



Eight STEMtastic ways to celebrate the holidays at home! Make memories with these holiday twists on our signature activities.

Stuck at home for the holidays? Don't get your tinsel in a tangle. We've got you covered with eight ways you can keep the family learning, engaged and having fun! Just be prepared, because the holiday cheers may not make for a very silent night.

Crack the code to the perfect gift

Step up your gift-giving street cred by thinking like an engineer and getting hopeful about the future. Pick a family member and think about where they'll be in 10 years. What kind of things will they like? What will they spend their day doing? Draw up a plan to make a gift that wows them with your thoughtfulness. It's a spin on our Imagining Inventions activity that will get your little elves some skills in empathy and user-centered design.

Stay Connected: Have your little learners share their invention idea with family or friends after they've opened their presents.



[Guide here](#)

Shake things up with an earthquake-proof gingerbread house

Hold on to your gumdrops! Create a gingerbread house using a mix of materials that's at least one foot tall and can withstand an "earthquake." Bonus points if you use actual gingerbread!

Stay Connected: Instead of a gingerbread house building party, throw a "shake that house down" virtual soiree with family and friends.



[Guide here](#)

Mix your own eco-friendly holiday decor with biotinkering

Take a clue from mother nature to make your own biodegradable tassel garland with our Algae String activity. Design your own color scheme and experiment with thickness and texture.

Bonus: Once it's dried, you can cut it up into confetti in time to throw for New Year's Eve!

Stay Connected: Celebrate Sustainability challenge! Ask two or three friends to decorate their space in the most sustainable way possible. Show off your creative decor and share your tips.



[Guide here](#)

Track that elf

Keep tabs on that sneaky Santa spy by thinking like a computer. Have your child create a sequence of yes/no questions that will help narrow down where you hid that mischievous little tattle-tale. Not only will your kiddo pick up the kind of computational thinking skills that programming careers are made of, you'll have fun leaving clues for your little problem-solver.

Stay Connected: Time your sequence and challenge friends to see who can uncover the path the fastest or in the fewest steps.



[Guide here](#)



Season your greetings with Cabbage Inks

Skip the toxic ink and play with biology to make your own set of biodegradable paint mix to decorate cards or gift tags. All you'll need is cabbage and a few ingredients you can get at any grocery store. It's a STEM spin on crafting that even the Grinch will love.

Stay Connected: Host a virtual painting party. Have everyone make their Cabbage Inks palette ahead of time and show off their creations as you make them over video chat.



[Guide here](#)

Take your reindeer games virtual

Create your own reindeer game! In our Get in the Game activity, real scientists help you think like an engineer to design a board game. Your added challenge is to make it work over video chat. You up (on the rooftop) for this Safer at Home holiday challenge?

Stay Connected: Host a few virtual game nights to test your game and perfect your design!



[Guide here](#)

Making in a wind-ter wonderland present delivery challenge

Can you harness the wind to deliver presents six feet? Your holly jolly innovators will have fun searching for materials, then building and designing a device that can deliver a present using wind from a fan or hair dryer. Who can make their device go the farthest? Ask them to keep perfecting their designs for hours of energy-burning entertainment.

Stay Connected: Show off your designs on video chat! Whose design goes the farthest? Who used the most unique materials?

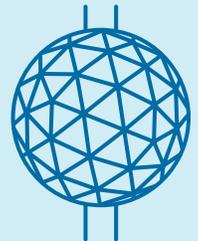


[Guide here](#)

Make your own NYE ball drop — only five sheets of paper needed!

Ring in 2021 with the family (it's almost here!) and this fun engineering design challenge. How tall a tower can you make with just five sheets of paper? Can you perfect your design in time for midnight ... or 9 p.m. bedtime?

Stay Connected: Add a countdown to the ball drop to your virtual celebrations!



[Guide here](#)

We hope you have a safe and fun holiday season!

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Share Your Results! Keep us posted about your design challenges on social media with **#TheTechatHome**.

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