a stage out of respect (though it's not always for that reason). The famous photo of Pantani crossing the finish line just ahead of Lance (when Lance was leading decisively a few meters prior) shows that Pantani did not really appreciate the gesture—he has a grimace on his face and the joyful hands in the air usually seen on the stage winner are conspicuously absent. To this day Lance rues the day he "gifted" that win to Pantani. In 2010 his goal was to win the stage in his historic comeback, but it wasn't to be. Prior to the Tour, he was quoted as saying, "No gifts."

Flamme Rouge

This is not a strategy or competition, but it is an interesting and fun element of each stage. The *Flamme Rouge* (literally: red flame) is a red triangle suspended over the 1 km mark of the Tour de France. In your stages, elevate your excitement as you pass under that red banner! Use it to initiate launches of attacks in breakaways, sprints, or the final push to the top of the mountain.





Team Strategy at the Tour de France

Teams are made up of nine riders. They usually have one key rider around which the team is built, designated as the team leader. However, some teams have two or three potential leaders, and which one takes on that role may not be decided until the first week of the Tour when the rider with the strongest legs will determine his place. This was the case in 2009 when both Lance Armstrong and Alberto Contador were on team Astana. Contador proved to be the strongest rider once they got into the Pyrenées, so Lance had to swallow his pride and work for another rider at the Tour de France for the first time in ten years. It was obviously not an easy task for him to do.

At the Giro d'Italia in 2013, Chris Froome and Bradley Wiggins of Team Skye were both vying for the team leader position. Both are very capable of taking that role, but there was some obvious friction within the team, although it was strongly denied in the press. Wiggins had a terrible Giro and ended up dropping out due to illness, but he had already lost time to his rival, er, teammate in the horrid weather conditions and slick roads. The leader for the 2013 Tour de France was always going to be Wiggins, since he would be defending his win of the previous year. But shortly after the Giro, Wiggins announced he would not ride the Tour de France due to a knee injury. So there you have it—Chris Froome gets his wish. He is favored to win yellow this year.

After the team leader there is a "lieutenant" (the leader's right-hand man), who helps make decisions, and who is a very strong rider in his own right. Most teams also have a designated climber and a sprint specialist. Teams with strong sprinters who have an excellent shot at the *maillot vert* will also put another strong sprinter on the team to serve as the "lead-out" rider. This rider, though strong enough to win his own sprints, is there to lead the designated sprinter as close as possible to the finish line, and then pull off to the side so the primary sprinter can explode to the line, hopefully in first place. The lead-out/sprinter combination is an extremely important element of a team, and the best duos are the ones who bring the glory of a flat-road stage win to the team.

The rest of the riders on the team are "*domestiques*" (French for servant), whose job it is to help out the leaders (see the glossary). To be most successful, the team strategy is to do whatever is necessary to get the leader close enough to either win a stage (a non-sprinting stage that is; sprinting specialists are never very good all-around riders) or to get/maintain the yellow jersey or maintain his high position in the GC.

Domestiques work very hard in the Tour. Often, the team leader or the *directeur sportif* (sporting director, the team manager/coach/chief decision maker) will send a domestique up the road to try to catch a breakaway, or have them continuously attack an opponent to wear him down. Domestiques will also drop back to the team car to stuff their jerseys with multiple water bottles to distribute to the rest of the team. They will also be the first to give up their wheel if a rider higher up on the team ladder has a flat, or even give another rider his bike in the case of a mechanical problem. Once the team car comes by to replace his wheel or bike, the domestique will have to ride very fast to rejoin the peloton and be there for his leader. Finally, if the leader has a mechanical problem or crash, several domestiques will slow down in order to pace him back up to the peloton.



These continual higher-intensity efforts to attack, to race back to the group, or to pace the leader are extremely fatiguing. For this reason, sometimes domestiques who work very hard for their team may end up dropping out of the Tour, or finishing near the very end. When this happens, it is not considered a disgrace at all; it shows their loyalty to their team. When it is widely known in the professional cycling community how seriously a rider takes his role as a domestique, it may actually help him in contract negotiations. Teams will pay more for a proven worker bee!

There may be a case in which a rider might begin to envision a stage win because he finds himself in a break with a substantial time advantage over the peloton. But it's possible he may be called back by his team leader or *directeur sportif* in order to ensure that the team leader has enough teammates to support him on an upcoming climb. This is accomplished with the help of radios that every rider wears. He cannot pretend his radio didn't work (although some riders have tried that excuse). That rider will have to (often grudgingly) drop back and banish his own hopes for glory for the sake of the team and his leader. Imagine in the days before radios when this didn't happen!

Some teams who know they don't have a podium contender will simply make it their goal to win stages or garner points for either the green or KOM jersey. These teams don't have as well developed a strategy and may be in development over a couple of years as they gather bigger names and stronger riders. Often, as in any sport, it comes down to the amount of money a team can offer a potential rising star. Big budgets have better riders!



Setting aside his long history of doping, Lance Armstrong's seven victories were undeniably due in part to an excellent team that helped him out any chance possible. The USPS, Discovery, and Astana, Lance's teams for his seven wins, had unbelievable teamwork. Their strategy has been copied by many of the stronger, more organized teams in recent years.

[Photo: The Discovery train leads Lance Armstrong up the first big climb in the Pyrenées in 2005. Note how Lance in yellow is protected by his teammates, who take turns at the lead. One by one they will work hard until they fatigue and drop off, passing on the effort to the next teammate, until Lance has one final teammate to help him up the final climb. Photo by Jennifer Sage]

It has been said that some of the other teams with very strong riders failed in their efforts to get and maintain the yellow jersey for their team leader because they did not follow this strategy. One example is Telekom from Germany during Lance's golden years, 1999–2005. This team had strong riders such as Jan Ulrich (who was the first German to win the Tour in 1997, and who came in second five times), Alexandre Vinokourov, and Andreas Kloden, but each one seemed to be working for himself; in other words, there were too many chiefs and they were rarely organized. Vinokourov left the team after the 2005 Tour seeking a team that would work for him as team leader.

Though the concept of having one team leader with all other riders working to help one man has been an important part of team strategy for many years, it wasn't always as prevalent or as structured as it became during the Lance Armstrong years, first developed like Swiss clockwork by

the US Postal team. Prior to the mid-1990s, when radio receivers were just beginning to be used among the teams to connect them to their sport directors in the team cars, racing was done more on adrenaline alone. Attacks and chases were carried out spontaneously and the cyclists called the shots. Lance's team heralded a much more structured, disciplined, and highly scientific approach to winning, with the team leader and the sporting director sending the domestiques out on attacks (whether they felt like it or not). The strategy worked very well, and many teams try to emulate the same approach, yet it does take away a little of the slightly sloppier but arguably more fun and spontaneous racing of the past.

Interestingly, in 2009 the Tour tried to designate two days where riders would race without radios, in an effort to bring back those pre-wired days, but the riders and teams protested, and radios were eventually allowed. As it turned out, the first scheduled stage without radios was lining up to be a very stormy day and the teams argued that the weather made it dangerous for them not to be connected with their team cars. They won their battle and were allowed to wear the radios.

