



145+ Innovative Rube Goldberg Project Ideas

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Discover simple and fun Rube Goldberg project ideas! Create cool machines that do simple tasks in a tricky way using everyday items.

Want to build a fun and tricky machine? A Rube Goldberg project is about making a simple task happen in a super complicated way. You can use everyday items like dominos, ramps, pulleys, and levers to create a chain reaction.

For example, your machine could turn on a light, water a plant, or crack an egg—all with different steps working together. Ready to get started? Let's dive in and explore!

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What is a Rube Goldberg Machine?

A Rube Goldberg machine is a device that does a simple task in a very complicated way. It uses a series of steps that trigger each other, like dominos falling, ramps, or levers. The goal is to make the task fun and creative, like turning on a light or popping a balloon, through a chain of actions.

It's all about making things happen in a fun, complex way using everyday objects!

The Origin of Rube Goldberg Machines

Here's a simpler version of the origin of Rube Goldberg machines:

1. **Rube Goldberg:** He was an American cartoonist who created these machines.
2. **Early 1900s:** Goldberg started drawing these machines in his cartoons.
3. **Comic Strips:** His cartoons showed machines doing simple tasks in very complicated ways.
4. **The Name:** The term “Rube Goldberg machine” came from his name.
5. **Humor:** His machines were meant to be funny, showing how things can be over-complicated.
6. **Today:** Now, a “Rube Goldberg machine” is any machine that does something simple in a very complex way.

Why Build a Rube Goldberg Machine?

Here are simple reasons why people build Rube Goldberg machines:

1. **Fun and Creativity:** They allow people to be creative and have fun designing complex, silly machines.
2. **Problem Solving:** They challenge you to think of ways to solve a simple problem in a complicated way.
3. **Learning:** They teach concepts like cause and effect, physics, and engineering.
4. **Teamwork:** Building one often involves working together, helping people practice teamwork.
5. **Entertainment:** They are entertaining to watch and show how over-complicated things can be funny.

Choosing Your Rube Goldberg Project

Here are some simple steps for choosing your Rube Goldberg project:

1. **Pick a Simple Task:** Choose a simple action you want your machine to complete (like turning on a light or popping a balloon).
2. **Think About Steps:** Plan out multiple steps for the machine to go through to complete the task.
3. **Use Everyday Items:** Look around for common items you can use, like marbles, dominoes, or toys.
4. **Challenge Yourself:** Try to make the machine as complicated as possible while still being fun and functional.
5. **Make It Fun:** Pick a task that excites you, so building the machine is enjoyable.
6. **Consider Space:** Make sure you have enough room to build and test your machine.

Goldberg Project Ideas

Here are some of the best goldberg project ideas:

Kitchen and Food

1. Flip a pancake using a toy car and lever.
2. Pour cereal into a bowl with ramps and pulleys.
3. Pop a bag of popcorn by pressing a microwave button.
4. Open a jar of peanut butter with a rolling ball.
5. Crack an egg into a bowl using a toy car and string.
6. Butter a slice of bread with a ramp and knife.
7. Make a sandwich by placing bread, cheese, and meat.
8. Slice a tomato with a rolling marble and knife.
9. Mix ingredients by turning a crank.
10. Make a cup of coffee with a water pouring system.

Household and Daily Activities

1. Turn on a light with a ball pulling a string.
2. Press a doorbell by knocking over dominoes.
3. Brush your teeth with a ball moving a toothbrush.
4. Turn the pages of a book by pressing a lever.
5. Make your bed by pulling sheets with pulleys.
6. Open a window using a pulley system.
7. Close a door with a marble rolling into a lever.
8. Fold a towel by using a series of arms.
9. Switch on a fan with a marble pressing a button.
10. Sweep the floor using a broom moving automatically.

Games and Toys

1. Launch a paper airplane using a ramp.
2. Knock over dominoes in a creative pattern.
3. Pop a balloon by rolling a marble into a needle.
4. Roll a marble into a cup on a track.
5. Launch a toy car off a ramp.
6. Play a tune on a xylophone using weights.

7. Spin a top using a chain reaction.
8. Knock down a stack of blocks with a ball.
9. Activate a toy robot using pulleys.
10. Swing a toy swing by using weights.

