

CAREERS AND ME TEACHER'S RESOURCE PACK



- 3 ENTREPRENEURSHIP
- EMPLOYABILITY
- EDUCATION

Playful Project-based Learning | Life Orientation | TERM 3



basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

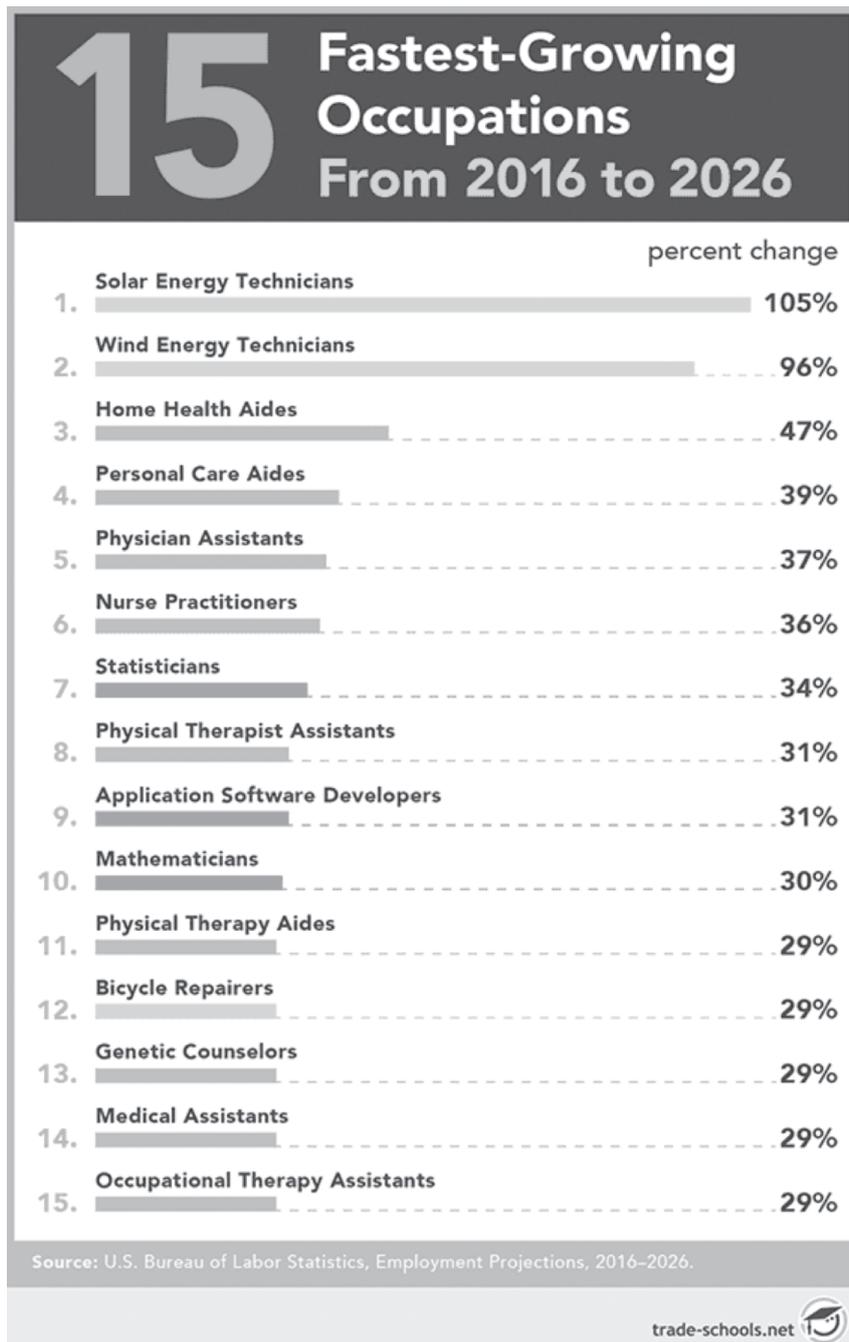


GRADE 10

Additional Resources



1. The World is Changing Video - *The World is Changing* - <https://www.youtube.com/watch?v=PZiTyw34lZQ>
2. *How to prototype* - video with the class to explain what a prototype is <https://www.youtube.com/watch?v=85muhAaySps>



Solar Energy Technician

Like wind energy, solar power will continue to be a major part of humanity’s transition toward a clean-energy future. The cost of solar energy keeps dropping year after year, so it’s becoming much more affordable for businesses and homeowners. In cities all around the world, solar energy technicians are enjoying stable employment in a growing industry that makes a positive difference.