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Tour de France Program

How to schedule and simulate the Tour De France stages in your indoor cycling class

If you plan to follow the tour and create profiles from every stage (or most of the stages) for the entire three weeks, take some scheduling license and vary the type of stage in one week (instead of always riding that day's stage). Otherwise you will have mostly flattish or rolling stages with sprint finishes the first week, and many mountain stages in a row, followed by a high-intensity TT. This is OK for finely tuned racers at their peak, but for the average indoor cycling student, it's too much if they come often. Try to alternate harder with more moderate (or even easy) days. Schedule recovery classes during the two days off during the Tour and give students incentives to attend these if they come frequently.

Keep in mind that for any stage, no matter the terrain, you can always give the option to your students to stay "in the middle of the peloton" to avoid the attacks and high intensity efforts. A rider of the Tour will do this when he needs to conserve energy for the next day's stage, or if he went particularly hard the day(s) before, or if he just can't put out the effort to attack. Riding in the peloton will keep their heart rates in the lower zones. Your students can always choose to do this as well, and giving them permission, just like the Tour riders, will make them feel better about doing so!

On the following pages are ideas on how to create profiles for each type of stage and coaching tips for each of the varieties of stages you'll encounter at the Tour de France.

Tour de France Program



Creating indoor cycling profiles from the various types of stages

Profile design, strategies, and coaching tips, plus a recommended stage or two from each category.

1. Flat Stages (*Etapes de Plaine*)

Many of the stages the week prior to and a day or two after the first big mountain stages are long, relatively flat courses, or rolling terrain with no or few categorized climbs. These can be anywhere from 130 km (80 miles) to well over 200 km (120 miles). But flat doesn't always have to mean easy or "boring" as some might think. On these stages is where there may be many attacks and breakaways, often inspiring solo breaks that may possibly endure until the finish line (although so many breakaways seem to get swallowed up by the peloton in the final kilometer or two—more on that in a moment). Also on these stages there are one or two designated intermediate sprints for green jersey points. Simulating these intermediary sprints can take the intensity quite high at several points through your profile, as the intensity will build for several minutes as riders position themselves to be close to the front (or if there's a breakaway, at least at the front of the first chase group), followed by a sprint of 15–30 seconds (see below for how to coach a sprint).

These flat stages are also an excellent time to plan easier endurance or recovery rides, especially if you plan on doing the full three weeks of the Tour and hope to inspire students to come often through contests and incentives. If you do have an attendance contest and give out points/miles for each class they come to, make sure to give out the most points for a recovery ride, next for endurance, and less for the higher-intensity days. This is a great way to incentivize your students and teach them the importance of balancing hard with easier days.

Even if the stage is flat, encourage your riders to stand up occasionally to stretch their legs on their own, just like a rider might do over a long route. Another way to give them an opportunity to stand in a realistic manner is to describe riding through roundabouts or around corners; they must slow down to negotiate the turn. Then have your riders stand up for 10–20 seconds to simulate getting back up to their previous speed and gear. The more your riders need saddle breaks, the more turns you can throw in. This should go without saying, but "turning" does not mean you contort your body in any way when riding a bike indoors!

If there is a breakaway with a group of two to eight or so riders, they will often form a paceline, even if they are on opposing teams. Larger breaks might form a couple of pacelines, or a mini peloton. This is because they know the success of their break depends on how well they work together. You can simulate pacelines in your flat stages, which will allow an occasional out-of-the-saddle effort (see below under Team Time Trial on how to orchestrate a paceline in a class).

On the Tour de France website, the flat stages are designated as *étapes de plaines* (*plaines* means the same in English) or sometimes as *en ligne*. Notice that they aren't always completely flat and may even have a Category 3 or 4 climb with the elevation written on the profile. However, compared to the middle or big mountain stages, they have much less elevation gain and are mostly flat. These stages usually end up with a bunch sprint finish—that is, if there is not a successful breakaway. Note that the sprinters often feel robbed when a break is successful, because they have precious few opportunities to do their thing, and only on certain stages.

The *Flamme Rouge* is very important for sprinting stages, where sprinters will time their final attack for the last few hundred meters of the race. The *Flamme Rouge* is followed by hundred-meter markers so the sprinters and lead-outs know how far away the finish is. You can use this *Flamme Rouge* as a colorful element of your race commentary.

How to coach a sprint finish: It is highly advisable that you already have a good understanding of how to teach sprints safely and properly and that your students have been schooled in this prior to your TDF stages. A true sprint is a 110% effort, fully maximal, with a big gear and powerful legs. There is no 92% MHR ceiling! The description below is too short to be considered a sufficient primer on sprinting—it takes much more than a couple of paragraphs to do that. Nevertheless, I am going to assume that you already know this and give you some tips on cueing your sprints for a Tour de France stage. (If you are not an ICA member, I highly recommend you consider joining to learn more about proper coaching of sprints and every other cycling effort. We have an audio profile called HIT IT! by Tom Scotto that contains detailed descriptions on how to teach proper, effective sprints.)

A rider in the Tour de France who is daring and skilled enough to place himself in the potential carnage of a bunch sprint finish is truly a powerful cyclist. Though they are fit enough to finish the Tour and to ride 100–150 miles day after day, they usually suffer in the mountains and in the time trials. These sprint specialists usually have only one specialty and that is ***explosive power***, which translates to pushing a big gear very fast. A true sprint at maximal effort will last no longer than 10–20 seconds. If a sprinter launches too soon, requiring an effort that exceeds 10–20 seconds, power and pace decline very rapidly and he will most likely *not win* the sprint. In fact, sometimes you see them drop from the lead to 20th place in a matter of one or two seconds as other riders who began their sprint a second later explode past him. Therefore, timing is crucial.

The following is a description of a "bunch sprint" when there is no breakaway (or if the break gets swallowed up towards the finish). The peloton arrives en masse towards the finish. Teams will usually have a lead-out rider who paces the sprinter to within 50–100 meters of the finish line. The lead-out will turn himself completely inside out to place his teammate in a strategic position. Then at a precisely timed moment, he pulls to the side and falls back. No, these are not sprinters who went too early as described above; they are purposely dropping back! If timed correctly, this will launch the sprinter like an explosion. In any bunch sprint, there may be 5–10 teams vying for that stage win, and if everyone has a lead-out rider that may mean 10–20 riders all battling it out at once in a limited space between metal barriers lined with thousands of screaming fans. As you can imagine, this is very, very dangerous! When the route designers throw in a turn in the final 100–400 meters, you can see that strategy can be thrown off completely.

To simulate a bunch sprint in your own classes, designate half the room as a lead-out rider and the other half as the sprinter. Or, if they already have their own teams, let them choose which they want to be. Tell them that the next time you sprint they can take on the other role—there is no way to be both! In actuality, the lead-out will work harder longer (though he will put out less total power at one time) than the sprinter. Both, however, will be exhausted!

Describe the approaching finish line. The peloton is arriving en masse, teams are starting to position themselves to bring their sprinter to the fore. Lead-outs get in place. About 4 minutes before the finish, increase the excitement and prepare them for what is coming. With 2 minutes to go, launch your lead-outs. It is not a sprint, but a very concerted effort above threshold. They should quickly go into their anaerobic zone. Tell your sprinters to "stay close" but to hold some in reserve (they won't be working as hard as the lead-outs). Use positive coaching to motivate the lead-outs to maintain that effort seated for almost 2 minutes; they should be totally breathless by the second minute, which is about where they will encounter the *Flamme Rouge* (1 km left). Then with 20–25 seconds left, count down 5–4–3–2–1 and launch your sprinters! IMPORTANT: They must LOAD resistance before standing so that they have something to push against. It is not correct or safe to stand up with low or even moderate resistance, or to expect to be able to dial it in once they stand. Remember this: LOAD first, then EXPLODE!

