

## 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.

	Unit 1	Unit 2	Unit 3
<b>Focus</b>	Welding Careers, Types of Welding and Welding Safety	Welding Equipment, Basics and Defects	Introduction to Welding Simulation
<b>Number of Lessons</b>	6	6	1
<b>Topics</b>	Welding Career Opportunities	Welding Equipment and Setup	guideWELD VR software
	Types of Welding	Welding Technique	guideWELD VR components and software
	Welding Safety – Personal Protective Equipment	Welding Basics and Terminology	guideWELD VR setup
	Welding Safety Focus	Multiple Causes of Defects	Understanding diagnostic reports

### 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