WESO 2023 Event Slate

Confirmed Events	Grades 2 & 3	Grades 4 & 5	# of participants/team
The Human Machine	✔		1-2
iCompute		✔	1-2
iRobot	✔		1-2
Map Reading	✔		1-2
Mystery Architecture	✔	✔	1-2
On Target	✔	✔	1-3
Pentathlon	✔	✔	5
Potions		✔	1-2
Read It/Build It	✔		1-2
Write It/Build It		✔	2-4
Zip-A-Dee-Doo-Dah	✔	✔	1-3
Aerodynamics	✔	✔	1-2
Barge Building	✔		1-2
Feathered Friends	✔	✔	1-2

Event Summaries
(Event summaries are from previous years and may be modified for 2023)

The Human Machine
Teams will be tested on their knowledge and understanding of basic human anatomy and physiology. There will be two components to this event. The first will involve a standard test with questions pertaining to the overall concepts of human anatomy and physiology and eleven organ systems. The second component will be a rotating station practical assessment focusing on the specific organ system(s) identified for that year.

iCompute
Participants will be tested on the following.

- Knowledge of basic computer concepts, including hardware and software
- Understanding of how computers solve problems
- Ability to create a simple program using a graphical interface

iRobot
Participants will be tested on the following:

- Knowledge of basic computing and robot automation concepts including software.
- Understanding of how computers and robots solve problems.
- Ability to identify the correct color code sequence to have Ozobot complete an objective.

Map Reading
Students will test their map reading skills by answering geographical questions using maps of different kinds.

Mystery Architecture
The goal is to use the given materials to build the tallest free-standing tower that can hold a tennis ball on top until the measurements are recorded.

On Target
Each team builds exactly 6 missiles, utilizing precision straws as the missile body. Missiles are constructed during the time of the event, using only materials provided by WESO. Missiles are launched indoors at a fixed target, with each participant on a team getting an opportunity to launch. The accuracy of the missile (distance from target) on a team's three best launches is used to determine the team score, with the shortest total distance from target being considered the winner.

Pentathlon
Five physical skills are combined with math questions in an obstacle course/relay race event. Each team must have five participants. The team score will integrate both the timed physical activities and the accuracy of answers to questions.

Potions
Each team will answer questions about basic chemistry concepts and complete simple chemistry experiments, while exercising basic lab skills and safety procedures.

Read It/Build It
All teams will be given an identical set of objects and instructions. Teams will attempt to build a "picture" from the objects based on the given instructions. The team with the most pieces placed correctly wins. This event tests each team's ability to understand and follow written or graphical instructions.

Write It/Build It
Writers will be shown a "picture" and will write a description of it. In a separate room, the builders will be given the objects of the "picture" and the written description, made by their writer teammates, and attempt to rebuild it. The team with the most pieces placed correctly wins. This event tests competitor's ability to clearly communicate in writing and follow written directions. The **"picture"** is a designed layout of individual objects installed on a flat surface, such as a poster board.

Zip-A-Dee-Doo-Dah
Given a few household materials, each team will construct a cable car capable of safely carrying a ping-pong ball down a zip line. The objective will be to achieve a target run time which will be

revealed on the day of the event. There will be a short written portion testing the physics concepts of the zip line, including an average velocity calculation.

Aerodynamics

Teams will design, construct, and fly at least two paper airplanes. Two initial flights will be measured for distance. Two final flights will be measured for flight time.

Barge Building

Using materials provided, teams will construct a barge, predict the amount of cargo the barge will hold before it sinks and load the barge. Scoring is based on the amount of cargo held by the barge and the team's ability to predict the maximum amount the barge can hold.

Feathered Friends

Participants will be tested on bird identification skills and basic bird science. Bird vocalizations, habitat, behavior, specimen identification, and field guide comprehension will be included as part of this hands-on, multimedia event.