

*WHAT'S
IS IN
STORE
FOR YOU*

BY: CA DR. VISHNU BHARATH ALAMPALLI.

PREFACE: The people who are born in fifty's & sixty's have seen drastic changes which probably no other generation would have seen it in the past and the generation to come. What couldn't be dreamed are seen as reality and there will be much more advancement in technology in future. Even if one looks into history, no other century had such drastic changes and advancement.

No doubt the LIFE has come easy and enjoyable, so much comfort makes one immobile as everything will be made possible sitting at one place, but most unfortunately the advancement in technology is making human more lazy and that results into disaster health , mood and other wise,

Change is inevitable, changes have to be there, only then the life will be more interesting. But the change making humans lazy and unhealthy is the big question to be answered.

If one has to draw a Balance sheet of things, I am sure many agree that these changes are not good for human beings.

I am able to compile vital data and making it available for the people to know what is in store for them in the near future. This will be my 48th book, I am so much motivated when the people call me and say they are eagerly waiting for the next, in fact they have started referring the number of the book. I am delighted.

I am indeed thankful, to Mrs. Jayshree Chetan for giving finishing touch, Mr. Sagar for designing and M/s Omkar Printing Press for printing. I am also grateful to the sponsorer's of this book M/s

CA Dr. Vishnu Bharath Alampalli.

WHAT WILL BE TECHNOLOGY IN NEXT DECADE: WHAT IS 5G, AND HOW THE WORLD WILL CHANGE

In the beginning there was the wire, then came the 3G, which changed all our lives and let us walk around with little computers in our pockets.

THEN CAME 4G, AND LET US DO AMAZING THINGS WITH OUR PHONES - LIKE WATCHING VIDEOS.

NOW COMES 5G, AND EXPERTS SAY IT'S THE BIGGEST JUMP YET, ENABLING ALL OUR SMART DEVICES TO DO AMAZING THINGS. WHAT IS IT AND WHY IS IT GOING TO CHANGE OUR LIVES? PLEASE GO THROUGH THIS TO KNOW WHAT IS IN STORE FOR YOU.

SCIENTIFIC BREAK THOUGH'S

If you cast your mind back 10 years, you'll probably realize how different your life was then. If you had a cell phone, most of your friends and neighbors probably didn't. You also likely didn't use social media or check your favorite websites every day. You didn't have instant access to the whole world lying right in your pocket. Yet the current rate of technological advances is so startlingly fast, that the next 10 years are expected to see exponential growth in activity.

The following 21 future changes are going to herald a total revolution in human affairs. Prepare to be shocked and amazed!

1. In 2 years, unlimited free data storage for 90% of humans



It's believed that unlimited storage for all your files will (or could) be given to you free of charge, very soon, meaning you'll never need to delete anything ever again due to lack of space. Companies will be able to do this as the cost of hard drive gigabytes falls precipitately.

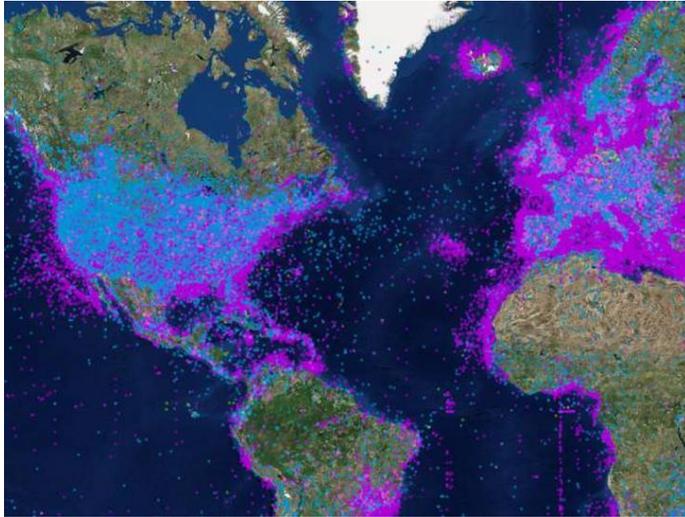
2. By 2021, Robotic pharmacists to be in America



Robots have already replaced manual workers in the manufacturing industry, and that's just the start. For better or worse, it won't be long

before you'll be getting your medicine from a robot – I just wonder if they'll be able to read the doctor's note!

3. By 2022, 1 trillion sensors to be online



Sensors are getting so cheap, and computers so powerful that soon there'll be hardly any reason for any electronic device (or otherwise) not to be wired to the internet. This'll mean that we'll be able to perceive our environment digitally as well as or perhaps even better than we can physically.

4. By 2022, 10% of us will wear clothes hooked up to the web



Already we have people that own watches and rings with connections to the internet, and there's no sign that the fad will stop there. In just a few years your outfit (or the outfit of some rich guy on TV) will be connected to the World Wide Web. It might seem like there's no point to this, but perhaps the reason will come afterward.

5. By 2022, 3D-printed cars to be made



One automotive company, Local Motors, is set to steal ahead of its rivals by producing a full-sized 3D car using printers after Audi showed they could make a miniature one recently. It might sound strange now, but perhaps, if it brings prices down, you'll be driving one in a few years.

6. By 2025, implantable mobile phones to be available to buy



The thinking here is that a mobile phone will soon be able to keep check on your health and vital signs, which it will do better by being permanently implanted within you. What's more, such devices will perhaps reach a stage that they can interpret our thoughts and transmit them to other users. This could all be coming in the next few years.

7. By 2023, Big-data technologies to replace government censuses



All nations still use traditional censuses to record demographics and information about us, helping them plan ahead for school, housing and hospital building, and things of this kind. Yet Canada has lately started to use more digital methods. Soon, censuses will be a thing of the past, and governments will formally request digital data from us.

8. By 2023, 10% of reading glasses to be wired to the web



Technological experts and futurists believe that soon, eyeglasses will be hooked up to the internet to give direct access to apps which we can control hands-free. Google Glass has already set sail on this journey and has even started experimenting with contact lenses that operate eye-tracking technology.

9. By 2023, 80% of humans will have a 'digital presence'



Many people already spend half of their day 'in' the internet, and futurists believe this activity is only going to increase, with people existing as much online as they do off. This will, of course, help connect people that are physically thousands of miles apart in such a way that they hardly feel anything separating them.

10. By 2023, 90% of humans to have a pocket-sized supercomputer



PC computers are becoming less and less important as people prefer to use their phones to connect to the internet and perform a dizzying array of

functions. This now encompasses 50% of the world, and the coverage is growing rapidly as prices diminish and computer power increases.

11. By 2024, internet access to be considered a human right

Big tech giants like Facebook and Google are pioneering attempts to spread internet access to remote places via drones, satellites, and balloons. Soon, the idea of being without internet will so shock people that they will demand to never be without it again. It will become politically necessary for nations to promise permanent everlasting online access as if it were a human right.

12. By 2024, 3D-printed livers to be transplanted

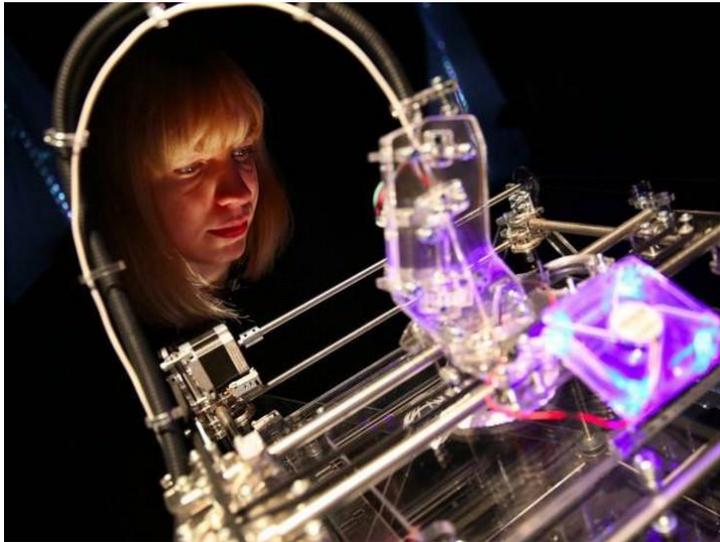
The hope is that 3D printing, after the success of constructing artificial bones, will move to bioprinting of organs, like livers. This possibility is incredible! Just imagine having access to an unlimited supply of synthetic body parts! It may be that the human life-span is set to double!