Nurse Practitioner

Because of an aging and longer-living population, the health care system may have trouble keeping up with the growing influx of patients. Many regions could experience severe shortages of doctors. They'll need more non-physician health professionals with the ability to diagnose and treat patients with various acute and chronic conditions. Registered nurses who get the right kind of advanced education at the graduate level can become nurse practitioners and help fill that void.

Software Developer

Computers, robots, and mobile devices are useless without the well-engineered software that gives life to the sophisticated hardware it runs on. As the Internet grows and machines get smarter and more connected to us and to each other, the need for talented software developers will expand. Mobile app development, especially, is considered one of the best careers for 2020 and beyond. In fact, almost 1.2 million total job openings are projected to become available in the software development field between 2016 and 2026.

Physical Therapist

With more seniors in our communities, the need for physical therapy professionals will increase. Many seniors end up requiring some form of physical rehabilitation, pain management, mobility assistance, or therapeutic treatment as they age. From 2016 to 2026, about 177,000 jobs may become available for physical therapists.

Digital Content Specialist

One of the major cultural revolutions that keeps getting more entrenched is the move toward more dynamic, digital, interactive, and on-demand media. Because of digital devices that keep us constantly connected to almost any kind of information or entertainment we want to consume, the need for fresh content that breaks through the noise is never-ending. Organizations in every industry are discovering that generating new digital content is becoming a major key to sustaining their effectiveness.

Biomedical Engineer

Professionals in this field are already starting to revolutionize the health care industry. In fact, biomedical engineering is probably one of the best careers to get into if you want your work to have a positive impact in the years ahead. After all, biomedical engineers are involved in all kinds of cutting-edge research and development. For example, many of them get to design things like sophisticated medical devices, artificial organs, bionic body parts, and biological implants. About 16,000 jobs are expected to become available in this field over the decade from 2016 to 2026.

Digital Rehab Counsellor

Do you ever feel overwhelmed by the incredible amount of digital information you consume in a day? Many people do. As more and more of our lives revolve around social media and other online activities, there's a growing awareness that a lot of us are actually addicted to the technology we use. So one of the top jobs of the future may involve helping people "detox" from their over-consumption of digital inputs. People with counselling training will likely be the best-equipped to pursue this type of job.

Blockchain Developer

You've probably heard of the digital cryptocurrency called Bitcoin. But how much do you know about the underlying technology that makes it possible? Blockchain technology works as a distributed cryptographic ledger that can make economic and other types of transactions decentralized, faster, and more private. It's all a bit hard to understand, but many experts believe that blockchain technology will eventually be just as world-changing as the Internet. That's why professionals who understand how to develop practical services and products with blockchain technology will probably be in high demand well into the future.

Civil or Commercial Drone Pilot or Dispatcher

The government is figuring out the best way to regulate the use of drones. After all, people continue to dream up new ways to take advantage of their remote flight capabilities. Instead of drones mostly being used for military or recreational purposes, they are increasingly used for all kinds of civil and commercial applications. For example, companies like Amazon envision drones delivering packages. But they could also be used for things like removing waste from city streets, monitoring air pollution levels, and performing routine tasks in high places that are dangerous or hard to reach. So, some companies and public agencies are beginning to put together teams of drone pilots and dispatchers to manage their fleets of small remote-controlled aircrafts.

3D-Printing Technician

Many futurists believe that we've only just begun to scratch the surface of what 3D-printing technology (aka additive manufacturing) will ultimately be capable of achieving. Hobbyists, industrial designers, biomedical engineers, and other people are already experimenting with on-demand manufacturing of things like tools, food, clothing, everyday household objects, medical implants, aviation, automotive, and electronics components. As this technology advances, 3D-printing machines may become just as commonplace as refrigerators and microwaves.

Remote Health Care Engineer

As robotics and communications technologies get more advanced, it's becoming possible for doctors and other health care specialists to consult with patients without being physically present. Technology is even being developed and perfected to allow surgeons to perform remote operations with the assistance of robots. In the future, many more remote health care engineers will develop and coordinate the use of advanced technology that allows patients to get diagnosed and treated by almost any medical specialist in the world, regardless of where he or she is physically located.

