

# STEM Sims™ Credits



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STEM Sims are dedicated to the leadership, spirit, and memory of Sebastian Foti, Ph.D. who inspired the direction of this and other educational technology products. Sebastian, we hope that this product lives up to your standards of excellence and high expectations for quality educational learning materials.

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<sup>2</sup> *The Science Fair Kits (SFK) Project was supported in part by the Department of Homeland Security Science and Technology Directorate under Award Numbers NBCHC090007 and N10PC20003. Its contents are solely the responsibilities of the authors and do not necessarily represent the official views of the Department of Homeland Security.*

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We wish to thank the **National Center for the Study of Preparedness and Catastrophic Event Response DHS Center of Excellence (PACER)** for their help in the development and implementation of this module. In particular, our special thanks go to Drs. Meredith Tanner and Kevin Jeng for providing guidance and content that enriched and enhanced the materials.

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We wish to thank the **National Center for Food Protection and Defense** DHS Center of Excellence (NCFPD) for their help in the development and implementation of this module. In particular, our special thanks go to Drs. Abbey Nutsch, Vangie Alociljia, and Don Shaftner for providing guidance and content that enriched and enhanced the materials.

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We wish to thank the **Awareness & Location of Explosives - Related Threats** DHS Center of Excellence (ALERT) for their help in the development and implementation of this module. In particular, our special thanks go to Claire Duggan, Director for Programs and Operations - The Center for STEM Education.

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Parent Material Author: Richard Ledbetter  
Video Introduction: Hannah Mellott  
Simulation Walkthrough Script: Theresa Williams  
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Research and Quality Assurance: Timothy Williams, Theresa Williams

We wish to thank the **Awareness & Location of Explosives - Related Threats** DHS Center of Excellence (ALERT) for their help in the development and implementation of this module. In particular, our special thanks go to Claire Duggan, Director for Programs and Operations - The Center for STEM Education.

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Video Introduction: Hannah Mellott  
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Web Programming: Michael P. Lewis, Jr., Timothy Williams, Matthew Deyarmin, Corey Wilmot  
Brochure Content Author: Richard Ledbetter  
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Simulation Walkthrough Video: Corey Wilmot  
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We wish to thank the **Center for Maritime, Island & Remote/Extreme Environment Security DHS Center of Excellence (MIREES)** for their help in the development and implementation of this module. In particular, our special thanks go to Dr. Kevin Kelly for providing guidance and content that enriched and enhanced the materials.



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Simulation Programming: Kevin Neelands

Web Programming: Michael P. Lewis, Jr., Timothy Williams, Matthew Deyarmin

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Simulation Programming: Robert Melczarek, Ph.D.

Web Programming: Michael P. Lewis, Jr., Timothy Williams, Matthew Deyarmin

Brochure Content Author: Richard Ledbetter

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Research and Quality Assurance: Timothy Williams, Theresa Williams

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Web Programming: Michael P. Lewis, Jr., Timothy Williams, Matthew Deyarmin

Brochure Content Author: Emily Brooks

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Simulation Walkthrough Script: Corey Wilmot

Simulation Walkthrough Video: Corey Wilmot

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Simulation Programming: Robert Melczarek  
Web Programming: Michael P. Lewis, Jr., Timothy Williams, Matthew Deyarmin  
Brochure Content Author: Emily Brooks  
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Simulation Walkthrough Script: Corey Wilmot  
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Brochure Content Author: Richard Ledbetter

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Video Introduction: Hannah Mellott

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Simulation Walkthrough Video: Corey Wilmot

Research and Quality Assurance: Timothy Williams, Theresa Williams

We wish to thank the **Center of Excellence for Zoonotic and Animal Disease Defense** DHS Center of Excellence (ZADD) for their help in the development and implementation of this module. In particular, our special thanks go to Dr. Heather Engleking for providing guidance and content that enriched and enhanced the materials.

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Simulation Programming: Michael P. Lewis, Jr., Corey Wilmot

Web Programming: Michael P. Lewis, Jr., Timothy Williams, Matthew Deyarmin

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Brochure Content Author: Richard Ledbetter  
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Video Introduction: Hannah Mellott  
Simulation Walkthrough Script: Timothy Williams  
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We wish to thank the **National Transportation Security Center of Excellence** DHS Center of Excellence (NTSCOE) for their help in the development and implementation of this module. In particular, our special thanks go to Dr. Eduardo Martinez for providing guidance and content that enriched and enhanced the materials.

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Brochure Content Author: Richard Ledbetter  
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Video Introduction: Hannah Mellott  
Simulation Walkthrough Script: Theresa Williams  
Simulation Walkthrough Video: Corey Wilmot  
Research and Quality Assurance: Timothy Williams, Theresa Williams

We wish to thank the **National Center for the Study of Preparedness and Catastrophic Event Response** DHS Center of Excellence (PACER) for their help in the development and

implementation of this module. In particular, our special thanks go to Dr. Meredith Tanner and Kevin Jeng for providing guidance and content that enriched and enhanced the materials.

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Simulation Programming: Kevin Neelands  
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Brochure Content Author: Emily Brooks  
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Simulation Walkthrough Script: Corey Wilmot  
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We wish to thank the **Center for Maritime, Island & Remote/Extreme Environment Security** DHS Center of Excellence (MIREES) for their help in the development and implementation of this module. In particular, our special thanks go to Dr. Kevin Kelly for providing guidance and content that enriched and enhanced the materials.