13. By 2024, half our internet traffic will be from appliances and devices



Almost all the internet traffic we generate today comes from our computers and phones. Yet soon, since all our domestic appliances and devices will also be hooked up, only half of our internet use will come through the phone and computer.

14. By 2025, 5% of consumer products to be 3D printed



The cost of 3D printers and the tasks they can perform is expected to rapidly change in the next few years. This will enable small start-ups to manufacture their own creations at home on demand, making production much easier than it currently is. Things will be produced and disseminated faster than ever before.

15. By 2026, 30% of business audits to be performed by AI



Though once we believed that only blue-collar jobs were at risk thanks to AI, that was only the start. By 2025 30% of all corporate audits will be executed by AI, leaving fewer jobs at the top table for highly qualified white-collar graduates. This is how much the world is set to change.

16. By 2027, more car-shared journeys than private



Current projections of the share-industry suggest that it's about to explode. Today, for example, many young people use car-sharing services like Uber, Lyft, and Zipcar, forcing auto manufacturers to start reconsidering their own business plans. If the share industry starts to dominate, we can

expect most journeys in the future to be shared ones with strangers, rather than either public transport or individual private trips in our own cars.

17. By 2026, Driverless cars to account for 10% of all cars in the US



Driverless cars have generated a lot of interest since they promise to increase safety and cut down on harmful emissions. That's why big techno companies and automakers like Toyota are already making prototype cars that drive themselves. It will probably be by 2026 that 1 in 10 of us will own one of these incredible gadgets.

18. By 2026, cities without traffic lights



Smart cities are set to become prototypes for the urban centers where most of us are to live. These will have traffic lights, sidewalk, and streets all wired up to the internet. All infrastructure will be maintained online. The first one will probably have a population of 50,000 by 2026.

19. By 2027, 10% GDP to be stored with block chain technology



Currently, the digital Bitcoin currency in blockchain technology accounts for 0.025% of global GDP, yet this is expected to rise to 10% by 2027. Soon, then, lots of the world's wealth will be digitally stored on computers, as we sadly wave goodbye to old hard currencies.

WHAT YOU HAVEN'T DREAMED, WILL HAPPEN.

AWAIT ! YOU WILL HAVE A GREAT FUTURE

ARTIFICIAL INTELLIGENCE

With Artificial Intelligence coming, there will be total transformation and few are indicated below:

The Most Important Skill In The Age Of Artificial Intelligence (AI)



Shutterstock: No doubt each of us has come in contact with Artificial Intelligence (AI) -- whether it is by shopping online and seeing 'suggested for you' products, or ads popping up in your Face book feed, or at the bank when we are making a check deposit at the ATM. Other industries, ranging from health to fitness to media to

dating apps to finance have all adopted AI in some capacity to optimize and automate their processes. Although known in the academic world since the 1990s, AI is only coming to mainstream utilization in recent years. So what exactly is the power of AI and why is it becoming so popular now?

AI is what is known as a forward model in computer science, meaning it is a computer model that makes decisions based on the input into the model, such as data that can be in the form of pictures, numbers, and really anything that is mathematically quantifiable. Thus, this type of model is able to modify its prediction based on the dynamic flow of input. So, the longer that the model receives input, the 'smarter' it becomes and the better guesses it can make about future behavior.

It is different from the backward model, or non-AI predictive computer algorithms, in that in a backward model a prediction is made on a past data set and the unique parameters that are chosen at the time of the model building. Therefore, it does not have the capacity to modify its guesses or predictions because no matter how many times the backward model is fed data, it will always give the same answer for the same data point, this is a crucial difference to the forward model, where the answer changes with more data that is fed into the model.

The reason why AI is being prevalently used now than before is twofold: 1) the science and the advancement behind algorithm development; 2) with the abundance of data generated makes it a perfect time to use this model. One of the key principles of algorithm design for AI is that there must be enough 'training' data on which to 'train' the model before it is able to make meaningful predictions. This number can range from 10,000 data points and above. The abundance of data did not exist in the same capacity as it does now, and with the prevalence of high-speed computing, this is a perfect time utilize this model.

Now, that we understand what AI is and why it is being used now, let's examine what AI can and cannot do. AI is able to replicate and automate decisions based on certain parameters that are fed into the program, but no matter what AI cannot be creative. It is only a program that is able to quickly and efficiently match and sort data, it is unable to make creative decisions about things, ideas or places.

In 1998, Kodak had 170,000 employees and sold 85% of all photo paper worldwide. Within just a few years, their business model disappeared and they got bankrupt.

What happened to Kodak will happen in a lot of industries in the next 10 years - and most people don't see it coming. Did you think in 1998 that 3 years later you would never take pictures on paper film again?

Digital cameras were invented in 1975. The first ones only had 10,000 pixels, but followed Moore's law. So as with all exponential technologies, it was a disappointment for a long time, before it became way superior and got mainstream in only a few short years.

It will now happen with Artificial Intelligence, health, autonomous and electric cars, education, 3D printing, agriculture and jobs.

Welcome to the 4th Industrial Revolution. Welcome to the Exponential Age. Software will disrupt most traditional industries in the next 5-10 years.

Uber is just a software tool, they don't own any cars, and are now the biggest taxi company in the world.

Air BNB is now the biggest hotel company in the world, although they don't own any property.

Artificial Intelligence: Computers become exponentially better in understanding the world. This year, a computer beat the best Go player in the world, 10 years earlier than expected. In the US, young lawyers already don't get jobs. Because of IBM Watson, you can get legal advice (so far, for more or less basic stuff) within seconds, with 90% accuracy compared with 70% accuracy when done by humans.

So if you study law, stop immediately. There will be 90% less lawyers in the future, only specialists will remain.

Watson already helps nurses diagnose cancer, 4 times more accurately than human nurses.

Facebook now has a pattern recognition software that can recognize faces better than humans.

In 2030, computers will become more intelligent than humans.

Autonomous cars: In 2018 the first self driving cars appeared for the public. By the end of 2020, the complete industry will start to be disrupted.

No one want to own a car anymore. Everyone will prefer to call a car with phone, it will show up the location and drive to your destination. There is no need to park it, only pay for the driven distance and can be productive while driving. Our kids will never get a driver's licence and will never own a car.

It will change the cities, because we will need 90-95% less cars for that. We can transform former parking space into parks.

1.2 million people die each year in car accidents worldwide.

We now have one accident every 100,000 km, with autonomous driving that will drop to one accident in 10 million kms. That will save a million lives each year.

Most car companies might become bankrupt.

Traditional car companies try the evolutionary approach and just build a better car, while tech companies (Tesla, Apple, Google) will do the revolutionary approach and build a computer on wheels.

I spoke to a lot of engineers from Volkswagen and Audi; they are completely terrified of Tesla.

Insurance companies will have massive trouble because without accidents, insurance will become 100x cheaper.

Their car insurance business model will disappear.

Real estate will change. Because if you can work while you commute, people will move further away to live in a more beautiful neighborhood. Electric cars will become mainstream until 2020.

Cities will be less noisy because all cars will run on electric.

