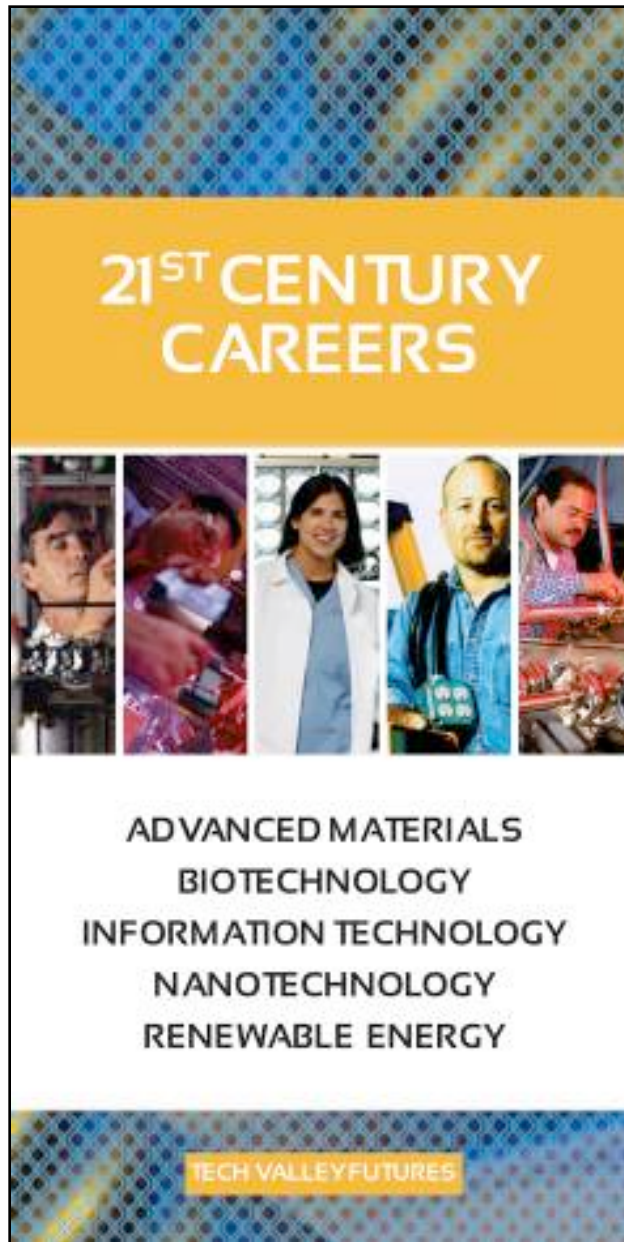



Appendix C: 21st Century Careers Flashcards

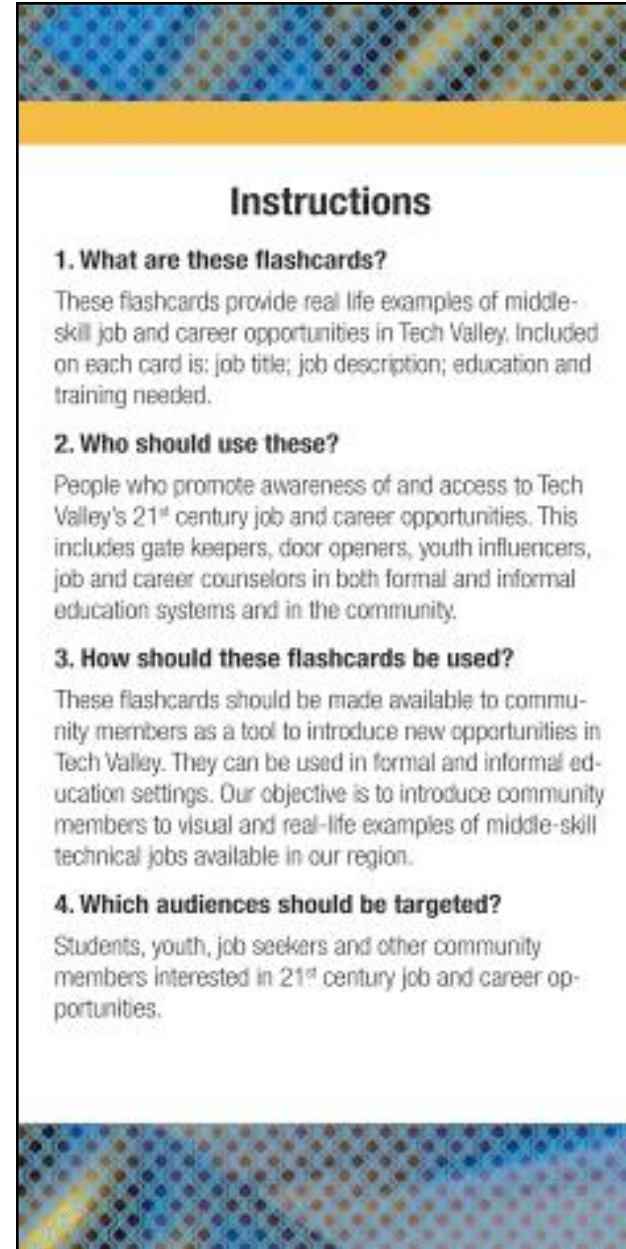


21ST CENTURY CAREERS



**ADVANCED MATERIALS
BIOTECHNOLOGY
INFORMATION TECHNOLOGY
NANOTECHNOLOGY
RENEWABLE ENERGY**

TECH VALLEY FUTURES



Instructions

1. What are these flashcards?

These flashcards provide real life examples of middle-skill job and career opportunities in Tech Valley. Included on each card is: job title; job description; education and training needed.

2. Who should use these?

People who promote awareness of and access to Tech Valley's 21st century job and career opportunities. This includes gate keepers, door openers, youth influencers, job and career counselors in both formal and informal education systems and in the community.

3. How should these flashcards be used?

These flashcards should be made available to community members as a tool to introduce new opportunities in Tech Valley. They can be used in formal and informal education settings. Our objective is to introduce community members to visual and real-life examples of middle-skill technical jobs available in our region.

4. Which audiences should be targeted?

Students, youth, job seekers and other community members interested in 21st century job and career opportunities.

Appendix C: 21st Century Careers Flashcards

ADVANCED MATERIALS



Career: Welder

TECH VALLEY FUTURES

ADVANCED MATERIALS

Job Description: Welders use hand-welding or flame-cutting equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.

Education: Most careers in welding require training in vocational schools, related on-the-job experience, or an associate's degree. Knowledge of machine operations, tools, and math is required.

Training: Welders usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

Additional Information:
For more information about this job visit:
www.nycareerzone.org

To learn about internship opportunities in Advanced Materials visit:
www.TechValleyInternships.com

Appendix C: 21st Century Careers Flashcards

BIOTECHNOLOGY



Career: Biological Technician

TECH VALLEY FUTURES

BIOTECHNOLOGY

Job Description: Biological Technicians perform laboratory and field work, such as testing and analyzing organic substances, in a variety of settings. Biological Technicians must possess knowledge of biology and medicine.

