

SEASONAL INFO

Think of the Easter Holidays and what comes to mind? Apart from hoards of chocolate that is...

If you're young, it's baby animals; if you're older, it's likely to be Bank Holiday traffic jams. Here's a factfile on both, to keep everyone happy in the car as you drive along – or sit in gridlock.

FURRY ANIMAL FACTS

Woof! Mum! Chicks and other baby birds follow the first moving object they see after hatching, this is called imprinting. Normally it's their real mother but sometimes it's a human, a dog or even a flashing light.

Untidy Barnett A mole's hair doesn't just grow one way like most mammals - it bends in all directions. So when a mole reverses in its tunnel it doesn't rub itself up the wrong way and impede its speed.

Adolescent Spots Dalmatian puppies are entirely white when they are born; they get their characteristic black spots later in life.

Legs of Lamb Lambs 'bounce' because their legs and reflexes are not fully developed. Like human babies, it takes time for them to learn to walk like adults.

Purrfectly reasonable Cats and kittens purr when they inhale and exhale. Purring is not always a sign of happiness, cats in great pain will also purr and some people think that the cat does this to comfort themselves.

Hare today... Baby rabbits have no hair and they can't see. Baby hares have both hair and the ability to see. Rabbits are born in nests while hares are born in the open and start to run soon after being born.

10 tog chicks Chicks' fluff traps in the heat keeping them warm until they are old enough to develop feathers.

Bunny hops Most rabbits and hares make their tails stand on end showing a flash of white to warn their friends that a predator is nearby.

Hammer Head Chicks have one tooth that falls off 12 to 24 hours after they hatch. They use this egg tooth to help break their way out the shell.

Delaying tactics Badgers' eggs are fertilised when they mate but don't actually start to develop until several months later.

TRAFFICOLOGY



BUNCHES OF BUSES

You know what it's like. You wait ages for a bus and then two – or even three - come along together. Buses seem to have a habit of bunching up, but what causes this frustrating phenomenon?

Unfortunately, it's us passengers that are to blame. If buses didn't have to stop to pick us up then they'd all keep their designated distance from each other, give or take the odd traffic snarl-up. But when a bus reaches a stop, it takes time for passengers to get on and pay for their fares, which snarls up all the nicely spaced timetables they drafted back at the bus terminal...

HERE'S WHAT HAPPENS...

The first bus leaves the depot, arrives at a stop and picks up the people waiting there. If there's an unusually large number of people wanting to board the bus then this slows it down, making it slightly behind schedule. This means it gets to the next stop a bit later than planned, by which time there are more passengers waiting than would normally be expected. So it also takes longer to load these passengers. As you can see, the bus gradually slips further behind on its timetable....

Meanwhile, a second bus leaves the depot on time, but because the first bus has slowed down and taken on more people than expected, there are less people waiting at the stops when the second bus passes by. So the second bus takes less time than scheduled on its route, and eventually catches the first one up.

The two buses then travel round the route together, often leapfrogging each other at stops.

TRAFFIC JAMS

Don't you just love them?

The bags are packed and loaded in the car and you're headed off for a lovely weekend away. The road's clear and there's every chance you'll get there in time for lunch. Then suddenly over the brow of the hill you find yourself sitting in gridlock. What happened? One minute the traffic was flowing freely the next thing you're at a standstill... usually with at least one passenger desperate for the loo.

People love to blame roadworks – particularly unattended roadworks! – for traffic jams, but traffic jams can build up without any roadworks or accidents along the route. All that's needed is a change in the normal flow of traffic, for example a lost driver slowing down to read a road sign.

What happens is: as that one car reduces its speed, the faster moving traffic behind it also has to slow down. This creates a higher density of traffic behind the lost driver. As the driver works out where they're going and speeds up again, the traffic is released from the go-slow, but what's known as a "density wave" of slow-moving cars remains behind, snarling up the traffic.

Density waves are very common and they appear in the most unlikely places, from the spiral arms of galaxies to the flow of cornflakes out of a cereal box. During the holidays when there are lots of cars about, density waves form on nearly every major road and slow down the traffic. Too bad you had to find yourself in the middle of one on the M6!

JUST THINK OF THE DRIVING

Although driving is a complex activity that requires a great deal of attention, most cars contain loads of gadgetty distractions. Hands-free mobile phones, hi-fi systems and screens that show the quickest way to get to the destination are just a few examples of technologies that are becoming basic fittings in every car.

The dangers of being distracted have always been obvious – for example, back in the past when windshield wipers were first introduced there were worries that they might hypnotise drivers. This was quickly proved not to be the case, but how many distractions *can* a driver contend with and still drive safely?

Recent experiments show that any kind of mental effort is likely to distract you, even if it doesn't involve taking your hands off the wheel or your eyes off the road. Eye tracking devices were used to test the visual behaviour of drivers who were given tasks to do while driving, such as talking on the phone or doing mental calculations. The results suggest that the more complex the task the narrower the visual field becomes. (Needless to say, these experiments weren't carried out on real roads – that would be dangerous!)