Electricity will become incredibly cheap and clean: Solar production has been on an exponential curve for 30 years, but you can only now see the impact. Last year, more solar energy was installed worldwide than

fossil. The price for solar will drop so much that all coal companies will be out of business by 2025.

With cheap electricity comes cheap and abundant water.

Desalination now only needs 2kWh per cubic meter.

We don't have scarce water in most places, we only have scarce drinking water. Imagine what will be possible if everyone can have as much clean water as he wants, at nearly no cost.

Health: The Tricorder X price will be announced this year.

There will be companies who will build a medical device (called the "Tricorder" from Star Trek) that works with your phone, which takes your retina scan, your blood sample and your breath into it.

It then analyses 54 biomarkers that will identify nearly any disease.

It will be cheap, so in a few years everyone on this planet will have access to world class medicine, nearly for free.

3D printing: The price of the cheapest 3D printer came down from 18,000\$ to 400\$ within 10 years.

In the same time, it became 100 times faster.

All major shoe companies started 3D printed shoes.

Spare airplane parts are already 3D printed in remote factories ,

The space station now has a printer that eliminates the need for the large amount of spare parts they used to have in the past.

At the end of this year, new smart phones will have 3D scanning possibilities. You can then 3D scan your feet and print your perfect shoes at home. In China, they already 3D printed a complete 6-storey office building. By 2027, 10% of everything that's being produced will be 3D printed.

Business opportunities: If you think of a niche you want to go in, ask yourself: "in the future, do you think we will have that?" and if the answer is yes, then how can you make that happen sooner?

If it doesn't work with your phone, forget the idea.

And any idea designed for success in the 20th century is doomed in to failure in the 21st century.

Work: 70-80% of jobs will disappear in the next 20 years.
There will be a lot of new jobs, but it is not clear if there will be enough new jobs in such a small time.

Agriculture: There will be a \$ 100 agricultural robot in the future.
Farmers in 3rd world countries can then become managers of their fields instead of working all days on their fields.
Aeroponics will need much less water.

The first petri dish produced veal is now available and will be cheaper than cow produced veal in 2018. Right now, 30% of all agricultural surfaces is used for cows. Imagine if we don't need that space anymore. There are several startups who will bring insect protein to the market shortly. It contains more protein than meat.

It will be labeled as "alternative protein source" (because most people still reject the idea of eating insects).

There is an app called "moodies" which can already tell in which mood you are in

by 2020 there will be apps that can tell by your facial expressions if you are lying. Imagine a political debate where it's being displayed you will know if they are telling the truth and when not.

Bitcoin will become main stream in few years and might even become the default reserve currency.

Longevity: Right now, the average life span increases by 3 months per year.

Four years ago, the life span used to be 79 years, now it's 80 years.

The increase itself is increasing and by 2036, there will be more than one year increase per year.

So we all might live for a long long time, probably way more than 100.

Education: The cheapest smartphones are already at \$ 10 in Africa and Asia. By 2020, 70% of all humans will own a smartphone. That means, everyone has the same access to world class education.!!!

WHAT IS GOING TO BE THE VALUES OF LIFE?

Two things decide the success in our life. The way you manage when you have nothing in hand and the way we behave when we have everything in hand.

The deepest level of worship is praising god inspite of the pain, trusting him when we are tempted to lose hope and loving him when he seems so distant and far away.

Sometimes the strongest among us are the ones who smile through silent pain, cry behind closed doors, and fight battles nobody knows about.

"Little adjustment is always better than a lengthy argument."

A task without vision is a burden. Vision without a task is an empty dream. Both vision and task together transforms your dream into reality.

When you undervalue what you do.. The world will undervalue who you are..

When you trust a person you finally get one of the two results:- A person for life.. Or a lesson for life..

Life is a most difficult exam, but many people fail because they try to copy others, not realizing that everyone has a different question paper.

If opportunity doesn't knock, build a door. I am a great believer in luck, and I find the harder I work, the more I have of it.

You don't have to be great to start, but you have to start to be great.

Be so busy improving yourself that you have no time to criticize others.

You only live once, but if you do it right, once is enough.

The size of your success is measured by the strength of your desire; the size of your dream; and how you handle disappointment along the way.

Satisfied soul is better than successful body, because our success is measured by others but our satisfaction is measured by our own heart.

"Success and relation never depend on the capability of your brain, but they always depend on the greatness of your thoughts..."

Never feel sad on losing anything in your life, because whenever a tree loses its leaf, a new leaf is ready to take its place."

A drop of Care, a touch of trust, a pinch of warmth, some part of respect, bit of love and some messages, keep relations evergreen.

Be Careful with Your Words. Once They Are Said, They Can only be forgiven but Never Forgotten..

No Person in this World has ever been Rewarded for what he has 'RECEIVED'. He is always "Honoured" for what he has 'GIVEN' to others.

I can't change the direction of the wind, but I can adjust my sails to always reach my destination.

"FACE" can give just Identification for the name, but "CHARACTER" gives the Introduction of a person.

Don't mix bad words with your bad mood. You'll have many opportunities to change a mood, but you'll never get the opportunity to replace the words you spoke.

"Everything is easy, if you are crazy about it. And, nothing is easy, when you are lazy about it."

It is impossible to fail completely and it is impossible to succeed perfectly. But it is always possible to perform dedicatedly. Have faith in yourself.

Always look for “what is wrong”, before looking for “who is wrong”. This is what keeps relations safe and strong.

Negative attitude is like a punctured tyre, you cannot reach anywhere until you change it. So always think positive and be positive.

Maturity is not when we start speaking big things. It is when we start understanding small things.

Success does not depend on making important decisions quick, but it depends on your quick action on important decisions.

A person's most valuable asset is not a brain loaded with knowledge. But a heart full of love with an ear open to listen and a hand willing to help.

Every success makes you grow strong, because it teaches you what to do, but every failure makes you stronger, because it also teaches you what not to do.

A paper is flying in the air due to luck. But a kite flying in the air is due to efforts. So don't worry, if luck doesn't support efforts are always yours.

SAVE WATER IT IS PRECIOUS!

BATHING.....

By Shower consumes 100 litres. By Bucket 18 litres.. Saving 82 litres.

FLUSHING after toilet:

By Flush is 20 litres. By bucket is 6 litres. Saving is 14 litres.

WASHING CLOTHES

In a running tap - 116 litres. In a bucket .. 36 litres. Saving 80 liters.

SAVING: In a running tap..5 litres. In a mug ..0.5 litres.

Brushing Teeth: In a running tap..5 litres. Closed tap or Bucket ..0.75 litres.

Washing Car: In running tap water nearly 100 liters..... white with single bucket 2 to 3 cars can be washed with just 18 liters.....

Watering Potted Plants: In running tap water nearly 50 liters..... Bucket less than 10 liters....

Watering Garden: Running tap 100 lites or even more in multiples..... sprinkler system only 25/ 30 liters

Please Use Bucket and you will find a notable difference..

Choice is yours whether to enjoy n be safe with municipality / bore well water or disturb your family health by calling tankers water.

Each family can save at least 300 Liters of water per day with minor changes in life style.....Please Help Save Water..... Help Save Your Future.....

Cicero of the Roman empire wrote this about the situation during his lifetime 43 BC:

- 1. The poor, work & work.**
- 2. The rich, exploit the poor.**
- 3. The soldier, protects both.**
- 4. The taxpayer, pays for all three.**
- 5. The wanderer, rests for all four.**
- 6. The drunk, drinks for all five.**
- 7. The banker, robs all six.**

- 8. The lawyer, misleads all seven.**
- 9. The doctor, kills all eight.**
- 10. The undertaker, buries all nine.**
- 11. The Politician live happily on account of all ten.**

Written in 43 B.C. , but valid even today.

