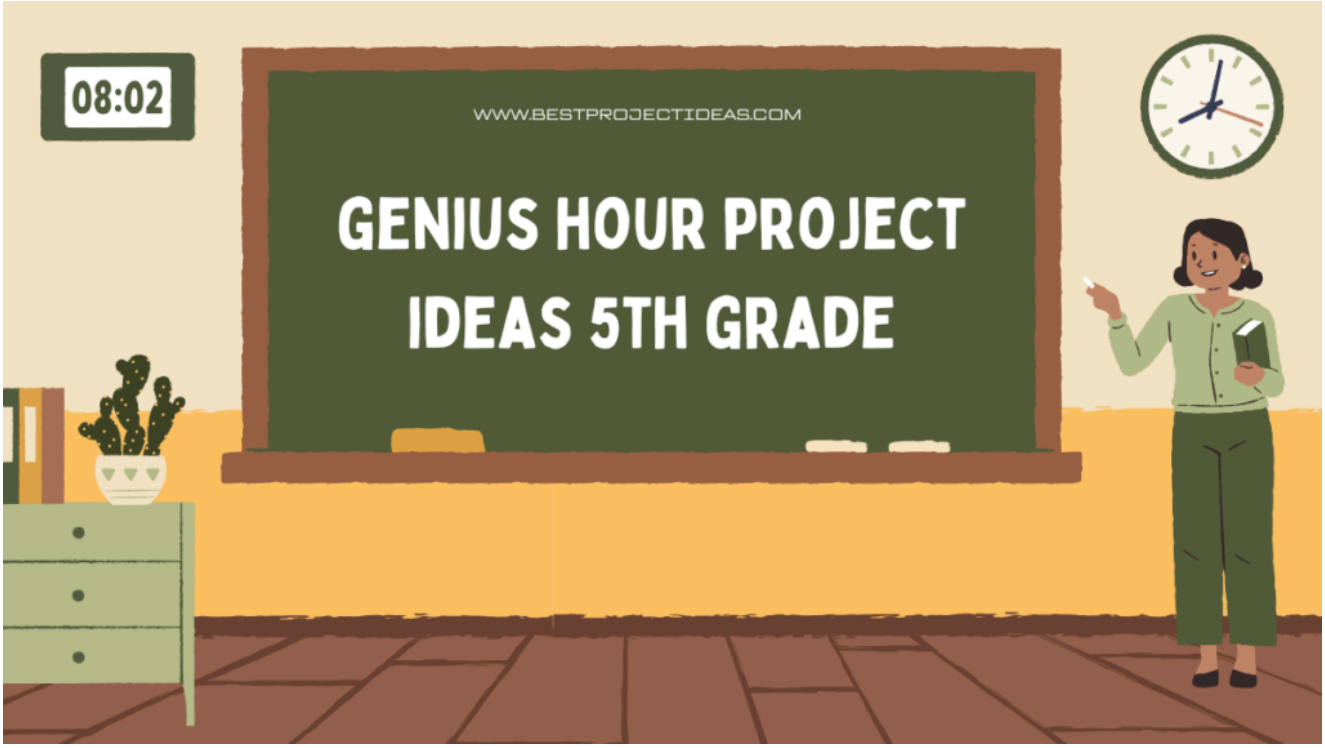
Best Project Ideas

Genius Hour Project Ideas 5th Grade — 30 Creative Projects Students Can Do

DECEMBER 17, 2025 | JOHN DEAR



Genius Hour is a special time set aside in class for students to follow their curiosity and work on projects they care about. For a 5th grader, Genius Hour is a chance to explore new interests, practice real research skills, and create something meaningful. This article collects **30 workable, student-friendly genius hour project ideas 5th grade** students can choose from.

Each idea includes a clear description, a list of simple materials, step-by-step actions, learning goals, and ways to extend the project. Everything is written so a 5th grader can understand and use it to plan and finish a project independently or with a little teacher help.

Use this guide to pick a project that matches your interests—science, writing, art, technology, community service, or a combination. Each idea is flexible: you can make it simple or add extra challenges. Let's get started and find the perfect genius hour project for you.

Must Read: 25 Cybersecurity Project Ideas 2026-27

Table of Contents

What is Genius Hour and why it matters for 5th graders

Genius Hour gives students time to choose what they want to learn and how they want to show it. In 5th grade, students are ready to take responsibility for small research projects, hands-on experiments, creative writing, or community ideas. The benefits of Genius Hour include:

- Building curiosity and motivation.
- Practicing research, planning, and time management.
- Learning to communicate ideas clearly.
- Gaining confidence by creating something original.

