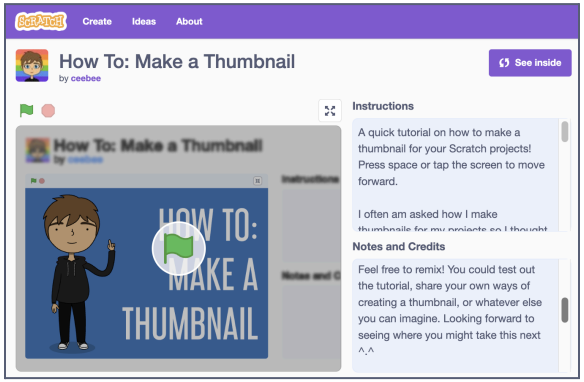
SCRATCH LESSON PLAN

Scratch Activity Swap: Share, Inspire, Collaborate



A new school year or learning cycle is an opportunity to get to know classmates and build community. In this lesson, students use Scratch to share something they are passionate about and then “swap projects” with each other to remix and try out different ideas. The activity can also work any time learners are in a creative slump or looking for inspiration.

The activity begins with creating a Scratch project that includes a craft, idea, tutorial, or activity that can serve as inspiration for others. Learners are then asked to remix a project by their peers, trying the activity and/or expanding on the activity shared. By stepping into the role of teacher, learners can practice effective communication and self efficacy.

At Scratch, we have a strong focus on building community, kindness, and respect through our Community Guidelines, as well as connecting learners with each other and with educators in meaningful ways. Coding, presentation, and feedback skills, along with practice remixing and iterating on others’ work, provide an important base for establishing a positive learning community.

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

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Time: Approx 3 hours total

- Part 1: Sharing Activity - 60 minutes
- Part 2: Swap and Reflect - 60 minutes
- Part 3: Remix and Reflect - 60-75 minutes

Objectives (Learners Will):

- Identify a craft, idea, tutorial, or activity they feel confident teaching others about
- Decompose and sequence the steps needed
- Create and share an informative project to teach a peer
- Communicate with their learning community
- Reflect and debug
- Remix the work of a peer and reflect on the experience

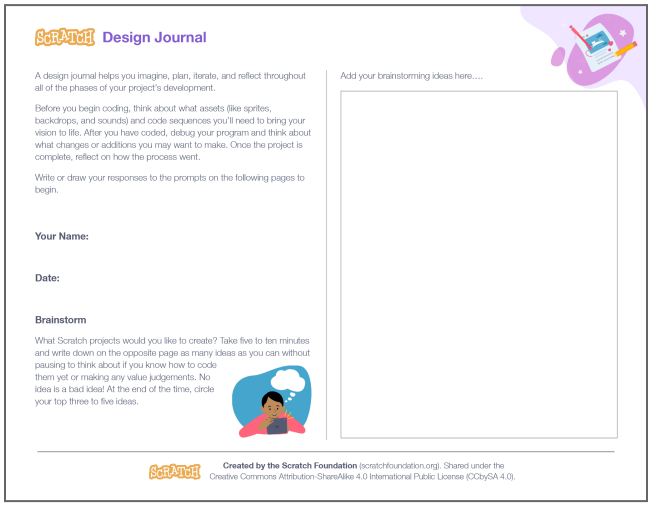
See page 8 for aligned standards.

Part 1: Sharing Activity

Brainstorm (10 minutes)

Ask learners to think about what they want to share: a craft, idea, tutorial, or activity. We suggest focusing on a Scratch Tutorial or “This is how you…” project as listed in the section below. See Additional Options below for alternative ideas.

Use a design journal to record ideas and plans. Learners are encouraged to write and draw their answers.


Design Journal

A design journal helps you imagine, plan, iterate, and reflect throughout all of the phases of your project's development.

