

Appendix C

Labor Market Projections

1. Career: High School Teachers

Wages

Because teachers usually work a ten-month year, their wages are reported annually.

High school teachers who coach sports or supervise other extracurricular activities may be paid extra for their work.

Teachers who work full time usually receive benefits. Common benefits include sick leave, health insurance, and a retirement plan.

Over half of all public school teachers belong to unions -- mainly the American Federation of Teachers and the National Education Association. These unions negotiate with employers regarding wages, hours, and conditions of employment.

View the Regional Wage Comparison Chart for:

- [Secondary School Teachers, Except Special and Vocational Education](#)
- [Vocational Education Teachers, Secondary School](#)

Employment

In Minnesota, about 25,939 high school and middle school teachers work in this large occupation.

Major employers:

- Public and private schools

Note: The titles below are keywords for related job categories in Minnesota Works. To find current job openings in Minnesota for this job category, **enter a zip code and click "show jobs"**. Your results will show job openings **within a 25 mile radius** of the zip code you entered.

Outlook

The number of school-age children is increasing slowly. The growth rate varies by area of the country. States in the South and West--particularly California, Texas, Nevada, and Idaho--will have a large increase in the number of students. However, states in the Northeast and Midwest may actually have fewer students.

Job availability depends heavily on geographical location. Positions are often available in big cities and small, rural towns. Limited funding in these places can make it difficult to attract and keep teachers. Availability also depends upon subject. High school teachers who specialize in subjects such as computer science and bilingual education are very desirable to many school districts.

	Employment		Employment Change	
	2004	2014	Number	Percent
National	95,534	91,133	-4,401	-4.6
State	1,453	1,353	-100	-6.9

Advancement Opportunities

High school teachers may advance into positions that require special knowledge, such as librarian, reading specialist, or guidance counselor. They may also become administrators or supervisors, although competition for these jobs is very stiff. Some school systems allow highly-qualified and experienced teachers to become senior or mentor teachers. These positions include higher pay and more responsibilities.

2. Career: Elementary School Teachers

Wages

Because teachers usually work a ten-month year, their wages are reported annually.

Teachers who have advanced degrees earn the most money. Teachers can earn more money by teaching in the summer.

Teachers who work full time usually receive benefits. Typical benefits include health and life insurance, a retirement plan, and sick leave. Some teachers get sabbatical leave.

Over half of all public school teachers belong to unions -- mainly the American Federation of Teachers and the National Education Association. These unions negotiate with employers regarding wages, hours, and conditions of employment.

View the Regional Wage Comparison Chart for:

- Elementary School Teachers, Except Special Education

Employment

In Minnesota, about 23,567 elementary school teachers work in this large occupation.

Major employers:

- Public and private elementary schools

Note: The titles below are keywords for related job categories in MinnesotaWorks. To find current job openings in Minnesota for this job category, **enter a zip code and click "show jobs"**. Your results will show job openings **within a 25 mile radius** of the zip code you entered.

Outlook

One reason for this growth is the number of school-age children is increasing slowly. The growth rate varies by area of the country. States in the South and West--particularly California, Texas, Nevada, and Idaho--will have a large increase in the number of students. However, states in the Northeast and Midwest may actually have fewer students.

Many openings will occur as current teachers retire. Demand for teachers is high in inner city schools because crime is higher and wages are usually lower. Teachers who are willing to relocate or who are bilingual will have the best chances of finding a job.

	Employment		Employment Change	
	2004	2014	Number	Percent
National	1,540,159	1,749,333	209,173	13.6
State	24,685	27,241	2,556	10.4

Advancement Opportunities

Some teachers advance to administrative positions, such as elementary school principal, after earning a master's degree. In some states, teachers can obtain additional certification. Teachers are usually paid more as they complete additional college coursework.

3. Career: University and College Teachers

Wages

Wages for university and college teachers vary by the subject they teach. The wages for professors in several areas are given below.

Many faculty have additional earnings from research, consulting, publications, or teaching extra classes.

Faculty in four-year institutions earn higher salaries, on average, than do those in two-year schools. Average faculty salaries in public institutions were lower than those in private schools. Faculty at religiously affiliated private colleges and universities have the lowest average salaries.