IBM- THE TECHNOLOGY

IBM, the technology giant that gave the world the personal computer, is known for its bold, technology-related predictions on the future, and it recently came up with a new list, detailing what it thinks the world will look like in just five years' time.

The company predicts that there will be huge advances in artificial intelligence, ultra-powerful telescopes, smart sensors and smart medical devices. All of these advances put together will benefit many different fields, ranging from healthcare to the environment, as well as allowing humanity to understand both the Earth and the universe to a degree that simply wasn't possible before.

You must keep in mind that these predictions are based on technology and research that's happening in the present, and that there's no way of knowing what other technologies might emerge, or developments be made, in the intervening time. All we can do is look back in five years and see if the predictions were right!

1. Our speech will give insight into our mental health

You can learn a lot about another person based on how they talk, such as whether they are bored, flustered, distracted, or miserable. While human beings have evolved naturally to pick up these cues, rapid advancements are being made in computer processing that means speech analysis is about to allow us a far deeper insight into the human condition than ever before.

IBM predicts that we'll be able to use our writing and speech as indicators of our mental health and physical wellbeing by 2022. An example of this could be the ability to spot Parkinson's disease much earlier than previously possible thank to a mobile app. This app would send relevant data to a computing cloud, where calculations could be done on the spot, allowing for treatment to be conducted as early as possible.

Although it sounds like a stretch of the imagination to link speech cues to symptoms of a debilitating disease, experimental systems along these lines are already emerging – a team from the University of Southern California has built a program that can detect variations from normal speech patterns and identify signs of depression.

2. Superhero-level vision will be possible

Our eyes are amazing pieces of biological equipment, however their power could soon be eclipsed by tiny cameras combined with formidably powerful processing power, allowing us to see more than ever before.

In addition to the visible spectrum, we'll be able to see microwave, millimeter waves, and infrared images through devices that'll be small enough to fit into our pockets or clip onto our sunglasses. This will instantly allow us to be able to see if food is safe to eat, or give self-driving cars the ability to navigate through difficult weather conditions much more easily. The very first devices of this kind are already appearing, however they're only in the experimental stage, and cost an exorbitant amount of money to buy at present. That doesn't mean to say that the status quo won't change by the year 2022.

3. We will be able to understand the Earth in infinite detail

Tools such as Google Earth, which harnesses the power of satellites orbiting the Earth, are already commonplace, however they represent the very beginning of what is possible with the technology. The next step is going to be “macroscope” systems. You can think of these in the same terms of microscopes, only they will allow the combination of all the complex data on the Earth so that it can be analyzed from all kinds of new perspectives.

In addition to the planet's natural processes, it will be possible to analyze all kinds of devices, ranging from lights to refrigerators, using macrosopes. This will allow us to predict everything from climate change events, to determining the best food distribution methods to communities around the globe.

Light bulbs will become remote-controlled, as will “smart” speakers, which will have the ability to record your shopping list as you speak, or look up Wikipedia entries and relay the information to you verbally. These are just two of the whole myriad of applications that could become possible in the home, across cities and the wider world. In a nutshell, this technology will allow us to sift through all the data available to us in a much more intelligent way than we could do before.

4. “Labs on a chip” are set to cause a medical revolution

With each passing year, computing technology continues to shrink and gets ever more powerful, and this is already having a significant impact on the medical industry. In the near future, it’s likely that you’ll actually have the ability to diagnose illnesses or diseases at home, catching them earlier than ever before.

Scientists are envisaging a “medical lab on a chip” – nanotechnology health devices that will trace invisible cues in our bodily fluids, letting us know immediately in the event that we need to see a doctor. It’ll be like having your very own biochemist tucked away in your pocket.

The possibility for early diagnosis that such devices will allow will make a massive difference to the success of treatments for cancer or Parkinson’s, among many others. In fact, scientists are simultaneously developing the ability to analyze bodily fluids, such as tears, blood, urine, and sweat. By 2022, your sleep tracker or fitness band will be able to feed data into an artificial intelligence system, in turn allowing you to access detailed information on how to improve your health. It will also remotely alert your doctor to any signs of impending disease.

5. Smart sensors will detect environmental pollution almost instantly

In its recent list, IBM also boldly predicted that a combination of smart hardware and artificial intelligence analysis, as featured in the other predictions in this list, could be used to detect environmental pollution in real-time.

In the same way that a smart tracker could spot the early signs of disease, smart sensors in the ground, or attached to drones, could sniff out pollutants in the air without having to transfer any samples back to a lab.

A practical application of this could be to contain methane leaks, which are invisible to the naked eye. Methane is a greenhouse gas, and is widely believed to be the world’s second-largest contributor to global warming after carbon dioxide.

Smart sensors designed to detect the presence of methane could be placed along pipelines, around storage facilities and near natural wells to be able to raise the alarm regarding a leak as soon as it happens. This idea has massive potential for the reduction of pollution and waste in the event that something goes wrong.

Conclusion: No-one has a crystal ball to gaze into in life, so the future can be hard to predict. Nevertheless, the kinds of technologies outlined above are already well

into development by research teams around the globe, so it's a question of "when" we get there, rather than "if". All we can do is wait and see what's possible by 2022, and hope that we can advance even further than these bold predictions outline.

SCIENTIFIC BREAK THOUGHTS

Many clever scientists and researchers the world over are making incredible breakthroughs, which will inevitably enhance our quality of life, reduce the impact of human activity on the environment, and make things cheaper and more efficient. Here are four amazing breakthroughs that scientists have made recently:

1. Biodegradable packaging to double the shelf life of produce: Scientists at the University of Singapore are developing biodegradable packaging that's made out of – wait for it – crustacean shells and grapefruit. As odd as this might seem, this breakthrough has fantastic potential. It can double the shelf life of produce, contains no toxic substances whatsoever (unlike plastic), and might just be the answer to solving the problem of millions of tons of plastic ending up in the ocean each year.

2. Israeli scientists discover how to extend the shelf life of bananas: Bananas are some of the world's favorite fruits, however they do have a tendency to go bad pretty quickly after you buy them. Israeli scientists have found a way around this – they have discovered a way of "switching off" the gene that makes them decompose. The bananas displayed in the video are said to be one month old, yet they appear perfectly edible.

3. Nano wire-infused windows to render curtains obsolete: The scientists at Harvard University have found a way of inserting nanowires into glass. These nanowires react to a current that is passed through them at the flick of a switch. This reaction sees the glass darken as and when needed. This breakthrough means that light-adjustable glass is commercially viable for the very first time.

4. Ultrasonic-infused water to kill bacteria and decontaminate surfaces: British scientists have discovered the manipulation of hydrogen molecules, making them ripple with a very high intensity ultrasonic infusion. This particular device is fantastic for cleaning medical devices and/or other precision tools, because it allows the cleaner to get into all of their nooks and crannies on a microscopic level.

If you cast your mind back 10 years, you'll probably realize how different your life was then. If you had a cell phone, most of your friends and neighbors probably didn't. You also likely didn't use social media or check your favorite websites every day. You didn't have instant access to the whole world lying right in your pocket. Yet the current rate of technological advances is so startlingly fast, that the next 10 years are expected to see an exponential growth in activity.

POWER OF BRAIN

I'm continuously impressed by the brain - this most complex piece of the human anatomy is endlessly amazing. For centuries, mankind was baffled by it. In the present day, many scientists devote their lives to uncovering how this multifaceted organ works. Here are 11 facts about your brain that'll blow your mind:

YOUR BRAIN CONSUMES 20% OF YOUR OXYGEN, BUT ACCOUNTS FOR ONLY 2% OF YOUR BODY MASS.

Your brain can generate 10-25 watts of power. That's enough to power a light bulb.

Your brain only fully matures when you're in your late teens. Empathy, multi-tasking and good decision - making are the skills that develop last.

Your brain is more active when you're asleep than when you're awake.

