SCRATCH LESSON PLAN

Hour of Code™ 2024 with Scratch: Spreading Kindness with Gitanjali Rao

Scratch has teamed up with inspiring young scientist and innovator Gitanjali Rao (gitanjalirao.net) to celebrate Hour of Code™ 2024. We've created two activities to explore and remix, inspired by her innovations and advocacy. We also invite you and your learners to watch a replay of our live Create-Along with Gitanjali and Maren from the Scratch Team, which was live-streamed on our official YouTube channel (ScratchTeam) on December 10th.

In the first activity option, learners can design their own invention, share the invention's goal or purpose through text and/or a voice recording, and learn about Gitanjali's innovation process. In our second activity option, learners can develop and share a message of kindness, inspired by Gitanjali's innovative approach to anti-bullying efforts for young people around the world. For more on our invention activity, click here.

Gitanjali is an author, speaker, and an active promoter of STEM education around the world. She was honored as Forbes "30 Under 30 in Science" in 2019, as well as *TIME*'s "Top Young Innovator" and "TIME Kid of the Year" for her innovations and the STEM workshops she conducts globally, which have inspired thousands of students across forty-six countries. At the Scratch Foundation, we design products and programs that support learners as they develop their thinking, their voice, and their identity. The Scratch Team is excited to create and explore with Gitanjali for Hour of Code™ because she inspires young innovators to try new ideas and develop meaningful solutions in community with others. Together, we can make the invisible visible by raising awareness about problems in need of solutions and bringing our ideas to life in prototypes, projects, and products to create amazing things that can change the world!

Resources for Learners:

- Hour of Code 2024 with Scratch: Spreading Kindness Coding Cards (Student-Facing Cards) - printable cards students can use to follow along with the lesson
- Hour of Code 2024 with Scratch: Kindness Community Activity (Explainer Video) - a short video highlighting what the project entails and how to remix
- Replay of our live Create-Along with Gitanjali and Maren from the Scratch Team

Additional resources provided throughout the guide.

Audience:

Classroom Teachers, Instructional Technology Specialists, Library Media Specialists, Informal Learning Environments

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Time: Activity Option: Kindness Community - 60 minutes

- Create Your Message of Kindness - 45 min
- Digital Citizen - 15 min
- Communicate - Share and Reflect - 10 min

We've provided timing for a 60 minute session, but you may opt to spread out over two separate sessions if learners need/want more time to tinker or you want to take more time to brainstorm, plan, and reflect.

Objectives (Learners Will):

- Learn about Gitanjali Rao
- Reflect on the importance of kindness and good digital citizenship and share a message via a Scratch project
- Communicate and share their projects with their learning community

See page 10 for aligned standards.

Activity Option: Kindness Community

Meet Gitanjali Rao

Gitanjali Rao is a young inventor, scientist, author, speaker, and promoter of STEM education globally. She was honored as *TIME*'s "Top Young Innovator" and "TIME Kid of the Year" for her innovations and the STEM workshops she conducts globally. She was recognized as America's Top Young Scientist of 2017, and she was a recipient of an EPA Presidential award for her patented invention of an innovative lead contamination detection tool, just one of her many inventions. She is currently a sophomore at Massachusetts Institute of Technology.

One of Gitanjali's inventions is Kindly, an AI-based anti-cyberbullying service that aims to detect and prevent cyberbullying at an early stage. You can learn more about it here: https://kindly.unicef.io/https://kindly.unicef.org. Kindly "uses Machine Learning to identify 'toxic' messages…before they are sent and offers users the chance to modify them." It was "created for children between the ages of 10 and 18 years in an effort to end cyberbullying and make them feel safer."

At Scratch, we have a strong focus on building community, kindness, and respect through our Community Guidelines, which include "Treat everyone with respect" and "Help keep the site friendly" by reporting inappropriate comments or projects to our moderation team and welcoming fellow Scratchers to share about things that excite them and are important to them.

Using her Innovation Process, Gitanjali has created several inventions, including:

- Kindly, an **AI-based anti-cyberbullying service** that aims to detect and prevent cyberbullying at an early stage, which launched as an API available for use along with a variety of front-ends
- Tethys, a patented **device to detect lead in drinking water** that is faster and more inexpensive than current techniques, based on the latest developments in carbon nanotube sensor technology
- A **windshield barrier that absorbs laser light**, protecting pilots from laser beams directed at aircraft
- A **scanning app that detects the toxicity of snakebites**
- **Technology to better target drug delivery to lung tumors**

You can learn more about Kindly and Tethys (Troubled By Flint Water Crisis, 11-Year-Old Girl Invents Lead-Detecting Device).

