

# GREEN CAREERS

MICHIGAN

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# Table Of Contents

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|                                                                 |           |
|-----------------------------------------------------------------|-----------|
| <b>INTRODUCTION .....</b>                                       | <b>1</b>  |
| WHY GREEN CAREERS?.....                                         | 1         |
| ABOUT THE ACTIVITIES.....                                       | 1         |
| <b>GREEN CAREERS ACTIVITY 1: GREEN GOALS .....</b>              | <b>3</b>  |
| GC WORKSHEET 1.1: PROTECTING PLANTS AND ANIMALS .....           | 5         |
| GC WORKSHEET 1.2: REDUCING HARMFUL HUMAN IMPACT .....           | 6         |
| GC WORKSHEET 1.3: UNDERSTANDING THE EARTH .....                 | 7         |
| GC WORKSHEET 1.4: SUPPORTING GREEN LIFESTYLES.....              | 8         |
| GC WORKSHEET 1.5: RAISING PUBLIC AWARENESS .....                | 9         |
| GC WORKSHEET 1.6: ADVOCATING FOR THE ENVIRONMENT.....           | 10        |
| GC WORKSHEET 1.7: INNOVATING.....                               | 11        |
| GC WORKSHEET 1.8: CREATING GREEN COMMUNITIES.....               | 12        |
| GC WORKSHEET 1.9: PROTECTING HUMAN HEALTH .....                 | 13        |
| <b>GREEN CAREERS ACTIVITY 2: HOW GREEN IS THIS CAREER?.....</b> | <b>14</b> |
| GC WORKSHEET 2: HOW GREEN IS THIS CAREER? .....                 | 16        |
| <b>GREEN CAREERS ACTIVITY 3: GREEN CAMPAIGN .....</b>           | <b>20</b> |
| GC WORKSHEET 3: GREEN CAMPAIGN .....                            | 21        |

# Introduction

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## WHY GREEN CAREERS?

At Career Cruising, we often get requests for information on green careers. Educators, career guidance professionals, and students all recognize the significant impact that the environmental movement and the “green economy” are having on career development. Our desire to reduce our carbon footprint, conserve natural resources, cut down on energy usage and costs, and preserve biodiversity has not only altered the way in which we perform our everyday tasks, but also our work-related tasks.

Green issues are both environmental and economic, and the trend for business and industry to go green continues to grow. As more and more companies accept responsibility for the environmental impact of their operations, the number of people receiving (and needed to receive) the appropriate preparation to assume these greener roles also expands. So much so that many agencies and organizations tasked with collecting, analyzing, and disseminating labor market information are making a concerted effort to include specific data about green occupations. Undoubtedly, it is more important than ever for students to learn about green careers.

But what should they learn? An exploration of green careers is not without its challenges. Generally speaking, green careers are performed in support of a healthy environment; yet, there is no one way to have a green career any more than there is a single career option for every person. Career choices are not limited by the desire to help the environment, and the ability to have a positive impact on the environment is not limited by career choice. It is this notion that is at the heart of our approach to the development of our green career activities.

## ABOUT THE ACTIVITIES

To some extent, no career or industry is untouched by the green movement; therefore, we feel it’s important to encourage students to think beyond the occupations traditionally identified as green. Not everyone can be, or is interested in becoming, a solar energy tech or an ecologist. With these activities, we’ve tried to offer a point of entry into green career development that is accessible to all students, wherever their current career interests lie.

The activities contained within this guide can be easily integrated into an environmental science class as a way for students to apply their environmental knowledge to the world of work, or they can be incorporated into a career development curriculum where students investigate changing employment trends and how they affect the labor market and career decisions.

You can modify the activities to suit the needs and interest of your students. You can also use the activities individually or together, depending on the amount of time you have to allot to an exploration of green careers. However, we estimate Activity # 1 to be best suited for middle school students (5th to 8th grade), while Activities #2 and #3 are geared more towards high school students.

# Introduction

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The diverse activity formats (worksheet, group work, research project) not only add variety, but also encourage students to develop a wide range of important skills such as co-operative learning, independent work, analytical and critical thinking, creativity, and information literacy, all of which are transferable to the world of work.

There are a number of options for setting the stage for an exploration of green careers in your classroom. One approach is to have students brainstorm about what “green” means. You can use the brainstorming results to develop a definition of “green” that meets the needs of your classroom. Alternatively, students can research definitions online or in the library.

Students can also develop a glossary of green terms and phrases (such as sustainability and carbon offsetting) that they may encounter as they continue to explore environmental issues and careers. These activities provide students with a greater understanding of green issues and a well-defined context for an exploration of green careers.