Your brain is the reason that you don't notice when you're blinking. It illuminates the world when your eyes are closed. Some 20,000 times each day.

Human beings have the wrinkled brains of any species. These wrinkles are linked to sophisticated neural pathways & higher intellectual functioning.

On average day, a human being has over 70000 different thoughts.

The brain doesn't contain any pain receptors. That's why brain surgery can be performed on a conscious patient.

A woman's brain can shrink when she's pregnant. It can take her up to six months to recover from "Pregnancy Brain" You can't tickle yourself because the brain distinguishes between your own touch and someone else's.

Your brain contains enough fluid to fill a 1.5 liter bottle..

15 THINGS THAT SHOULDN'T HAVE GONE OUT OF STYLE:

- 1. WRITING A DAIRY.**
- 2. WRITING LOVE LETTERS BY HAND.**
- 3. BEING MODEST.**
- 4. RECIPE CARDS.**
- 5. SAYING MA'AM AND SIR.**
- 6. CURVY WOIMEN.**
- 7. PRINTING PHOTOS.**
- 8. DRIVE-IN MOVIES.**
- 9. SAYING "PLEASE" "SORRY" AND "THANK YOU".**
- 10. HAVING TABLE MANNERS.**
- 11. BABY BOOKS.**
- 12. NOT SWEARING ALL THE TIME.**
- 13. WEARING HATS.**
- 14. CALLING SOMEONE.**
- 15. HOLDING THE DOOR FOR SOMEONE..**

GOOD THINGS HAPPENING ALL OVER THE WORLD:

Watching the news lately can make you feel like only terrible things are happening in the world, since for some strange reason good news never really gets the press coverage it deserves. However, you'll be pleased to hear that there are actually plenty of remarkably good things going on in the world at the moment, and here are 7 of the most wonderful:

1. Work has begun on a graphene-based sieve that will produce



drinking water from seawater.

Last April, a team of scientists achieved a major breakthrough in their quest to remove salt from seawater through the use of a graphene-oxide membrane. Currently, this procedure is only being used in the laboratory, but it shows just how soon we could be gathering one of our most scarce resources, clean drinking water, from one of our most abundant, seawater.

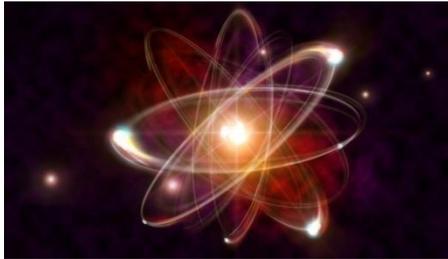
2. A 2-year-old's brain damage has been successfully reversed.

US researchers have reported the first-ever reversal of brain damage, which occurred when a two-year-old girl drowned in a pool, and was eventually resuscitated after her heart stopped beating independently for around 2 hours. The toddler suffered from cerebral atrophy and deep gray matter injury due to the lack of oxygen in her brain.

As a result, she was left unable to walk, speak, or respond to voices, and all she could do was shake her head and uncontrollably squirm around.

Incredibly, a team from the University of North Dakota and LSU Health New Orleans managed to significantly reverse the brain damage by means of a course of oxygen treatments, one of which was hyperbaric oxygen therapy (HBOT).

3. Sustainable nuclear fusion is just around the corner.



Nuclear fusion could be the best solution for our planet to produce a practically unlimited supply of energy with very few byproducts apart from saltwater. Much to the frustration of scientists though, they have always found it very challenging to invent a machine that could reliably withstand such an enormous chemical reaction. However, all of that appears to be changing, since towards the end of 2015, a gigantic nuclear fusion reactor was switched on in Germany, which has since been successfully able to contain a fiery blob of hydrogen plasma.

Germany isn't alone either, as China and South Korea have both gotten similar results from their own fusion machines. A groundbreaking type of reactor has also been activated in the UK, which is remarkably able to sustainably generate plasma within its core. Due to all of these spectacular advances, MIT scientists predict that fusion energy will be on the grid by 2030.

4. We are now able to 'listen in' on the Universe.

Many people are aware of 2015's massive gravitational wave breakthrough, but not many know that we've managed to detect at least another two since then. Thanks to a new series of space-based detectors known as LISA, by 2034 we should be able to test a whole plethora of crazy scientific theories, including the hypothesis that our Universe contains multiple dimensions.

5. Another disease will soon be eradicated from our planet.



Once upon a time, the human race successfully eliminated smallpox. Now, we may soon be eradicating the Guinea Worm parasite, which agonizingly erupts from under people's skin. At the beginning of 2015, only 126 cases were still left on the planet. This is mainly thanks to the development of a cheap and ingenious drinking straw filter which stops waterborne contamination from taking place. Incredibly, as of May in 2017, only 5 cases of the Guinea Worm parasite were globally reported.

6. The cure for polio might follow.

In 1988, the Global Polio Eradication Initiative was launched, which resulted in a 99.9% decrease in the global incidence of polio, mainly due to a momentous vaccination push. In 2016, there were only 19 reported cases of the wild polio virus, with only eight appearing in 2017 so far.

7. We're very close to having medication that can cure autism symptoms.

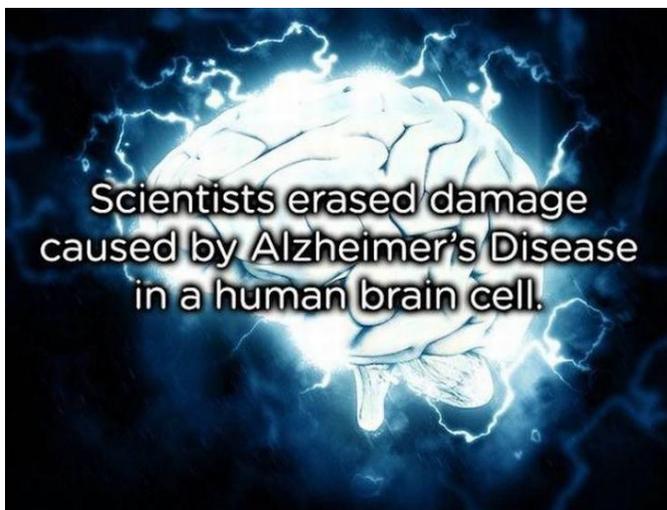
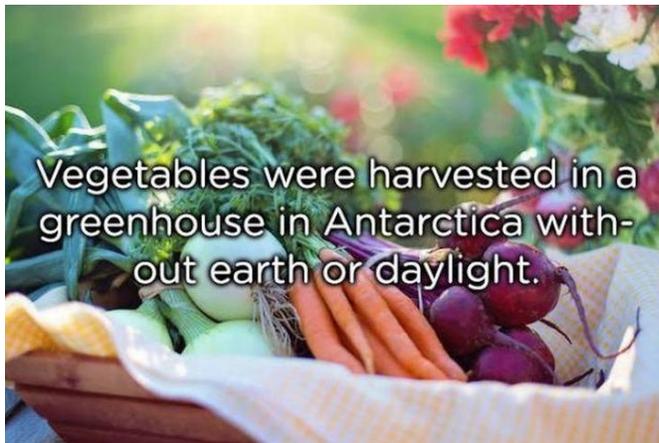
Recently, a small but extremely promising clinical trial in the US showed how a 100-year-old drug called suramin is able to significantly reduce children's symptoms of autism spectrum disorder (ASD). While there is still a lot of experimenting and research to be carried out, it's the closest humanity has ever been to properly treating symptoms of ASD.