Salaries are also higher in fields with high-paying jobs outside the university. Schools pay teachers in these areas more to keep them from leaving the university for higher-paying jobs elsewhere. For example, teachers of law, business, engineering, and computer science earn higher salaries than teachers of education or English.

Most full-time faculty receive benefits. These include sick leave, health insurance, and a retirement plan. In addition, most faculty receive some unique benefits. They may have summers and school holidays off. They have access to campus facilities and tuition waivers for their dependents. They also receive travel allowances and paid sabbatical leaves. Part-time faculty usually receive fewer benefits.

View the Regional Wage Comparison Chart for:

Employment

In Minnesota, about 24,184 university and college teachers work in this large occupation.

Most university and college teachers work at public or private colleges and universities.

Major employers:

- Colleges and universities
- Vocational and trade schools

Note: The titles below are keywords for related job categories in MinnesotaWorks. To find current job openings in Minnesota for this job category, **enter a zip code and click "show jobs"**. Your results will show job openings **within a 25 mile radius** of the zip code you entered.

Outlook

College enrollment is expected to increase ten percent through the coming decade. This will be due to growth in the college-age population. More faculty will be needed to teach these students. At the same time, many faculty will retire, opening even more positions. Also, the number of people receiving doctoral (Ph.D.) degrees is expected to grow more slowly than in the past. This will ease the competition for jobs.

Despite expected job growth, colleges may increasingly hire part-time or adjunct faculty. There has been a recent trend to hire more part-time faculty to save money on pay and benefits. If funding remains tight, this trend is likely to continue. Competition is expected to remain strong for tenure-track positions.

	Employment		Employment Change	
	2004	2014	Number	Percent
State	355	432	77	21.7

Advancement Opportunities

Most faculty members are hired as instructors or assistant professors. At the end of their contract period (usually seven years), their record of teaching and research is reviewed. If the review is favorable, faculty receive tenure and a promotion to the next rank. Tenure assures faculty they cannot be fired without just cause.

To advance higher, faculty members' records are reviewed again at the end of another time period. Most colleges and universities have four academic ranks. These are professor, associate professor, assistant professor, and instructor. Professors are paid the highest salaries.

4. Career: Fine Artist

Wages

Wages vary by employer and the artist's reputation. Many fine artists are self-employed and sell their work by the piece. Others work for a commission, which is a percentage of the amount a painting is sold for. Some artists obtain grants to support the time they devote to their art. Others win prize money in competitions.

About half of all fine artists are self-employed. They must provide their own benefits. Fine artists who are not self-employed and work full time for an employer may receive benefits. Typical benefits include sick leave, paid vacation, and health insurance.

View the Regional Wage Comparison Chart for:

- Fine Artists, Including Painters, Sculptors, and Illustrators

Employment

In Minnesota, about 632 fine artists work in this small occupation.

About 62 percent of fine artists are self-employed. The major employers of those who are not self-employed are:

- Newspapers, magazines, and book publishers
- Design companies
- Advertising companies

As the population grows and personal income levels rise, the demand for fine artwork should increase. Competition will remain keen for fine artists who must sell their work to be successful. It will be difficult to show work in galleries because of the number of artists who want to display their work. Talented artists with a mastery of skills will have the best prospects. Competition for illustration jobs will also be high.

	Employment		Employment Change	
	2004	2014	Number	Percent
National	29,240	32,221	2,981	10.2
State	632	694	62	9.8

Advancement Opportunities

Fine artists advance as their work becomes more widely circulated. If an artist can establish a reputation for a particular style, it may become easier to receive commissions for future work. It will also become easier to find art galleries willing to show their work.

With a college education, artists can become administrators for arts organizations or art galleries. They can also teach in high schools, colleges, and universities.

5. Career: Graphic Designers

Wages

Wages vary by area of the country. Wages also vary based on the type of project and the skill of the graphic designer. Experienced, self-employed graphic designers can earn much more than those who earn salaries. However, when they are starting out, they can earn much less. Wages tend to be higher in some industries, such as advertising.

Full-time graphic designers usually earn benefits such as sick leave, paid vacation, and health insurance. Self-employed designers must provide their own insurance.

View the Regional Wage Comparison Chart for:

- [Graphic Designers](#)

Employment

In Minnesota, about 4,497 graphic designers work in this medium-sized occupation.