Students could also monitor television, radio, and online media sources for stories about the environment. Ask them to bring in newspaper or printed articles or written recaps of the stories they come across, and then have students present their findings to the class. You can use some of the following sample questions to encourage classroom discussion about green issues: What environmental issues are covered by the stories presented? What are the circumstance surrounding the issues? Why are the issues so important? What initiatives in your school and/or community address these issues?

Another approach is to have students evaluate how the current demand for green goods and services impacts various aspects of their own lives. A modified A Day In The Life chart (like those provided by interviewees in the occupation profiles found on Career Cruising) would allow students to record their daily activities and estimate the effects their actions have on the environment. You can encourage them to think of ways to reduce the environmental impact of some of their activities. This would prepare students for an examination of the environmental impact of certain job tasks.

At any point during your investigation of green careers, you can direct students to the Helpful Information section of the program (accessed by clicking on the **Help** link in the menu bar at the top of every page). Here they'll find lots of useful links to professional associations, government agencies, and other green resources in the **Additional Information And Resources** section.

However you choose to incorporate these activities into your classroom, we hope your students find value in exploring and considering green issues in the world of work. As always, our goal remains to encourage students to pursue careers about which they are passionate. But, we also want to highlight how thinking green may impact a variety of jobs that aren't traditionally associated with the environmental movement. Some students may come away from these activities thinking that finding a green career, or “greening” the career that they do choose, is not high on their list of priorities. And that's okay. With these activities, we've given them not only the opportunity to explore and analyze the general relationship between work and the environment, but also the tools and practice they need to continually evaluate and prioritize the personal values that influence the career planning process.

# Green Careers Activity 1: Green Goals

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## FOR THE TEACHER

### Introduction

The purpose of this activity is to help students:

- Evaluate which environmental issues interest them and explore related careers
- Identify work tasks and working conditions that help support a healthy environment
- Look beyond conventional green careers and understand that green opportunities are not limited to specific career fields or subject areas

### Setting the Stage

1. Certain occupations immediately spring to mind when considering green career options (solar energy tech, for example). However, it's also important to acknowledge non-traditional or unconventional green careers. One way to do this is to focus on an environmental goal and explore a variety of careers that, in some way, can be seen as working towards that goal.

*If you have completed some of the Introduction activities:*

Remind students of the environmental issues raised during discussion. If you are not using the introductory activities, ask students what environmental issues are important to them.

**Sample discussion questions:** Why is this environmental issue important to you? What school-wide, city-wide, or nation-wide initiatives address this issue? How can you address the issue in your everyday life? How can you address the issue in your career?

The goal is to get students to think about aspects of environmentalism that interest them and how they can incorporate them into their career choices.

2. Organize students into nine groups and assign each group one of the environmental goals outlined on the worksheets for this activity. Distribute the appropriate worksheet to each group.

Groups use Career Cruising to identify between 5 and 8 conventional and/or non-conventional green careers that relate to the environmental goal defined on their worksheet. Students can search for related careers by keyword, subject area, or pathway. (If they need help identifying careers that fit their assigned goal, they can find the example careers in the program and look in the Related Careers section for inspiration.)

Students can also include other occupations that they think of in addition to those they find in Career Cruising.

## Green Careers Activity 1: Green Goals

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3. Each group then briefly presents their green goal and list of occupations, explaining how each career relates to the goal on their worksheet. After each presentation, ask the class to brainstorm other occupations that fit the category. Suggest careers that students may have overlooked, particularly those that seem like unconventional green occupations.

4. To conclude, ask students if they are surprised to learn that some careers that they did not think of as being environmental can be green (or have some green element to them).

After the activity is complete, combine the worksheets and display them where students can refer to them when needed.

### Starting the Program

Go to **[www.careercruising.com](http://www.careercruising.com)**. Enter your personal EDP username and password in the spaces provided and click on **Log In**.

[illegible]

[illegible]

## GC Worksheet 1.3: Understanding the Earth

From mountain ranges to oceans, the planet provides not only some amazing scenery, but also a seemingly endless supply of mysteries. Many people are driven by the need to explore, collecting data about the earth's features or using scientific knowledge about how the planet was formed to make a positive impact on the environment. If you're one of them, think about careers that involve the study of non-living parts of the ecosystem, such as the atmosphere, soil, rocks, oceans, and waterways.

*Example careers:*

meteorologist

*meteorologists study the effects of pollution on climate*

GIS specialist

*some analyze geographical data for environmental projects*

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

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# Green Careers Activity 2: How Green Is This Career?

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## FOR THE TEACHER

### Introduction

In this activity, students will:

- Learn more about the job tasks and working conditions associated with a career and evaluate the impact they have on the environment
- Suggest ways to modify job tasks and working conditions that have a negative effect on the environment to reduce their impact
- Express how skills and knowledge requirements might change in relation to the “greening” of a career

### Setting the Stage

*1. If you have completed Activity # 1 or any of the Introduction activities:*

Review students’ knowledge of what it means to be green and ask for examples of green tasks or activities. Remind students how environmental issues and goals can influence their career decisions and of the variety of green careers, both conventional and non-conventional, that they were able to identify in Activity #1. Recall some of the environmentally friendly tasks that people in those careers perform.

