



HOLIDAY 5-STAR CHALLENGES



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WELCOME,

Engaging young learners in hands-on activities can make Science, Technology, Engineering, the Arts, and Mathematics (STEAM) both enjoyable and educational.

Holiday 5-Star challenges are designed to allow young learners to explore the STEAM disciplines while having fun.

Each challenge engages the 5-Star qualities: Curiosity, Creative Thinking, Critical Thinking, Communication, and Collaboration.



PREP



- **Gather Supplies:** Before beginning any challenge, be sure you have all the necessary materials. Common household items can often be repurposed for these challenges, making them cost-effective and convenient.
- **Safe Space:** Make sure you have a safe, designated area that provides enough room for the activity.
- **Safety Precautions:** If a challenge involves small items or substances that could be potentially hazardous (e.g., small beads, glue), ensure children are supervised at all times.



FACILITATION



- **Introduction:** Briefly explain the challenge and its goal. Introduce the materials the children will be using and explain any safety rules.
- **5-Star Guidance:**
 - **Curiosity:** Prompt kids with questions that provoke curiosity. For example, "What do you think will happen if ...?"
 - **Creative Thinking:** Encourage children to think beyond the basics of the challenge and use their creativity. For instance, suggest adding holiday designs or decorations to their projects.
 - **Critical Thinking:** Ask questions that prompt deeper thought, such as, "Why do you think your design worked (or didn't work) the way you expected?"
 - **Communication:** Allow time for children to explain their designs and results to each other or to you.
 - **Collaboration:** Encourage teamwork if the challenge involves or allows for group activity. Not only praise the outcome but also how well the children worked together.



POST CHALLENGE



- **Show and Tell:** Give each child a chance to share their project and explain their thought process, what they learned, and what they would do differently next time.
- **Reflection:** Talk about what went well and what was challenging. Connect the activity back to real-world applications or the STEAM disciplines it touched on.
- **Clean-Up:** Ensure all materials are cleaned up, keeping reusable items for future challenges.
- **Share on Social:** We love to see your creations. Be sure to tag us on social media with a picture of your solutions @preschoolsteam.





SANTA'S SLEIGH RUNWAY

Materials: Cardboard, colored paper, glitter, stickers, toy cars (as stand-ins for sleighs)

Challenge: Design and construct a runway for Santa's sleigh. Think about how Santa would like to take off and land. Decorate it with festive designs.



5-STAR CHALLENGE

- ★ **Curiosity:** How do real runways work at airports?
- ★ **Creative Thinking:** How can you make your runway sparkle and shine under the moonlight for Santa?
- ★ **Critical Thinking:** Think about the length and width needed for Santa's sleigh to land safely.
- ★ **Communication:** Explain why you designed your runway the way you did.
- ★ **Collaboration:** Work with friends to make multiple runways or connecting flight paths.



JINGLE BELL MUSICAL STORY

Materials: Assorted jingle bells, paper, crayons or markers, a storybook with pictures, tape, or glue

Challenge: Create a musical story experience using jingle bells. Attach bells to different parts of a storybook page and produce sounds that correspond to the narrative or pictures.



5-STAR CHALLENGE

- ★ **Curiosity:** How can the sound of jingle bells add to the storytelling experience?
- ★ **Creative Thinking:** Assign specific sounds to different characters or actions in the story.
- ★ **Critical Thinking:** Decide where to place the bells on the book so they can be easily rung at the right moment in the story.
- ★ **Communication:** Practice reading the story aloud and integrating the bell sounds, then perform for a group.
- ★ **Collaboration:** Work with friends to assign roles (reader, sound effects, page-turner) and perform the musical story together.



REINDEER FLIGHT SCHOOL

Materials: Paper, coloring tools, scissors, and string or ribbon

Challenge: Design and cut out your own reindeer from paper. Attach it to a string or ribbon and make it "fly" around the room.



5-STAR CHALLENGE

- ★ **Curiosity:** How do birds and planes fly?
- ★ **Creative Thinking:** Customize your reindeer's appearance. Does it have special markings or colors?
- ★ **Critical Thinking:** Adjust the string length to change the flight pattern.
- ★ **Communication:** Explain your reindeer's unique features.
- ★ **Collaboration:** Pair up and create synchronized flying patterns with your reindeers.



GINGERBREAD GEOMETRY

Materials: Cardboard cutouts in the shape of gingerbread people, buttons, ribbons, and other decorative items that are different shapes

Challenge: Decorate your gingerbread person using geometric shapes. Discuss and identify the shapes you use.



5-STAR CHALLENGE

- ★ **Curiosity:** What are geometric shapes, and how are they different from each other?
- ★ **Creative Thinking:** Design patterns or outfits using different shapes.
- ★ **Critical Thinking:** Identify and name the shapes you used.
- ★ **Communication:** Discuss your design and the shapes incorporated.
- ★ **Collaboration:** Work with a friend to create a gingerbread family with coordinated outfits.



CANDY CANE STORY

Materials: Candy canes, paper, colored pencils or markers

Challenge: Draw or write a short story where candy canes come to life. Think about the adventures they might have or the possible challenges they may face.



5-STAR CHALLENGE

- ★ **Curiosity:** How have other cultures or stories incorporated candies or sweets into their tales?
- ★ **Creative Thinking:** Imagine a world where candy canes come to life and have personalities.
- ★ **Critical Thinking:** Structure your story with a beginning, middle, and end.
- ★ **Communication:** Share your story with others and discuss the themes or messages you included.
- ★ **Collaboration:** Pair up with a friend to co-write or illustrate a joint candy cane story.



