

I.O. Activity Descriptions

*This list includes IO activities that have been offered previously.
Not all activities are available every year. Others may be added or substituted.
Please review the IO schedule as posted on the GOAL teacher's website.*

Actor's Workshop – (6-8) - Students who registered for the Shakespeare Monologue and Scene Contest, and have their lines memorized ahead of time, attend this 90-minute coaching session with Shakespeare Teaching Artists from the O'Reilly Theater to work on characterization, inflection, blocking and delivery.

America Bowl (6-8) – Students will compete in an interscholastic quiz-bowl style competition focusing on national, regional, and local historical events.

Archaeology Dig – (6-8) Students will travel to the Lutherlyn Environmental Education Center to learn about local history by helping to excavate an active archaeology site. Many artifacts continue to be found from human activity, including frontier settlements and Native American campsites. Students will get very dirty as they carefully search for and identify artifacts.

Arts & Bots – (7/8) Students travel to Springdale MS to participate in an all-day workshop combining creativity and technology. Given a theme and art materials, teams create a visual display. They then learn how to use/program Hummingbird robots to enhance their project with lights, motions, and sensors that are controlled by the robot.

Back in Time – (6-8) –History buffs converge to immerse themselves in our nation's rich history. Learning centers include buzz questions, artifact discovery, and timeline assembly. A guest speaker highlights this event.

Battery Car Race – (6) – Student teams will design and build a battery-powered car, and complete a design document about their engineering process. Students will compete against other schools from the region.

Battery Car Race – (7/8) – Student teams will design and build a battery-powered car WITH an additional payload challenge (ie carry a water bottle), and complete a design document about their engineering process. Students will compete against other schools from the region.

Battery Car Workshop – (6-8) – Students who are signed up to compete in the Battery Car Race in either division will attend an all-day workshop to learn about race rules, how to prepare the required Design Documents and to begin designing and building their vehicles.

Battle of the Brains – (7, 8) - Teams of five students compete in "College Bowl" and "Identification Segment" where all academic areas are fair game. The College Bowl is run using a buzzer system pitting two teams against each other. The Identification Segment features questions in such areas as pop music, classical music, art identification, literature, movies, geography, and current events.

Bog and Watershed Environmental Study – Ligonier (7) – Students will travel by school bus to Linn Run State Park where they will take part in three workshops focused on understanding the unique ecological characteristics of the areas such as varieties of carnivorous species that would otherwise not be found growing in Pennsylvania. In addition, students will visit Saint Vincent College to learn about the Monastery Run Improvement Project, which was initiated to help restore the watershed after it was polluted by mine drainage.

Book Bonanza – (6-8) – Given three book titles in the fall, students will read the books then get together and use the content/message/themes in different high level thinking activities.

Calcu-Solve (NA) – (6-8) - Students will compete against other NA middle school students as they work on timed math problems. Top scorers will qualify for the AIU CalcuSolve competition at Duquesne University.

Calcu-Solve (AIU) – (6-8) - Students will compete against Allegheny County’s best math students as they work on timed math problems.

Calcu-Solve Superbowl – (6-8) – Top finishers from the AIU CalcuSolve competition can be invited to a higher level math competition against elite mathletes from the region.

Carnegie International Expo - (6-8) – Students will visit the Carnegie Museum of Art to view an exposition of pieces from emerging international artists and analyze/evaluate artworks.

Carnegie Museum of Art – (6-8) Students will attend Art Experience workshops which include visits to exhibits, exploration of selected pieces, and creation of thematic hands-on art projects.

Challenger Mission - (6-8) – Students will practice problem-solving, collaboration and leadership skills in this full-scale computer simulation.

Chesapeake Bay Trip – (8) - This three-day study takes students to island communities located in the Chesapeake Bay. The program is conducted by the Chesapeake Bay Foundation and teaches students about the relationship between the environment and the economics of the area.

Computer Fair – (6-8) – Students are able to unleash their creativity, convey information more dynamically, and collaborate to create innovative projects using the computer.