Nature and Outdoors

1. Water a plant by lifting a watering can with pulleys.
2. Feed a pet by releasing food from a container.
3. Plant a seed using a chain reaction.
4. Open a window by pulling a string with a marble.
5. Grow a flower by watering it through a chain system.
6. Open an umbrella by pulling a string.
7. Turn on a garden sprinkler with a weight and valve.
8. Pick a fruit from a tree by shaking a branch.
9. Open a bird feeder with a pulley system.
10. Shake a tree to drop fruit by pulling a string.

Fun and Creative

1. Blow out a candle using a fan triggered by a ball.
2. Peel a banana by pulling off the peel with a pulley.
3. Tie a shoelace automatically using a chain reaction.
4. Draw a picture by moving a pen across paper.
5. Brush a doll's hair by moving a brush with a ball.
6. Paint a picture by dipping a brush and painting automatically.
7. Put a sticker on a page using pulleys.
8. Build a Lego structure with a series of actions.
9. Write a message using a pen moving on its own.
10. Wrap a gift by pulling paper around it automatically.

Science and Education

1. Create static electricity using balloons and cloth.
2. Launch a rocket with baking soda and vinegar.
3. Light a bulb by completing an electrical circuit.
4. Make a sound by rolling a ball into a drum.
5. Demonstrate gravity with a falling object.

6. Open a microscope with a lever.
7. Stir a liquid using a rotating crank.
8. Make a pendulum swing by triggering it with a ball.
9. Separate colors in water using gravity.
10. Magnify an object by focusing a magnifying glass.

See also [225+ Outstanding SAE Project Ideas With Animals](#)

Tech and Gadgets

1. Charge a phone by plugging in the charger.
2. Turn on a computer by pressing the power button with a ball.
3. Launch a video by opening a player automatically.
4. Activate a fan by triggering a button with a marble.
5. Start a blender with a series of switches.
6. Set a timer by pressing a button using a marble.
7. Turn on a light by pressing a button with a ball.
8. Play a song on a Bluetooth speaker by connecting it automatically.
9. Send an email with a keyboard-triggered system.
10. Open a remote-controlled car with a lever.

Sports and Fitness

1. Shoot a basketball into a hoop with a chain reaction.
2. Kick a soccer ball into a goal by using a lever.
3. Open a water bottle by twisting off the cap with a marble.
4. Start a jump rope by swinging it automatically.
5. Hit a baseball off a tee with a bat triggered by a lever.
6. Turn on a fitness tracker by pressing a button with a weight.
7. Launch a football into the air by using a lever.
8. Push up a barbell with a pulley and weight system.
9. Pop a balloon with a dart launched by a marble.
10. Set up a target for a game with a pulley-triggered system.

Office and Work

1. Stamp a letter by triggering a stamp with a marble.

2. Print a document by pressing a button with a marble.
3. Open an envelope by pulling a string to cut it open.
4. File a paper by sliding it into a drawer triggered by a ball.
5. Turn on a printer by pressing a button with a marble.
6. Organize files by stacking them automatically.
7. Punch a hole in paper using a lever system.
8. Write a note by automatically moving a pen.
9. Open a stapler by pressing a button with a ball.
10. Set up a desk by automatically placing objects in place.

Transportation

1. Start a bike by pressing a button to turn on lights.
2. Open a car door by pulling a lever with a string.
3. Activate a traffic light by pressing a button with a marble.
4. Start a scooter by pulling a lever to trigger the motor.
5. Close a car window by pulling a string with a ball.
6. Set up a train track by placing pieces automatically.
7. Inflate a tire by triggering an air pump with a ball.
8. Start an electric car by activating the ignition with a marble.
9. Open a garage door by pulling a string that lifts it.
10. Unlock a bike lock using a key released by a pulley.

Pets and Animals

1. Feed a fish by triggering a food dispenser.
2. Turn on a pet's light by pulling a string to activate it.
3. Open a pet's cage by pulling a lever.
4. Give a dog a treat by dropping it from a height.
5. Activate a pet toy by rolling a ball into a switch.
6. Open a bird cage by using a chain reaction.
7. Turn on a pet water fountain using a pulley.
8. Give a hamster food by rolling it into a bowl.
9. Open a dog food bag by pulling a string.
10. Play with a cat using a string pulled by a ball.