When choosing a **genius hour project ideas 5th grade**, students should pick something that sparks curiosity and is doable with the time and materials available.

How to choose a great Genius Hour project

1. **Pick something you care about.** If you love animals, sports, music, or games, start there.
2. **Make it specific.** Narrow a big topic (“animals”) into something small and researchable (“how to build a bird feeder for my yard”).

3. **Set a clear final product.** Decide whether you'll build, write, make a video, or teach others.
4. **List simple steps.** Break the project into 3–6 steps you can finish during Genius Hour sessions.
5. **Ask for help when needed.** Teachers, parents, or librarians can give advice and materials.

30 Genius Hour Project Ideas 5th Grade

Below are 30 detailed project ideas, each formatted so a 5th grader can follow. Each project includes: **What you do, materials, step-by-step plan, what you'll learn, and extension ideas.**

1. Backyard Bird Feeder and Species Journal

What to do: Build a bird feeder and keep a journal of birds that visit.

Materials: Pine cones or small wooden board, string, peanut butter (or lard), birdseed, notebook, pencil, phone camera (optional).

Steps:

1. Attach string to pine cone or board and spread peanut butter.
2. Roll it in birdseed and hang it outside.
3. Watch daily for two weeks, write the birds you see, and draw or photograph them.
4. Look up the birds in a book or online and write one fact about each.

What you'll learn: Observation, basic ecology, recording data, species identification.

Extension: Build different types of feeders and compare which birds visit each one.

2. Stop-Motion Animation Short

What to do: Create a 1–2 minute stop-motion movie using clay or paper cutouts.

Materials: Smartphone or tablet, free stop-motion app, clay or paper cutouts, small stage (table), camera stand or tape.

Steps:

1. Plan your story with a short script (beginning, middle, end).
2. Build characters and a stage.
3. Take small photos for each movement; move characters slightly each time.
4. Compile photos in the app and add sound or music.

What you'll learn: Storytelling, planning, patience, basic animation.

Extension: Submit your film to a class festival or add voice acting.

3. Local History Podcast Episode

What to do: Record a short podcast episode about a local place or historical figure.

Materials: Recording device (phone), headphones, quiet space, notes from a library visit or interviews.

Steps:

1. Choose a local topic and research it (library, internet, interviews).
2. Write a short script with facts and interesting stories.
3. Record your narration and any short interviews.
4. Edit for clarity and add a short intro/outro.

What you'll learn: Research, interviewing, public speaking, audio editing.

Extension: Create a series of episodes about different local landmarks.

4. Simple Renewable Energy Model (Solar Oven)

What to do: Build a solar oven to cook a small treat like s'mores.

Materials: Cardboard box, aluminum foil, plastic wrap, black construction paper, tape, thermometer (optional).

Steps:

1. Line the box with black paper.
2. Cover flaps with foil to reflect sunlight.
3. Seal with plastic wrap to keep heat inside.
4. Place a chocolate and marshmallow on a plate and let the oven heat them.

What you'll learn: Solar energy, design thinking, testing and measuring.

Extension: Measure temperature changes and compare different box sizes.

5. Mini Book: Write and Illustrate a Short Story

What to do: Write a short illustrated book for younger readers.

Materials: Blank paper or folded printer paper, colored pencils or markers, stapler.

Steps:

1. Plan your characters and plot.
2. Write simple text for each page.
3. Add illustrations and bind the book.
4. Read it to a younger student or record a read-aloud.

What you'll learn: Creative writing, editing, art, empathy through storytelling.

Extension: Create a series or adapt the story into a short play.

6. Coding a Simple Game (Scratch)

What to do: Use Scratch to make a simple interactive game.

Materials: Computer or tablet with internet access, Scratch account (free).

Steps:

1. Learn basic Scratch blocks with a tutorial.
2. Plan a simple game (collect items, avoid obstacles).
3. Program the sprites and write rules.
4. Test and share with classmates.

What you'll learn: Computational thinking, problem solving, sequencing.

Extension: Add scoring, levels, or multiplayer features.

7. Healthy Snack Recipe and Nutrition Poster

What to do: Create a healthy snack recipe and a poster that explains its nutrition.

Materials: Ingredients for the snack, poster paper, markers, measuring spoons.

Steps:

1. Choose healthy ingredients and test a recipe.
2. Record measurements and steps.
3. Make a poster showing the recipe and nutritional benefits.
4. Present and offer samples if allowed.