Urban Agriculture Specialist

Here's a startling fact: Each year, the urban population on Earth grows by the equivalent of about seven Chicago-sized cities. That means, from 2010 to 2050, the global population of city dwellers will double, reaching about 5.2 billion people. In addition, many of today's industrial farming practices are damaging the natural environment. So, in order for cities to be sustainable, they'll need to grow their own food using sophisticated hydroponics and vertical farming methods. Demand for professional urban farmers will likely grow as more cities and urban dwellers realize that their survival depends on growing food locally.

Tech Ethicist

Humanity still hasn't fully learned that we shouldn't do something just because we can. Ethicists have the job of trying to help us avoid learning that lesson the hard way. They help us examine hard-to-answer questions in relation to new technologies and their potential consequences. For example, should we allow the creation of "designer babies?" Who has parental rights when a human is conceived, grown, and born in a laboratory, outside of a mother's womb? Should we grant artificially intelligent robots the same rights we have? How much information are we entitled to know about other people? The questions are almost limitless given how quickly technology is changing our world.

Virtual Reality Designer

Most people like to travel and explore places they've never been. However, you don't necessarily have to physically travel anywhere in order to see and experience new places. Whole virtual worlds are being created, and the supporting technology will increasingly allow you to interact with it using all of your senses. A lot of VR users might even form deep relationships with other people's virtual avatars while having adventures that they would never experience in the real world. As this technology matures, what's real and what's fantasy will start to blur together. Talented VR designers may become highly sought-after as VR developers race to fill a growing demand for more sophisticated, realistic, and imaginative virtual experiences.

Project-Based Human Resources Director

With more companies moving toward project-based employment models, it's likely that specialized human resources professionals will increasingly be needed for choosing and coordinating the best freelance workers for individual projects. In fact, organizations may hire project directors the same way movie studios hire film directors. A project director would be responsible for selecting his or her own team for a particular assignment from among all available freelance talent. Along with skills in human resources, this type of professional may also need a deep understanding of project management.



Personal Education Guide

Going to school is still an effective way to learn and get recognized credentials. But as we move farther into the future, it's possible that education will become much more personalized and even more convenient than today's online programs. Personal education guides may act as coaches and counselors in helping people choose on-demand courses or designing customized training plans that utilize freelance instructors. And they may provide confirmation that their clients have successfully completed those courses and earned alternative credentials that more and more employers will recognize as being valid.

Custom Body Part Manufacturer

At some point, waiting lists for organ transplants will probably become a thing of the past. Soon, doctors may be able to order custom organs that are grown or 3D-printed using their patients' own cells. After all, scientists have already had some success at creating hearts, kidneys, and livers in their labs. They've even grown skin, ears, and other external body parts.

Hyper-Intelligent Transportation Engineer

We're quickly moving toward a future in which humans will no longer be the operators of transport vehicles. Self-driving cars are probably only the beginning. With more intelligent machines and several advanced technologies already in place or being developed, a future of fully automated transportation networks may become reality. A new paradigm of smart roads, vacuum-tube tunnels, maglev trains, and many other advanced transportation systems could replace our current one.

Cyborg Designer

By combining the best aspects of a natural organism with those of an advanced robot, it may be possible to create a new entity that is superior to the sum of its parts. So, in the future, highly creative cyborg designers might be in demand as humans try to merge themselves with machines in order to transcend their natural limitations. Other non-human cybernetic organisms may also be developed for use in health care, entertainment, sports, space exploration, and many other industries.

Space Tourism Guide

Companies like SpaceX and Virgin Galactic already have plans well underway to commercialize space travel for the public. In the relatively near future, space tourists may be going into orbit for family holidays, a little adventure, or even to conduct business. If bases are established on the moon, they may be going there too. Of course, most of us aren't astronauts. That's why special guides will be needed to help people prepare for space travel and get adjusted to the new environment once they're in orbit.

Extinct Species Revivalist

Human actions continue to cause the extinction of various plants, animals, and micro-organisms. In many cases, we don't realize how important those species are to the health of the world's ecosystems until they're gone. As zoologists and other scientists learn more about the widespread ecological impacts of extinctions, it's becoming clear that many species play critical roles in supporting the environments that humans rely on. So conserving threatened species is often essential. But science may also advance to the point that we can actually bring back some of the species that have already gone extinct and reintegrate them into their natural environments.