

TIMETABLE

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
REGISTRATION			8.30–8.40AM		
LESSON 1	BIOLOGY 10–19	ZOOLOGY 46–59	SCHOOL TRIP 84–95	HISTORY 96–107	CHEMISTRY 134–145
LESSON 2					
LESSON 3	ENGLISH 20–33	POLITICS 60–71			
LESSON 4				MATHS 108–121	FASHION 146–159
LUNCH 1.00–2.00PM					LUNCH 1.00–2.00PM
LESSON 5	PHYSICS 34–45	PSHE 72–83			GEOGRAPHY 122–133

Are you as smart
as our Star Pupils?

Find the answers
to the quizzes
on page 174. But
no cheating!

BIOLOGY

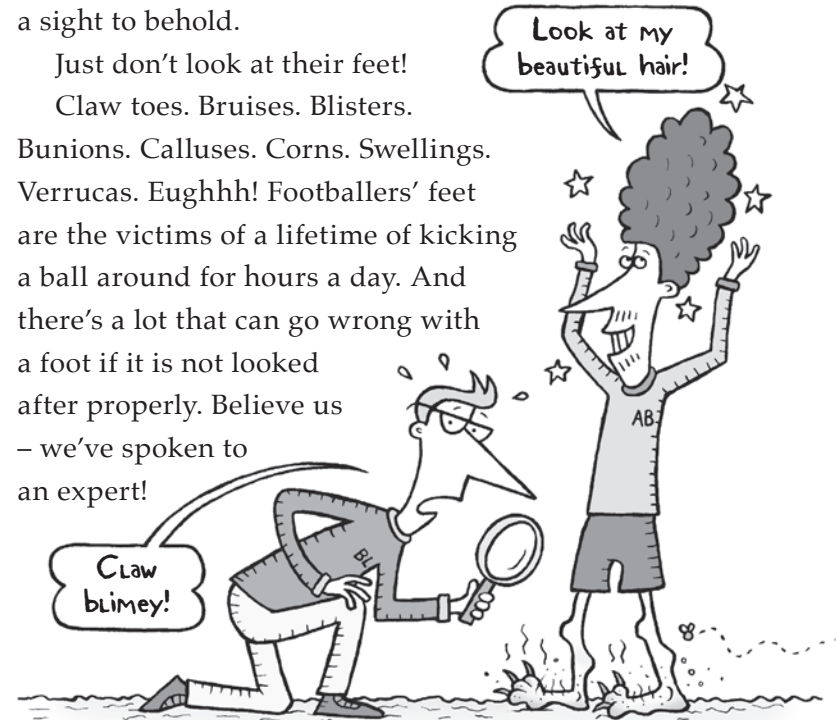


Professional footballers seem to glow. Their well-toned bodies and perfect posture are signs of fitness and well-being. They spend money on dentistry to make sure they have gleaming white teeth. On the top of their heads is always – always – a fashionable flourish of hair. They are a picture of good health, a sight to behold.

Just don't look at their feet!

Claw toes. Bruises. Blisters.

Bunions. Calluses. Corns. Swellings. Verrucas. Eughhh! Footballers' feet are the victims of a lifetime of kicking a ball around for hours a day. And there's a lot that can go wrong with a foot if it is not looked after properly. Believe us – we've spoken to an expert!



To kick off Season 3 at Football School, we are going to look at our lowermost limb: those five-pronged platforms that bear the weight of our entire bodies, and whose name is contained in the first four letters of our favourite sport.

There's trouble afoot and we're not going to tiptoe around the details!



POD SPODS

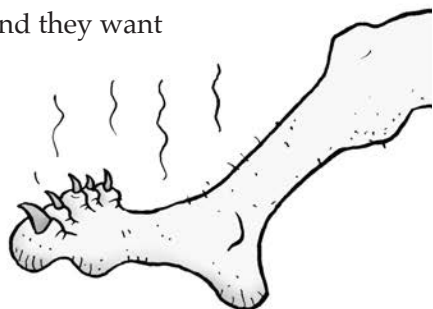
A doctor who specializes in feet is called a **podiatrist**. Many clubs employ a podiatrist because it is so important that footballers keep their feet in good condition.

Just as firefighters take care of their hoses, singers take care of their voices and illustrator Spike takes care of his pencils, footballers must look after their feet in order to do their jobs properly.

We spoke to Nutan Shah, one of the UK's top podiatrists, who has worked with many top clubs and the England team. She's peeled the socks off the subject in order to let us know the ugly truth about footballers' tootsies. "Not a pretty sight!" she revealed to us. "The feet get battered. A few players have immaculate feet but very few."

It pays to look after your paws. Shah says that a footballer's most valuable accessories are not their fancy sunglasses, a fast car or the latest phone, but a pair of nail clippers and a nail file. Badly looked after feet can mean players miss weeks of action.