Celebrations and Parties

1. Pop party poppers by triggering them with a marble.
2. Blow up a balloon by inflating it with air.
3. Cut a cake with a knife that's triggered by a pulley.
4. Light birthday candles using a fan.
5. Wrap a gift by pulling paper around it automatically.
6. Drop confetti by triggering a bag with a marble.
7. Ring party bells by pulling a string.
8. Open a gift box using a lever system.
9. Set up a piñata by pulling a string to break it.
10. Fill a cup with punch by lifting a dispenser.

Art and Craft

1. Cut paper with scissors triggered by a marble.
2. Paint a picture by moving a brush with a pulley.
3. Fold paper into an origami shape using a lever.
4. Shape clay into an object by pressing it with a ball.
5. Create a stencil design with a lever-operated cutter.
6. Create a greeting card by folding it automatically.
7. Thread a needle by pulling the string through it.
8. Draw shapes with a pencil that moves by itself.
9. Decorate a frame by applying stickers automatically.
10. Place gems on a craft project using a lever.

Music and Sound

1. Play a tune on a xylophone by rolling a ball into the keys.
2. Start a music box with a triggered lever.
3. Activate a drum by rolling a ball into it.
4. Start a guitar strum by pulling a string with a lever.
5. Turn on a radio by pressing a button with a marble.
6. Strike a bell by knocking over a domino chain.
7. Start a piano by triggering a key with a ball.
8. Play a note by rolling a marble into a piano key.
9. Hit a cymbal with a marble-triggered mallet.
10. Set up a choir by using pulleys to move voices.

Planning Your Rube Goldberg Machine

Here's a simple guide for planning your Rube Goldberg machine:

1. **Choose Your Task:** Decide what you want your machine to do (like turning off an alarm or opening a door).
2. **Sketch Your Ideas:** Draw out a rough plan of the steps your machine will take to complete the task.
3. **List Materials:** Make a list of items you'll need (dominoes, balls, ramps, etc.).
4. **Think About Cause and Effect:** Plan how each action will trigger the next step in your machine.
5. **Test Each Step:** Test each part of the machine to make sure it works before combining them all.
6. **Add Fun Elements:** Think of creative or silly ways to make your machine interesting and entertaining.

Building Tips and Tricks

Here are some simple tips and tricks for building your Rube Goldberg machine:

1. **Start Small:** Build one part of the machine at a time before combining everything.
2. **Test Often:** Check each step as you go to make sure it works.
3. **Use Gradual Angles:** Slopes or ramps should be at a gentle angle so things move smoothly.
4. **Be Creative:** Use household items like books, cups, or toys to add fun elements.
5. **Adjust if Needed:** If something doesn't work, change it and try again.
6. **Have Patience:** These machines can take time, so be patient and keep testing.
7. **Stabilize Your Setup:** Make sure everything is steady so nothing falls apart easily.
8. **Use Energy:** Think about how energy can move through the machine (like a ball rolling or a weight dropping).

See also [200+ Best Agriculture Project Ideas](#)

Incorporating Themes and Stories

Here's how to use different themes in your Rube Goldberg machine:

Seasonal Themes

1. **Pick a Season:** Choose winter, spring, summer, or fall.

2. **Use Seasonal Items:** Add things like leaves for fall or snowflakes for winter.
3. **Make it Seasonal:** Have your machine show something related to the season, like a snowman or flowers growing.

Storytelling Through the Machine

1. **Create a Simple Story:** Think of a story like a race or a hero.
2. **Link Steps to the Story:** Each part of the machine can show a part of the story.
3. **Make it Fun:** Use items that match the story as your machine works.

Educational Themes

1. **Choose a Topic:** Pick something educational, like the water cycle or plant growth.
2. **Teach with the Machine:** Each step can show something related to your topic.
3. **Make it Fun:** Add pictures or facts to help explain your theme.

