

APPENDIX D:

Career Exploration and STEM Skills

Introducing young children to a wide range of career opportunities broadens their notion of the work adults do, encourages imaginative role-play, and forms the foundation for career education. Each activity in this guide includes an Explore Careers suggestion, which introduces tree-related “green” careers through dramatic play or skill practice.

While the following 12 green careers are highlighted in the activities, there are many more careers related to trees and forests that you may want to explore with young children. If you also work with older audiences, visit plt.org/workingforforests for more career resources.

Highlighted Careers


- Arborist
- Biologist
- Chef
- Forest firefighter
- Forester
- Gardener
- Landscape designer
- Naturalist
- Nature artist
- Nature guide
- Tree farmer
- Tree planter



Developing STEM Skills

Career exploration in early childhood enables children to gain skills in science, technology, engineering, and mathematics (known collectively as STEM). These skills support youth development, no matter what career path the learner eventually chooses.

PLT promotes 10 STEM skills that are essential for everyone. At their core, these skills support hands-on learning that encourages children to ask questions, carry out environmental investigations, and develop new knowledge. They include elements of leadership, inquiry, and problem-solving, as well as skills related to human connection and care.

Skills with an asterisk (*) are used in numerous experiences within each activity in this guide. Others are identified in the sidebar and with this icon next to the appropriate experience: . Note that many activities include engineering challenges, which invite children to use problem-solving skills to design a solution.

Ten STEM Skills for Everyone

1. Collaboration

- Cooperating with team members
- Finding points of agreement or consensus
- Taking responsibility for individual contributions

2. Communication*

- Exchanging ideas with project partners
- Sharing project results
- Using different media to enhance communication

3. Creativity*

- Looking at a problem from different perspectives
- Exploring new ideas
- Learning from failures

4. Data Analysis

- Assessing the accuracy of data
- Presenting data in a useful format
- Identifying patterns in data

5. Investigation*

- Posing a question to investigate
- Planning and carrying out the investigation of a question
- Constructing an explanation based on findings

6. Leadership

- Leading projects or supporting a project team
- Developing a project plan and timeline
- Making decisions that are supported by data



MORE STEM RESOURCES

- **STEM Strategies:** Visit the PLT website for more opportunities to enrich STEM teaching and learning at plt.org/resources/stem-strategies
- **Self Assessment:** For older learners, try the 10 STEM Skills Self Assessment, accessible from plt.org/workingforforests

7. Nature-Based Design

- Finding inspiration in and from nature
- Recognizing that nature offers solutions to problems
- Incorporating ideas from nature into design

8. Organization

- Precisely following instructions, protocols, or blueprints
- Recording data accurately
- Keeping track of lots of different information

9. Problem Solving

- Defining a problem
- Using models to investigate a problem
- Designing solutions to a problem

10. Technology Use

- Identifying appropriate technology for a given application
- Using technology tools effectively
- Troubleshooting technology problems