What you'll learn: Cooking basics, nutrition, measurement, communication.

Extension: Compare your snack to a store-bought option and report differences.

8. Weather Station and Weekly Report

What to do: Make a simple weather station and record weather for a month.

Materials: Thermometer, rain gauge (plastic bottle), wind vane (cardboard), notebook.

Steps:

1. Build a rain gauge and a wind vane.
2. Measure temperature, rainfall, and wind direction daily.
3. Record findings in a table and write a weekly summary.
4. Create graphs to show changes over the month.

What you'll learn: Data collection, patterns, basic meteorology, graphing.

Extension: Compare your data with official weather reports.

9. Charity Drive Plan and Report

What to do: Organize a small charity drive at school for books or food.

Materials: Permission from teacher, flyers, collection boxes, chart to track donations.

Steps:

1. Choose a cause and set goals.
2. Make a plan: dates, promotion, collection points.
3. Run the drive and collect items.
4. Write a report with results and thank-you notes.

What you'll learn: Planning, leadership, community service, reporting.

Extension: Interview a representative from the charity and make a short video.

10. Build a Simple Robot (Using Kits or Recycled Parts)

What to do: Assemble a basic moving robot using a small kit or electric motor.

Materials: Small motor, battery pack, wheels (or recycled bottle caps), tape, glue.

Steps:

1. Design a chassis from cardboard.

2. Attach the motor to spin a wheel or brush.
3. Connect the battery and test movement.
4. Modify to change speed or direction.

What you'll learn: Mechanics, circuits, creativity, trial and error.

Extension: Add sensors or program movement if you have a microcontroller.

11. Science Fair Mini-Experiment: Growing Plants in Different Soils

What to do: Test how plants grow in sand, potting soil, and recycled soil.

Materials: Small pots, seeds (beans are easy), different soils, water, ruler, notebook.

Steps:

1. Plant the same number of seeds in each soil type.
2. Water them the same amount and keep them in the same light.
3. Measure growth every few days and record results.
4. Make a chart and write a conclusion.

What you'll learn: Scientific method, variables, measurement, data presentation.

Extension: Try different amounts of water or light as new experiments.

12. Create a Local Plant Field Guide

What to do: Make a small guidebook of local plants with drawings and facts.

Materials: Notebook, colored pencils, identification book or app, camera.

Steps:

1. Walk around a park and collect photos or sketches.

2. Identify plants using a book or app.
3. Write a short description and one cool fact for each plant.
4. Design a guide with names, pictures, and uses.

What you'll learn: Botany basics, research, organization, art.

Extension: Turn it into a pamphlet for park visitors.

13. How-To Video: Teach a Skill You Know

What to do: Make a step-by-step video teaching a skill like knot-tying, origami, or juggling.

Materials: Camera or phone, tripod or stable surface, props for the skill.

Steps:

1. Plan your steps and practice them several times.
2. Record short clips of each step, speak clearly.
3. Edit the clips and add captions.
4. Share the video with classmates.

What you'll learn: Communication, sequencing, video editing.

Extension: Add a voice-over, subtitles, or translations.

14. Math Games Handbook for Younger Students

What to do: Design 5–8 fun math games and make instructions for younger students to play.

Materials: Index cards, game pieces (buttons), dice, markers, poster.

Steps:

1. Invent each game and write clear rules.

2. Test games with a younger student or sibling.
3. Make a colorful handbook with rules and examples.
4. Teach a class of younger students how to play.

What you'll learn: Game design, teaching, math practice, feedback.

Extension: Create printable game boards and share online.

15. Local Wildlife Photography Project

What to do: Photograph local animals and make a display or slideshow.

Materials: Camera or phone, notebook, access to local park.

Steps:

1. Plan outings to places where wildlife is common.
2. Take photos and note where and when each photo was taken.
3. Pick the best photos and write captions.
4. Make a slideshow or poster for class.

What you'll learn: Photography skills, patience, observation, composition.

Extension: Enter photos in a school or community contest.

16. Recycle Art Sculpture

What to do: Make a sculpture or installation from recycled materials to show how to reduce waste.

Materials: Cardboard, plastic bottles, glue, paint, recycled packaging.

Steps:

1. Collect clean recyclable items.
2. Sketch a sculpture idea and plan how to connect pieces.

3. Build the sculpture and paint if needed.
4. Create an explanation card about the materials and message.

What you'll learn: Recycling awareness, 3D design, craftsmanship.