Before you begin coding, think about what assets (like sprites, backdrops, and sounds) and code sequences you'll need to bring your vision to life. After you have coded, debug your program and think about what changes or additions you may want to make. Once the project is complete, reflect on how the process went.

Write or draw your responses to the prompts on the following pages to begin.

Your Name:

Date:

Brainstorm

What Scratch projects would you like to create? Take five to ten minutes and write down on the opposite page as many ideas as you can without pausing to think about if you know how to code them yet or making any value judgements. No idea is a bad idea! At the end of the time, circle your top three to five ideas.

Add your brainstorming ideas here....

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Resources:

- Scratch Design Journal (Worksheet) - imagine, plan, iterate, and reflect throughout all of the phases of your project’s development

Create Your Project (50 minutes)

Learners will create a project that reflects a skill or idea they are passionate about sharing. The options of projects are endless! We suggest focusing on one of these two themes:

- Scratch Tutorial project (concepts specific to Scratch)
- “This is how you…” project (a personal hobby or interest)

Projects can communicate the information using illustrations, text, voice recordings, slideshows, commented code, etc.

Resources:

- scratchlycaterton’s "How to Create a Tutorial Slideshow"
- Activity Swap Tutorial Projects (Video of Examples)

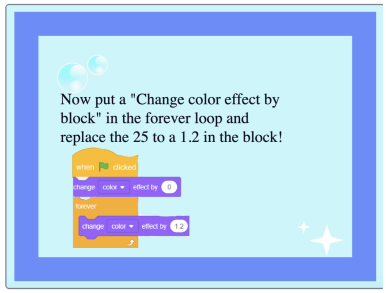
Scratch Tutorial Project

Project Idea Examples:

- how to create a mute button for music
- how to make an object or scene fade in and out
- make an icon creator and share how people can use it to create a custom Scratch profile picture
- how to draw something in the Paint Editor
- how use the backpack feature to move items from one project to another
- where to find extension blocks and how to use them
- suggestions for recording sound effects and altering them using the Sound Editor

Project Examples:

- *How to make a color changing block!*
- *How To: Make a Thumbnail*
- *How the "Size hack" costume works!*
- *How to use Pitch Effect*
- *Checking Status with Variables Example (code is commented inside, instead of instructions printed on the stage)*
- *Blinking Animation Tutorial*



"This is how you…" Project

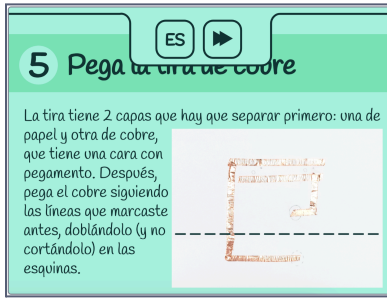
Project Idea Examples:

- Make an origami design or a fortune teller
- teach others how to create art in a certain style (like a blockshade or Pointillism, etc.) or how to add art effects (like shading or gradients, etc.), by creating a speeddraw or interactive artwork sharing instructions
- compose an informational project on how to make a favorite food and ask users to follow the steps
- share about a favorite craft or DIY (Do-It-Yourself) activity
- explain a favorite hobby
- Invent or choose a sport or a board game and create a project to show others how to play

To see a video sample of these projects, click here.

Project Examples:

- *How to Make Soft Circuits / Cómo hacer soft circuits*
- *Create a Self-Soothe Sensory Kit*
- *Tutorials & Templates: A Potted Plant*
- *Perfect Pancakes - How To Make Pancakes*
- *How To Make a Sock Puppet at Home!*
- *Scratch Cat Origami Tutorial*
- *How to Make Paper Stars*
- *Cat Mosaic Paper Craft*
- *Avión de papel remix*
- *Elder Wand [DIY]*



Additional Options

While we suggest focusing on two types of projects, you may opt to expand the types of project to share. Here are some examples of additional project ideas, which could be focused around a subject area such as art, music, or science:

Code a prompt generator

Generate project ideas by mixing and matching items from multiple lists that you create (like genre, main character, descriptive adjective, etc.)