Documenting Your Rube Goldberg Machine

Here's how to document your Rube Goldberg machine:

1. **Take Photos or Videos:** Capture each step and the whole machine in action.
2. **Write a Simple Description:** Describe how your machine works and what each part does.
3. **Show the Materials:** List all the items you used to build the machine.
4. **Explain the Process:** Write down how you planned, built, and tested the machine.
5. **Share Your Story:** Talk about the theme or story behind your machine.
6. **Record Failures and Fixes:** Note any problems you faced and how you solved them.

Safety Considerations

Here are simple safety tips for building your Rube Goldberg machine:

1. **Watch for Sharp Objects:** Be careful with anything sharp.
2. **Keep Things Stable:** Make sure parts are steady so they don't fall.
3. **Keep Small Parts Safe:** Keep small pieces away from pets or kids.
4. **Use Safe Materials:** Pick materials that are easy and safe to handle.
5. **Test in a Clear Space:** Make sure you have enough room and no one is in the way.
6. **Be Careful with Heavy Items:** Make sure heavy things are placed safely.

Inspiring Creativity in Kids

Here are easy ways to inspire creativity in kids when building a Rube Goldberg machine:

1. **Encourage Big Ideas:** Let them think of fun and crazy ideas.
2. **Use What's Around:** Show how everyday items can be used in creative ways.
3. **Ask Fun Questions:** Ask things like “What if we try this?” or “How can we make it cooler?”
4. **Celebrate Mistakes:** Tell them it's okay if something doesn't work right away.
5. **Make It a Game:** Turn it into a fun challenge.
6. **Let Them Lead:** Give them control over how the machine works.

Competitions and Challenges

Have a close look at the competitions and challenges for Rube Goldberg machines:

Local and School Competitions

1. **Join Local Events:** Look for Rube Goldberg competitions in your area or school.
2. **Team Up:** Work with classmates or friends to build a machine for the competition.
3. **Follow Rules:** Make sure to follow any guidelines given for the event, like size or task requirements.

Online Challenges

1. **Search for Online Contests:** Many websites host Rube Goldberg challenges where you can submit your videos.
2. **Join Virtual Groups:** Participate in online groups or forums where people share their Rube Goldberg ideas.
3. **Watch and Learn:** Check out other people's machines online for inspiration and tips.

Setting Personal Goals

1. **Start Simple:** Aim to build a working machine, then challenge yourself to add more steps.
2. **Improve Each Time:** Try to make your machine bigger or more creative each time you build one.
3. **Track Progress:** Set a goal, like completing your machine in under a certain amount of time, and see how much you can improve.

Famous Rube Goldberg Machines

Here are some famous Rube Goldberg machines:

Iconic Examples in Media

1. **OK Go's Video:** A music video with a big Rube Goldberg machine.
2. **Honda Commercial:** A car ad with a Rube Goldberg machine made of car parts.
3. **Google Doodle (2011):** Google made a Rube Goldberg machine for its homepage.

Record-Breaking Machines

1. **Longest Machine:** In 2017, a group built the longest Rube Goldberg machine, over 100 meters.
2. **Most Steps:** A team in Japan made a machine with over 3,000 steps in 2018.

Community Favorites

1. **Exploratorium's Machine:** A famous Rube Goldberg machine in San Francisco.
2. **Local Competitions:** Many schools and communities hold [Rube Goldberg contests](#).

Resources for Rube Goldberg Projects

Here are some simple resources for Rube Goldberg projects:

Books

- *The Way Things Work* by David Macaulay
- *Rube Goldberg's Simple Normal Humdrum Ordinary Day* by Rube Goldberg

Websites

- **Rube Goldberg Official Website:** Offers challenges, history, and inspiration.
- **Exploratorium:** A science museum with ideas for creating Rube Goldberg machines.

YouTube

- Watch videos of famous Rube Goldberg machines for ideas and techniques.
- Look for tutorials on building machines step by step.

DIY Kits

- Purchase Rube Goldberg machine kits online for ready-to-build parts.

Apps

- Look for apps that simulate or help design Rube Goldberg machines.

Local Competitions

- Check out community or school competitions for inspiration and guidance.

Rube Goldberg Project Ideas Easy

Here are some of the easy Rube Goldberg project ideas:

Pour a Glass of Water

What You Need: Dominoes, ball, string, cup, water jug.