Creative Convention – (6, 7, 8) – Fluency, flexibility, and originality highlight this stimulating activity. There is a separate competition for each grade level held this year at the Baierl Center.

DNA Day – (7/8) – CSI enthusiasts will learn more about the field of forensic science as they hear from experts.

Doodle 4 Google – (6-8) – Artists design a new themed logo for Google following Google’s contest parameters.

Drama Workshops – (6-8) Students participate in interactive drama activities. This may be presented by GOAL staff and/or professional actors.

eCybermission - (7/8) – Students will engage in a cyber simulation utilizing digital tools to solve complex challenges as part of a team.

Edible Architecture – (6-8) – Students will design and create a structure using edible materials of their choosing and submit their entry for judging.

Equations – (6-8) – Mathletes compete while playing the Equations game using dice to form challenging equations while strategically puzzling their opponents.

Escape Room (6-8) Students work in teams to solve challenges in an hour-long, fun, interactive experience where the participants solve clues to “escape a room” that is designed around a story or theme. This event also incorporates other team building, communication and problem solving challenges for small groups to work on while waiting for their turn in the room. A follow-up debriefing session back at school teaches students how to invent their own escape rooms.

Fairchild Challenge at Phipps (6-8) Students use art, music, writing and photography skills to express the way they think about environment. Students investigate and engage with some of the most controversial contemporary topics in environmental science and devise imaginative responses.

Faraday Lecture - (6-8) – The Society for Analytical Chemists hosts this annual lecture, and invites professors and professionals from the fields of Chemistry and Physics to be the guest speaker as students learn more about science in a lecture/demonstration format.

Federal Court Open House - (7/8) - Students will visit the Federal District Court in Pittsburgh to learn about the trial process and observe a mock trial, then participate in question/answer sessions with a federal judge.

Fluid Power Workshop and Challenge (8) - The NFPA Fluid Power Workshop and Challenge is a two-part competition that challenges eighth grade students to solve an engineering problem using fluid power. At the workshop, students learn about fluid power engineering, then work in teams to design and build a fluid power mechanism. Students build an original fluid power device to compete against other teams in a timed competition.

Globe-Quest (6) – Geography buffs work as team members to solve a variety of geography contests. Map making, globe trekking, charting courses, and general geography knowledge will be part of the day.

Globe-Quest (7/8) – Designed as an extension of Globe-quest 6, this competition will challenge students to stretch their knowledge of world geography, use high level thinking, and cooperative group skills to be successful in their geo-adventures.

Holocaust Speakers Seminar – (8) – Students will attend a presentation by the Pittsburgh Holocaust Center speakers to learn more about the historical events and cultural impacts of the Holocaust on the world and various cultural groups.

Invention Convention – (6-8) – Students will compete in this AIU sponsored event to demonstrate their own inventions.

Invention Land -- (7,8) – Students will visit a unique working environment composed of 15 departments divided by focus, including automotive, outdoors, juvenile, home and toys. Each department is designed to increase creativity and to offer an environment where the products being developed can be used, tested and photographed in-house.

Jennings Environmental Center - (6) – Jennings Environmental Center near Slippery Rock University hosts this fabulous learning opportunity. Abandoned coal mine drainage is a problem and students test water and analyze the results to learn about the health of the creek and our water shed. In addition, students visit and learn about the AMD passive treatment system.

K'nex Challenge- (6, 7/8)—Engineers and architects join together to construct various challenges using these popular building tools.

Knowledge Master Open – (6-8) – This Jeopardy like competition is held on the same day for the middle schools. Students work together to answer 150 – 200 multiple choice questions in a variety of categories. The contest is automatically scored for speed and accuracy as the questions are answered.

Mock Trial – (7, 8) – Students in teams study the case used by senior high teams the previous year for the national Mock Trial competitions. Each team, whether prosecution or defense, includes three or four lawyers and three witnesses. The teams use problem solving and critical thinking skills to decide a winning strategy. After much practice, the teams are pitted against teams from others schools at a mock courtroom with guest judges.