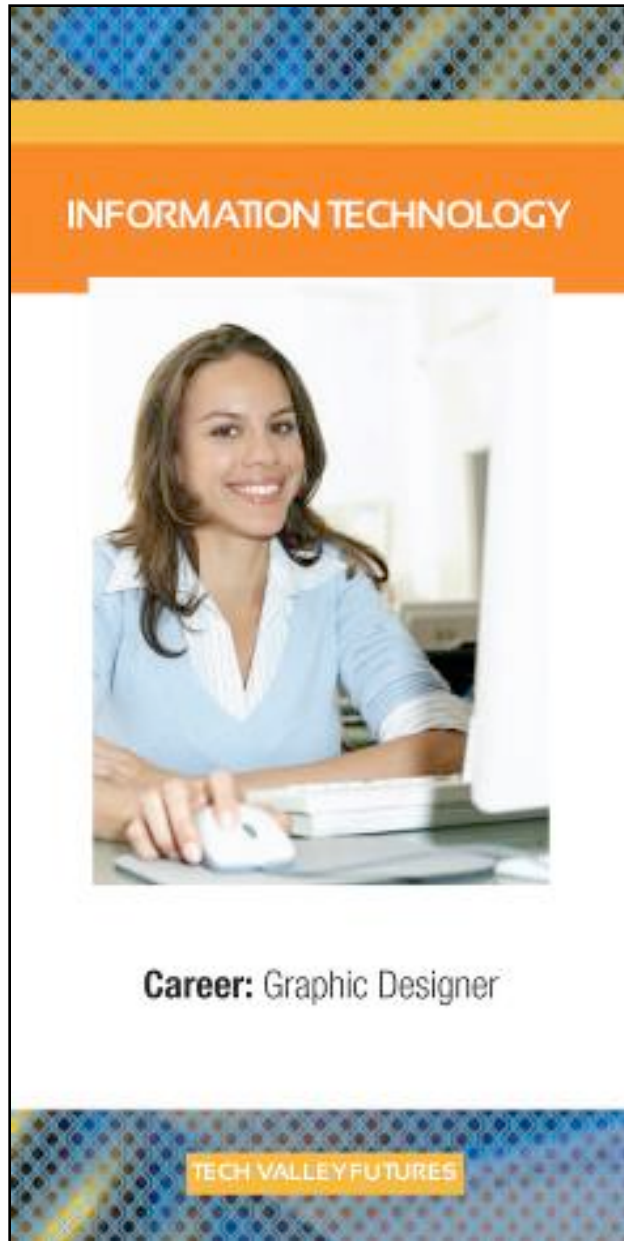
Education: Degree requirements for this job range from on-the-job training to bachelor's degrees. Two-year degrees in Biotechnology are most common.

Training: Knowledge of biology, scientific methods and computers is required. Many career and technical education schools offer concentrated training programs that help students gain "real world" experience.

Additional Information:
For more information about this job visit:
www.nycareerzone.org


To learn about internship opportunities in Biotechnology visit:
www.TechValleyInternships.com

Appendix C: 21st Century Careers Flashcards



The flashcard features a decorative top border with a blue and yellow geometric pattern. Below this is an orange horizontal band containing the text "INFORMATION TECHNOLOGY" in white, uppercase letters. The central part of the card is a white rectangular area containing a photograph of a smiling woman with long brown hair, wearing a light blue sweater over a white collared shirt, sitting at a desk and using a computer mouse. Below the photo, the text "Career: Graphic Designer" is written in a black, sans-serif font. At the bottom of the card is another decorative border with the same blue and yellow pattern, and a small orange box with the text "TECH VALLEY FUTURES" in white, uppercase letters.

INFORMATION TECHNOLOGY



Career: Graphic Designer

TECH VALLEY FUTURES



The flashcard features a decorative top border with a blue and yellow geometric pattern. Below this is an orange horizontal band containing the text "INFORMATION TECHNOLOGY" in white, uppercase letters. The main body of the card is white and contains three sections of text: "Job Description", "Education", and "Training", each starting with a bolded label. Below these sections is a section for "Additional Information" which includes a website URL. At the bottom, there is another section for "Additional Information" which includes another website URL.

INFORMATION TECHNOLOGY

Job Description: Graphic Designers design and create graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. They may use a variety of mediums to achieve artistic or decorative effects.

Education: Degree requirements for this job range from an associate's degree to a bachelor's degree. Two-year degrees in Graphic Design are most common.

Training: Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.

Additional Information:
For more information about this job visit:
www.nycareerzone.org

To learn about internship opportunities in Information Technology visit:
www.TechValleyInternships.com

Appendix C: 21st Century Careers Flashcards

NANOTECHNOLOGY



Career: Mechanical Technician

TECH VALLEY FUTURES

NANOTECHNOLOGY

Job Description: Mechanical Technicians apply theory and principles of mechanical engineering to modify, develop, and test machinery and equipment under direction of engineering staff or physical scientists.