*If you have not completed Activity # 1 or any of the Introduction activities:*

Ask students what environmental issues they have heard about on TV or read about in the newspaper or online. Which issues are most important to them? What kind of action can they take in their everyday lives to address the issue? What kind of occupation can someone who wants to devote their career to the issue consider? What can people in other occupations do in support of this issue?

The goal is to prepare students to look more in depth at aspects of an occupation (such as job tasks and working conditions) and evaluate whether they have a negative or positive impact on the environment.

2. Students may need help evaluating the environmental impact of certain aspects of a career. As a class, identify green and non-green work tasks and working conditions involved in a sample career and discuss ways to modify practices that have a negative effect on the environment. You can choose any occupation from the program or use one of the following examples:

**Career:** hairstylist

**Task / Working Condition:** wash and color hair

**Environmental Impact:** shampoos, conditioners, and hair dye can contain harmful chemicals and a lot of water can be wasted

**Modification:** use environmentally friendly products and, whenever possible, reduce water usage

## Green Careers Activity 2: How Green Is This Career?

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**Career:** landman

**Task / Working Condition:** acquire land on behalf of oil companies that build pipelines

**Environmental Impact:** pipelines could leak and the spilled oil would pollute the environment

**Modification:** obtain a job acquiring land for a wind farm developer

3. Distribute the worksheets to students. Before they begin, remind them that they are using the Search For Careers function to look for any career that interests them and not necessarily one they think is a conventional green career. (If students need helping finding a career that interests them, they can use one of the other search functions to look for careers by school subject or pathway.)

4. Encourage students to use the Internet to research ways to “green” their chosen career.

5. To conclude, discuss the careers that students chose and the tasks and conditions they identified as being harmful to the environment. Discuss the strategies they recommended to “green” the occupation.

### Starting the Program

Go to **www.careercruising.com**. Enter your personal EDP username and password in the spaces provided and click on **Log In**.

## GC Worksheet 2: How Green Is This Career?

Page 1 of 4

Click on **Careers** in the menu near the top of the page. Use the Keyword Search feature to find a career that interests you but that you may not know much about. Write the name of the career in the space provided below.

**Career:** \_\_\_\_\_

**1. Before you begin, do you think people interested in helping the environment should consider this as a career? Why or why not?**

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**2. Read the Job Description and Working Conditions sections.**

Part I

What do people in this career do? Write down 4 key job tasks.

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What are the working conditions like for people in this career? (*e.g., workplace, frequency of travel, etc.*) Write down 3 working conditions.

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Part II

Review the tasks and working conditions you wrote down and put a “✓” beside the ones that you think have a positive effect on the environment, and a “✗” beside the ones that you think have a negative effect. (If there are any tasks that you think are neutral/have no impact on the environment, leave them unmarked.) Be sure to consider things like the tools and materials used to perform an activity, the way in which a task is performed, the waste generated by an activity, and other factors that, as part of the daily work routine, have an impact on the environment.

## GC Worksheet 2: How Green Is This Career?

Page 2 of 4

Explain how the tasks and working conditions you marked with a “✓” have a positive effect on the environment. *(e.g., naturopaths treat patients with natural, herbal remedies instead of drugs that may contain harmful chemicals)*

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If you didn't mark any tasks or working conditions with a “✓,” do you think that means that everything about this career is bad for the environment? Explain.

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Explain how the tasks and working conditions you marked with a “✗” have a negative effect on the environment. *(e.g., frequent travel causes car and airplane exhaust which pollute the environment)*

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If you didn't mark any tasks or working conditions with a “✗,” do you think that means that everything about this career is good for the environment? Explain.

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Were there any tasks or working conditions that you thought had no impact on the environment at all? Explain why.

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## GC Worksheet 2: How Green Is This Career?

Page 3 of 4

Now that you've had a closer look at the tasks and working conditions involved in this career, has your opinion about whether people interested in helping the environment should consider this as a career changed? Explain why or not.

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**3. Even if a career's main goal isn't to help the environment, you can take steps to "green" the career by performing the job tasks or changing the working conditions in a way that reduces the negative impact they have on the environment.**

Look over the tasks and working conditions that you thought had a negative impact on the environment. Select 3 examples and answer the questions that follow. (If you didn't find any at first, re-read the Job Description and Working Conditions sections to see if you can find some now.)