About 25 percent of graphic designers are self-employed.

Major employers:

- Graphic design companies
- Advertising agencies
- Newspaper, magazine, and book publishers
- Printing and business form companies

Outlook

The demand for graphic designers will be due in part to the growth of the Internet. Graphic designers will be needed to design and lay out web pages. In addition, businesses will continue to want visually appealing ideas for their products, publications, and videos. All these items require the skills of graphic designers.

Despite high demand, competition will be strong for the best jobs. This is because employers will pay high wages to the most talented designers.

	Employment		Employment Change	
	2004	2014	Number	Percent
National	228,216	262,951	34,735	15.2
State	4,497	5,193	696	15.5

Advancement Opportunities

Experienced and successful graphic designers may advance to assistant art director, art director, or design director. In some companies, they may advance to creative director of an art or design department. Graphic designers may develop their skills to the point that they can specialize in one area, such as website design. Some may gain enough success to open their own business.

6. Career: Art Directors

Wages

Wages vary by employer and area of the country. The art director's level of experience, training, and responsibility also affect wages.

Art directors who work full time usually receive benefits. Typical benefits include sick leave, paid vacation, and health insurance. Art directors who are self-employed must provide their own insurance.

Employment

In Minnesota, about 1,833 art directors work in this small occupation.

About half of all art directors are self-employed.

Major employers:

- Advertising agencies
- Graphic design companies
- Newspaper and magazine publishers

Outlook

Most of the growth in this occupation will occur at graphic design firms and advertising agencies. Some of the demand for art directors will be due the growth of the Internet. Art directors will be needed to oversee the design and layout of web pages. In addition, businesses will continue to want visually appealing ideas for their products, publications, and videos. All these items require the skills of art directors.

	Employment		Employment Change	
	2004	2014	Number	Percent
National	70,815	78,961	8,146	11.5
State	1,833	2,036	203	11.1

Advancement Opportunities

Advancement opportunities for art directors are limited. This is because they have already advanced to a supervisory position. Thus, advancement often takes the form of moving to higher paying jobs with more well-known companies. Some art directors advance by starting their own businesses.

7. **Career: Potters**

Wages

Wage information is not available specifically for potters. However, they are part of the larger group of "molders, shapers, and casters."

Wages for potters who are artists depend on how much they produce. Wages also depend on how much potters charge for their pieces and if people are interested in buying. The potters who create functional pottery may earn less per piece than those who create artistic ceramics. However, artistic pieces may not sell as quickly or as often since they are more costly. Potters who are well-known in the field tend to earn more than other potters.

Production potters may increase their earnings by changing their work to fit what customers are buying. They can also increase their earnings by attending more art festivals or marketing their products. For example, some potters may expand their market by displaying their wares on the Internet.

Potters who work full time in factories may receive benefits. Typical benefits include sick leave, paid vacation, and health insurance. Self-employed potters must provide their own insurance.

View the Regional Wage Comparison Chart for:

- Molders, Shapers, and Casters, Except Metal and Plastic

Employment

In Minnesota, about 703 molders, shapers, and casters work in this small occupation. Potters are part of this larger group.

About 18 percent of "molders, shapers, and casters" are self-employed. Information about the percentage of self-employed potters is not available.

Most potters who are artists are self-employed. The amount of money needed to produce pottery is not overwhelming. However, the costs for advertising, shipping, and entering fairs and festivals can add up. In addition, renting studio space and operating a kiln are also significant.

Some potters sell their wares at art festivals or craft shows. Others work in a studio and offer classes to the community. Beginning potters usually supplement their income with a job in another field while they build their reputation.

Those who are formally trained may coordinate exhibits of their work at art galleries. They may develop relationships with gallery owners who are familiar with their work. These studios may be in the same state or in various states throughout the nation, depending on how well the artist's work is known.

Other potters are employed by art centers, colleges, or universities to teach ceramics to interested students.

Outlook

Potters who must sell their work to be successful will face a competitive environment. It will be difficult to show work in galleries because of the number of potters who want to display their work.

	Employment		Employment Change	
	2004	2014	Number	Percent
National	46,615	43,359	-3,256	-7
State	703	756	53	7.5

Advancement Opportunities

Potters advance by selling more of their products. If a potter can establish a reputation for a particular style, it may become easier to receive commissions for future work. It will also become easier to find art galleries willing to show their work.

