

What is *Learn with Harry*?

Learn with Harry is an innovative suite of computer-based training products for mine safety. The suite uses serious games and active learning techniques to improve worker engagement, encourage critical thinking, and evaluate safety competencies. Motivated by years of industry needs assessments, the training suite was designed by health and safety experts at the University of Arizona's Lowell Institute for Mineral Resources. The suite includes three "synthetic learning environments" suitable for use in a variety of training situations, such as new miner, annual refresher, safety meetings, and morning tailgates:

Serious Game	Training Focus Areas
<i>Harry's Hard Choices</i>	Emergency preparedness; Self-Escape; Hazards Recognition
<i>Harry's Hazardous Day</i>	Hazards recognition; Situational awareness; Operating Procedures
<i>Harry's Fatalgram Simulator</i>	Reviewing MSHA Fatality reports; Accident prevention; Best practices

To stay current with the latest industry trends, new content will be made available for download on a semi-annual basis. Furthermore, wrap-around materials are included to help your trainers integrate *Learn with Harry* into their curriculum:

Wrap-around Material	Description
Training Manual	Illustrates the use of <i>Learn with Harry</i> for MSHA compliance training. Includes use cases, curriculum, and example exercises based on a competency framework for mine safety. Tutorial presentations are provided for class introduction to serious games.
User Manual	Describes software installation and updating process. Covers the objectives, rules, and user interface of each serious game. Printed manuals are provided.
Evaluation Dashboard	Provides debriefing tools, including logging and presentation of game results. Allows trainers to generate and print job action sheets based on a competency framework.
Train-the-Trainer Workshop	Teaches your trainers to use serious games in their training, with an emphasis on active learning approaches. Addresses practical issues in your classroom. This half-day workshop may be conducted online as part of the initial setup and deployment process.
Evaluation Gateway	Tracks your safety competencies through our secure website. Allows your trainers to generate and analyze performance metrics for each user, crew, or shift. The website also includes game leaderboards that are accessible to your workers.

Customization options are available to put your worksite and your operating procedures into the games.

What are the hardware requirements?

The *Learn with Harry* suite was designed to run on a variety of computing hardware, including most recent PC laptops and desktops. The minimum hardware requirements are as follows:

	Minimum	Preferred
OS	Windows 7, 8, 10	Windows 7, 8, 10
CPU	Intel i5 7th Gen (Kaby Lake)	Intel i7 8th Gen (Coffee Lake)
Graphics*	NVidia GT 1050 Ti 4GB Graphics	NVidia GTX 1070 Ti 8GB Graphics
RAM	16 GB	32 GB
Hard Disk	12 GB available	20 GB available, SSD
Interface	Keyboard and mouse	Microsoft Xbox 360/One gamepad

*A dedicated GPU is strongly recommended

Note that LAN and internet access are required for multi-player game play, tracking, and evaluation. *Learn with Harry* is also compatible with some tablet computers, game consoles, and Virtual Reality headsets. The Western Mining Safety and Health Training Resource Center can provide limited recommendations on hardware upgrades and installation. Please inquire for details.

Does *Learn with Harry* work?

Yes. The training suite has been used successfully in MSHA-approved new miner and annual refresher training courses. Testing indicates that it improves workers' confidence and competency in mine safety, while affording a high level of user engagement and user acceptance. The software has been tested extensively for usability across worker demographics, including age, work experience, and computer literacy. Furthermore, training topics and techniques are based on extensive research and implement best practices recommended by the Mine Emergency Systems group at the National Institute for Occupational Safety & Health (NIOSH).

What is the early adopter program?

Learn with Harry is a new approach to mine safety training that employs state-of-the-art computing technologies and active learning techniques. The software suite and wrap-around materials are still in active development, with new content and features being added regularly. Some components of the software suite are presently in the alpha or beta testing stage.

We are seeking early adopters to use *Learn with Harry* in their training. The early adopter program provides invaluable feedback and performance metrics that will help us improve our products and increase their effectiveness. As an incentive, this special partnership offers more personalized support and access to invaluable data on the effectiveness of training. Furthermore, early adopters have the unique opportunity to steer new feature and content development based on their training needs. By participating in our early adopter program, your organization is at the forefront of mine safety and dedicated to improve training for the mining industry at large!



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