If you worked in this career, how would you modify the job tasks and working conditions so that they are more environmentally friendly? (*e.g., doctors can use electronic prescriptions instead of paper ones*)

Note: You can use the Internet to research ways to green this career.

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Making environmentally friendly changes to job tasks and working conditions may require additional skills and/or knowledge. What green knowledge or skills do you think you would need to reduce the environmental impact of this career? (*e.g., carpenters should know about building materials made from renewable resources*)

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## GC Worksheet 2: How Green Is This Career?

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Page 4 of 4

### SUMMARY – YOUR VIEWS

**4. Now that you have learned a little about this career and considered the impact that some job tasks and working conditions can have on the environment, answer the following questions:**

How important do you think it is that people in this career adopt a more environmentally friendly approach to the way in which they perform their job? Explain.

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What would be the most challenging part of “greening” this career? How could you meet that challenge?

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Would you still recommend/not recommend this career to people interested in helping the environment? Why or why not?

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Will the environmental impact of job tasks and working conditions influence your decision to pursue some careers? Explain.

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# Green Careers Activity 3: Green Campaign

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## FOR THE TEACHER

### Introduction

In this activity, students will:

- Demonstrate in-depth knowledge of an occupation
- Apply analytical skills in identifying non-green workplace practices and modifying them to support a healthy environment

### How the Activity Works

By now, students have investigated environmental areas of interest, identified careers in which they can achieve particular environmental goals, and looked closely at the environmental impact of job tasks and working conditions of an occupation that interests them. In this activity, students combine the knowledge and analytical skills they acquired from the previous activities to create a Green Campaign that encourages people to explore green occupations.

Students who have not completed the previous activities can also tackle this project, completing background research on environmental issues and the emergence of green careers either before creating the Green Campaign or as part of the project.

The Green Campaign can take one of (or a combination of) the following formats:

- brochure
- occupation guide
- poster
- student-produced video
- fact sheet
- media kit
- any other format that you have approved

Students can select an occupation from Career Cruising and use the program to research details about the career. However, they should also be encouraged to do research in the library or on the Internet as well.

### Starting the Program

Go to **[www.careercruising.com](http://www.careercruising.com)**. Enter your personal EDP username and password in the spaces provided and click on Log In.

# GC Worksheet 3: Green Campaign

Page 1 of 2

## ASSIGNMENT

You are responsible for initiating a Green Campaign that encourages people to explore a green career. You can pick an occupation that you think is interesting, but that may not seem like a conventional green career. Part of your campaign should focus on providing details about your selected occupation. You can cover topics such as:

- the kind of work or tasks people in the career perform
- the skills and personal characteristics they need
- the tools, instruments, or equipment they use
- where they work
- earnings information for this career and factors that affect income
- the education and/or training needed to get into the career
- where to get more information on the career (*e.g., helpful websites*)

The other part of your campaign should focus on establishing a green context, as well as the importance of adopting environmentally friendly practices within the career and strategies to reduce the negative impact of career-related tasks and working conditions on the environment. You can cover topics such as:

- what it means to be green
- what's driving the demand for green careers
- what environmental issues are related to the occupation
- definitions for key concepts and ideas related to the "greening" of the occupation (*e.g., sustainability*)
- suggestions for practical ways in which people in the occupation can perform their job in an environmentally friendly way
- the importance of "greening" the occupation
- how the demand for green goods and services affects the occupation (*e.g., increased demand*)
- green products or services that are offered as part of the occupation
- green tools or technologies that are being used in the occupation
- green specializations within the occupation or industry
- the skills required to perform the occupation in an environmentally friendly way
- the availability of specialized "green" education, training, licensing, or certification options in the career
- green initiatives or legislation affecting the occupation
- suggestions for entry into the occupation or the green specializations of the occupation (*e.g., internship, volunteering*)
- examples of companies or organizations in your area that are performing the occupation in an environmentally friendly way
- resources for addressing green issues in the occupation (*e.g., professional associations, government agencies*)

## GC Worksheet 3: Green Campaign

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Page 2 of 2

### RESEARCH

You can use Career Cruising to find a career that interests you and research details about the career. Further research can be done in the library or on the Internet.

### USING CAREER CRUISING

Sign into Career Cruising and click on **Careers** in the menu near the top of the page. Search for a career that interests you by using the **Keyword Search**. You can also click on the **School Subjects** or **Michigan Career Pathways** tab to investigate careers in subject or cluster areas that appeal to you.

Each specific career profile includes in-depth information on working conditions, education, income, and career paths, as well as links to other general sources of information. There are also two interviews with real people in each occupation. Click on the names on the left side of the screen to view the interviews.

We've also collected a number of links to help you begin your research. Click on the **Help** link in the menu bar at the top of the page to access the Helpful Information section. Look under **Additional Information And Resources** to find our useful Green Resources Guide.