2018 SCIENTIFIC INVENTIONS



THE 18 GREATEST SCIENTIFIC ACHIEVEMENTS SO FAR IN 2018

Although we're barely five months into 2018, scientists around the world continue to astound us all with their remarkable achievements. Not only have they discovered that there's mineable ice on Mars, but they have also found a way to grow vegetables without earth or daylight. Here are 18 of the greatest scientific achievements in 2018 to date:





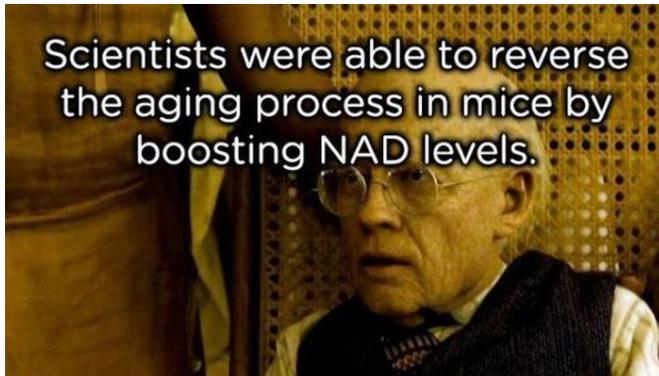
A chemical found in McDonald's fries may be able to regrow hair follicles.



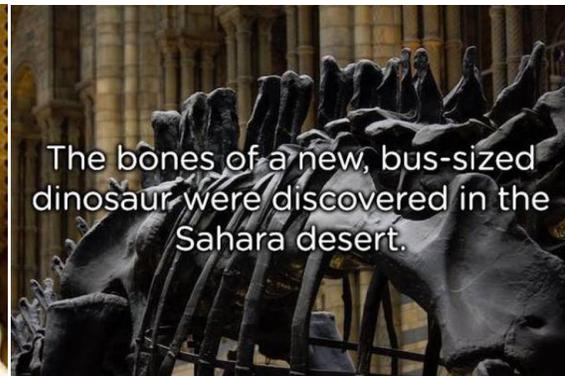
Thanks to astronaut Scott Kelly, it was discovered that time spent in space can permanently alter gene expression.



A fish called the Opah was discovered to be warm-blooded, something scientists previously considered impossible.



Scientists were able to reverse the aging process in mice by boosting NAD levels.



The bones of a new, bus-sized dinosaur were discovered in the Sahara desert.



A home test for breast and ovarian cancer was approved by the FDA.



A new, innovative stem cell treatment has been shown to “re-boot” blood and bone marrow for MS patients.



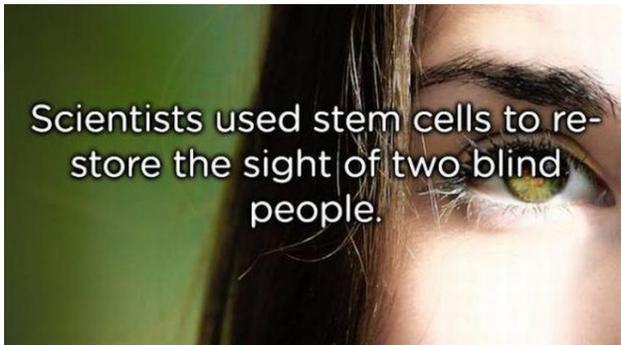
The origin of sickle cell anemia was discovered.



Scientists at MIT created a robotic fish in order to help study ocean life.



A DNA nanobot was created that can target and kill cancer cells!



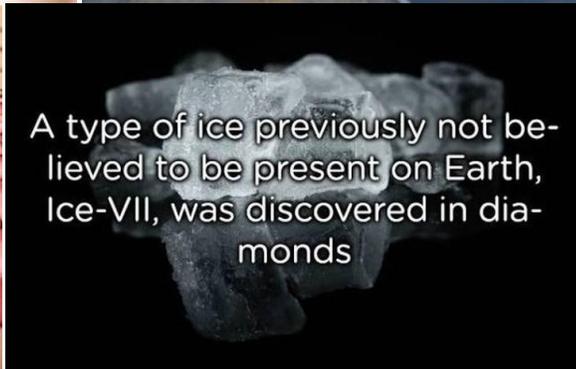
Scientists used stem cells to restore the sight of two blind people.



Archaeologists discovered evidence of thriving communities that once lived in deserted parts of the Amazon Rain Forest.



Scientists discovered, or more accurately re-classified, a new organ, the interstitium.



A type of ice previously not believed to be present on Earth, Ice-VII, was discovered in diamonds.

NEW INVENTIONS OF JAPAN: If there's one place on this planet that is well and truly at the forefront of modern technology, it has got to be Japan. Don't believe me? Then, keep scrolling down this page to check out all of the wacky kinds of technology that have recently become popular in the Land of



the Rising Sun: 1. Butter Graters:

We all know the feeling of vainly trying to spread hard butter onto soft toast. In order to avoid ripping their toast in half, the people of Japan often use a butter grater to bypass this problem entirely!



2. Sinks Attached to Cisterns

Most toilets in Japan actually have a sink attached to their cisterns, which uses water from the sink to partially fill up the cistern, thereby reducing overall water consumption.

3. Laptop Alarm Systems



Working out of office is a lot safer for people in Japan due to the local availability of laptop alarm systems. If the device's sensor detects movement, it will turn red, sound an alarm, and notify your smartphone.



4. Door Opening Detectors

A very useful tool for anyone who doesn't want anybody to abruptly walk in on them, this device has a panel that lights up to warn you that somebody has come within 13 feet of your door.



5. Desktop Washing Machines

The Japanese actually use desktop washing machines to clean small belongings, such as jewelry, watches or spectacles. To use one, you simply plug it into a computer, add water, and switch it on.



6. Tablet Cushion Covers

These special cushion covers are perfect for people who find holding up a tablet or book to read particularly tiring. This is because they contain silicone spots that will keep your book or device attached to the cushion, allowing for your reading experience to be more comfortable.



7. Transparent TVs

While the picture isn't quite as clear as the latest 4K TVs, owning a transparent TV is something that attracts people's business, which is why they are turning up in so many Japanese restaurants and businesses.



8. Mouse Gloves

These gloves were created to replace the traditional computer mouse since they allow users to click and move the cursor by simple flicks of the index finger.



9. Artificial Intelligence For Cars

Panasonic owns artificial intelligence technology that can detect drivers who are about to fall asleep. If it does so, it will alert the driver, as well as create certain conditions that make falling asleep very unlikely.

10. Magic Mirrors



Panasonic has also come up with a smart mirror that analyzes your facial features and prints a makeup mask that's perfectly designed to cover up all of your imperfections, such as scars, acne, or an uneven skin tone.

WORLD IS FULL OF FANTASTIC INVENTIONS

The world is full of fantastic inventions that add comfort, pleasure or ease of access that really should be available everywhere. These 22 items already exist, but are still very exclusive and hard to come by, but I'm sure that once you see them, you'll agree with me that they should be made available everywhere - immediately!



1. Cinema Toilets Which Screen the Movie

2. Available Parking Indicator



3. Never Lose Your Keys

The *tile* syncs with your smartphone, letting you locate it anytime, anywhere, so you'll never lose your valuables again.



4. Light Switch/Keychain Magnet



5. Sockets with Built-In USB Charging Ports



6. A Power Socket With a Built-In Night-Light



7. Movie Theaters with Beanbag Chairs



8. Earphones Zipper



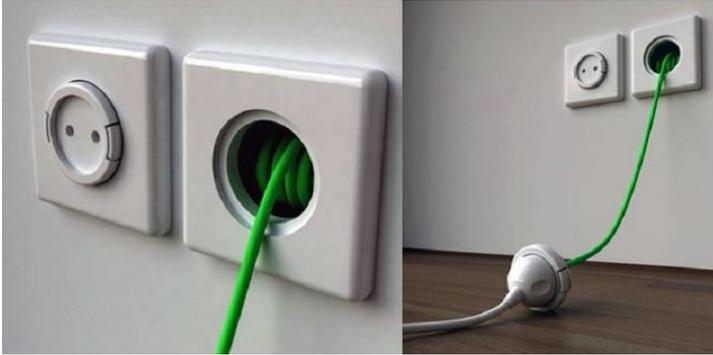
9. Potato Chip Extractor



10. 360 Power Socket



11. Extension Cord Wall Socket



12. Solar USB Charger

Use the power of the sun to charge your gadgets.