How It Works:

- Set up dominoes to knock a ball down a ramp.
- The ball pulls a string tied to a jug.
- The jug tips over and pours water into a cup.

Turn Off a Light Switch

What You Need: String, toy car, weight, ball.

How It Works:

- Tie a string to the light switch and attach it to the toy car.
- Roll a ball to push the car forward.
- The car pulls the string and turns off the light.

Pop a Balloon

What You Need: Dominoes, balloon, pin, lever.

How It Works:

- Set up dominoes leading to a lever with a pin.
- When the last domino falls, the lever moves the pin.
- The pin pops the balloon.

See also [119+ Exciting Science Experiments for Kids](#)

Water a Plant

What You Need: Ball, ramp, string, cup of water.

How It Works:

- The ball rolls down a ramp and pulls a string.
- The string tips the cup, pouring water onto the plant.

Ring a Bell

What You Need: Marble, string, bell, weight.

How It Works:

- The marble rolls and pulls a string tied to a bell.
- The bell rings when the string is pulled.

Open a Book

What You Need: Ball, ramp, book, lever.

How It Works:

- A ball rolls down and hits a lever.
- The lever flips open the book.

Toast Bread

What You Need: Toaster, ball, ramp, string.

How It Works:

- A ball rolls down and pulls a string tied to the toaster lever.
- The lever goes down, starting the toaster.

Feed a Pet

What You Need: Ramp, ball, pet food, cup.

How It Works:

- A ball rolls and knocks over a cup of pet food.
- The food spills into the pet's bowl.

Start a Fan

What You Need: Marble, ramp, small fan, button.

How It Works:

- A marble rolls down a ramp and presses the fan's button.
- The fan turns on.

Squeeze Toothpaste

What You Need: Dominoes, toothpaste, weight.

How It Works:

- Dominoes fall and move a weight.
- The weight presses the toothpaste tube, squeezing it out.

These ideas are simple and fun. You can try them with everyday items at home

Rube Goldberg Project Ideas for 8th Grade

Here are **Rube Goldberg project ideas** suitable for 8th graders. They are a bit more challenging but still fun and creative:

Turn on a Light Bulb

What You Need: Battery-powered light bulb, string, dominoes, ramp, ball.

How It Works:

- Dominoes lead to a ball rolling down a ramp.
- The ball hits a switch that turns on the light bulb.

Make a Smoothie

What You Need: Blender, string, weights, pulley system.

How It Works:

- Set up dominoes to knock over a weight.
- The weight pulls a string attached to the blender switch.
- The blender starts and makes the smoothie.

Raise a Flag

What You Need: Small flag, pulley, ball, lever.

How It Works:

- A ball rolls down a ramp and pushes a lever.
- The lever pulls a string on a pulley, raising the flag.

Open a Soda Bottle

What You Need: Bottle opener, lever, string, dominoes.

How It Works:

- Dominoes lead to a lever that lifts a bottle opener.
- The opener removes the soda cap.

Crack an Egg

What You Need: Ramp, ball, lever, egg.

How It Works:

- A ball rolls down and tips a lever.
- The lever cracks an egg into a bowl.

Start a Music Player

What You Need: Music player with a button, string, weight, dominoes.

How It Works:

- Dominoes knock over a weight.
- The weight pulls a string attached to the music player's button.

Fill a Cup with Cereal

What You Need: Cereal, funnel, string, ramp, ball.

How It Works:

- A ball knocks over a container of cereal.
- The cereal flows into a cup through a funnel.

Plant a Seed

What You Need: Seed, dirt, cup of water, ramp, lever.

How It Works:

- A ball tips over a cup of dirt into a pot.
- Another ball tips water over the seed, planting it.

Open a Door

What You Need: String, door handle, weights, ramps, dominoes.

How It Works:

- Dominoes pull a string attached to the door handle.
- The handle turns, opening the door.

Blow Up a Balloon

What You Need: Balloon, pump, string, weight, ball.

How It Works:

- A ball rolls and pulls a string tied to a weight.
- The weight presses a pump, inflating the balloon.

These projects let students explore creativity, engineering, and teamwork while using household materials!