Create Your Message of Kindness (45 minutes)

Use our starter project to share a unique message of kindness inspired by Gitanjali's work to combat cyberbullying. (Or let learners create their own project about spreading kindness.)

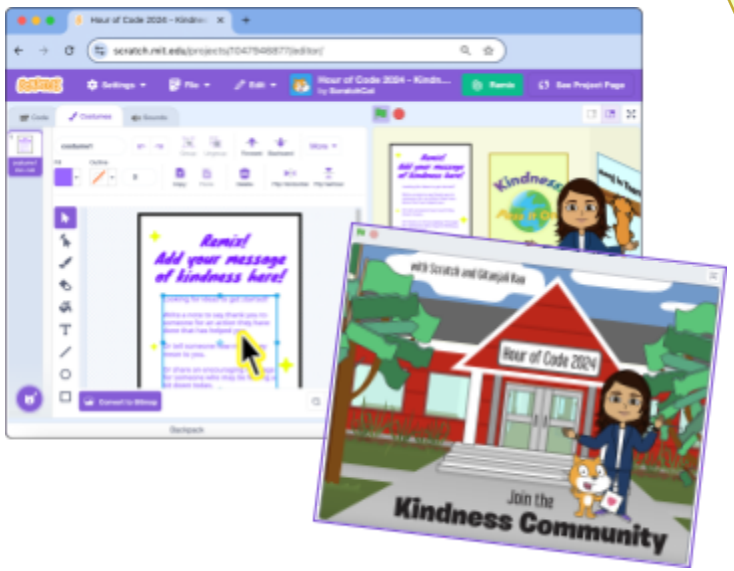
Step 1: Start this activity by looking at ScratchCat's "Hour of Code 2024 - Kindness Starter Project" (projects/1047946877) and hear Gitanjali's message on kindness.

Step 2: Remix the project. (Note: For offline Scratch users, download the starter project and upload it into the downloaded version of Scratch to experiment with it.)

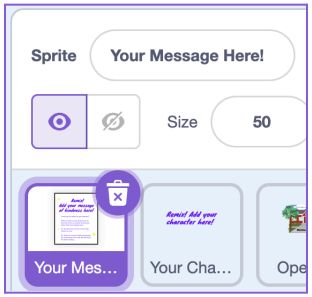
Step 3: Add your message of kindness to the "Your Message Here!" sprite provided by editing the sprite costume.

Step 4: Add a character to represent you to the "Your Character Here" sprite provided by editing the sprite costume. This could be a vector drawing created with the Paint Editor, an uploaded drawing (best with the background removed), or one created by remixing sprite library sprites. (See the resources and project coding cards below for more information.)

Step 5: Animate your sprite. Record your message of kindness. Further customize with new backgrounds, dialog, etc.



The Project Editor view of the Kindness project.



Sprites for your message and character in the sprite area.

Resources:

- Hour of Code 2024 with Scratch: Spreading Kindness Coding Cards (Student-Facing Cards) - printable cards students can use to follow along with the lesson
- Hour of Code 2024 with Scratch: Kindness Community Activity (Explainer Video) - a short video highlighting what the project entails and how to remix

Digital Citizen (15 minutes)

Look at our Community Guidelines and see our guide for Getting Started in the Online Community to learn more about the Scratch Community. Key guidelines around kindness are:

Treat everyone with respect.
Scratchers have diverse backgrounds, interests, identities, and experiences. Everyone on Scratch is encouraged to share things that excite them and are important to them—we hope that you find ways to celebrate your own identity on Scratch, and allow others to do the same. It's never OK to attack a person or group's identity or to be unkind to someone about their background or interests.

Give helpful feedback.
Everyone on Scratch is learning. When commenting on a project, remember to say something you like about it, offer suggestions, and be kind, not critical. Please keep comments respectful.


Community Guidelines

Scratch is a friendly and welcoming community for everyone, where people create, share, and learn together. We welcome people of all ages, races, ethnicities, religions, abilities, sexual orientations, and gender identities.

Help keep Scratch a welcoming, supportive, and creative space for all by following these Community Guidelines:

Treat everyone with respect.

Scratchers have diverse backgrounds, interests, identities, and experiences. Everyone on Scratch is encouraged to share things that excite them and are important to them—we hope that you find ways to celebrate your own identity on Scratch, and allow others to do the same. It's never OK to attack a person or group's identity or to be unkind to someone about their background or interests.

Be safe: keep personal and contact information private.