NA Calcu-Solve – (6-8) – North Allegheny middle school students will meet and compete against each other by completing a series of individual and group math problems. The top students from each building will go on to compete in the AIU Calcu-Solve.

NA Chess Tournament – (6-8) – Students interested in chess will compete in an “in-house” competition in a 6th grade and a 7th/8th grade division to determine rankings and qualification for the NAGC Chess Tournament.

NAGC Chess Tournament – (6-8) – Qualifying players from the in-school tournaments will participate in a formal competition with an adjudicator (judge) and timed rounds. Each school team is composed of five players ranked for ability.

NACLO Workshop/Open Round – (8) - The North American Computational Linguistics Olympiad is a contest in which students solve linguistic puzzles, learn about the diversity and consistency of language, and exercise logic and “code-breaking” skills. No prior knowledge of linguistics or second languages is necessary. This is a set of I.O. activities, with the workshop being an introduction to and practice with computational linguistics, and the Open Round competition being a 3-hour contest. Workshop attendance is suggested for contestants.

Peep Show - (6-8) – Creative students display their creative talents by creating a diorama made from sugared marshmallow ‘peeps’ that presents a theme. Dioramas are entered in a contest.

President’s Bowl – (6-8) – Every fourth year, students will compete in this AIU sponsored event to learn about the election of the American president, and test knowledge of presidential history.

Prime Stage – (7, 8) – Students attend a live theater adaptation performance of a young adult fiction piece of literature. The performance is followed by a presentation and question/answer session with the director and actors about the play and how it was presented.

PSU Engineering WS (7, 8) – Student engineers from Penn State visit and explain their field of engineering and engage middle school students in engineering challenges.

Purple Comet Math Contest – (6-8) – Students work in teams to answer a series of math problems during this online, international mathematics competition.

Science Bowl – (6-8) – Students will compete in this regional science knowledge competition sponsored by the US Department of Energy. Regional winning teams moved on to national competition in Washington, DC.

SciTech (6-8) – Students visit this special exposition at Carnegie Science Center that features Pittsburgh scientific research and careers in many areas, including: Biotechnology, IT, Robotics, Advanced Materials Processes, Environmental Technology, and Nanotechnology – and connect students with leading scientists and technologists in a fun, dynamic atmosphere.

Shakespeare Monologue and Scene Contest – (6-8) – Interested drama students select a monologue or a scene to memorize and perform for a panel of local actors serving as judges at Pittsburgh's O'Reilly Theater.

Silver Eye Photography - (6 – 8) – Amateur photographers will get a glimpse of life through a lens as they strive to improve their photography skills. After a brief overview of what makes a good picture, students tour the area with a guide from Pittsburgh Landmarks looking for photo opportunities. A slide show of their work is critiqued the same day.

Teen Screen/Jewish Film Festival Talk Shop – (8) – Students will participate in one or both parts of this activity about the Holocaust. The JFF offers screenings of a menu of films presenting unique perspectives of people who experienced the Holocaust in different ways. JFF staff lead discussion based workshops to help students understand the film they watch and engage with the experiences of the characters portrayed.

Theater Arts Workshop – (6-8) – Students will work with theater professionals at the Byham Theater to develop skills in playwriting, set design, directing, staged combat, costumes, hair and make-up in this hands-on learning workshop.

Wordsmith – (6-8) – Fun with words fills this event as students compete by playing Scrabble, Boggle, Tri Bond, Scattergories, and Think Links!

World Affairs Council – (7,8) - An interactive program designed to familiarize middle school students with various global issues and cultures.

Writing Workshop – (6-8) – Creative Writing is the focus on this workshop. Sixth graders meet at the Baierl Center one date, and seventh and eighth graders go to Pine Richland to experience a creative writing workshop. Students will exchange these writings in oral form during the workshops.