13. Thermal USB Charger

This charger uses heat or cold from your drinks to power up your gadgets.



14. Easy-to-Open Packing Tape

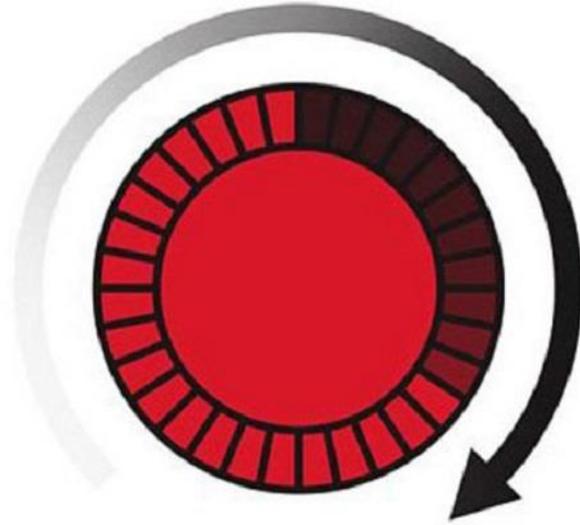


15. The No-Spill Cup

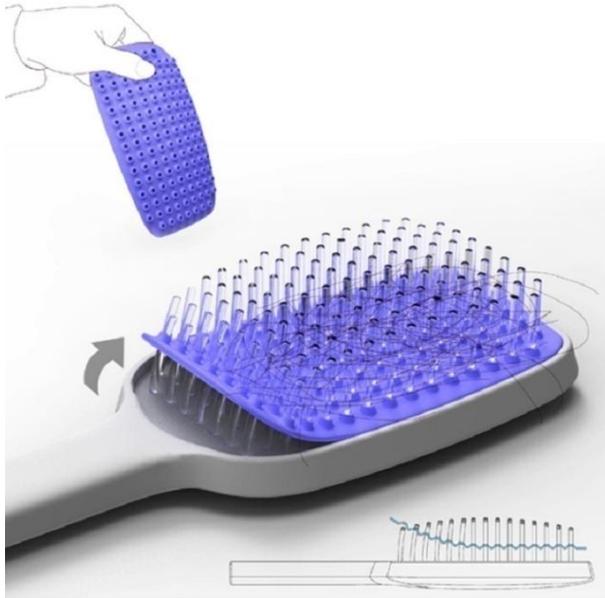


16. Folding Bicycle Parking

17. Traffic Light with a Timer



18. Easy-to-Clean Hairbrush



19. Rechargeable USB Batteries



20. Recycle to Use the Train



21. Water Fountain with a Bottle Station



22. Folding Bike Helmet



Very practical uses...

Wow there has to be one or two that you didn't know about, but are glad now you do



The simplest way to slice a bunch of cherry tomatoes

**is to sandwich them between two plastic lids
and run a long knife through all of them at once!**



Keep brown sugar soft by storing with a couple of marshmallows.



Install a regular coat rack low down the wall to store shoes safely off the floor.



Create a thrifty watering can by puncturing holes in the top of a used milk bottle.



Remove pet hair from furniture and carpets with a squeegee.



Flip a toaster on its side to make grill cheese.

INGENIOUS!!



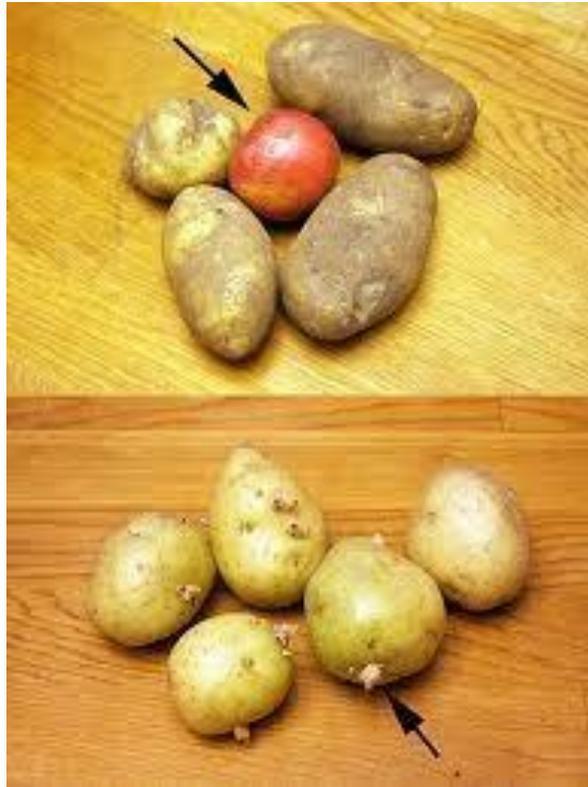
Water straight from the tap becomes cloudy when frozen. To make ice cubes

crystal clear, allow a kettle of boiled water to cool slightly

and use this to fill your ice cube trays.



**Use a large muffin tin to cook stuffed peppers in the oven
- it will help keep them upright.**



To prevent potatoes budding, add an apple in the bag.



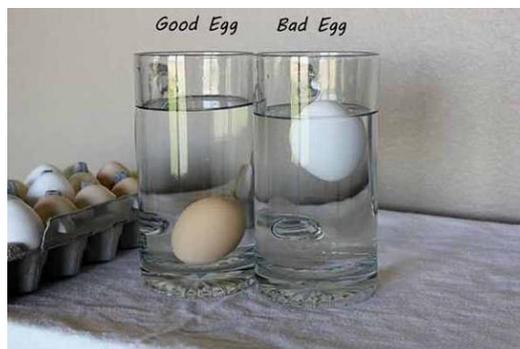
**Add half a teaspoon of baking soda to the water when hard-boiling
eggs**

to make the shells incredibly easy to peel off.



WD40 can be used to remove crayon marks from any surface!

Cool!



To tell if eggs are fresh, immerse them in a bowl of water.

Fresh eggs will lie on the bottom, while stale eggs will float to the surface.



To clean a wooden chopping board, sprinkle on a handful of Kosher salt

and rub with half a lemon. Rinse with clean water

and dry to ensure it is clean and germ-free.



Use ice-cubes to lift out indentations made by furniture on your carpets.



Prevent soil from escaping through the holes in the base of flowerpots by lining with large coffee filters.



To sharpen scissors, simply cut through sandpaper.

ANOTHER GOOD ONE!



Use rubber bands to help open a jar easily: place one around the jar lid and another around the middle of the glass. The rubber provides friction to prevent your hands from slipping.



To prevent your eyes watering while chopping onions, wipe the chopping board with white vinegar (which won't affect the taste of the onions).



Store bed sheets inside their pillowcases for easy storage and access.

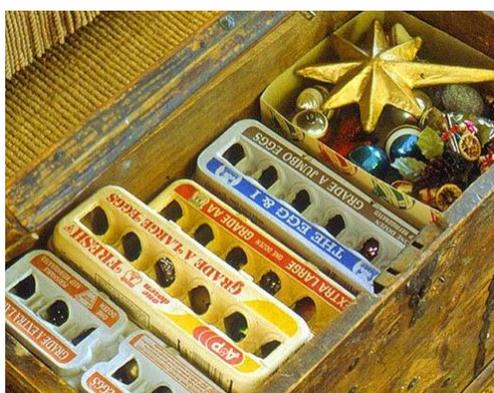


Drop a couple of denture cleaning tablets into the toilet bowl at night to clean off stubborn stains.