Education: Most Mechanical Technicians require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree. Two-year degrees in Mechanical Technology are most common.

Training: Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

Additional Information:
For more information about this job visit:
www.nycareerzone.org

To learn about internship opportunities in Nanotechnology visit:
www.TechValleyInternships.com

Appendix C: 21st Century Careers Flashcards

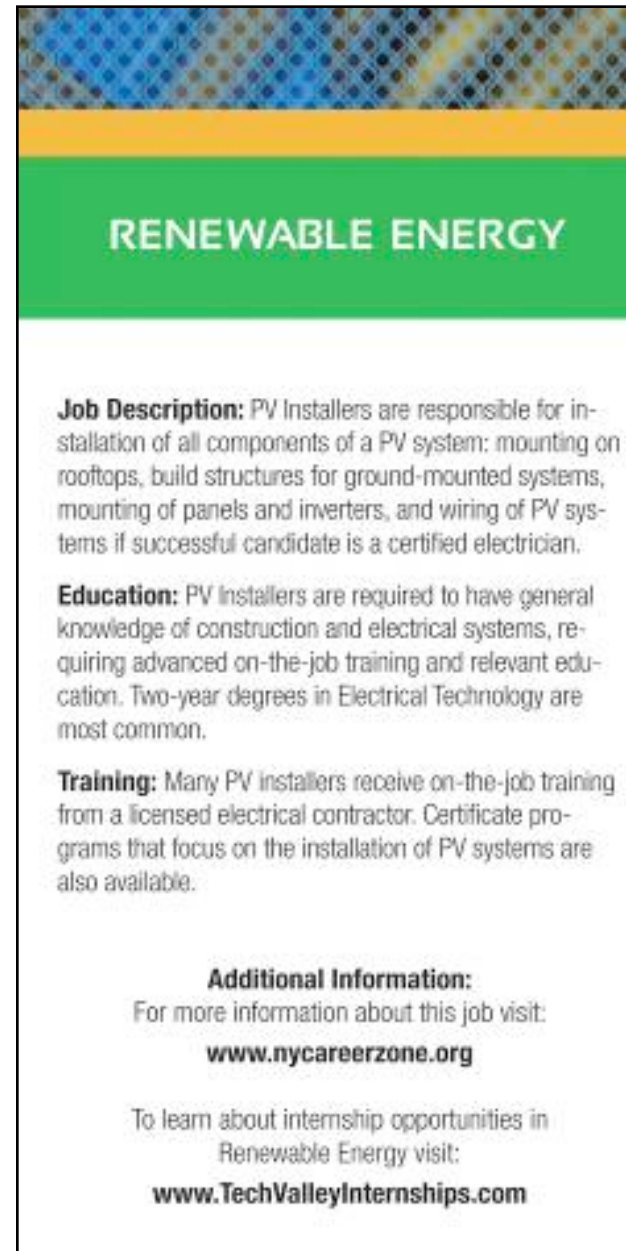


RENEWABLE ENERGY



Career: Photovoltaic (PV) Installer

TECH VALLEY FUTURES



RENEWABLE ENERGY

Job Description: PV Installers are responsible for installation of all components of a PV system: mounting on rooftops, build structures for ground-mounted systems, mounting of panels and inverters, and wiring of PV systems if successful candidate is a certified electrician.

Education: PV Installers are required to have general knowledge of construction and electrical systems, requiring advanced on-the-job training and relevant education. Two-year degrees in Electrical Technology are most common.

Training: Many PV installers receive on-the-job training from a licensed electrical contractor. Certificate programs that focus on the installation of PV systems are also available.

Additional Information:
For more information about this job visit:
www.nycareerzone.org

To learn about internship opportunities in Renewable Energy visit:
www.TechValleyInternships.com