Rube Goldberg Project Ideas for Middle School

Here are some **simple Rube Goldberg project ideas** for middle school students:

Flip a Pancake

What You Need: Toy car, lever, spatula, ramp, string.

How It Works:

- A toy car rolls down a ramp and hits a lever.
- The lever pushes a spatula to flip the pancake.

Blow Out a Candle

What You Need: Dominoes, fan, string, ball.

How It Works:

- Dominoes fall and pull a string that turns on a fan.
- The fan blows out the candle.

Press a Doorbell

What You Need: Ball, ramp, pulley, weight, doorbell.

How It Works:

- A ball rolls down a ramp and pulls a string attached to a weight.
- The weight presses the doorbell.

Peel a Banana

What You Need: Banana, string, weight, ball.

How It Works:

- A ball hits a pulley system that pulls a string.
- The string peels the banana.

Fill a Bowl with Cereal and Milk

What You Need: Cereal box, milk carton, ramp, ball.

How It Works:

- A ball knocks over the cereal box into the bowl.
- Another ball tips the milk carton to pour milk into the bowl.

Launch a Paper Airplane

What You Need: Rubber band, lever, dominoes, string.

How It Works:

- Dominoes fall and pull a string attached to a rubber band.
- The rubber band launches the paper airplane.

Plant a Flower

What You Need: Soil, seed, ramp, cup of water.

How It Works:

- A ball tips soil and a seed into a pot.
- Another ball tips a cup of water onto the seed.

Turn a Page in a Book

What You Need: Lever, ball, ramp, string, book.

How It Works:

- A ball rolls and hits a lever.

- The lever pulls the string and turns the page.

Brush Your Teeth

What You Need: Toothbrush, toothpaste, ramp, ball, lever.

How It Works:

- A ball knocks a lever, which makes the toothbrush move.
- Another ball presses toothpaste onto the brush.

Popcorn Machine

What You Need: Popcorn packet, microwave button, string, weight.

How It Works:

- Dominoes fall and pull a string attached to a weight.
- The weight presses the microwave button to start the popcorn.

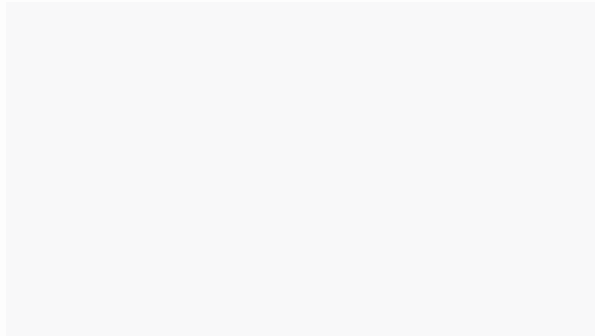
These ideas are simple and fun to make while learning about how machines work!

Conclusion

Rube Goldberg projects are a fun way to see how small actions can lead to big results. You use simple items to create a chain reaction where one thing causes the next. Whether you're flipping a pancake, blowing out a candle, or turning a page, these projects help you think and solve problems.

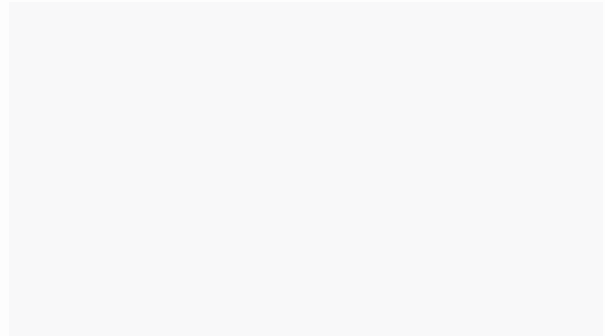
You'll also learn how simple machines like levers and pulleys work together. These projects are great for practicing teamwork and planning. So, gather your materials and start building your chain reaction. It's a fun way to learn and have fun!

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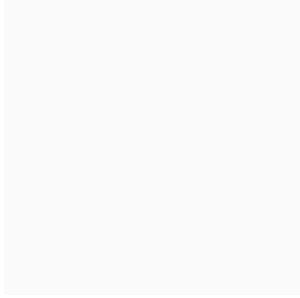
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