Sprinters can stay standing if desired for half or more of the sprint (5–8 seconds), then sit down the final few seconds. Again, the total should be 10–15 seconds. This is a 110% effort and they should feel like they could not have continued for one second more.

If that is the case, and they cannot speak for a few moments afterward, then they did it right and can consider themselves a stage winner!

Warning: This is NOT advisable for everyone, so know your students' fitness level and coach them accordingly. Make sure to tell them to monitor their own effort, and to just "pretend" to sprint if they are not well trained or feeling confident. Or, as is always an option, they can picture themselves hanging back in the peloton.

Because of the addition of Corsica this year, I opted for a rolling stage in Corsica rather than an entirely flat stage. But the 2011 and 2013 TDF packages have some stages that are flatter that you can use for your flat stages for 2013.

2. Time Trial: *Contre la Montre* (CLM) or *Race Against the Clock*

This would be a Race Day Energy Zone in Spinning® parlance. It is said that a cyclist cannot win the Tour de France without great time trial skills. Time trials are where riders often pick up significant time advantages. You can make your TT stage anywhere from 15 to 30 minutes long, or even 40 minutes if your group of riders are especially fit. Students must be fit and ready (especially for the longer time trials), especially if they plan to ride hard during your entire "tour." Encourage sufficient recovery the following day.

In the real world, riders will rarely come out of the saddle during a time trial if the route is flat, but you can offer opportunities to stand like those described in the flat stages above (except obviously there are no pacelines). Time trial routes still negotiate turns and roundabouts so riders will need to slow down to turn, then stand up to regain their speed. If the TT route has an uphill or two, riders may stand up for some or all of the effort, still making sure to stay near their anaerobic threshold. They may also stand up towards the finish if they need to gain some additional time on an opponent, but will probably sit in the saddle for the final minute or so as they cross the finish line. Normally, you would keep your standing segments on a time trial to a minimum, but this year's TT may present opportunities to stand a little longer than is typical.

This year we do not have a time trial profile because they are so similar form year to year. You can find two different in-depth time trial profiles in the 2011 and 2012 ICA TDF packages.

3. Team Time Trial: *Contre la Montre par Equipes.*

Cycling fans were delighted that the TTT was back for 2011 after being removed for 2010. These are very fun to coach indoors. My suggestion is to coach a team time trial using pacelines, which is also a technique that can be used in any type of stage, because riders will always create pacelines to share the effort between a group of riders. Oftentimes at the head of the peloton, one team will drive the pace and rotate their own riders. In a breakaway, even with riders of opposing teams, they must work together to keep their pace higher, otherwise the break will not succeed and none of them has a chance at the stage win. However, a paceline for a team time trial has a few different elements to it, with a slightly different goal—it is all one team, and they are pushing harder for a shorter distance, so intensities may be higher than a paceline among non-teammates working together.

Organize your class into three to four groups, either by counting them off, letting them choose their own groups/teams, or by dividing the room into three or four segments (the latter works best for large studios with a lot of bikes). Designate who is at the head of the paceline by calling out "rider number 1," then "number 2," etc. (Note: This is explained in detail in the Team Time Trial Stage 2 profile audio and transcripts.)

The riders at the front of the paceline are said to be taking a "pull," and work much harder than those behind. You can vary the duration of the pulls anywhere from 15 to 45 seconds in your classes, though in reality, riders don't spend much time at the front. When it comes time to switch

riders, tell those at the front to imagine moving over to the left and slowing down ever so slightly, letting the train of riders pass them on the right. As the final rider passes them, they tuck in behind the group and "grab the wheel" of the last rider (with their front wheel only 6–8 inches away), settling into the slipstream, or draft. In the real world of pacelining, it's actually quite hard to grab that wheel and there is an increase in effort to do so, but for the sake of simplicity in coaching and managing your riders' intensity in class, I usually use that *creative license* and just ask for three levels of intensity: "moderately hard" when they're in the back (that is the easiest, just below threshold), "hard" when in the middle (right around threshold level), and "harder" when pulling (just above threshold). If desired, you can tell them to use that handful of seconds when they drop back from the lead as a real recovery, until they can grab that wheel and bring themselves to the working pace at the back. Your riders will no doubt appreciate that brief respite.

In this way the speed of the entire group is kept at a constant pace and riders get a short break. No rider in the world can maintain the same high pace that a well-trained team can maintain while in a paceline.

In the real world, pacelines are usually carried out in the saddle. Indoors, however, our students would mutiny if we made them stay seated that long. Go ahead and take a little license and allow your front rider to stand up for 5–8 seconds to overcome the increased gear, and then have them sit down and "drive" for the remainder of the "pull." Team time trials are most often flat courses, but they may also be in very windy conditions, which can easily replicate a climb when it's at the front. If the wind is particularly strong, there may be a few surges out of the saddle by the whole group in order to stay together. Another common scenario is that a weaker rider might get dropped by his own team. He will have to dig in to catch up and will often do so out of the saddle. Because a team must cross the finish line with five members of their team intact, it often behooves them to slow down and wait for a rider who has had a flat or has crashed, especially if that rider is large and strong. Such is the amazing benefit of drafting behind him! On the other hand, they may not wait for a rider who isn't as strong, and instead choose to go on without him.

You can simulate an uphill in a paceline (though TTT are rarely uphill) if you are doing a paceline in another type of stage. Though the aerodynamic benefits of a paceline are diminished on a climb, there is the mental benefit of maintaining a strong and consistent tempo when paced by a rider in front of you. On a hill, the rider in front is not usually there for more than a few seconds—this constant rotation of riders is called circling. However, for simplicity in class and to avoid confusion by changing leaders too quickly, coach the pulls on a hill as 10–20 seconds, with most, or at least half, of that in the saddle.

This year Bryon Black provides a detailed description of how to conduct a very authentic team time trial for this ICA TDF package. You can also look back in the ICA Audio Master Classs in 2012 for a Vuelta a Espana TTT stage by Jennifer Sage, for a little different style of coaching.

4. Mountain Stages



There are numerous ways to interpret a mountain stage at the Tour de France in your indoor cycling classes. One way is to simulate the entire stage from beginning to end, compressing each climb into anywhere from 2 to 15 minutes. Another way is to pick up the race from about the halfway point, beginning with a little commentary as to what has happened up to that point. This way you can focus on the biggest and most challenging climbs in the second half of the stage.

My preference is to pick one or two signature climbs in a stage that has a mountaintop finish, such as Ax-Trois-Domains, Mon Ventoux, or Alpe d'Huez for 2013. Then guide your riders through a climb for pretty much the entire class. If you do this, use the "warm-up" as the approach road to the base of the climb, and describe what went on in the previous hundred miles or so before guiding them onto the slopes of that final HC climb.

Many European passes (cols) have switchbacks, or hairpin turns, which are fun to simulate indoors. To do this, alternate a seated climb on the straight segments for 45–60 seconds with a standing climb of about 15–30 seconds just as you come out of the hairpin turns.

