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What Will Be the Hot Jobs of 2018?

By SUE SHELLENBARGER

Kelley McDonald has always loved exploring new terrain. In home videos as early as age 3, "I'm always off by myself, looking under rocks or catching and studying bees," she says. Today, at 18, the Apple Valley, Minn., college student is studying for a science career in the fast-growing field of nanotechnology—working with materials at the molecular or atomic level.

That makes her one of the lucky ones—a young adult whose career passion is in sync with one of the hot jobs of the near future.

Predicting the jobs or skills that will be in demand years from now is a tricky task for many teens, young adults and their parents. Luckily, there are rich sources of information on the Web, in books, and in most people's communities; the challenge is to sift through them all.

Ms. McDonald found her passion through a community-college nanotechnology program funded by the National Science Foundation, where one official foresees hundreds of thousands of job openings in the field in the next five years. Other sources include government forecasts, school or college career counselors, and neighbors and friends employed in growing fields.

The richest vein of job-growth information is the Labor Department's 10-year forecast for demand, pay and competition for more than 300 jobs in 45 categories. The department's latest biannual compilation, published last month as the "Occupational Outlook Handbook," is great for sizing up the long-term outlook for most fields. The forecasts have often been prescient—accurately predicting this decade's fast growth in special-education teaching jobs and the widening range of hot health-care careers, for example.

In the coming decade, engineering—already known for paying college graduates some of the highest starting salaries—is expected to offer the fastest-growing area: biomedical engineering. Jobs in this field, which centers on developing and testing health-care innovations such as artificial organs or imaging systems, are expected to grow by 72%, the Labor Department says.

Among other professions, job opportunities for physicians should be "very good," the guide says; health care dominates the list of the fastest-growing jobs, capturing 11 of the top 20 slots. While more attorneys and architects will be needed, competition for these jobs will be intense. Psychologists will be in demand, but growth will be fastest in industrial and organizational psychology.

The forecasts have limitations. The Labor Department's macroeconomic model works on two noteworthy

assumptions—that the economy will rebound to long-term growth and that there won't be any more big shocks like the 2007-2008 recession. Thus its forecasts don't predict the big job-market swings or sudden changes in the supply of workers that can easily happen in a volatile economy.

That means you could pick a job from the Labor Department's "fastest-growing" list when you enter college, only to find the field in a slump by the time you graduate. For example, a 2006 high-school graduate eyeing the government's 2004-2014 forecast for nursing at that time would have read about excellent job prospects, with "thousands of job openings" predicted because experienced nurses were expected to retire.

While that forecast is likely to hold for the long term, the job market for students graduating from college this year is headed in the opposite direction: Thousands of experienced nurses who had been inactive or retired have been re-entering the work force because of the recession.

Similarly, a high-school grad in 2000 might have picked computer programming—No. 8 at the time on a government list of fast-growing, high-paying jobs—only to graduate to the aftermath of the dot-com collapse.

And finally, no economic model can forecast growth in jobs that are still evolving. While the government's latest handbook contains a supplement on "green occupations" in emerging industries such as biofuels and wind energy, it has no data on many of the jobs these industries are creating, such as fuel-cell technologists.

"Right now, all the projections we have are about a world that existed" in the past, says David Passmore, director of The Pennsylvania State University's Institute for Research in Training & Development. "We are sitting on the precipice of the next big transformation" in energy production, "and no one in the occupational-projections area knows how to handle that."

All that leaves much to the resourcefulness, imagination and research skills of young people weighing a career choice. The first step is to explore and try out various fields in order to figure out what kind of work you love and can do well. The next is to learn about broad career fields that are likely to grow; the government's handbook lists job-by-job career-information contacts, such as professional associations or industry groups. Then, pick a field with this attitude: "I think I'll jump in and learn what I can learn," says Bob Templin, president of Northern Virginia Community College in Annandale, Va.

Networking with people in your target industries can help. Russell Wagner, a 20-year-old from Prior Lake, Minn., likes electronics and science, but when he tried robotics in high school, he found it boring. His mother contacted friends in industry and learned nanoscientists are in demand in many industries, developing a wide range of products, from electronic memory devices and coatings for stents to mold-resistant shingle coatings.

At Dakota County Technical College, Rosemount, Minn., where Mr. Wagner and Ms. McDonald are enrolled, program head Deb Newberry says employers contact her trying to fill more job openings than she has students.

All job markets are local, so it is important to check out job demand in the locale where you want to live. Community colleges tune into regional work-force needs and are often set up to provide counseling and work-force advice to the public.

Also, ACT Inc. compiles state-by-state data comparing the career interests of students who have taken its college-entrance exams with the job outlook in each state.

In Virginia, for example, student interest in computer-related jobs is falling far short of likely demand; only 3% of Virginia students are interested in the field, which has projected growth of 23%. To see the data, go to ACT.org, click on "2009 College Readiness Report" and scroll down to the state list; work-force data is on page 10 of each "Readiness Report."

Of course, many people fare best by holding out for a job doing what they love. Careers in filmmaking are expected to grow very slowly in the coming decade, and competition for jobs will be keen.

But that isn't stopping Kiel Greenfield. He has loved movies for so long—watching them, talking about them and working with them as a video-rental store employee—that he has decided, at age 28, that filmmaking is the only career for him. He signed on for a film-making program at a respected school, the Zaki Gordon Institute, Sedona, Ariz., and plans to do whatever it takes to land a job in film photography.

"It's going to be hard," he says, "but it's totally worth it."

Write to Sue Shellenbarger at sue.shellenbarger@wsj.com