

Pentathlon

Grades:	2, 3, 4, 5
Team Size:	5 participants
Duration:	15 minutes
Supervisors:	Tom Colis

Summary Description

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 (please see logistics and scoring for details).

Concepts Covered

- The mathematical concepts required will be based on those listed in the grade level content expectations from the *MI K-12 Mathematics Content Standards* (available on the Pentathlon event page). These will include, but are not limited to, addition, subtraction, multiplication, division, fractions, measurements, geometry, data interpretation, mathematical representations and word problems. Second grade teams will not be given any word problems.

Rules/Competition Format

- Each team member will need to complete one physical activity followed by a math themed problem.
- There will be five different physical skill activities and five different math problems for each grade level team. The five physical activities may change for each grade. The five math problems will change for each grade and will be grade level appropriate.
- Physical activities will vary in nature. Examples of these activities might be climbing through a tunnel or kicking a ball into a net. At least one activity will be stationary and could be completed by a seated participant.
- If the activity is such that multiple attempts may be required (i.e. kicking a ball into a net), the participant will be given three attempts (or as described in the preview) to successfully complete the activity. If they have not successfully completed the activity after the third attempt, they will be allowed to proceed to the math question portion.
- Each participant will be given one math problem written on a single piece of paper. Participants will be asked to work on their problem at a desk, table or on

the ground. The designated stationary activity will also have the math problem presented at a desk or table. The math problem may be presented in several formats. Problems may be of the type that require a single solution with the answer written in a designated space, may be a matching type problem or may require them to circle the correct answer(s). Problems will include instructions and will be of a grade appropriate format. Pencils will be provided. No calculators or any other devices will be allowed. Participants will not need to write their name, team name or anything else on the paper. Answer sheets will be collected and labeled with the team name by the supervisor following completion of the entire course. The team member can only attempt the problem once the physical activity has been successfully completed or has attempted three times (see above). Each team member will be given 1 minute (timers will be visible to the participants) to complete their problem. Inability to record an answer in 1 minute will result in the math problem being recorded as incorrect.

- Once the first teammate has submitted their solution or 1 minute has passed, the next teammate can initiate their physical activity followed by their math problem. The official timekeeper will indicate when the next teammate can start their physical activity. This sequence will continue until all 5 activities and math problems are completed.
- Two time keepers/referees will follow the team from start to finish recording the completion time for the obstacle course including the time taken to work out the math problems. This will be a running clock from start to finish.
- No communication is allowed between teammates outside of cheers of encouragement. No participant is allowed to ask their teammates for help with their math problem.
- No participant is allowed to look at their math problem prior to successful completion of their physical activity.

Scoring

- The team's base completion time will be the time determined by the two official timekeepers (or an average of the two times if different).
- The teams official score will be adjusted based on the accuracy of each individual math problem as follows:
 - Each correct answer will have 20 seconds subtracted from the base completion time.
 - Each incorrect answer will have 30 seconds added to the base completion time.
- Lowest time (score) wins.

- Example calculation:

Base completion time:	300 seconds (5 Minutes)
# correct answers X 20 (4 X 20):	- 80 seconds
# incorrect answers X 30 (1 X 30):	<u>+30 seconds</u>
final time (score):	250 seconds

Additional information

A few days before the tournament, a video will be made available explaining the details of the obstacle course and the 5 physical activities. This video will be distributed to head coaches and posted on the WESO website.

Materials Distributed by WESO

None

Materials to be brought to competition

None

****No cell phones or smart watches are allowed in event rooms. Participants who bring those items will be asked to leave them with the event supervisor for the duration of the event. Participants observed using them during the event will be disqualified.**

Event Questions

Please go to <https://wesoscience.org/events/> for information on how to submit questions about this event.