The Tour de France is without a doubt won in the mountains and it is here that the true heroes emerge. Climbing tough mountains like these can be exceedingly painful. To recognize this, all you have to do is read the sound bites from Phil Liggett and Paul Sherwen. Most of their descriptions are of the pain on the riders' faces are as they are ascending these monster climbs. Now certainly in your classes you probably don't want to push your students to this level of pain or suffering, but don't be afraid to challenge them! Use the mountaintop finishes as the most challenging and exciting profiles of your tour, and ask students to reach inside themselves to produce efforts they didn't think they could accomplish. This is where your motivational coaching skills will really be needed. (For ideas on inspirational cueing and coaching on climbs, listen to the audio profiles for ICA members that entail long and challenging climbs, or look up the series on coaching different types of efforts.)

5. Rolling Hill Stages

The hills in the rolling hills stages are short and often very steep, and may be interspersed with longer, flattish segments. This makes for a good interval effort in your class profiles. Rolling hill stages can be very fun in an indoor environment. Announce attack after attack on the short uphills. Just like any other stage, you can have fun with a breakaway and a chase group. One interesting way to coach a ride like this (or any stage, even a big mountain stage) is to act like you are the TV announcer, going back and forth between what is happening in these two groups every few minutes. Then go back to the peloton and announce that the teams with riders high in the GC have decided to set a blistering pace to catch up with the two chase groups ahead. Does the peloton "reel in" the two breakaway groups? That is up to you to decide! As the instructor, you are the "announcer" of this fantasy stage—it can end up any way you like. (That is, unless you are riding a stage that has already taken place and you want to follow the real course of events.)

This year you have two very different rolling hills profiles. Stage 3 in Corsica by Jennifer, and Stage 7 in the south of France by Tom.

6. The Finale on the Champs Elysée in Paris:

The countryside around Paris is relatively flat or mildly rolling. There are usually 50 or so kilometers covered before arriving in Paris, and riders will often do this at a very easy pace. You can exaggerate the short little "bumps" as needed to get your students out of the saddle for 30–45 seconds. The peloton enters Paris and rides through the city to the center and onto the famous boulevard of the Champs Elysées, where they will do 8 laps (about 52 km). Though it looks flat, it is actually a slight uphill in one direction with a 60-foot elevation difference, giving it the sensation of a "false flat." There will of course be breakaways once they get there, but these are usually done by lesser-known riders who are way down in the GC, attempting to make a name for themselves and/or make their sponsors happy. Some are simply having fun! (You'll see a lot of smiles on the faces of the riders—you'd be happy too if you knew your three weeks of pain were almost over!)

Winning the stage in Paris is a huge honor, especially for a Frenchman. This is also the stage where the green jersey can solidify his lead, or be lost to his closest rival. However, the yellow jersey begins this stage knowing that no matter how close the 2nd place rider is in the GC, an unwritten law of cycling etiquette* to "never attack the yellow jersey" on the final day virtually guarantees that he will be on the top podium at the finish of the stage.

This is an entertaining stage to do in your cycling classes. Once you "arrive" into Paris make sure to include a lot of short attacks and surges, as riders zoom up and down the cobblestones of the Champs Elysées. You can also encourage your own students to stand up and attack on their own accord, inviting them to attack any time they want, since this is what happens on this crazy finish to the Tour! Then be sure to finish is off with a bunch sprint finish, because breakaways rarely if ever succeed on the Champs Elysées.



This year we don't have the finale in Paris, but there are two different profiles for this stage in the 2011 edition by Tom and 2012 by Robert. The approach to Paris is essentially the same every year (different towns, similar terrain, same finish on the Champs Elysée).

Finish your event with a wine and cheese party, a special podium awards ceremony, and maybe even some champagne (or sparkling cider)! There is always that famous picture of the yellow jersey sipping champagne on the bike as he rides into Paris, surrounded by his teammates who helped him win.

(*Note: The ONLY time that this rule was NOT the order of the day was the famous time trial into Paris in 1989 on the final day when Greg LeMond made up 50 seconds to win with an 8-second victory, overtaking the current yellow jersey of Laurent Fignon. There hasn't been a time trial into Paris since then.)

Tour de France Program

Decorating your indoor cycling room



Yellow, green, and some red polka dots are the theme of the day. You can have a lot of fun with these colors and a Tour de France theme in your cycling studio.

Here's a fun idea—give this task to your child-care center at your club if you have one, or maybe just empower your own young children at home if you have them, and have them cut out red circles of 6 to 8 inches from construction paper and tape them up on the walls (like on the church walls in this photo to the right). Have them draw pictures of bicycles and post them throughout the room with yellow, red, or green construction paper as a frame. You might show them some bike racing magazines to give them ideas for their own drawings. You can also cut out jerseys from appropriately colored construction paper and suspend them from the ceiling, as in the photo below of the village of Beaufort in the Alpes, just outside of Albertville.



Or how about having them decorate an old child's bike like in the photo below, or create a teepee of extra bike parts? How much fun would your local artistic children have with a task to create something like this?







France prepares for the arrival of the Tour. Great ideas for fun and inexpensive ways to decorate your studio!
Photos by Jennifer Sage, Tours of 2004, 2005, and 2007

Sponsors, sponsors, sponsors!

Include your sponsors in your room décor. Get banners or signs from your local merchants to sponsor your "tour" and post them in your cycling studio.

Make sure to purchase a Tour de France cycling calendar from your local bookstore or bike shop. Tear the pages off and post around the room. They often have a "centerpiece" double foldout in the center. (These will be fun when posted right next to a clever child's drawing!)

Watch local newspapers and magazines during the Tour to post current photos and clippings. Over the course of the year, start collecting photos, magazines, and outdated calendars to use in your next year's TDF program. Save them from year to year to be re-used.



Photo: Jennifer Sage and Viva Travels clients at the Tour d France in the Loire Valley in 2005 with their schwag bags, hats, and even a beer collected from the Carvan Pubicitaire.

Would you like to come to the Tour de France, or just ride your bike in France or Italy? Introducing Viva Travels!

Jennifer has been organizing and leading guided bicycle tours in France and Italy since 1989, and started her own bicycle tour company in 2003. For information on attending the Tour de France on a guided or self-guided tour, contact Jennifer at Jennifer@vivatravels.com. You can also check out www.vivatravels.com and sign up for the free (infrequent) newsletter to be informed of upcoming tours. Next year (2014) she is formulating an idea to take a group to ride in Corsica. After watching the first three stages and seeing the beauty of this island, you're going to want to start saving your pennies!

Appendix A: Tour de France Glossary

Alpe d'Huez: The most famous and mythical climb in the Tour, though not the most difficult. There are twenty-one switchbacks on Alpe d'Huez, with an average 7.9% grade (some parts are 11%), 13 km long. Each switchback is numbered. Sheryl Crow can do it in 96 minutes! The record is just over 37 minutes.

Attack: A sudden acceleration by a rider.

Blocking: Legally impeding the progress of riders in the pack to allow teammates a better chance of success in a breakaway.

Blow up: To suddenly be unable to continue at the required pace due to overexertion.

Bonk: What happens when you don't eat or drink enough (glycogen depletion). Cyclists in the Tour take *musettes* (bags, after the feedbags given to horses) of food from their teams in the feed zones. (FYI—it was a *musette* held by a young spectator, who had probably gotten it at a stage the day before, thrown to the side of the road by a rider as he finished his lunch, that caught Lance's handlebars in the Pyrenees in 2003 and caused him to flip over!)

Breakaway: A rider or group of riders who have escaped the pack.

Chasers: Those who are trying to catch a group or a lead rider.