Extension: Create a step-by-step guide so others can build similar art.

17. Design a Board Game About Your Town

What to do: Create a board game that teaches players about local landmarks and history.

Materials: Poster board, markers, dice, game pieces.

Steps:

1. Map out the board with streets and landmarks.
2. Write cards with trivia or tasks about the town.
3. Playtest and fix rules that don't work well.
4. Make a final version to share.

What you'll learn: Local history, game balancing, editing rules.

Extension: Create different difficulty levels or an app version.

18. How Plants Clean Water — Mini Bioreactor Model

What to do: Build a small model that shows how plants and soil can clean dirty water.

Materials: Plastic bottles, gravel, sand, activated charcoal, small plants, dirty water (soil-water mix).

Steps:

1. Layer gravel, sand, and charcoal in a bottle.

2. Plant small plants on top.
3. Pour dirty water through and collect filtered water.
4. Compare before and after clarity and write observations.

What you'll learn: Filtration, ecosystems, experimental testing.

Extension: Test which plants clean better or how often to change layers.

19. Create a Mini Comic Book on a Science Topic

What to do: Write and draw a comic that explains a science idea like the water cycle or simple machines.

Materials: Paper, pencils, markers, ruler.

Steps:

1. Choose a topic and outline the facts you want to include.
2. Break the facts into short scenes and dialogue.
3. Draw panels and add speech bubbles.
4. Share with classmates and get feedback.

What you'll learn: Science communication, creative writing, sequencing.

Extension: Translate the comic or make an animated version.

20. Family History Project (Interview and Timeline)

What to do: Interview a family member and make a timeline or poster of their life story.

Materials: Notebook, recorder, photos, poster board.

Steps:

1. Prepare interview questions about childhood, school, jobs, and memories.

2. Record the interview and take notes.
3. Create a visual timeline with photos and important dates.
4. Present to class or family.

What you'll learn: Interviewing, empathy, organizing information.

Extension: Make a small book or website with audio clips.

21. Build a Mini Greenhouse and Grow Seeds

What to do: Construct a small greenhouse from recycled plastic and grow seedlings.

Materials: Clear plastic container or recycled bottles, potting soil, seeds, small pots.

Steps:

1. Prepare small pots and plant seeds.
2. Place them inside a clear container to trap heat.
3. Observe growth and note temperature and humidity.
4. Transplant seedlings to larger pots later.

What you'll learn: Plant biology, microclimates, care routines.

Extension: Test different seed types or soil mixes.

22. Learn Sign Language and Teach a Class

What to do: Learn basic sign language phrases and teach them to classmates.

Materials: Internet or library resources, poster with signs, practice partner.

Steps:

1. Learn 20–30 basic signs (hello, please, thank you, colors).

2. Make flashcards and practice daily.
3. Create a short lesson plan and teach a small group.
4. Make a poster or video to share.

What you'll learn: Communication, inclusivity, teaching skills.

Extension: Learn how to fingerspell and introduce simple stories in sign language.

23. Design and Sew a Simple Stuffed Toy

What to do: Make a small stuffed animal from cloth or felt.

Materials: Felt fabric, needle and thread (or glue for no-sew), stuffing, scissors, marker.

Steps:

1. Draw a simple shape and cut two pieces of fabric.
2. Sew or glue three sides, add stuffing, then close the last side.
3. Add eyes and a mouth with markers or buttons.
4. Name your toy and write a short story about it.

What you'll learn: Basic sewing, fine motor skills, creativity.

Extension: Make a small line of toys and design packaging.

24. Investigate How Different Drinks Stain Teeth

What to do: Test how tea, soda, juice, and water affect the color of eggshells (as a tooth model).

Materials: Hard-boiled eggs or eggshell pieces, cups, different drinks, notebook.

Steps:

1. Place eggs in different drinks for several days.

2. Observe and take photos each day.
3. Compare staining and write a conclusion.
4. Explain how to prevent stains and keep teeth healthy.

What you'll learn: Experimental control, chemistry basics, health education.

Extension: Test the effect of brushing or using mouthwash.

25. Create a Cultural Fair Booth

What to do: Research a country or culture and create a booth with food samples, maps, clothing photos, and music.

Materials: Research materials, poster board, artifacts or printed photos, simple recipes.

Steps:

1. Choose a country and research its food, clothing, music, and celebrations.
2. Make a poster and prepare a small display.
3. If allowed, bring a simple food sample or play music.
4. Present the booth at school or virtually.

