Vermont Students! ***Consider submitting a project at VCTM's***

2021 Statewide Virtual Math Fair

The Vermont Council of Teachers of Mathematics

The Vermont Council of Teachers of Mathematics is once again sponsoring a Mathematics Fair for student projects. Unlike the first four years of this event, students, teachers, judges, parents, and members of the public will engage online with projects over the course of a whole week in early April, 2021 (**April 5th - April 9th**).

ALL Vermont students (public, private or homeschool) in grades K-12 are eligible to enter!

= MATH FAIR REGISTRATION DEADLINE =

FEBRUARY 5th, 2021

SCAN ME

↓ More information on the rest of this flyer & online ↓

To get the full scoop, visit vermontmath.org **or scan our event page QR code!**

SCAN ME

First, a message from the Math Fair Director, Steven Ushakov:

On behalf of the Vermont Council of Teachers of Mathematics (VCTM), I would like to cordially invite you to submit a project and join us as part of the next generation of critical thinkers and problem solvers at the 2021 Statewide Virtual Math Fair. With your virtual participation, we hope to connect with even more parts of our statewide mathematics community while continuing to meet our event goal of allowing students the opportunity to demonstrate their understanding of math in a collaborative, non-traditional way.

New this year - VCTM plans to release a video invitation for students and lesson plan for teachers (by mid-November). We've also updated our scoring rubrics, project entry criteria, and project creation & submission criteria. Oh, and we'll be online FOR A WHOLE WEEK! Otherwise, the outline of registering, investigating, and sharing projects is much the same as prior years.

Within this document you will find our Plan A, but please know that with no playbook and variable circumstances in our world, VCTM may have to change certain aspects of the event at short notice. Any changes will be communicated promptly to students, teachers, parents, community members and project stakeholders. Please don't hesitate to reach out with questions!

Next, check out the rest of this flyer to get the full scoop on this year's fair. You can click on the linked items below OR scroll down to the appropriate section:

1. GET REGISTERED! 📋

First, all students interested in participating must register by the **February 5th deadline** under one of the grade band categories (K-2, 3-4, 5-6, 7-8, 9-12) as an INDIVIDUAL or CLASS project.

- Visit our website (vermontmath.org) to fill out the registration form (available as of early November 2020). Fill out one form for each project, but please include all participant names.
- While all K-12 VT students are eligible to participate, please be sure to abide by our project entry criteria as you organize and prepare to register.

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2. CREATE & INVESTIGATE... 🕵️

...your mathematical topic or question! This can be applied, pure, or even paradoxical in nature! Consider a famous problem or pose one of your own. Perhaps you want to know what it means mathematically for a video to go viral online. It could be that the Sierpinski Triangle and the world of fractals has you wondering. Maybe you want to design a physical model or computer program to accomplish a task or solve a real-world problem. What do you notice and wonder about our world? How can you measure it? How can you model it? Why do we want to learn about it?

- While exploring our world quantitatively, please follow our project creation & submission criteria. This will give you guidance on how to document your great work as well as what form(s) it can take!
- You should also consult our scoring rubrics: Primary (Grades K-2/3-4/5-6) Rubric & Secondary (Grades 7-8/9-12) Rubric.

- π *Questions? Having trouble getting started?* Explore a list of possible topics here! Or consult our FAQs at the bottom of this flyer. By mid-November, we hope to have an informational video for available participants (including lesson ideas for teachers/project advisors).

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3. SUBMIT & SHARE YOUR PROJECT! ✔️

Next, students must **submit their public project product for a public display no later than April 2nd**. A submission form will be available online in early March. Projects MUST be submitted in a video and/or slideshow format (Please see: project creation & submission criteria).

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4. PARTICIPATE IN MATH FAIR WEEK! 👨💻

During the week of April 5th - April 9th:

- π MATH COMMUNITY - Projects will be publicly displayed online to the statewide math community for likes, comments & feedback!
- π PROJECT INTERVIEWS - Additionally, during this week, students will be scheduled for a 15-minute (max) synchronous Q&A/scoring interview with grade level judges. A schedule for these sessions will be released a few weeks after the registration deadline has passed.
- π MATH NIGHT & AWARDS CEREMONY - On the night of Thursday April 8th, 2020, we will convene for an evening of family mathematical fun and an awards ceremony. This will happen synchronously (all together, at the same time) over Zoom or Google Meets.

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5. FAQs 🙋‍♀️

Below is a list of frequently-asked and anticipated questions:

- **Is there a cost to participate?** Unlike prior in-person years, there is NO cost to register for the 2021 fair. It's F-R-E-E and we welcome any and all students to register. *Whether enrolled in public or private K-12, whether learning remote or in-person this year, whether homeschool or doing school at home/remotely for the first time, we want YOU to submit a project!*
- **How do I get started?** Note that students are NOT required to submit anything about their project at the time of registration, but it is highly encouraged that they have either already started working on their project or have chosen a mathematical topic or essential question for their investigation. When available, please check out our informational video for participants & project advisors.
- **What if I missed the deadline? What if I can no longer participate?** Student substitutions and late registrations will be accepted only as both our ability to display and score more projects allows. Check out our project entry criteria for more info.
- **I need to change something in my registration. What do I do?** Please contact the math fair director, Steven Ushakov, by email at sushakov@u32.org.
- **What if I/my student(s) cannot participate in the synchronous, online parts of the virtual fair?** The most important aspect of this event is your investigation/project and sharing with the Vermont mathematical community! We understand that not all schedules will allow synchronous participation and not all households have consistent access to reliable internet. We do hope students can attend their scheduled synchronous zoom with judges and that as many students, teachers, parents, and community members as possible can attend our math night and awards ceremony. Due to anticipated confidentiality concerns, we may be unable to record the latter, but want to make every effort to give students feedback if they cannot make their scheduled

interview. If you foresee issues attending the project interviews for your project, please indicate so on the registration form (if before the deadline) or email the math fair director Steven Ushakov (if after the deadline) as soon as possible.

- **How are students scored & placed?** In each grade band category, we will award a first-second-third place finish as well as an honorable mention. A team of judges (at least two) will score each project according to our scoring rubrics: Primary (Grades K-2/3-4/5-6) Rubric & Secondary (Grades 7-8/9-12) Rubric. VCTM will make every effort this year to deliver on the promise of physical medals for our winning projects.
- **When did the math fair start? Why?** Kate McCann, a Vermont High School Math Teacher, former co-president of VCTM, 2017 Vermont Teacher of the Year, and a big proponent for getting a human on Mars, started this event in 2017 with the primary goals of generating excitement and community around math, providing low-stakes competition, and offering an authentic opportunity for students to demonstrate their learning in a non-traditional way. With generous support from local sponsors, VCTM has been able to continue offering this event and was excited to take on the challenge of making it happen once again but in a virtual format.
- **What is the Vermont Council of Teachers of Mathematics (VCTM)?** VCTM is a professional organization of K-12+post-secondary math educators from around the state whom volunteer their time to achieve the following mission: Building a math educators community, by facilitating conversation and sharing resources around best practices to engage student learning throughout the state of Vermont while strengthening connections with state and national organizations. Please visit our website vermontmath.org to learn more!