Domestique: French for "servant." Each team has a leader, a lieutenant, a few designated climber-boys whose job it is to win mountain stages and keep the leader in contention for the overall title on hilly stages. The other 5–6 guys on the team are *domestiques*, who work their butts off for the leader, including chasing down breaks, pulling the leader back up the pack if he's dropped, sacrificing a wheel or a bike to the leader if there's a mechanical problem, getting water bottles, and running errands. Many don't finish, but if they wear themselves out helping the leader, it's a job well done.

Echelon: A paceline in which riders angle away from the leader to get maximum draft in a crosswind.

Field Sprint: The dash for the finish line by the main group of riders. AKA, a bunch sprint or pack finish.

General Classification: The overall standing in a stage race. The rider with the lowest time is in first place.

Green Jersey: The jersey given to the leader of the sprint points competition. Points are gathered at pre-determined spots midway through certain stages, and at the end of select stages. Originally supposed to be for consistency of finishes, but now widely termed the "sprinter's jersey." The green jersey began in 1953.

Hors Catégorie (HC): Climbs are rated HC, 1, 2, 3, and 4, in decreasing order of difficulty. "HC" is French for "beyond category" (i.e., waaaaaay hard climb!). Climbs are rated according to a strange standard that includes the length of the climb, average/steepest grade, difference in altitude from top to bottom, where the climb is in the ride (early or late), and even width and conditions of the road. Some climbs, like Alpe d'Huez, are always rated as HC.

Jump: A sudden acceleration, often to close a gap or to break away from the group.

King of the Mountain (KOM): A competition for the best climber, which runs on a point system like the green jersey. The polka-dot jersey began in 1933, and is awarded to the King of the Mountain.

Lieutenant: The team leader's right-hand man. The lieutenant helps keep the team organized during the stage and plans and executes strategy like chasing down breakaways or setting up the final sprint.

Maillot Jaune (Yellow Jersey): The yellow jersey signifies the leader in the general classification (GC), first awarded in 1919. At the time racers rode individually (no teams). The director created the yellow jersey so that journalists could tell the leader apart from the others. The founding sponsor of the Tour, *L'Auto*, made the leader's jersey the same color as its trademark yellow pages. Lance Armstrong's pet name for the *maillot jaune* was "Mellow Johnny."

Paceline: A group formation in which each rider takes a turn breaking the wind at the front before pulling off, dropping to the rear position, and riding in the others' draft until at the front once again.

Péloton: The main group of riders in a race.

Prime: Pronounced "preem"—a special award given to the leader on selected laps during a criterium or track race, or the first rider to reach a certain landmark in a road race. It's used to heighten the action. In the Tour, primes are points toward an overall competition like the KOM or the sprinter's green jersey. Time bonuses are also given for the first three places in each stage.

Prologue: A short time trial that is held as the opening stage of the Grand Tours, usually less than 5 miles, and is designed mainly as a way to get the yellow jersey on someone's back for Stage 1. There are riders who are prologue specialists, whose goal it is to get the yellow jersey for as long as possible to get publicity for the team.

Stage: Each day's race during a multiple-race event is called a stage.

Stage Race: A multi-day event consisting of point-to-point and circuit road races, time trials, and sometimes criteriums. The winner is the rider with the lowest elapsed time for all stages.

Switchback: A 90-degree or greater turn in the road, usually up a mountainside. The French call them *lacets*, pronounced "lah-say" (shoelaces).

Team Time Trial (TTT): A race against the clock with the whole team working together. The TTT relies less on individual talent than on collective strength and demands a lot of strategy. The TTT is not always included in the Tour de France.

Time Bonuses: To lead the Tour, a rider must have the lowest accumulated time over all the stages. Margins can be close in the early going; that's why time bonuses can be important in deciding who wears the yellow jersey. Bonuses are usually given out in the first third of the Tour. There are no bonuses for the prologue or time trials. Bonuses are deducted from a rider's total time for General Classification (GC).

White Jersey: Since 1975, the white jersey has been awarded to the best young rider, less than 25 years old, or the best neophyte in the general classification. White was chosen to signify purity, and therefore youth and the future.

Appendix B: Tidbits on Race Strategy

During the TDF it is common to hear announcers or race commentators talk about a certain aspect of the race and allude to the strategy behind it. Here are a few brief descriptions of the "whys" of certain strategies riders and teams will adopt.

- **Riding at the Front to Avoid Crashes**
  It is said that riding at the front or near the front of the peloton is safest and can help riders avoid crashes. This can be due to a few factors. First, the front of the race is often less cluttered with riders next to each other, as the head of the peloton can resemble an arrowhead. Less clutter translates to fewer riders to get tangled up in. Since there are also fewer riders ahead of you, if you are close to the front of the group (peloton), it is easier to see the approaching road and potential dangers and obstacles. The speed and pace of the peloton is primarily controlled by the riders at the front. This means that riders in the middle and back of the group are usually not aware of speed changes and must respond accordingly. This creates numerous accelerations and decelerations, which can be very hectic and dangerous. Finally, no part of the peloton is immune to crashes, but considering the above, most happen from the middle of the peloton toward the back. So to avoid being part of a crash or delayed by a crash, it is best to stay close to the front (within the first half of the peloton).
- **Riding Tempo**
  Often you may see a number of riders from the same team at the very front of the peloton. They will be said to be riding tempo for the team. Two reasons for this are to either protect their team leaders and/or jersey (yellow, green, or polka-dot) or to chase down a rider or riders in a breakaway. When tempo is being set to protect a leader, the goal is to keep the highest speed possible to discourage other riders from attacking or disturbing the pace. The theory is that if the pace is already very hard, very few will have the courage or strength to challenge it with a faster pace. This is not just done for the GC (yellow jersey), but can be used to protect the sprint leaders approaching an intermediate or final sprint. You will also find tempo riding in the mountains as the climbing specialists go to the front of the lead group (which may be small since the peloton is usually not together en masse in the mountains). The mission is the same: climb at a fast speed (relatively speaking) to discourage attacks and fatigue as many other riders and leaders as possible.
- **Why Break Away If You Are Not Going to Win?**
  It is common to see one or more riders attempting to race away from the peloton at various points during different stages of the TDF. This is a bold and courageous move, considering it takes a tremendous amount of strength and fitness and often results in a failed attempt. So why do it? Besides the challenge of trying to win the day, riders may be attempting to put themselves in a better position for intermediate sprints or climbs. Even if they are not wearing one of the jerseys, it can be prestigious to acquire sprint points or arrive first at the top of a noted climb. Riders may even break away to steal points from other riders (from other teams) who may need them to secure their advantage. This is where things can get heated and interesting as the "game is on" between the peloton and breakaway rider(s). Also, keep in mind that companies sponsor teams for a reason; they want exposure. If a rider, particularly a solo rider, gets away, this will bring some great attention to the sponsors. Not only will the sponsors of this solo rider be visible on TV, but often the race announcers and commentators will repeatedly mention the sponsor as they describe what is unfolding in

the race and the probability of this courageous rider's success. Breakaways can also be fueled by local popularity. If a rider is from a particular region, he may attempt to break away, knowing the local fans will appear to be in hysterics over the fact that one of their own is leading the day.