With a college education, potters can become administrators for arts organizations or art galleries. They can also teach in high schools, colleges, and universities

8. Career: Jewelers

Wages

Wages vary based on the jeweler's duties and level of experience. Wages also vary by area of the country and by employer. Jewelers in larger companies usually earn more than those in small shops.

Benefits vary by employer. Salaried jewelers who work full time generally receive benefits such as paid vacation and health insurance. Many employers also provide payment for work-related courses and discounts on jewelry purchases. Self-employed jewelers must provide their own insurance.

View the Regional Wage Comparison Chart for:

- Jewelers and Precious Stone and Metal Workers

Employment

In Minnesota, about 587 jewelers work in this small occupation.

About 38 percent of jewelers are self-employed. Some own their own stores or repair shops. Others specialize in designing and creating custom jewelry.

Major employers:

- Jewelry stores
- Jewelry manufacturers

Outlook

The demand for jewelry is related to the amount of income people have. Jewelry sales should remain strong because the number of people earning high incomes is increasing. However, customers are switching their buying patterns. Rather than buy items from a local store, many people are buying from Internet sites, catalogs, and television shopping networks. This is reducing the need for jewelers at retail stores. Workers who repair jewelry will still be in demand. This is because jewelry stores are one of the few places customers can get jewelry repaired.

The outlook for those who manufacture jewelry is mixed. Workers who do basic jobs may be replaced by machines. However, workers who do creative or highly skilled tasks are less likely to be replaced. In addition, imports may affect manufacturing jewelers. Because the price of labor is lower in some countries, retailers may import more jewelry to save money.

Employment opportunities for repair jewelers should be excellent. Many current jewelers are expected to retire soon, and there is already a shortage of these workers. Opportunities will be best for graduates from a jeweler or gemologist training program.

	Employment		Employment Change	
	2004	2014	Number	Percent
National	42,461	42,444	-17	0
State	587	605	18	3.1

Advancement Opportunities

Advancement opportunities are limited, and greatly depend on a jeweler's skill. In manufacturing, some jewelers advance to supervisory jobs, such as master jeweler or head jeweler. Jewelers who work in stores or repair shops may become managers. Some open their own businesses. For most, advancement takes the form of higher pay for the same job. Formal training in jewelry skills may enhance a jeweler's chances for advancement.

9. Career: Photograph Processing Workers

Wages

Wages for photograph processing workers vary by task. The wages for different types of processing workers are given below.

Wages vary based on the skill level and education of the worker. Wages also vary by area of the country.

Most full-time photograph process workers receive benefits. Typical benefits include paid vacation, sick leave, and health insurance.

View the Regional Wage Comparison Chart for:

- [Photographic Process Workers](#)
- [Photographic Processing Machine Operators](#)

Employment

Information on the number of photograph processing workers working in Minnesota is not available.

Major employers:

- Photo finishing labs
- Drug store photo finishing labs
- Photographic portrait studios

Outlook

Digital cameras use electronic memory rather than film to record images. In recent years, the use of digital cameras has grown rapidly. This trend is expected to continue and will reduce the demand for photo process machine operators. In addition, digital technology will decrease the demand for precision workers. With the right software, consumers can now use their computers to retouch their own photos. Nevertheless, there will continue to be a need for photo processing workers. Many people will bring their digital pictures to labs to print them. In addition, many people do not have digital cameras and will continue to need their film developed.

Many job openings will result from the need to replace workers who leave the field. In addition, there will always be some precision tasks that require skilled manual work.

	Employment		Employment Change	
	2004	2014	Number	Percent
National	54,402	37,683	-16,719	-30.7
State	1,242	893	-349	-28.1

Advancement Opportunities

Advancement opportunities are limited for photograph processing workers. Those who are experienced and have good people skills may become supervisors or managers. Retouchers, reproduction workers, and digital imaging technicians sometimes start their own businesses.

10. Career: Photographers

Wages

Wages vary by employer. For example, news photographers tend to earn more than photographers who work in portrait studios. Few fine arts photographers earn enough to support themselves only through their art. Thus they may have a second job.