Use cupcake cases to cover drinks glasses in the summer and prevent flies from dropping in.

GOOD ONE



Use egg boxes to store delicate Christmas tree decorations.



This has to be the simplest way to open those annoying blister packs!

TERRIFIC!

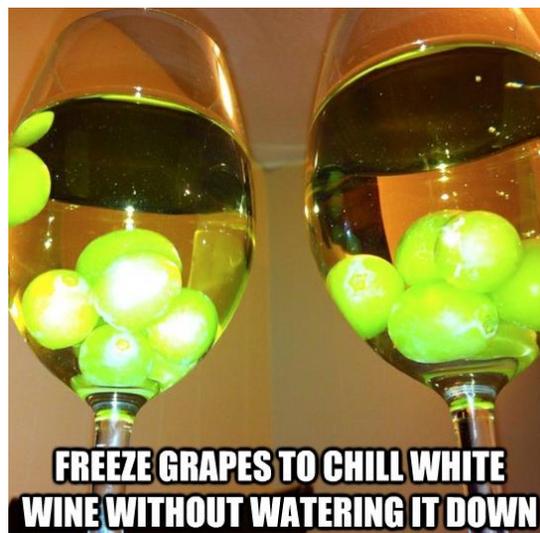


Use a cut potato to easily remove a broken light bulb.



Use chalk to remove grease stains from clothes. Simply rub white chalk

on the affected area and wash as normal - the chalk will absorb the grease and be washed away in the cycle.



FROZEN GRAPES ARE GREAT EVEN WITHOUT THE WINE



Use a rubber band to rescue a stripped screw.



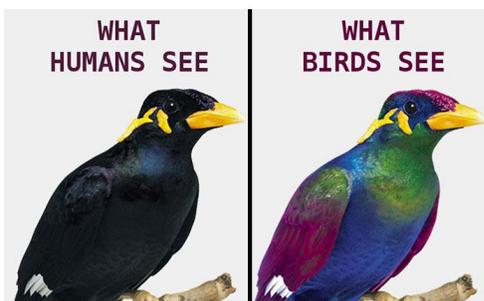
**Wrap rubber bands around the ends of a coat hanger
to prevent dresses from slipping off.**

Perspective - a point of view from a distance, whether in time or place, is a wonderful thing through which we can appreciate different things by comparing variables such as time, distance, angle and more. In this series of pictures, you'll see 16 moments showing the most interesting comparisons made, which will make you look twice and re-evaluate things in life. From data storage, through bridges, tires to streets, vegetables, and lighting, in the following photo series you'll see it all! Take a few minutes and look at the pictures in front of you, so that you get a new perspective on what you may have taken for granted.

Laptop, mobile phone, cameras, music player, watch and G.P.S in 1990 versus today



What our eyes see versus what birds' see



THE LANDSCAPE BEYOND THE INVALIDES BRIDGE IN PARIS IN 1900 COMPARED TO



2017

LED street light versus regular street lights



A school bus compared to a tractor



The differences in tides in Nova Scotia from the same dock



Physiotherapy and prostheses in 1988 versus today



The Titanic versus a modern-day cruise ship





The same street, a difference of 71 years

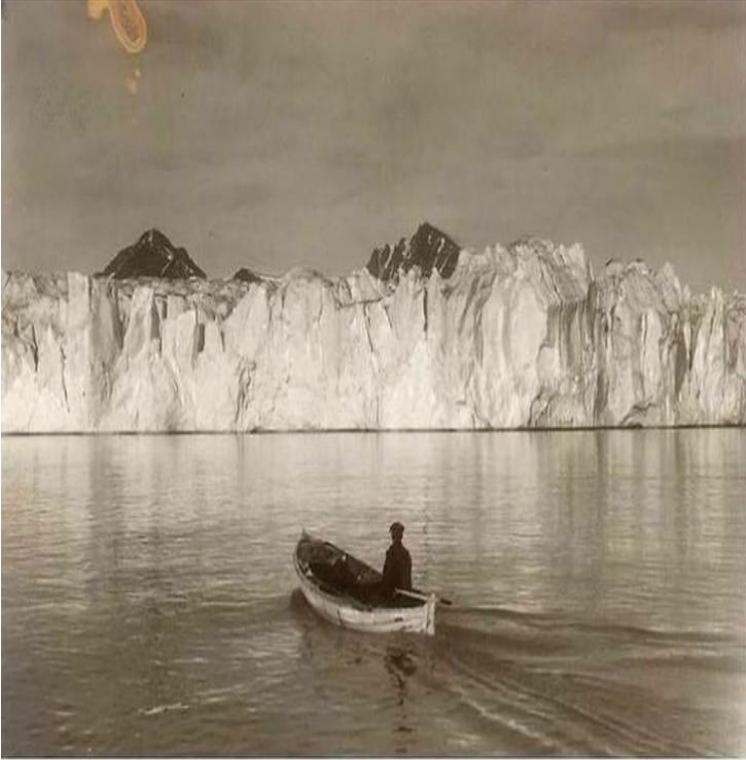
The differences in the ceilings at Da Nang Airport, Vietnam in the smoking and non-smoking rooms



98% wolf versus 40% wolf



The Arctic - 103 years ago and today



Michelin's largest wheel facing its smallest



St. Francis' throne versus that of Pope Benedict XVI



138.24 megabytes of storage drives in 1995 versus a 128GB storage drive in 2018



A modern tomato in front of a tomato grown from 150-year-old seeds



JAPAN INVENTIONS

Japanese inventors have always been an imaginative bunch, and you can always rely on them to come up with some quirky new products. Most of the innovations in this list have failed to catch on around the world, I can't possibly think of a reason why!

1. Harnessing the effective cleaning power of energetic babies, it's the baby-grow mop!



2. I am pretty baffled as to how this full face food bib is more effective than just tucking your serviette into your shirt, but I'm open to ideas!



3. The must-have accessory for single men everywhere, it's a lady lap pillow!



4. Cuddle up ladies! There's no room for sexism in Japan, so here is a great pillow for spinsters. I might get the wife one so I can get a good night's sleep!



5. We understand this is an alarm clock. The snooze button is lined with spikes to give you lazy folk a nasty surprise in the morning



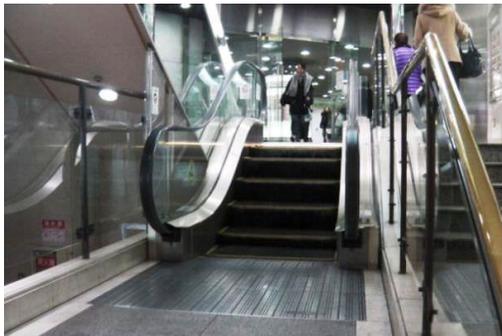
6. Training heels with wheels. Maybe I have been looking at these too long, but I see the logic behind this one?!



7. The Hay fever hat takes the tissues out of your pocket and puts them on your, erm, head.



8. The four step escalator. Well worth the installation costs!



9. The tie with built in air conditioner, a must have for any businessman. Plug it into your laptop for a nice breeze. I actually want one of these!



10. Nothing will keep you drier than this reinforced super-umbrella!



11. Oh, actually this will keep you even drier than the reinforced super-umbrella



12. Anyone for a green tea flavored Kit-Kat?



13. From the same team that brought you the Hay fever Hat, comes the Eye Drop Funnel Glasses. A solution to a problem that quite possibly didn't need solving.



15. A fidget's dream - never-ending bubble wrap. I would never get any work done if I had one of these!



16. Of course in urban Japan, space is at a premium, so you get weird parking lots. You wouldn't want to drive off the edge if you are on the upper level...



17. And of course, odd little capsules sold as hotel rooms!