- **How Does a Lead-out Work?**
  Riding behind another rider may provide some motivation, but the reason a rider will lead out or pace another rider is to allow the rider behind them to obtain a fast speed while minimizing the adverse affects of the wind. Because the front rider is breaking through the wind, the rider behind them may only require 70%–75%* of the power to maintain the same speed as the rider leading them out. This saved power can be used for that last surge or sprint for the win. Lead-outs are not only restricted to one rider. If a sprinter is fortunate, they may have a few teammates left at the front of the race that can provide a lead-out "train." For example, if a sprinter had three teammates leading him out, he might only be working at about 65% of the effort, which could result in more speed and power reserve to win.

  Once the lead-out train has been initiated, the goal of each rider is to ride as hard as they can when they are at the front. Since riders are working as hard as they can, this can result in some very fast speeds upwards of 40+ mph. As soon as they sense their speed or power dropping, it is time to pull over and let the next lead-out rider take over. It all comes down to timing, with the ultimate goal to bring their sprinter within striking distance to throw down the last burst and win the day.

  *Measured from General Motors Wind Tunnel in 1996.

Appendix C: Some Historical Notes of the Tour de France

Use the trivia and stats from these pages to pepper your classes with interesting commentary throughout the race. Include some of them in your flyers, posters, blogs, or e-mails to your participating members.

- **1903:** The race was founded to boost the circulation of *l'Auto* newspaper, as a form of competition with its main rival *Le Vélo*, which was sponsoring the most famous bicycle events in France—the Bordeaux-Paris and the Paris-Brest races.
- *l'Auto* editor Henri Desgrange was the first professional racing cyclist and set the first record for distance covered in one hour (35.325 kilometers).
- **July 1, 1903:** The 60 competitors in the first Tour de France left Villeneuve-Saint-Georges, in the Paris district to race some 2,428 kilometers in just six stages. There were between one and four rest days between each stage. Prize money of 20,000 gold francs was shared among the 60 riders, with 6075 going to inaugural Tour winner Maurice Garin. Garin arrived in Paris nearly three hours ahead of runner-up Lucien Pothier and almost 65 hours ahead of the 21st and last to finish.
- **From 1903 until 1929** teams were organized according to bicycle brand names.
- **1905:** After being based on overall time for the first two years, the classification was based on a points system (designed in an attempt to reduce the temptation to cheat). Stages were shortened in an effort to cut down on the long night stages. The Ballon d'Alsace was added, becoming the first major climb of the event.
- **1906:** The hilly region of Alsace was first traversed.
- **1909:** Luxembourger Francois Faber became the Tour's first non-French winner.
- **1910:** The Pyrénées were incorporated into the route for the first time.
- **1910:** The Tour suffered its first fatality, but not on the road—Adolphe Hélière was electrocuted by a jellyfish while bathing in Nice on the rest day there.
- **1912:** Eugène Christophe completes the longest-ever solo breakaway, 315 kilometers into Grenoble.
- **1913:** The Tour reverts to a time-based classification.
- **1913:** In one of the most famous incidents in the Tour's history, Christophe led Stage 6 by five minutes at the top of the Tourmalet, only for his forks to snap on the descent. He collected the pieces and ran until he reached the village of Ste. Marie de Campan, where he found a forge, lit the fire, shaped a piece of metal, and repaired his bicycle. Despite losing more than four hours he carried on and finished seventh overall. The forge still stands and the building is a national monument.
- **From 1915 through 1918** the Tour was suspended due to the First World War.
- **1919:** The traditional yellow jersey was introduced on Stage 11 from Grenoble to Geneva when Desgrange gave one to leader Christophe to make him stand out from the rest of the bunch. Christophe wore it for three stages until, on the penultimate stage, his forks broke—again!

- **1920:** Phillipe Thys became the first triple Tour winner, taking out four stages and finishing in the top five on all 15, while Belgians filled the top seven places overall.
- **1922:** The Tour crossed the Col de Vars and Col d'Izoard for the first time, Christophe's forks snapped yet again (he found another forge), and 37-year-old Firmin Lambot became the oldest winner and the first to win the Tour without claiming a stage win.
- **1923:** Time bonuses of two minutes per stage were awarded for the first time.
- **1923:** Team directors were allowed to give riders technical assistance for the first time.
- **1924:** Ottavio Bottechia becomes the first Italian winner and the first rider to hold the yellow jersey from start to finish.
- **1926:** After 23 years of starting in Paris, Evian was the first provincial city chosen as the departure point.
- International starting points have been: Amsterdam (1954), Brussels (1958), Cologne (1965), The Hague (1973), Charleroi (1976), Leiden (1978), Berlin (1987), Luxembourg (1989), San Sebastian (1992), s'Hertogenbosch (1996), Dublin (1998), London (2007), and Rotterdam (2010)
- **1927:** In an effort to suppress the negative tactics of the major teams, Desgrange introduced a form of team time trial, with 16 separated starts
- **From 1930 to 1961** riders were grouped into national teams making it easier to drum up patriotic support.
- **1930:** The publicity caravan was introduced to raise money that had previously been supplied by the manufacturers. This was also the first year of radio coverage.
- **1933:** Spaniard Vincente Trueba became the first King of the Mountains.
- **1937:** The derailleur gear systems, already widely in use amongst even casual cyclists, were introduced for the Tour. They had previously been thought to be an unfair advantage.
- **1938:** On the final stage, Tour greats Antonin Magne and André Leducq broke away together and finished arm in arm, giving Leducq his 25th and final Tour de France stage win.
- **From 1940 through 1946** the Tour wasn't held due to the Second World War.
- **1952:** The first televised racing and the first climb of L'Alpe d'Huez.
- **1953:** The first time Mont Ventoux is added to the Tour. France's Louison Bobet marks the Tour's 50th anniversary with the first of three consecutive wins.
- **From 1962 to 1966** brand-name teams were re-introduced, then in 1967 and '68 national teams made a reappearance, before brand names came back for good.
- **1967:** Tom Simpson, the best British rider of his day, died on Mont Ventoux, a victim of the heat, his own fierce determination, and amphetamines.
- **1968:** As a result of Simpson's death, drug tests were introduced.

- **1969:** Belgian Eddy Merckx became the only man to sweep all three titles, not only winning the Tour by 17 minutes, but also claiming the green jersey for the points classification and taking the best climber's prize.
- **1975:** The polka-dot jersey for the King of the Mountains and the white jersey for the best young rider were introduced.
- **1975:** The Tour finished on the Champs Elysées in Paris, as it has done each year since.
- **1976:** The first prologue time trial was held.
- **1976:** The Tour's great "bridesmaid," Raymond Poulidor, retired after finishing third at the age of 40, having never worn the yellow jersey despite finishing second overall five times and third three times over 15 years.
- **1978:** Riders strike over split stages and transfers.
- **1981:** Phil "Skippy" Anderson becomes the first Australian to wear the yellow jersey.
- **1982:** Anderson becomes the first Australian to win a stage and is awarded the white jersey as best young (under 25) rider.
- **1983:** Amateurs were permitted to compete for the first time.
- **1984:** The Women's Tour de France was inaugurated, with a shorter course being created.
- The Women's Tour de France was called the Tour of the EEC in 1990 and '91, only to revert to its old name in 1992.
- **1986:** American Greg LeMond became the first non-European winner.
- **1988:** Spaniard Pedro Delgado won despite testing positive to a drug banned by the IOC but not cycling authorities.
- **1989:** Laurent Fignon looked to have his third Tour win well in hand when he led by 42 seconds going into the final stage, a short 24-km time trial in Paris, but LeMond began an aerodynamic revolution on the banks of the Seine, using aero bars and a low-profile bike to win the Tour by an incredible eight seconds.
- **The early '90s** were dominated by Big Mig, the Extra Terrestrial, with freakish Spaniard Miguel Indurain winning an unprecedented five Tours in a row from **1991 through 1995.** (Jacques Anquetil and Eddy Merckx each won four in a row while Bernard Hinault did four in five years.)
- **1992:** Indurain, who had a resting heartbeat of 29 beats per minute and lungs which could scoop up eight liters of air, was always unbeatable against the clock but excelled himself this year when he won the time trial in Luxembourg by an incredible three minutes.
- **1994:** Indurain made a strong statement to answer his critics by attacking in the Pyrenees when a young Marco Pantani tempted him to follow up a climb.
- **1995:** Italian Fabio Casartelli, Olympic gold medalist in Barcelona and a popular member of the Motorola team, died after crashing on a Pyrenean descent. His teammate, a young and relatively unknown rider named Lance Armstrong, won the stage the next day in his honor.

