



**“EVERYONE  
SHOULD EXPERIENCE  
IMPACT\*  
IT HAS TOTALLY  
CHANGED  
HOW I APPROACH THE  
TEACHING OF  
MATHEMATICS.”**

*IMPACT participant*

*\*Improving Mathematical Practices  
and Classroom Teaching  
for Grades K-3*

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## ABOUT IMPACT

- The development of IMPACT was funded by ODE and written by a team of leading Ohio mathematics educators.
- The statewide delivery of IMPACT is being coordinated by the TLC in partnership with 16 regional sites.
- ODE has confirmed that a variety of state and federal funds can be used to support an IMPACT program (a listing of sources can be found on the bottom of the next page).
- IMPACT can be offered to a building or cluster of buildings in various configurations.



## WHAT IS K-3 IMPACT?

The K-3 IMPACT (Improving Mathematical Practices and Classroom Teaching) Program has served Ohio's teachers for five years.

It is a teacher professional development initiative **recommended by ODE** that provides grades K-3 teachers with strategies to improve their use of inquiry-based instructional practices and to increase their mathematics content knowledge.

Through IMPACT, teachers explore rich tasks that emphasize mathematical processes and challenge students to understand mathematics more deeply.

Specific program content includes:

- Instruction focused on number, number operations, numeracy, and the concept of equality;
- Research-based presentation and engagement strategies that encourage inquiry learning;
- How to use a balanced approach between teacher and student-centered mathematics instruction;
- Experience with rich, problem-solving tasks and applications that develop a deeper understanding of how to differentiate content, process, and product when building new mathematical knowledge;
- Development of a deeper understanding of formative assessment to perceive student thinking and misconceptions;
- How to build on student thinking to guide and plan for instruction; and,
- Opportunities to share successes and challenges in implementing the instruction with students.

## FUNDING SOURCES

The Ohio Dept. of Education has confirmed that the following funding sources can be used to support an IMPACT program for your school/district:

*Title I, Part A: Improving basic programs | Title II, Part A: Teacher and principal and recruiting fund training | Title II, Part B: Mathematics and science partnership | Title V Part A: Innovative programs | Title V, Part B: Charter-school programs | 21st Century Community Learning Centers | IDIEA funds | REAP funds*

## WHAT PARTICIPANTS SAY

*“IMPACT really helped change my thought process, attitude, and teaching style with math. Now that I see the effectiveness of this way of thinking/teaching, I want to incorporate it into all subject areas. It has turned me into a ‘process thinker,’ allowing students to find their ways to cement ideas in math. It was run by highly qualified, helpful, professional people that exude the love of this type of math. It was contagious.”*

*“Solely based on what I’ve learned in this class, I now challenge my students more, and they have responded by improving a lot in their understanding of number sense, estimation, and basic math skills. They absolutely love the estimation activities and have really started to grasp other ways of solving math problems that they did not have before.”*

## RESULTS

Four years of evaluation results have consistently demonstrated IMPACT’s value as a strong, well-received professional development opportunity for K-3 teachers. IMPACT is changing the way teachers are teaching mathematics. Most importantly, their young students are learning to make math their own through problem solving, making connections, and by using critical thinking to demonstrate and explain their answers.



## BENEFITS

- Participation in a high quality, research-based professional development experience developed by a statewide group of mathematics leaders;
- A 58-hour, professional development program configured to meet building needs delivered by certified trainers; 28 hours in-person and 30 hours on-line;
- Selected books and resource materials;
- Two semester hours of graduate credit from Miami University at no cost, upon successful completion of the online iDiscovery course;
- Opportunity to earn and purchase up to two semester hours for the in-person sessions (if permitted by district policy).

## SCHEDULING AND COST

IMPACT can be implemented over 4.5 days, usually spread across 3-4 months. The program could be conducted partially in the summer and partially in the school year or completely during the school year. An additional two semester hours of on-line follow-up is an important part of the program and typically occurs from January to May.

Cost for the program varies according to the number of teachers and grades served, but commonly runs about \$15,000 for 30 participants. Schools may want to combine clusters to form a group of 30.

## POSSIBLE IMPACT CONFIGURATIONS

**Example A:** 2 consecutive days in August | 1 half-day each September – January | Online follow-up

**Example B:** 4 full-release days | 1 after-school session | Online follow-up

**Example C:** 1 day in August | 3 half-release days (Sept., Nov., Dec.) | 1 District PD day (October) | 2 three-hour after-school sessions (January) | Online follow-up

## OTHER RESOURCES

The TLC also offers the following resources:



### **Science Tasks with Otis & Flask**

Resources written by Ohio science education practitioners for science teachers to help students learn and review some of the most difficult elementary school science concepts and content!

This exciting program includes a set of 9 Science Tasks booklets. We also offer three types of equipment packs.



### **Math Camp-In**

In this program, students “hike” to math “trail posts” (stations), complete rich mathematical tasks and record ideas in their Camp Journal. Camp-In-a-Box is available for purchase, and includes sufficient materials to conduct Math Camp with 26 students.



### **Contract Professional Development**

TLC designs and conducts many standards-based and engaging, multi-day professional development sessions.

Interested? Contact TLC and talk with the staff to tailor a program just for you. Programs are priced on an individual basis, depending on the program’s length and nature.

## ABOUT THE TEACHING & LEARNING COLLABORATIVE

The Teaching & Learning Collaborative (TLC) is a non-profit organization whose mission is to improve science and mathematics education. It is a coalition of school districts, organizations, businesses and government agencies with whom we collaborate to design and carry out our work.

TLC works at a variety of levels, from the classroom to the state level, to ensure that all students have access to quality education in science and mathematics.

The TLC was formerly known as the Science & Mathematics Network. Our name changed in 2006, but our approach to professional development design and delivery has not. Simply put, TLC helps K-12 teachers teach science and mathematics more effectively. Sessions may focus on academic standards, instructional strategies, assessment in the classroom or on statewide tests, or a combination.

When possible, our professional development involves multiple interactions over time with the same teachers. In a combination of face-to-face and electronic sessions, participants explore and try new techniques, and adapt them to their particular needs and classroom settings.

## WANT TO SCHEDULE OUR IMPACT PROGRAM?

For additional information on each resource, visit our website:

[teachinglearningcollaborative.org](http://teachinglearningcollaborative.org)

For more details or to schedule an IMPACT program in your school or district, here’s how to reach us:

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