Footballers are all too aware of their disfigured trotters, which is why Shah told us that at the end of the season they often ask her if she can make their feet look pretty. "They are about to go on holiday and they want their feet to look nice on the beach. Footballers are able to look after their hands and face throughout the season, but their feet are completely bashed about."



TIPS FOR TOES

When it comes to looking after your feet, the first thing to get right is the size of your shoe.

Footballers often wear boots that are too tight, maybe a size or a size and a half smaller than what their podiatrist recommends. Many footballers prefer tight boots because it makes them feel that the shoe is like a second skin, which gives them more control of the ball. But it creates foot problems down the line. It's a pressing issue!

Footballers also need to be very careful about what shoes they wear in their free time. Podiatrists see problems emerge when footballers wear stiff fashion shoes that rub their feet and give them calluses, blisters and even open sores called ulcers. If an athlete wants to protect their Achilles tendon, they need to wear shoes that have an incline in the heel, so flat shoes like Converse trainers or flip-flops are not recommended.

Nor are stilettos!

Another major problem is moisture. This isn't just because footballers run around a lot, which gives them hot and sweaty feet. It's also because they spend so much time washing and soaking their feet in water. As part of their fitness and hygiene routines, footballers are often in the shower, Jacuzzi or bath. If the feet stay too wet then they are at risk of fungal infections, and if they dry out too much they get dry and cracked skin. A sensible footballer will rub moisturiser on their feet. Smooth!



Foot Complaints

athlete's foot • An itchy rash caused by a tiny fungus that eats dead skin. It got its name because the fungus thrives in moist, warm places like the damp surfaces in swimming pools and gyms where athletes spend their time. In order to avoid catching athlete's foot, it's advisable to wear flip-flops at the pool or gym.



black toe • If a player hits their toe hard – perhaps by kicking the ground by mistake, or another player treading on their feet – the skin underneath the nail can bleed, turning it black or purple.



In certain cases of black toe, the entire nail will eventually fall off.

callus • A yellowy blob of hard skin, caused by something hard rubbing against the skin continuously for a long time. For example, the little lump many people get on their middle finger from where a pencil rubs when they write is a callus. Calluses tend to appear on the feet more than anywhere else, because whenever we walk or run our feet rub against the inside of our shoes. A small callus can help protect the foot, but once they get big they cause discomfort and have to be removed. Footballers and other sportspeople are susceptible to calluses, especially if their boots are too tight.



claw toe • A condition where all the toes, apart from the big toe, curl in, so rather than lying flat, they look like animal claws. Most footballers have claw toe, the result of wearing boots that have been too tight from a young age. If a footballer has claw toe, they are more likely to damage their toenails and get more calluses and corns.



corn • A hard, circular callus on the toes which is caused by friction putting pressure on a single point. In some extreme cases, corns are filed down or sliced off with a knife.



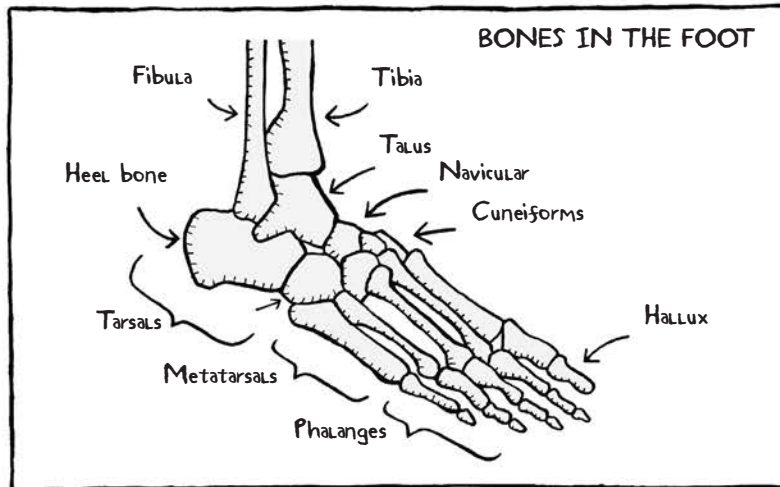
ingrown toenail • When a toenail is not clipped properly there is the risk that it may start to grow into the skin. Ingrown toenails are not a silly little problem. They can cause huge pain and easily lead to a footballer having to take weeks out injured. To avoid them, a footballer should check their toenails every day, and file down any sharp bits that might dig into the skin.



verruca • A wart that you get on the sole of your foot. Verrucas are contagious and can be spread through the watery floors of communal showers and swimming pools. Football clubs are obsessively vigilant for any players with verrucas, since if one person has them, they can quickly spread through a whole team. If you get a verruca and it causes pain, one treatment is for a doctor to freeze it so it falls off.