- **1996:** Dane Bjarne Rijs attacked Indurain repeatedly throughout the Tour and cracked the Spaniard on an amazing day in the Alps, but his win raised eyebrows as he'd been around for a while without any similar performances.
- **1997:** After the first Danish winner the year before, Jan Ullrich became the first German to win the Tour. This is also the year that Uzbekistan's Dshamolidin Abdushparov becomes the first rider to be disqualified from the tour for taking banned substances.
- **1998:** Marco Pantani's win—the first by an Italian in 33 years—was overshadowed by a doping scandal after French police found EPO in a team car days before the race, leading to teams being disqualified from the race and riders, team bosses, and doctors being arrested.
- **1999:** American Lance Armstrong, who had fought off life-threatening cancer, claims the Tour for the first time.
- **2000:** Armstrong claims his second Tour by 6 minutes, while Ullrich is second for the third time.
- **2001:** Erik Zabel claims an unprecedented sixth-straight green jersey while Armstrong makes it three straight wins.
- **2002:** Robbie McEwen is the first Australian to win a green jersey. Armstrong's fourth win is by his biggest margin, over 7 minutes in front of Joseba Beloki.
- **2003:** Armstrong endured a dramatic three weeks, but claimed his fifth win by just over a minute from his old rival Ullrich. Baden Cooke won the green jersey by edging out McEwen by a wheel on the Champs Elysees.
- **2004:** Armstrong wins a time trial up the flanks of Alpe d'Huez to a record number of spectators—it is said that over a million people lined the 21 switchbacks. Armstrong wins his sixth yellow jersey.
- **2005:** Armstrong claims an unprecedented seventh win.
- **2006:** Floyd Landis wins the yellow jersey but becomes the first rider in history to be stripped of his win due to a failed doping test.
- **2010:** Alberto Contador wins the Tour de France for the third time, but is clouded in doping suspicions.
- **October 2012:** Following doping allegations, Lance Armstrong is stripped of all his titles and banned for life from cycling. A few months later, Armstrong admits on national television to Oprah that he did indeed dope throughout his career.

Appendix D: Strikes, Exclusions, and Disqualifications: Great fodder for trivia prior to your stages!

(From Wikipedia)

- In 1907 Emile Georget was placed last in the day's results after changing his bicycle outside a permitted area. Edmond Gentil, sponsor of the rival Alcyon team, withdrew all his riders in protest at what he considered too light a penalty. That included Louis Trousselier, the winner in 1905.
- In 1912 and in 1913 Octave Lapize withdrew all his La Française team in protest at what he saw as the collusion of Belgian riders.
- In 1920 half the field pulled out at Les Sables d'Olonne in protest at Desgrange's style of management.
- In 1925 the threat of a strike ended Desgrange's plan that riders should all eat exactly the same amount of food each day. *(Can you imagine?)*
- In 1937 Sylvère Maes of Belgium withdrew all his national team after he considered his French rival, Roger Lapébie, had been punished too lightly for being towed uphill by car.
- In 1950 the two Italian teams went home after the leader of the first team, Gino Bartali, thought a spectator had threatened him with a knife.
- In 1950 much of the field got off their bikes and ran into the Mediterranean at Ste-Maxime. The summer had been unusually hot and some riders were said to have ridden into the sea without dismounting. All involved were penalized by the judges.
- In 1966 riders went on strike near Bordeaux after drugs tests the previous evening.
- In 1968 journalists went on strike for a day after Félix Lévitan had accused them of watching "with tired eyes," his response to the writers' complaint that the race was dull.
- In 1978 they rode slowly all day and then walked across the line at Valence d'Agen in protest at having to get up early to ride more than one stage in a day.
- In 1982 striking steel workers halted the team time trial.
- In 1987 photographers went on strike, saying cars carrying the Tour's guests were getting in their way.
- In 1988 the race went on strike in a protest concerning a drugs test on Pedro Delgado.
- In 1990 the organizers learned of a blockade by farmers in the Limoges area and diverted the race before it got there.

- In 1991 riders refused to race for 40 minutes because a rider, Urs Zimmerman, was penalized for driving from one stage finish to the start of the next instead of flying.
- In 1991 the PDM team went home after its riders fell ill one by one within 48 hours.
- In 1992 activists of the Basque separatist movement bombed followers' cars overnight.
- In 1998 the race stopped in protest at what the riders saw as heavy-handed investigation of drug-taking allegations.
- In 1998 the Festina team was disqualified after revelations of organized doping within the team.
- In 1999 demonstrating firemen stopped the race and pelted it with stink bombs.

Appendix E: French Translations for the Tour de France

Autobus or Grupetto Autobus means “bus” in French. Grupetto is the Italian term, but is widely employed. A large group of riders at the back of the race in the mountains. Generally it's made up of the sprinters who can suffer on climbs or domestiques who've “buried” themselves setting tempo for the team leader at the head of the peloton.

Coureur *Fr*. Racing cyclist

Flamme Rouge *Fr*. Red Flame. A red banner hanging over the road to signal the final kilometer of a stage in a road race. The flag is especially important on sprint stages where the sprinters will time their final attack for the last few hundred meters of the race. The “flamme rouge” is followed by hundred-meter markers so the sprinters and other riders know how far away the finish is. This will be especially important if a sprint finish is expected.

Grand Boucle *Fr*. Big loop. A colloquial term for le Tour de France which travels through the French countryside from a starting point that may nor may not be within France to Paris over 21 days.

Grimpeur *Fr*. Climber. Climbers are the riders with the capacity to conquer the high mountain passes on a race stage. Being a good climber is essential to being in contention for the general classification (GC) on stage races such as the grand tours.

Lanterne Rouge *Fr*. Red lantern. Red light or “red tail light.” The last rider in the peloton in the general classification.

Meilleur Grimpeur *Fr*. The best climber. Climbers compete for the *maillot a pois*, known as the polka-dot jersey in a points competition. The points are awarded for individual climbs within a stage of a road race. The most points overall in a grand tour takes the maillot a pois for the race.

Musette *Fr*. The feedbag handed out to racers during the stage. Musettes have long straps that the riders put over their heads and shoulders, so they can dig into the contents while riding.

