guideWELD® VR Curriculum Overview

Goals:
To equip all participants with knowledge of welding safety and welding defects, and give them the tools to make weld corrections.

Length:
The 20- to 30-hour curriculum is comprised of lessons and activities that can take 40-60 minutes each.

Synopsis:
Each unit includes teacher guides, PowerPoint presentations, worksheets, quizzes and assessments.

<table>
<thead>
<tr>
<th>Unit 1</th>
<th>Unit 2</th>
<th>Unit 3</th>
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<tbody>
<tr>
<td><strong>Focus</strong></td>
<td>Welding Careers, Types of Welding and Welding Safety</td>
<td>Welding Equipment, Basics and Defects</td>
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<tr>
<td><strong>Number of Lessons</strong></td>
<td>6</td>
<td>6</td>
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<tr>
<td><strong>Topics</strong></td>
<td>Welding Career Opportunities</td>
<td>Welding Equipment and Setup</td>
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<td>Types of Welding</td>
<td>Welding Technique</td>
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<td>Welding Safety — Personal Protective Equipment</td>
<td>Welding Basics and Terminology</td>
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<td>Welding Safety Focus</td>
<td>Multiple Causes of Defects</td>
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Curriculum Components:
- **Instructor’s Guide** with detailed information for classroom learning.
- **Admin Guide** for installation and setup of software.
- **Student Notes materials** like student activity sheets and homework assignments for every lesson.
- **Microsoft PowerPoint® presentation slides** for visual classroom learning during each lesson.
- **Assessment Tools** such as quizzes and exams with answer keys to track students’ knowledge for select lessons.
# guideWELD® VR Curriculum Outline

## Unit 1: Welding Types, Careers, and Safety

### Lesson 1: Welding Career Opportunities
- Position Definition
- Position Salary
- Position Education Requirement

### Lesson 2: Types of Welding
- Types of Welds and Applications

### Lesson 3: Welding Safety - PPE
- Types of Welding Hazards
- Personal Protective Equipment
- Clothing and Skin Precautions

### Lesson 4: Welding Safety Focus Part 1
- Safety Focus: Electricity and the Arc

### Lesson 5: Welding Safety Focus Part 2
- Safety Focus: Compressed Gases, Fumes and Fire

### Lesson 6: Safety Review, Assessment, Certification

## Unit 2: Welding Equipment, Defects, and Basics

### Lesson 1: Welding Equipment
- Types of Welders
- Parts of Welders

### Lesson 2: Welding Equipment (continued)
- Parts of Welders
- Set up/Maintenance

### Lesson 3: Weld Defects
- Types of defects
- Causes of defects
- Repair
- Prevention of Defects

### Lesson 4: Welding Basics
- 5 Basics
- Welding Joints
- Positions

### Lesson 5: Welding Basics (continued)
- 5 Basics
- Welding Joints
- Positions

### Lesson 6: Welding Basics Assessment

## Unit 3: The Welding Simulation

### Lesson 1: Intro to Welding Simulation
- How it works
- Teacher & Admin Guidance
- Student Guidance

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