Benefits also vary by employer. Most full-time salaried photographers earn benefits. Typical benefits include paid vacation, sick leave, and health insurance. Self-employed photographers must provide their own insurance.

View the Regional Wage Comparison Chart for:

- [Photographers](#)

Employment

In Minnesota, about 2,227 photographers work in this small occupation.

About 58 percent of photographers are self-employed.

Major employers:

- Photographic portrait studios
- Newspapers and magazines

Outlook

The outlook for photographers varies by employer. The number of jobs in the newspaper and magazine industry will drop. In contrast, the demand for portrait photographers is increasing as the population grows. Additional job growth will be with news and wire services. Photographers will be needed to use digital equipment to transmit digital images.

Keen competition is expected for photographers because this field attracts so many people.

	Employment		Employment Change	
	2004	2014	Number	Percent
National	122,480	135,138	12,658	10.3
State	2,362	2,505	143	6.1

Advancement Opportunities

Photographers may start out as assistants to experienced photographers. Assistants learn to develop film and print photos. They also learn the skills necessary to run a portrait or commercial business. After years of experience, news photographers may advance to editor positions. Some photographers become teachers at technical schools or universities. Others open their own businesses.

11. Career: Set and Exhibit Designers

Wages

Wages vary by employer and area of the country. The designer's reputation and skill also affect wages. Most self-employed designers are paid by the project rather than by the hour.

Set and exhibit designers who work full time usually receive benefits. Typical benefits include sick leave, paid vacation, and health insurance. Set and exhibit designers who are self-employed must provide their own insurance.

View the Regional Wage Comparison Chart for:

- Set and Exhibit Designers

Employment

In Minnesota, about 373 set and exhibit designers work in this very small occupation.

About 28 percent of set and exhibit designers are self-employed.

Major employers:

- Performing arts companies
- Museums and historical societies

Outlook

The outlook for these workers depends on growth in the industries that are their primary employers. The theater industry is expected to grow because the public is rediscovering the arts. However, the number of new jobs created in this industry will be small. Museums and other nonprofit entities will continue to have budget challenges. Thus, they may not keep a staff of designers. They may hire exhibit and design companies to install new displays when needed. The fastest growth may be with television and movie production companies. They will need more set designers as they increase the number of shows and movies they film.

Because this occupation is small, the number of job openings each year will be limited. Competition for these positions will be strong.

	Employment		Employment Change	
	2004	2014	Number	Percent
National	12,205	14,373	2,168	17.8
State	370	408	38	10.3

Advancement Opportunities

Set and exhibit designers advance as they build a reputation in the field. They may also advance by getting additional training. Exhibit designers at large museums may advance to supervising the work of other designers. Experienced set and exhibit designers may open their own firms. Some become teachers in design schools and colleges and universities.

Growing Industries:

The following table shows Minnesota's top fastest growing industries, 2004-2014. The odds of finding jobs may be higher in these industries than in others.

Industry	Percent Growth	Projected Annual Openings
Individual and Family Services	77.4%	2,748
Internet Publishing and Broadcasting	60.5%	38
Community Care Facility for the Elderly	58.3%	755
Management & Technical Consulting Svc	54.9%	709
Performing Arts and Sports Promoters	51.8%	99
Home Health Care Services	49.9%	646
Business, Computer & Management Training	45.9%	74
Technical and Trade Schools	45.8%	57
Other Schools and Instruction	45.8%	300
Educational Support Services	45.8%	103
Other Support Services	44.2%	404
Wireless Telecommunications Carriers	42.7%	147
Office Administrative Services	42.4%	201
Other Residential Care Facilities	38.1%	113
Residential Mental Health Facilities	37.5%	1,064
Specialized Design Services	36.0%	85
Pharmaceutical & Medicine Manufacturing	35.0%	101
Other Ground Passenger Transportation	34.8%	64

Offices of Real Estate Agents & Brokers	32.4%	208
Computer Systems Design and Rel Services	32.3%	854
Other General Merchandise Stores	31.8%	459
Facilities Support Services	31.0%	22
Other Amusement & Recreation Industries	30.7%	798
Freight Transportation Arrangement	30.2%	74
Other Ambulatory Health Care Services	29.0%	150

Source: [Department of Employment and Economic Development Employment Outlook Tool](#)