

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
Focus	Welding Careers, Types of Welding and Welding Safety	Welding Equipment, Basics and Defects	Introduction to Welding Simulation
Number of Lessons	6	6	1
Topics	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