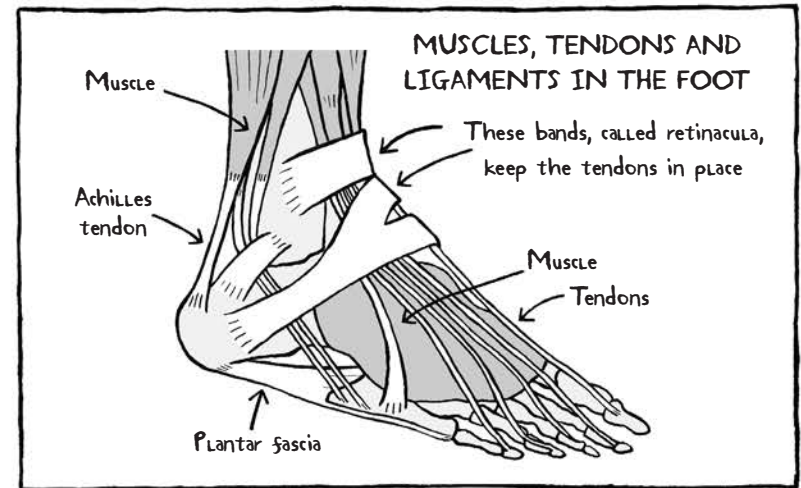
Foot Anatomy

The **anatomy** of a living thing is a description of its internal structure. Here's a glimpse into the anatomy of the foot – as you'll see, it's quite a *feet* of engineering!



bones • Each foot contains 26 bones and 33 joints, meaning that about a quarter of all the bones in our body are in the feet. The only limbs in our body with a more complicated bone structure are our hands, but feet undergo much more physical stress than the hands because

feet carry the entire weight of our body. The bones that are the most at risk of injury for footballers are the **metatarsals**, on the forefoot, since they are the thinnest in the foot and, unlike the **phalanges** in the toes, metatarsals cannot flex out of the way.



skin • The skin under the ball of your foot and under the heel is thicker than the skin anywhere else on your body. This is because there are extra layers of fat, a bit like bubble wrap, which act as shock absorbers when you walk. Comfy!

ligaments • Ligaments join bones to bones. An important ligament in the foot is the **plantar fascia**, which runs along the sole from the heel to the toes. When you step on your foot, the plantar fascia stretches like a spring, and when you lift the foot up, the ligament releases, which gives

the foot a bounce of energy. It is literally a spring in your step!

tendons • Tendons join muscle to bone. The main tendon in the foot is the **Achilles tendon**, which joins the calf muscle to the heel. The Achilles tendon acts like a lever that pushes your foot away from the leg, which is what enables us to run, jump, walk up stairs and stand on tiptoe. Scientists have discovered that sprinters, on average, have shorter Achilles tendons than other people, because this gives them more force when pushing off the ground.



FOOT FROMAGE

Everyone with a nose knows that feet often infuse socks with a distinctive, cheesy aroma. You should smell Ben's after he's been for a run! This pongy perfume is the result of the fact that the soles of the feet (as well as the palms of the hand) have the highest density of sweat glands in the entire human body. Sweat on its own does not smell. But moist, warm socks provide the perfect habitat for **bacteria** that live on the skin to thrive. The bacteria eat dead skin and the process produces a smelly gas with a familiar cheesy scent. Scientists who study smelly socks discovered that the same malodorous bacteria in our feet are present in smelly cheeses, such as reeky Limburger, from Germany. Whiffy!



BIOLOGY QUIZ

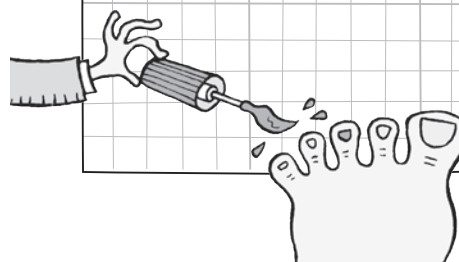
1. What is the name of a doctor who specialises in treating feet?

- a) Podiatrist
- b) Sole man
- c) Faith healer
- d) Head, shoulders, knees and toes surgeon



2. Former England striker Darius Vassell once missed three games due to injury because he did what to his toe, after it had become swollen?

- a) He tried to clip off the nail, but cut a chunk out of his toe.
- b) He peeled off the toenail by accident and it became too painful to put his boots on.
- c) He drilled through his nail to drain the blood and ease the pressure, and the toe became infected.
- d) He painted the toenail with varnish and became ill from inhaling the fumes.



3. How did Achilles, the hero from Greek mythology, die, which is the reason why the tendon in our heel is named after him?

- a) A lightning bolt hit him in the heel
- b) A poisoned arrow hit him in the heel
- c) A snake bit him on the heel
- d) A football hit him on the heel



4. Which of the following players has the biggest feet?

- a) Cristiano Ronaldo
- b) David Silva
- c) Paul Pogba
- d) Romelu Lukaku

5. Which animal is attracted to the smell of sweaty socks?

- a) Tiger
- b) Skunk
- c) Mosquito
- d) Snail

