**Justification Toolkit**

Making the case for professional development requires a solid understanding of the benefits of attending an event.

The **NCTM 2024 Virtual Conference**, **April 10–13**, offers a valuable opportunity to improve your instructional practice, explore the latest trends in mathematics and in mathematics education and to gain insight that will transform your experience, learning and teaching mathematics.

This toolkit provides resources to help define and clearly communicate these benefits so you can make the case for attendance.

**This toolkit includes the following:**

* Why You Should Attend
* Benefits Worksheet
* Conference Strands
* Registration Rates
* Sample Justification Letter

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| **Why You Should Attend** |

If you’re a classroom teacher, administrator, math coach, supervisor, college professor, or preservice teacher―you will benefit from the sessions, workshops, learning opportunities, and connections available at the **NCTM 2024 Virtual Conference**.

**Professional Development:** Benefit from four days of learning from educational leaders, master teachers, and experts in mathematics education in a positive and supportive environment. Bring back actionable information and strategies to your school, district, and classroom.

**Networking/Community:** Our virtual conference platform offers numerous opportunities for you to connect through live interactive sessions, RoundTable discussions, networking, social, and collaborative opportunities, and much more.

**Exposition:** Discover innovative tools and resources to support your teaching. Meet with exhibitors and get answers to your questions about their products and services. Request additional information or schedule a follow-up.

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| **Professional Benefits** |

Beyond fulfilling your personal professional development goals, attending the **NCTM 2024 Virtual Conference** enables you to take expertise and knowledge back to your school or district. When you submit a request to attend, be sure to ***focus on what you will specifically bring back to your school or district***. Connect your responsibilities, goals, and challenges to your conference experience. Here are some goals common to mathematics teachers and the ways the **NCTM 2024 Virtual Conference** meets these goals.

**Benefits Worksheet**

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| **GOAL** | | **How NCTM Supports Your Goal** |
| ü | Gain insight into how to support students and teachers most significantly **impacted by the pandemic**. | NCTM conferences feature experts in mathematics education who can strategies and their experience with research-based methods to address immediate needs and support students and teachers. A variety of sessions provide tools and strategies to support and engage students who are struggling in mathematics learning. |
| ü | Stay on top of **current (and future) trends** in mathematics education | NCTM’s conferences offer various types of sessions to keep you ahead of the trends in mathematics education. You will gain new and effective intervention methods, refine your assessment techniques, discover the latest technologies, and acquire strategies to support the needs and learning of underrepresented populations. |
| ü | Expand your **professional network** | You’ll connect with knowledgeable speakers and session leaders as well as experience exceptional peer-to-peer networking opportunities where you will learn from others and grow your network. |
| ü | Keep your students **engaged and excited** about learning | Classroom teachers and other experts in mathematics education, who are breaking new ground and witnessing real success in schools across the country, present workshops and sessions to share their insights and strategies. |
| ü | Gain **fresh ideas** and get inspired | Get inspired by keynote speakers and leaders in mathematics education who will stimulate your passion for teaching mathematics. |
| ü | Learn about **new advances and technologies** for the classroom | Talking with vendors can be a great way to access expert knowledge and learn about new products and educational resources. Speak with exhibitors through chat or video meetings. |
| ü | **Share information with** your school or district | Session handouts are posted and available on the NCTM website after the event so you can support the investment of time and budget dollars by sharing information with your colleagues. Recordings of all sessions will also be available for 30 days after the event. |

# Conference Strands

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| **Rejoicing in the Assets and Identities of All Students** |

Valuing each student as an individual, we plan intentional learning experiences that celebrate students’ assets and identities. These assets/identities include but are not limited to developmental variations, neurodiversities, race/ethnicity, language, gender, sexual orientation, economic class, country of origin, culture, community, and interests. When we bring joy in learning experiences, we provide powerful opportunities for students to understand mathematical ideas, build their positive mathematical identity, foster their love of learning mathematics, make connections, and see mathematics in the world around them. The more we understand and respect the individual’s background and strengths, the more we understand their particular needs. *How do we nurture and foster a sense of joy in the mathematics classroom through learning experiences? How can we, as teachers, understand, celebrate, and utilize the strengths and differences that make our classes unique? How do we situate students in tasks in which they can find joy in productive struggle that is appropriately supported*? Sessions in this strand might include, but are not limited to, the following:

* Improving Mathematical Identity and Agency
* Creating a Sense of Belonging in the Mathematics Classroom
* Instructional Strategies to Celebrate Students’ Assets
* Using Student-Centered Instruction

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| **Finding Joy When Taking Up Multiple Pathways:**  **Enhancing Instruction for All Students** |

communities.