What you'll learn: Cultural awareness, research, presentation skills.

Extension: Make a recipe booklet or short documentary.

26. Energy-Saving Audit for Your Home or Classroom

What to do: Check lights, unplugged devices, and insulation to find ways to save energy.

Materials: Checklist, thermometer (optional), notebook, camera.

Steps:

1. Make a list of energy areas to check: lights, computers, heating.
2. Walk through and record where energy can be saved.
3. Suggest easy changes and estimate how much energy could be saved.
4. Present findings to family or class.

What you'll learn: Environmental science, data collection, persuasive writing.

Extension: Implement changes and measure if energy use falls.

27. Homemade Musical Instrument and Performance

What to do: Build a simple instrument (like a rubber band guitar or tin-can drum) and perform a short song.

Materials: Rubber bands, box, cans, sticks, tape, string.

Steps:

1. Design the instrument and test sounds.
2. Tune it by changing the tightness or length of parts.
3. Learn a short song and practice.
4. Record a performance or play live for classmates.

What you'll learn: Acoustics basics, creativity, performance skills.

Extension: Make a small ensemble with other students and compose an original song.

28. Study How Different Materials Insulate Heat

What to do: Test which materials (foam, fabric, paper) keep heat better using hot water in identical containers.

Materials: Identical cups, hot water, thermometers, different wrapping materials, timer.

Steps:

1. Pour the same hot water into each cup.
2. Wrap each with a different material and measure temperature over time.
3. Record the rate of cooling and graph results.
4. Explain why some materials insulate better.

What you'll learn: Thermal insulation, scientific measurement, graphing.

Extension: Test cold insulation or design a better insulating container.

29. Create a "How Things Are Made" Video

What to do: Pick a simple everyday item (pencil, soap, bread) and explain how it's made.

Materials: Research sources, camera, objects to show.

Steps:

1. Research the manufacturing steps of the item.
2. Write a script and collect images or make simple models.
3. Record your explanation and edit with images.
4. Share the video and include a bibliography.

What you'll learn: Research, sequencing, explanatory speaking.

Extension: Interview a local maker or visit a small factory.

30. Design a Playground Improvement Proposal

What to do: Observe your school playground and design a plan to improve safety or fun with sketches and a budget.

Materials: Measuring tape, notebook, ruler, graph paper, research on playground safety.

Steps:

1. Survey the playground equipment and take notes on problems.
2. Sketch ideas for improvements and estimate costs.
3. Create a short presentation or poster with before-and-after sketches.
4. Present to a teacher or parent group.

What you'll learn: Problem solving, budgeting, persuasive presentation.

Extension: Run a small fundraising plan to make one low-cost improvement.

Must Read: 29+ Cloud Computing Project Ideas 2026-27

Tips for Planning, Working, and Presenting Your Genius Hour Project

- **Set a timeline.** Break your project into small steps with dates. For a 4-week Genius Hour, set one step per session.
- **Keep a project notebook.** Write what you do each session: what worked, what didn't, and what you'll do next.
- **Make a clear final product.** Decide if you will make a poster, video, model, booklet, or live demonstration.
- **Practice your presentation.** Prepare a 3–5 minute explanation of your project with a short demo or visuals.
- **Ask for feedback.** Share your work with classmates, teachers, or family and use their suggestions to improve.
- **Reflect.** After finishing, write two things you learned and one thing you would do differently next time.

Conclusion

Genius Hour is a powerful way for 5th graders to explore, create, and learn in their own way. This list of **genius hour project ideas 5th grade** offers a wide range of options—science experiments, creative arts, research projects, community service, and technology challenges.

Pick an idea that sparks your interest, make a clear plan, and enjoy discovering something new. Remember: the project that excites you most is the one you'll work hardest on and learn the most from. Good luck—and have fun creating!

Blog

JOHN DEAR

I am a creative professional with over 5 years of experience in coming up with project ideas. I'm great at brainstorming, doing market research, and analyzing what's possible to develop innovative and impactful projects. I also excel in collaborating with teams, managing project timelines, and ensuring that every idea turns into a successful outcome. Let's work together to make your next project a success!

29+ Cloud Computing Project Ideas 2026-27

Best Project Ideas

Are you ready to make your big ideas happen? Let's connect and discuss how we can bring your vision to life. Together, we can create amazing results and turn your dreams into reality.

Top Pages

Terms And Conditions

Disclaimer

Privacy Policy

Follow Us