See this example:

- ScratchCat's Idea Generator

More information:

- Variables and Lists Video Tutorial Part 1 and Part 2, Written Guide, and Coding Cards

Start a story, poem, book trailer, interactive story, etc.

Encourage viewers to remix and add to or animate what you've begun.

See examples:

- Two birds on a wire AMV
- Simple Animated Story
- Finish the story - Part 5
- Otto, Karl and Kato: A Penguin Family

Start a music project

Use music blocks or sounds. Ask others to add to it by creating additional instruments, compatible beats, or layer sounds.

See examples:

- Fur Elise with Music Blocks
- [Noteblocks] Loreen - Tattoo

More information:

- Sounds and Music Coding Cards
- My Blocks Video Tutorial Part 1 Part 2 Part 3, Written Guide, and Coding Cards
- Make Some Noise: Exploring Sounds and Music Lesson Plan

Identify a piece of art that inspires you, make it come alive and/or teach others about the artist or piece

See examples:

- Art Alive
- First Manga from Japan: Scratch Mascot in Middle Ages Choju-Giga

Develop an interactive simulation

Teach about electricity, gravity, the solar system, etc., through an interactive project.

See examples:

- Double Pendulum
- Machine Constructor V1.1
- Orbits Simulation

Localize

Share about a local custom, your culture, regional food, etc.

See examples:

- How to Draw Afro Hair In Vector Tutorial
- Learn to make Idlis! - An Interactive Recipe Game

Part 2: Swap and Reflect

Share: Create a Class Studio to Gather Shared Projects (45 minutes)

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 to share their activity swap projects. In part 3 of this lesson, learners will choose a project to remix.

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) - General information on setting up and managing.
- How to Run Your Own Event Studio (Written Guide) - Our guide for facilitation tips.

**Note: Learners need a Scratch account and access to the online editor to participate in this option. Alternatively, you could see our guide on "How to Replicate an Event Studio in an Offline Scratch Environment," where students could share and upload each other's Scratch files to the offline editor to iterate on the project or try the activity themselves.*

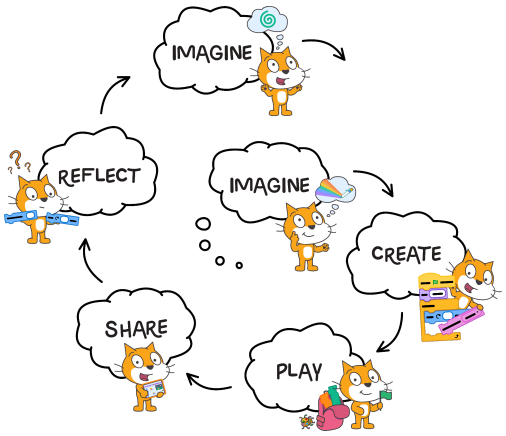
Reflection (15 minutes)

Learners reflect on their project creation and process as they complete the Sharing Sheet below.

Next, their peers are encouraged to leave feedback or comments on the sheet for the creator as they view the projects in a studio.

Resources:

- Activity Swap Reflection and Sharing Sheet (Worksheet)



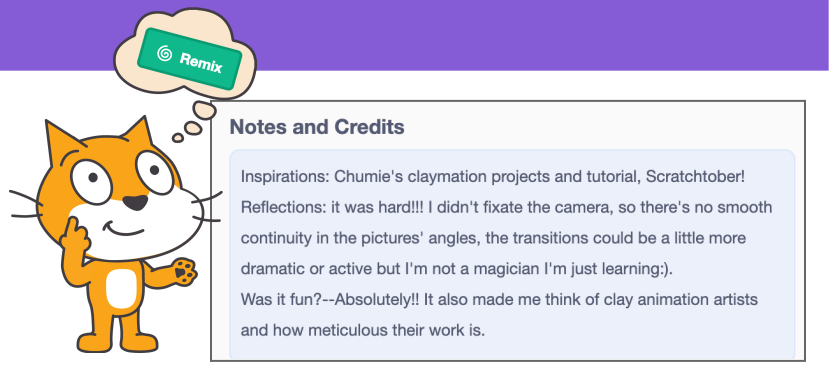
Part 3: Remix and Reflect

Identify a Project to Remix/Try (10 minutes)

Scratch embraces 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.