For safety reasons, don't give out any information that could be used for private communication, in person or online. This includes sharing real last names, phone numbers, addresses, hometowns, school names, email addresses, usernames or links to social media sites, video chatting applications, or websites with private chat functionality.

Give helpful feedback.

Everyone on Scratch is learning. When commenting on a project, remember to say something you like about it, offer suggestions, and be kind, not critical. Please keep comments respectful and avoid spamming or posting chain mail. We encourage you to try new things, experiment, and learn from others.

Embrace remix culture.

Remixing is when you build upon someone else's projects, code, ideas, images, or anything else they share on Scratch to make your own unique creation.

Remixing is a great way to collaborate and connect with other Scratchers. You are encouraged

You can download our Community Guidelines as a printable poster in 8.5x11 or 18x24 format.

Help keep the site friendly.
It's important to keep your creations and conversations friendly and appropriate for all ages. If you think something on Scratch is mean, insulting, too violent, or otherwise disruptive to the community, please use the "Report" button rather than engaging in fights, spreading rumors about other people's behavior, or otherwise responding to any inappropriate content.

Resources:

- Scratch Community Guidelines (Website Page) or Poster 8.5x11 or Poster 18x24 (Printable Posters)
- Getting Started in the Online Community (Written Guide) - A guide all about the Scratch Online Community.
- Looking for more information on Digital Citizenship? Check out new lessons from ISTE on Digital Citizenship or try our Google's interactive game Interland, which focuses on digital citizenship and safety

Communicate - Share and Reflect (10 minutes)

Ready to spread your message of kindness? Share your remix in our studio, which will go live for Hour of Code™ week, starting on December 9th. Look for the studio in the Featured Studios row on the homepage that week, or linked in the project description. Or create your own class studio or a gallery walk where learners can share their projects. (See more information below.)

Resources:

- Show-and-Tell Sharing Sheet (Worksheet)
- Project Gallery Walk Self-Reflection and Peer Feedback Sheet (Worksheet)

Share Option #1: Create a Class Studio to Gather Shared Projects

Studios are a space on Scratch where users can come together to make, share, and collect projects related to a particular theme, idea, or prompt. Set up a class studio* for your learners and add their original asset projects. Learners are encouraged to take time to look at projects and read/listen/interact with them.

Resources:

- Teacher Account Guide (Written Guide) - This resource contains information on setting up teacher accounts and student accounts, managing classes, and class studios.
- Scratch Studios Guide (Written Guide) - Information on setting up and managing studios generally.

**Note: Learners will need a Scratch account and access to the online Scratch editor to participate in this option.*

Share Option #2: Gallery Walk

Have each participant's project open on their computer or other device. Participants can walk around a room, or take turns sharing their screen in a virtual space, to experience each other's creations. Another option is to display one project at a time on a large screen. Learners are encouraged to take time to look at projects and read/listen/interact with them.

More Things to Try

- Debugging Reflection (Worksheet) - Dive into the practice of debugging with learners and use this reflection sheet to help them explore.
- Debugging Strategies Posters (Printable Posters)

Looking to learn more? The Scratch Foundation has partnered with The Achievery to provide free beginner and intermediate creative coding lesson plans on a variety of topics for educators, caregivers, and learners. **Sign up (for free!) for the Achievery by using our custom partner code "SCRATCH"** when you register to support our work! https://www.theachievery.com/account/signup

Standards Aligned

CSTA Standards	ISTE Standards	CASEL Framework	RITEC Indicators
Link to full standards	Link to full standards	Link to full standards	Link to full standards
• 1B-AP-10 Create programs • 1B-AP-12 Modify, remix, or incorporate • 1B-AP-14 Give appropriate attribution • 1B-AP-15 Test and debug	• 1.1a Learning Goals • 1.1d Technology Fundamentals • 1.2.b Online Interactions • 1.5.c Decompose Problems • 1.5.d Algorithmic Thinking • 1.6.b Creative Communicator • 1.6.c Communicate Complex Ideas • 1.7.a Global Connections	• Self-awareness • Self-management • Relationship Skills	• Autonomy • Competence • Relationships • Creativity • Identities • Diversity, equity and inclusion

This lesson also fulfills all three of the ISB Indicators of Playful Learning (Choice, Delight, Wonder), developed by the Pedagogy of Play (PoP) research project at Harvard University.

The 'Hour of Code™'/'Hora del Código®' is a global initiative by Computer Science Education Week and Code.org to introduce millions of students to one hour of computer science and computer programming.

Tip: If you'd like to translate this guide, **click here to make a copy** of this Google doc.