Integrate Engineering Design & Inquiry-Based Teaching into the Classroom

Join ASSET STEM Education and SAE International for an in-depth professional learning program to bring STEM education to life. During this two-day workshop, educators in Pre-K through grade 8 will discuss ways to integrate engineering design and inquiry-based teaching into the classroom and preview hands-on activities from SAE International's A World in Motion® (AWIM) program. The event includes a facility tour of the Aviation Science Center in Beaver.

WHAT TO EXPECT AT THE EVENT

FOUNDATIONS OF ENGINEERING COURSE:
Discuss what it means to teach engineering intentionally at all grade levels & make connections using a cross-curriculum learning approach.

BREAKOUT GROUPS TO PREVIEW
SAE’S AWIM CHALLENGES (see page 2):
• Rolling Things (Pre-K through Grade 1)
• Pinball (Grades 2-3)
• Gravity Cruiser (Grades 4-5)
• Glider Challenge (Grade 6-8)
• Cybersecurity (Grades 6-8)

CONTINUING EDUCATION CREDITS AVAILABLE

PROGRAM DETAILS

OCTOBER 21-22, 2019
8:30 a.m. - 3:30 p.m.

COMMUNITY COLLEGE
OF BEAVER COUNTY
1 Campus Drive
Monaca, PA 15061

$400 PER PERSON
(20% discount for Early Bird Registration by August 31, 2019)

REGISTER BY 10/18:
assetinc.org/EngageEngineering

Questions? Contact epomerantz@assetinc.org or 412-481-7320
ENGAGE IN THE FUTURE: ENGINEERING WORKSHOP

SAE’S A WORLD IN MOTION® CHALLENGES

ROLLING THINGS
Pre-K through Grade 1
Students explore the effects of changing ramp height and vehicle weight to answer questions based specific performance criteria.
Core Concepts: Gravity, energy, friction, momentum, mass, velocity, and acceleration
Literature Piece: The Three Little Pigs Sledding Adventure explores how different sled materials affects three pigs’ ability to outfox the Big Bad Wolf.

PINBALL
Grades 2-3
Students build, test and modify a non-electronic pinball machine that meets specific performance criteria.
Core Concepts: Gravity, potential and kinetic energy, and inclined planes
Literature Piece: Malarkey and the Big Trap introduces students to the design process as a lazy cat attempts to catch a mouse.

GRAVITY CRUISER
Grades 4-5
Students build, test and modify gravity-powered cars based on specific performance criteria.
Core Concepts: Potential and kinetic energy, friction, inertia, momentum, diameter, circumference, measurement, and graphing

GLIDER CHALLENGE
Grades 6-8
Students build, test and modify gliders based on specific performance criteria, basing their decisions on consumer demand.
Core Concepts: Force and motion and the effects of weight and lift

CYBERSECURITY
Grades 6-8
Students model the movement of information through the internet, securing data and systems, and develop marketing materials that meet specific criteria.
Core Concepts: The Internet, nodes and packets, TCP/IP, cybersecurity, encryption, decryption and keys

SPECIAL OFFERS
Attendees at the workshop will receive a 10% discount on AWIM kit orders placed during the event.
Attendees will also be automatically entered into a raffle to win AWIM kits donated by SAE.

TEACHER RESOURCES
Save an additional 25% on AWIM kits when you engage a volunteer to help you administer the curriculum:
bit.ly/FindVolunteers25
For educators who engage a volunteer prior to the workshop, this discount can be combined with above 10% special offer for a total discount of 35% applied to orders placed onsite or by September 30, 2019.

Resources to secure funding:
bit.ly/AWIMfundingresources

Sample grant application questions and answers:
bit.ly/AWIMgrantQA