Review the Activity Swap projects shared in the class studio. Identify one project to try. Learners can ask themselves:

- What interests me about this project?
- What materials do I need to try this activity?
- How can I iterate on what was shared?



The project "A bat becoming a bat becoming a bat becoming..." is a great example of responding to a prompt, noting inspiration, and making some reflections in the Notes and Credits section.

Remix Another's Activity Swap Project (50 minutes)

Learners should click the "Remix" button on the project they want to try. When remixing, a learner might:

- add code to animate an art piece they created from a tutorial, adjust the colors, or place it in a new setting
- record their voice or add text on the stage explaining what they liked about the activity and what they learned
- take photographs of themselves trying the activity and share the results (just be sure no personal information is included in photographs, such as pictures of their face)

Encourage learners to include text in the "Notes and Credits" section about the remix experience or appreciation for the prompt creator. Facilitators can model good digital citizenship by demonstrating a couple examples of what this looks like.

Remix Examples:

- *Anime Eye Tutorial showed creating a design element; the remix shows using the element in a new setting, making the remix uniquely different.*
- *How to Draw a Hand featured a slideshow tutorial using uploaded images; the remix shows how to add to the tutorial with additional steps, adjust code, and explain what was changed.*
- *How To Animate Lip Sync (like me) | #Tutorials was an information project; the remix simply showed the result.*

Reflect (15 minutes)

Depending on the size of the class or the number of projects created, you may want to utilize the same class studio to house original activities and their remixes, or create a separate class studio specifically for remixes.

If learners haven't shared in the "Notes and Credits" section of their remix about their about the experience, prompt them to add a few words about:

- what inspired them to remix this particular project
- if they found the original instructions clear/what was successful or what did go according to plan
- why they had fun or what they found challenging
- what they changed or added
- at least one thing they learned

Show the projects on a large screen at the front of the class or do a computer gallery walk. Facilitate a class discussion where learners share about the points listed above.

Additional Resources

Examples of studios focused on skill sharing:

- ScratchCat's 2023 Activity Swap "Prompts & Inspiration" studio
- ScratchCat's 2023 Activity Swap "Show-and-Tell" studio
- Scratch Wellness Studios: Skill Share Workshop and Creativity Corner

Resources on original asset creation:

- "Create a Sprite with the Scratch Paint Editor" (Video Tutorial or Written Guide)
- Printable student-facing Bring Yourself In Lesson Coding Cards on sprite creation
- "Bring Your Drawings Into Scratch" (Video Tutorial or Written Guide)
- "Create Your Own Asset Pack, Part 3: Remixing and Using Assets in Scratch | Tutorial" (Video) for tips and best practices
- "Sounds in Scratch: Add, Record, and Use Text to Speech Blocks" (Video Tutorial and Written Guide)

Debugging:

- Debugging Reflection (Worksheet)
- 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

Example Lessons Suggested for Grades 3-5:	Example Lessons Suggested for Grades 6-8:
• Coding a Digital Piano • Create a Math Game	• Create a Text Sprite and Revealing a Sprite • Catch Game Design and Player Health Bar

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-08 Compare & refine algorithms • 1B-AP-10 Create programs • 1B-AP-11 Decompose problems • 1B-AP-12 Modify, remix, or incorporate • 1B-AP-14 Give appropriate attribution • 1B-AP-15 Test and debug • 1B-AP-16 Take on varying roles • 1B-AP-17 Describe choices made	• 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.

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