The key to safer driving is therefore not to think too hard, and that goes for both business related phone conversations and thinking about the shopping list!

THE A – ZEBRA OF PEDESTRIAN CROSSINGS

Did you know that there's a veritable zoo-full of different pedestrian crossings? As well as the familiar **pelican** and **zebra**, there's also the **toucan** (which is for cyclists as well as pedestrians) and the **pegasus** (for horses and people).

Pelican crossings are being phased out in favour of another animal crossing, the **puffin**. This updated version sports infrared detectors that monitor pedestrians' progress as they cross. This will eliminate the need for the ambiguous flashing 'green man' and amber signals.

Rather than being set on a simple timer, the time allowed for the 'green man' varies. If someone is particularly slow then it gives them more time to cross, but if everyone has zipped over then it switches back to the 'red man' and allows the cars to start move off.

The detectors can even tell if a pedestrian has pressed the button and then crossed the road without waiting for the lights to change, or disappeared off elsewhere. If this happens, then the lights remain green so that drivers are not left waiting at lights for no apparent reason.

ROAD RAGE AHEAD

Beep beep - £!%\$&£””!!!

The uncontrolled anger known as “road rage” is usually caused by an irritating act of another motorist. But what is it about driving that can turn a generally emotionally stable person into a complete maniac?

The everyday world is full of potential conflict and annoyances – like having to jostle through crowded streets or stand in a queue when you're in a rush. But people who experience road rage while driving probably don't deal with these frustrating situations in the same way as they do when they're on the road.

It seems that driving is problematic because drivers can't see each others' faces, and therefore can't relate to each other. For example, Driver A might be genuinely apologetic for cutting in front of Driver B, but Driver B can't see this. All he knows is that someone just drove in front of him, which is stressful and can be interpreted as rude and aggressive behaviour if you can't see the other person's emotional reactions.

BRAIN RAGE

Research into the neurochemistry of the brain shows that in some cases a deficiency in a chemical known as serotonin means the person will find it hard to control feelings of anger. Individuals with reduced serotonin are more likely to be road ragers than those that produce normal amounts.

It's possible that this emotional behaviour is something that's evolved to help our survival... When faced with a predator, our Stone Age ancestors would probably have stood more chance of escaping quickly if they reacted emotionally rather than stopping to think about the best way to deal with the situation. (The judge in your reckless driving court case may not go for this explanation though!)

THE LIGHTS REALLY DO CONTROL THE TRAFFIC

Trying to predict traffic flow in a busy town or city is very complicated. There are many paths that vehicles can take and routes vary. School holidays or the presence of roadworks have a big impact on normal patterns. Planners therefore use computer models to try and anticipate how changing the system, by introducing a bus lane for instance, affects the flow.

Traffic lights have a huge role to play...

Planners can alter the timings of traffic lights to ensure a smooth flow of traffic. By changing the timings, they can try and spread out the movement of vehicles, eliminating congestion or at least shifting it elsewhere so it causes less problems or pollution. There's a set plan of how timings vary depending on the time of day or other conditions.

Because traffic patterns tend to slowly drift, the light timings need monitoring and altering on a regular basis. This can be expensive and time consuming, so

planners employ computerised systems that collect information from traffic lights. A common system in the UK is called SCOOT (Split Cycle Offset Optimisation Technique). Detectors at each traffic light count the number of cars passing then send the information back to a central database where it's collated and used to build a model of traffic flow. The software then tries to optimise the flow by changing the timings of the lights.

SCOOT also performs other tricks, such as giving buses priority, or ensuring that an emergency vehicle encounters a wave of green lights to speed it to its destination.

ROADS + CARS + MORE CARS = TRAFFIC JAMS

The first stretch of motorway in the UK opened in 1959; it was a mere 115 kilometres long. Motorists considered it to be such a spectacle that they took to picnicking on the hard shoulder to watch the cars race by. There are now over 3,000 kilometres of motorway across the country, but it still only makes up less than 1 percent of the total road length.

There are around 26 million cars in the UK, which make up 81 percent of all traffic. The number of cars has increased 70 percent in the last 20 years and is predicted to rise a further 2 percent each year. It's estimated that there will be 31 cars million by 2020. This can only mean more and more traffic jams....

Being stuck in a traffic jam is no fun; London drivers can spend a third of their journey at a total stand still. One quarter of Britain's main roads are jammed for an hour a day. Frighteningly, predictions claim that congestion will increase 20 percent by 2010.

Holiday traffic jams are another huge source of stress. In a survey 34 percent put being trapped in a bank holiday traffic jam as their top cause of stress (3 percent claimed it was being sat behind someone tall at the cinema!) Last Easter drivers were stuck in a 12-mile traffic jam on the M40 in Oxfordshire – happy holidays...

More cars means that there's also more pollution. Thankfully today's cars are far more efficient: one 1976 Ford Fiesta produced the same amount of exhaust emissions as twenty 1998 model Ford Fiestas do.

BLUE IS THE COLOUR...

By the way, blue is the most popular car colour followed by red, silver then white. You could try keeping a tally on your next journey to check this. The safest colour is yellow – you are most likely to be seen.