By dismantling “inequitable structures, including ability grouping and tracking” (NCTM 2020, *Catalyzing Change in Early Childhood and Elementary Mathematics: Initiating Critical Conversations*, p. 25), teachers are tasked to differentiate their mathematics instruction in new and innovative ways. We suggest joy should be at the center of this differentiation, allowing students choice and opportunities to play with the mathematics with an inquisitive mindset. In particular, we emphasize the importance that cognitively demanding tasks have in this work, whereby students are supported in their access to

mathematics through multiple access points. Moreover, these foci could also allow for discussion around varied and student invented strategies and pathways. Through this differentiated instruction, we wonder *How can teachers embrace their students’ assets when solving problems in authentic and meaningful ways? How can teachers both support and challenge students with varying mathematical strengths and interests? How can teachers develop an environment that uses students’ curiosity at the center of their mathematics instruction*? Sessions in this strand might include, but are not limited to, the following:

* Providing Student Choice in Their Strategy Development
* Elevating Pathways While Dismantling Tracks and Deficit Mindsets
* Offering Unique Learning Trajectories That Explicate Space for Novel Learning Opportunities
* Eliciting and Using Evidence of Student Reasoning at the Center of Instruction
* Investigating Co-teaching Structures to Explore Collaborative Inclusive Practices
* Preparing Mathematics Instruction That Ensures Equitable Learning Opportunities for Multilingual Learners

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| **Uplift, Empower, and Promote a Sense of Agency**  **in Mathematical Communities** |

NCTM engages in advocacy to focus, raise awareness, and influence decision-makers and the public on issues concerning high-quality mathematics teaching and learning. "Rehumanizing mathematics seeks to not only decouple mathematics from wealth, domination, and compliance, [but to recouple] it with connection, joy, and belonging" (Gutiérrez 2018, *Rehumanizing Mathematics for Black, Indigenous, and Latinx Students*, p. 4). In this strand, we will focus on advocacy and community work that can support and facilitate joy in the teaching and learning of mathematics. *What do humanizing practices and policies look like in and out of the mathematics classroom? What is possible when we learn about and leverage knowledge of our students’ communities, including the knowledge and wisdom of community members? How can our communities be used as mathematical resources and support mathematics teaching and learning in the classroom*? Sessions in this strand might include, but are not limited to, the following:

* Dismantling Inequitable Structures, Challenging Spaces of Marginality and Privilege, and Redefining What Counts as Knowing Math and Who Can Be Good at Math
* Sharing Policies or Practices That Elevate the Professional Status of Mathematics Teachers and Promote Joyful Learning Communities
* Employing Strategies to Recruit and Retain Mathematics Teachers
* Identifying the Political Pressures that Teachers are Currently Facing and Sharing *Strategies for Creative Insubordination in Mathematics Teaching* (Gutiérrez 2016)

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| **Catalyzing Change through Equitable Technology Integration** |

Using the capabilities of technology is essential for educators and learners to inform and transform how they learn, experience, communicate, assess, and do mathematics. Technology should be used to develop and deepen learner understanding, stimulate interest in the mathematics being learned, and increase mathematical proficiency. By harnessing technologies to facilitate computations and test conjectures, students and teachers alike find joy in creating new-to-them mathematical content. Aware of limitations and excited by possibilities, teachers implement technology-infused activities to provide more equitable access and opportunities for each and every learner to actively engage and participate in the learning of mathematics. *How does our use of technology position each and every student as a powerful doer of mathematics? How can we use technology in transformative ways to communicate safely and productively about mathematics, within and across different mathematics education communities (e.g., among students, with colleagues, with families)? How can we use technology to support students’ interest in and sense making about relevant social contexts facing our communities? How can teachers and teacher leaders support one another as we continue to develop and reflect on our deepening of technology integration and a vision of high-quality, equitable instruction with technology that is aligned with NCTM’s effective and equitable teaching practices? (2014, Principles to Actions: Ensuring Mathematical Success for All)* Sessions in this strand might include, but are not limited to, the following:

* Showcasing the Brilliance of Learners of All Ages, Abilities, and Backgrounds
* Leveraging Technologies for Collaborations and Communication to Increase Opportunities for Authentic Learning Experiences That Promote Learners' Success
* Creating Opportunities to Support the Reasoning and Sense Making of Relevant Social Contexts Connected to Relevant Issues Facing Our Communities
* Developing Systems of Reflective Practice to Support Educators as They Plan for and Use Technology in Their Instruction
* Identifying Elements from Mathematical and Technological Knowledge Bases to Support Learners’ Creation of New Mathematical Knowledge to Respond to Societal Questions or Bring About Joyful Learning

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| **Discovering Joy through Deep Mathematical Understanding Inspired by New Perspectives** |

The idea that deep mathematical understanding can happen only within the beige walls of a “traditional” math classroom is a thing of the past. This strand will focus on effective teaching practices that help develop students’ mathematical proficiencies and processes. By doing so, we honor students’ personal experiences, identities, cultures, backgrounds, and prior math experiences to nurture deep learning of mathematics content while instilling a joy of learning mathematics. *What routines can be implemented to honor individual perspectives? Which instructional methods promote understanding and growth in the math classroom? How can student mathematical discourse, student thinking, and opportunities for students to joyfully engage in meaningful math practices be encouraged through strategies, routines, and tasks*? Sessions in this strand will provide participants with strategies to implement new perspectives—from both teacher and student—that will enhance joy in the math classroom. Sessions in this strand may include, but are not limited to, the following:

* Effective Teaching Practices
* Student-Led Activities, • Choice in Learning
* Hands-on Engagement
* Real-World/Personal Connections
* Recognizing Individual Success

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| **Finding Joy and a Sense of Belonging through the Analysis and Reflection of Student Assessment Outcomes** |

Supporting students to understand that obtaining and retaining their mathematical knowledge has greater significance than a letter grade. These experiences should cultivate a mindset devoid of barriers that hinder student growth while promoting a positive outlook on mathematics and students’ mathematical identities. In this strand, we will focus on how teachers navigate the next steps when examining formative and summative assessment data. We see assessment data as an intentional tool to support students in understanding and building on their positive mathematical identity, and not a barrier to mathematical opportunities and experiences. *How can mathematics educators use data analysis to promote student ownership in their learning and success? How can data support the development of individualized instructional practices*? Sessions in this strand may include, but are not limited to, the following:

* Assessment Design in Mathematics
* Teachers Using Assessments to Plan Next Steps
* Students Using Assessments as a Form of Feedback and Ownership
* Critical Conversations About Equitable Assessment Design
* Recognizing the Bias in Traditional Assessment Practices
* Implementing Alternative Assessment Practices (e.g., Ungrading)
* Providing Asset-based Feedback
* Leveraging Multiple Points of Data to Support Every Child
* Dismantling Grade-Driven Motivation

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| **Joy for Teachers and Students: Stories from the Classroom** |

The effective use of inclusive practices brings joy to the teaching and learning of mathematics. Sessions in this strand use video and student work to showcase the joy in helping students succeed. The sessions can be told through stories that show how intentionality, thoughtfulness, and care ensure that all students find joy in the mathematics classroom. The video or student work provides concrete evidence from classrooms, allowing for discussions around what students say, do, and write about mathematics as well as teacher moves used to support meaningful discourse. Additionally, sessions can highlight the strategies and success that teachers use to find joy in the teaching of mathematics. *What do inclusive, anti-racist teaching practices look like? How do we nurture students’ positive mathematical identities with activities, practices, and routines? Do you have a success story of disrupting systems of oppression by challenging spaces of marginality and privilege within your classroom? How have you responded to and sustained students’ cultural and linguistic resources? How can we foster all students’ mathematical agency, belonging, and joy*? Using video and student work, sessions in this strand might include, but are not limited to, the following:

* Intentional Learning Experiences That Bring the Joy of Learning Mathematics
* Strategies For Promoting Students’ Curiosity and Creativity
* Identification, Revision, and/or Implementation of a Problematic Task (Contained Stereotypes Regarding Family Structure, Race/Ethnicity, Class, Gender, Culture, and Language) Highlighting Lessons Learned
* Celebrations of The Brilliance and Unique Contributions of Our Students
* Situations That Challenge Students to Explore, Problem Solve, and Make Connections
* Examples That Provide Students with the Opportunity to See Mathematics as They Encounter Their World and Make Meaning of It
* Stories That Situate Students in Tasks in Which They Can Find Joy in Productive Struggle That Is Appropriately Supported

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| **Registration Rates** |
| The most up-to-date rates can be found [**online**](https://www.nctm.org/virtual2024/#Rates). |

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| **Sample Justification Letter** |
| Personalize and use this draft letter to help gain approval to attend the **NCTM 2024 Virtual Conference**. We recommend downloading this portion as a word document to modify and share with your supervisor. |

*<Date>*

**Request to Attend the NCTM 2024 Virtual Conference**

[**http://www.nctm.org/virtual2024/**](http://www.nctm.org/virtual2024/)

Dear <Colleague>,

At the NCTM 2024 Virtual Conference, educators at all levels will virtually come together to enhance their professional skills, knowledge, and careers. I would like to participate in this event, which is scheduled for April 10–13, 2023, to learn best teaching practices to build a strong foundation of deep mathematical understanding and further our mathematics instruction for each and every student.

For an <NCTM Member / Nonmember>, the registration fee for the entire four-day conference would be $\_\_\_\_\_\_\_. I believe that I would also benefit from attending a Preconference Workshop, *Making Differentiated Instruction Work for Them and Work for You* on April 10 for an additional $85. The total cost for my participation would be $\_\_\_\_\_\_\_.

At this event, I will select presentations (sessions, bursts, and workshops) specific to my grade level from the following topic strands:

* Rejoicing in the Assets and Identities of All Students
* Finding Joy When Taking Up Multiple Pathways: Enhancing Instruction for All Students
* Uplift, Empower, and Promote a Sense of Agency in Mathematical Communities
* Catalyzing Change through Equitable Technology Integration
* Discovering Joy through Deep Mathematical Understanding Inspired by New Perspectives
* Finding Joy and a Sense of Belonging through the Analysis and Reflection of Student Assessment Outcomes
* Joy for Teachers and Students: Stories from the Classroom

My participation in this program will complement our school’s objectives, and I plan to return with resources to share what I’ve learned with my peers, and to give our students the tools they need to succeed.

Sincerely,

***<Your Full Name>***