WIRED to WEAR

Teacher Resource Packet

About *Wired to Wear*™

Wired to Wear is the first-ever exhibit dedicated to the future of wearable technology. The 8,000-square-foot exhibit brings together cutting-edge technologies from industry pioneers and creative visionaries, showcasing how our clothing is becoming infused with tools to make us stronger, smarter and healthier.

Wired to Wear features items from brands, designers, engineers and artists across 15 countries, bringing the world's most innovative technologies to MSI, including:

- Global brands such as Dainese, Google, Intel, Microsoft, NASA and Gravity Industries;

- Renowned universities and laboratories including Harvard University, Massachusetts Institute of Technology, Johns Hopkins University and Northwestern University;

- Celebrated artists and designers that include Anouk Wipprecht, Behnaz Farahi, Melissa Coleman, Suzi Webster, Jordan Reeves, Lisa Lang, and Amy Winters, Ph.D.

True to MSI's hands-on approach to science, *Wired to Wear* is purpose-designed to let you touch, feel and even try on these technologies:

- **SpiderSense Vest:** Put on a vest that provides haptic feedback as you navigate through an obstacle.

- **Iridescence:** This collar's quills use hundreds of actuators and vision-activated technology to follow your gaze and react with life-like behavior. For example, when an angry face is detected, the collar expresses anxiety with fast jittery movements.

- **Smart Tattoo:** Placed on mannequin arms, the conductive tattoos turn the body into an interface. Swipe the tattoo to create notes on an instrument and even control lighting.

- **Infinite Flow:** Direct the Google Jacquard fabric using the interactive cloth as an interface to control a series of fans and lights that allow it to float gracefully.

Throughout *Wired to Wear*, you'll see examples of how wearable technology is fueling innovation to revolutionize the benefits clothing can and will provide, including:

- Gravity Industries' Jet Suit, which is comprised of five miniature jet engines and an exoskeleton, which can travel more than 30 miles per hour and ascend to 12,000 feet.

- Nike's self-lacing shoes from "Back to the Future Part II," along with Nike's HyperAdapt 1.0 and the recently announced Nike Adapt BB shoes.

- Seismic Powered Clothing™, a lightweight alternative exoskeleton providing extra strength for standing and sitting to help reduce injury and preserve mobility.

- Dainese D-Air Racing Suit monitors the wearer's position 1,000 times per second to determine if embedded airbags need to instantaneously inflate to protect the wearer from injury.

- Jacquard™ by Google is a technology platform that allows any personal item to have interactivity and connectivity. Learn how the first product developed with this platform, Levi's® Commuter™ Trucker Jacket with Jacquard, works.

Next Generation Science Standards Connections

Wired to Wear is aligned with the following Next Generation Science Standards:

Disciplinary Core Ideas:

- PS3: Energy

- ETS 1: Engineering Design

- ETS 2: Links among engineering, technology, science and society

Classroom Lessons

To enhance a *Wired to Wear* field trip, teachers can use this free classroom lesson before or after their visit.

Engineering for Our Environment: Students will use the Engineering Design Cycle to create a prototype of a wearable device that can help conserve Earth's valuable resources and fight climate change.

Additional Resources

Innovations List: This document highlights innovations that represent the most cutting-edge technology from across this emerging industry.

Featured Creators: Learn about the people behind the amazing innovations on display.