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We wish to thank **Dr. Robert Hochberg, DIMACS Education Coordinator**, Rutgers University for his help in the development and implementation of this module. Dr. Hochberg is also President of Discrete Teaching in Greenville, NC ([www.discreteteaching.com](http://www.discreteteaching.com)).

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Web Programming: Michael P. Lewis, Jr., Timothy Williams, Matthew Deyarmin

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Video Introduction: Hannah Mellott

Simulation Walkthrough Script: Theresa Williams  
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Simulation Programming: Robert Melczarek  
Web Programming: Michael P. Lewis, Jr., Timothy Williams, Matthew Deyarmin  
Brochure Content Author: Emily Brooks  
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Video Introduction: Hannah Mellott Simulation Walkthrough Script: Kami Montecillo  
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Web Programming: Michael P. Lewis, Jr., Timothy Williams, Matthew Deyarmin  
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Graphics: Corey Wilmot  
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Video Introduction: Hannah Mellott  
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Research and Quality Assurance: Timothy Williams, Theresa Williams

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Graphics: Emily Brooks  
Simulation Programming: Brandon Hoover  
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Brochure Content Author: Richard Ledbetter  
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Video Introduction: Hannah Mellott  
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We wish to thank the **Center of Excellence for Zoonotic and Animal Disease Defense** DHS Center of Excellence (ZADD) for their help in the development and implementation of this module. In particular, our special thanks go to Dr. Heather Engleking for providing guidance and content that enriched and enhanced the materials.

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Graphics: Brandon Hoover  
Simulation Programming: Robert Melczarek, Ph.D., Brandon Hoover  
Web Programming: Michael P. Lewis, Jr., Timothy Williams, Matthew Deyarmin, Corey Wilmot  
Brochure Content Author: Richard Ledbetter  
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Video Introduction: Hannah Mellott  
Simulation Walkthrough Script: Corey Wilmot

Simulation Walkthrough Video: Corey Wilmot  
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We wish to thank the **DHS Center of Excellence in Command, Control, and Interoperability Environments** (CCI) for their help in the development and implementation of this module. In particular, our special thanks go to Marti Burns and Dr. Tim Collins, Executive Director, for providing guidance and content that enriched and enhanced the materials.

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Brochure Content Author: Richard Ledbetter  
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Video Introduction: Hannah Mellott  
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We wish to thank the **Natural Disasters, Coastal Infrastructure and Emergency Management** DHS Center of Excellence (NCDIEM) for their help in the development and implementation of this module. In particular, our special thanks go to Drs. Tom Shay, Thomas Richardson, and Anna Schwab for providing guidance and content that enriched and enhanced the materials.

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Video Introduction: Hannah Mellott  
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Research and Quality Assurance: Timothy Williams, Theresa Williams

We wish to thank the **Natural Disasters, Coastal Infrastructure and Emergency Management** DHS Center of Excellence (NDCIEM) for their help in the development and implementation of this module. In particular, our special thanks go to Drs. Tom Shay, Thomas Richardson, and Anna Schwab for providing guidance and content that enriched and enhanced the materials.

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Graphics: Hannah Mellott

Simulation Programming: Brandon Hoover

Web Programming: Michael P. Lewis, Jr., Timothy Williams, Matthew Deyarmin, Corey Wilmot

Brochure Content Author: Richard Ledbetter

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Simulation Walkthrough Script: Corey Wilmot

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Research and Quality Assurance: Timothy Williams, Theresa Williams

We wish to thank the **National Center for the Study of Preparedness and Catastrophic Event Response** DHS Center of Excellence (PACER) for their help in the development and implementation of this module. In particular, our special thanks go to Dr. Meredith Tanner and Kevin Jeng for providing guidance and content that enriched and enhanced the materials.

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We wish to thank the **National Consortium for the Study of Terrorism and Responses to Terrorism** DHS Center of Excellence (START) for their help in the development and implementation of this module. In particular, our special thanks go to Drs. Katherine Worboys

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We wish to thank the **DHS Center of Excellence in Command, Control, and Interoperability Environments** (CCI) for their help in the development and implementation of this module. In particular, our special thanks go to Marti Burns and Dr. Tim Collins, Executive Director, for providing guidance and content that enriched and enhanced the materials.

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We wish to thank the **National Transportation Security Center of Excellence** DHS Center of Excellence (NTSCOE) for their help in the development and implementation of this module. In particular, our special thanks go to Dr. Eduardo Martinez for providing guidance and content that enriched and enhanced the materials.



## **Survivor**<sup>2</sup>

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We wish to thank the **Center for Advancing Microbial Risk Assessment** DHS Center of Excellence (CAMRA) for their help in the development and implementation of this module. In particular, our special thanks go to Dr. Mark Weir, CAMRA Associate Director, Michigan State University for providing guidance and content that enriched and enhanced the materials.

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### **Trouble Incorporated<sup>2</sup>**

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We wish to thank the **National Center for Risk and Economic Analysis of Terrorism Events** DHS Center of Excellence (CREATE) for their help in the development and implementation of this module. In particular, our special thanks go to Drs. Kelly Gribben and Gisele Ragusa for providing guidance and content that enriched and enhanced the materials.

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We wish to thank the **National Center for Risk and Economic Analysis of Terrorism Events** DHS Center of Excellence (CREATE) for their help in the development and implementation of this module. In particular, our special thanks go to Drs. Kelly Gribben and Gisele Ragusa for providing guidance and content that enriched and enhanced the materials.