Moto *Fr*. A moto is a motorbike carrying a driver and cameraman on a road stage. The television footage of road stage races comes from the motorbike cameramen, helicopters, and some fixed cameras along the route. The motorbikes have to contend with the riders, team support cars, the neutral cars, and referee cars to get their pictures. The cameraman also has a still camera. It's a very demanding job. Sometimes the pictures are unavailable because of local conditions such as heavy rain for fog as happened on the 2010 Tour of California. On grand tours the moto are numbered. Moto One is always at the head of the race covering the leaders.

Oriette *Fr*. Earpiece for radio communication. Riders wear radios to communicate with the team car and their team *directeur sportif*. There is some controversy about the use of team radio and the governing body of cycling, UCI, has expressed a wish to ban its use. To date the ban has been resisted by the pro riders. The riders' position is safety: the radios alert them to problems on the road including crashes and mechanical problems. The UCI seems to want to limit instructions being given to the riders by their *directeur sportif* from the team support car.

Parcours *Fr*. The race route.

Poursuivant *Fr*. A chaser. When there has been a breakaway from the peloton and a new group formed at the front by one or more riders a poursuivant may in turn break away and chase the lead group. In news coverage the time gap between the poursuivant and the group or rider being chased will be shown.

Stagiaire *Fr*. Apprentice. The title given to a rider on trial with a pro team, which is allowed under the rules from September to the end of a year. A good performance during the trial period can result in a contract on the pro tour or continental tours for the following season.

Venga *Sp*. “Come on.” A common phrase used by Spanish fans to encourage the riders as they pass. It is heard a great deal over the 21 days of the Tour of Spain, la Vuelta a Espana, held in August each year. It's also heard a great deal when le Tour de France takes the peloton through the Pyrenees, which border France and Spain. The Spanish fans are often in red, the national color of Spain. It is the Spanish version of the French *allez*, although interestingly, they literally mean the opposite. *Allez* means “go” and *venga* means “come”! The Italians use *vai* as their word of encouragement, which means “go.”

Translation of the song "Tour de France" by Kraftwerk (2003)

Knowing the translation of this song will make it even more interesting to you!

Tour de France
Radio Tour information
Transmission télévision
Reportage sur moto
Caméra, vidéo et photo
Les équipes présentées
Le départ est donné
Les étapes sont brûlées
Et la course est lancée
Tour de France
Les coureurs chronométrés
Pour l'épreuve de vérité
La montagne les vallées
Les grands cols les défilés
La flamme rouge dépassée
Maillot Jaune à l'arrivée
Radio Tour information
Transmission télévision
Tour de France

Translation to English:

Tour de France
Radio Tour information
Broadcast television
Reporters on motor bikes
Video camera and photo
The teams are introduced
The start is given
The stages are fired up
And the race is underway
Tour de France
The timed riders
For the race of truth
The mountains, the valleys
The great cols, the long lines of riders
The red flag is overtaken
Yellow jersey at the finish
Radio Tour information
Broadcast television
Tour de France

Appendix F: How the Climbs are Categorized at the Tour de France

Though there is a bit of subjectivity to the categorization of some of the climbs, in general, the 5 tier ranking system looks like this:

- 4th Category: The lowest category, climbs of 200–500 feet (70–150 m).
- 3rd Category: Climbs of 500–1600 feet (150–500 m); in the TDF this would be around a 5 km climb at a 5% grade.
- 2nd Category: Climbs of 1600-2700 feet (500–800 m); this would be a 5–10 km climb at an 8% grade. Because of the terrain in the United States and methods of road construction, this is usually the toughest climb you'll see the in U.S. Our climbs are usually very short if steep, or long gradually increasing grades. Notable exceptions include the climb from Ouray to the top of Red Mountain Pass in Colorado, Whiteface Mountain in New York, Palomar Mountain in California, Mount Washington in New Hampshire, and Mt. Lemmon in Arizona. Winter regulations in the U.S. require mountain roads to be 9% or less in most areas.
- 1st Category: Climbs of 2700–5000 feet (800–150 0m); this is usually a longer duration climb (20 km) with a grade of 5%–6%.
- Hors Category (HC): The hardest; climbs of 5000+ feet (1500+ m) with grades of 7% and more; in the TDF what would normally be considered a HC climb could be downgraded to a Cat. 1 if there is a flat section—a good example of this in the TDF is the Col de la Madeleine, which has a flat section halfway to the top (sigh, a piece of heaven!) and therefore is usually only a Category 1, unless it's closer to the end of the stage, when it is ranked as an HC. Also, the famed L'Alpe D'Huez is relatively short for an HC climb (3700 feet), but is very steep (average 7.9% grade), and is also always a stage finisher (and once, in 2004, a time trial). In 2013, it will be climbed twice in one day.

In France, there are usually only very short segments that exceed 13% grade, and anything steeper generally does not appear in the Tour de France. This is not the case in Italy for the Giro d'Italia or in Spain for the Vuelta a Espana, where it is not uncommon for climbs to exceed 15% on a regular basis, and even reach 22%–23%! These climbs require new gearing be installed on the riders' bikes the evening prior to these stages. If you cannot visualize a 23% grade, image walking up a hill in which you have to lean forward and walk on your tiptoes, and where you feel fatigued just walking a short distance!

Appendix G: Tour Tidbits and Trivia (compiled for the 2006 Tour)

Calories consumed by a rider per day: 5,900 average, 9,000 max

Calories burned by a rider in the course of the Tour: 123,900 (based on 5,900 per day average at 21 days of racing)

Number of pedal strokes taken per rider for the three weeks: 324,000 (at 60 rpm); 486,000 (at 90 rpm)

Number of miles of barricades erected and torn down for the race (again and again and again): 217 miles

Number of gendarmes (French military police officers) on the Tour: 13,000

Number of chains worn out by a single rider: 7

Total number of tires used by the peloton: 792

Number of finishers, worst-ever year: 10 in 1919 (out of 69 starters)

Most stages won by a single rider, career total: 34, Eddy Merckx (1969: six stages and overall; 1970: eight stages and overall; 1971: four stages and overall; 1972: six stages and overall; 1974: eight stages and overall; 1975: two stages)

Most number of stages won on single Tour: 8—Charles Pelissier (1930), Eddy Merckx (1970, 1974), and Freddy Maertens (1976)

Most riders to wear yellow jersey in one Tour: 8 in 1987

Most days spent in yellow jersey: 96 by Eddy Merckx (over 7 Tours)

Biggest winning margin (since 1947): 28 min 27 sec (Fausto Coppi—Stan Ockers in 1952)

Smallest winning margin: 8 sec (Greg LeMond—Laurent Fignon in 1989)

Longest solo breakaway: 253 km by Albert Bourlon in 1947

Biggest winning margin on stage win: 22 min 50 sec by Jose Luis Viejo in 1976

Fastest prologue: 55.152 kph by Chris Boardman in 1994 over 7.2 km

Highest total number of "King of the Mountains" victories: 7 by Richard Virenque

Fastest individual time trial: 54.545 kph by Greg LeMond in 1989 over 24.5 km

Fastest team time trial: 54.930 kph by Gewiss in 1995 over 67 km

Fastest average over a flat stage: 50.355 kph by Mario Cipollini in 1999 over 194.5 km (Laval-Blois)

Fastest average over whole Tour: 40.276 kph by Lance Armstrong in 1999

Oldest race winner: Firmin Lambot (36) in 1922

Youngest winner: Henri Cornet (20) in 1904

Most times participated by one rider: 16 (Joop Zoetemelk, between 1970 and 1986; he finished them all)