TOY ASSEMBLY LINE

Materials: Assorted craft materials (beads, pipe cleaners, paper, fabric scraps), glue, scissors, boxes

Challenge: Design and assemble a toy using the craft materials provided. Imagine you are an elf in Santa's workshop and create toys that children will love.



5-STAR CHALLENGE

- ★ **Curiosity:** How are toys made in real factories?
- ★ **Creative Thinking:** What kind of toy can you create that hasn't been seen before?
- ★ **Critical Thinking:** Consider how each part of the toy comes together for the final product.
- ★ **Communication:** Explain the purpose and functionality of your toy to others.
- ★ **Collaboration:** Team up with another child and assemble toys that complement each other or can be part of a set.



SANTA'S MAILROOM

Materials: Paper, envelopes, colored pencils, stamps, and stickers

Challenge: Draw or write letters to Santa as if you are a child from a different part of the world. Think about what children from various regions might wish for.



5-STAR CHALLENGE

- ★ **Curiosity:** How do letters travel around the world?
- ★ **Creative Thinking:** Imagine the dreams and wishes of children from different cultures.
- ★ **Critical Thinking:** How can you make sure Santa understands exactly what the child wants?
- ★ **Communication:** Share the content of your letters and the backstory of the imaginary children you've represented.
- ★ **Collaboration:** Team up with friends and categorize the letters based on regions or types of toys.



GIFT WRAPPING STATION

Materials: Wrapping paper, tape, ribbons, bows, and empty boxes

Challenge: Wrap the empty boxes as if they contain precious gifts. Try different wrapping techniques and styles.



5-STAR CHALLENGE

- ★ **Curiosity:** Why do we wrap gifts? How do different cultures wrap presents?
- ★ **Creative Thinking:** Develop unique wrapping styles or personalize each gift with creative touches.
- ★ **Critical Thinking:** Determine the amount of material needed to wrap each box without waste.
- ★ **Communication:** Share your wrapping techniques and the inspiration behind your designs.
- ★ **Collaboration:** Work in pairs to time each other on how fast you can neatly wrap a gift.



REINDEER CARE CORNER

Materials: Playdough, pipe cleaners, googly eyes, fake fur or cotton balls, bowls, and craft paper

Challenge: Create a model of a reindeer using the materials. Design a feeding and care station for the reindeer, thinking about what they might need to stay healthy and energetic for their big journey.



5-STAR CHALLENGE

- ★ **Curiosity:** What do real reindeer eat? How do animals prepare for long journeys?
- ★ **Creative Thinking:** Design unique features for your reindeer model.
- ★ **Critical Thinking:** Determine the needs of a reindeer and how you can provide for them in the care station.
- ★ **Communication:** Share facts or stories about your reindeer and its preparation for Christmas Eve.
- ★ **Collaboration:** Work with friends to set up an entire reindeer stable, ensuring all the reindeers' needs are met.



JINGLE BELL ORCHESTRA

Materials: Various sizes of jingle bells, strings, wooden sticks

Challenge: Create musical instruments using bells. Think about how the size of the bell might affect the sound it makes.



5-STAR CHALLENGE

- ★ **Curiosity:** Why do different-sized bells produce different sounds?
- ★ **Creative Thinking:** Design a unique instrument incorporating bells.
- ★ **Critical Thinking:** Consider how to play your instrument to produce a range of sounds.
- ★ **Communication:** Share your instrument's sounds and demonstrate how to play it.
- ★ **Collaboration:** Form a bell band with other kids and play a harmonious tune together.



CAROLING KARAOKE

Materials: Music player, printed lyrics of Christmas carols, simple musical instruments (like bells or tambourines)

Challenge: Pick your favorite Christmas carols and perform them. Try adding your own verses or changing the tunes to make them unique.



5-STAR CHALLENGE

- ★ **Curiosity:** Why is caroling a popular Christmas tradition?
- ★ **Creative Thinking:** Put a personal twist on classic carols.
- ★ **Critical Thinking:** Decide on the order of songs to keep the performance engaging.
- ★ **Communication:** Express the emotions and stories behind the carols.
- ★ **Collaboration:** Form a caroling group with friends and harmonize together.



CANDY CANE TWIST

Materials: White and red playdough, glitter (optional)

Challenge: Use the play dough to create your own candy canes. Experiment with different twists, shapes, and patterns.



5-STAR CHALLENGE

- ★ **Curiosity:** How are real candy canes made and twisted?
- ★ **Creative Thinking:** Design candy canes with unique patterns or even try adding new colors.
- ★ **Critical Thinking:** Plan out the twisting process to achieve a consistent pattern.
- ★ **Communication:** Describe your design process and the inspiration behind your candy cane look.
- ★ **Collaboration:** Team up with a friend to create a candy cane forest or sculpture by combining your designs.



FROSTY'S MAGICAL HAT

Materials: Old hats or paper, craft supplies, glitter, ribbons

Challenge: Design a magical hat inspired by the one that brought Frosty to life. Imagine what powers your special hat may have.



5-STAR CHALLENGE

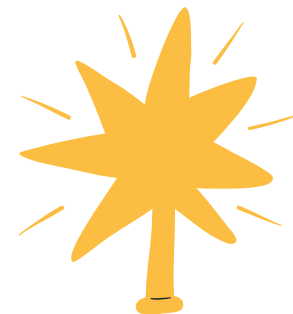
- ★ **Curiosity:** What made Frosty's hat magical, and how did it make him come alive?
- ★ **Creative Thinking:** Dream up enchanting decorations and powers for your magical hat.
- ★ **Critical Thinking:** Decide which materials will best create the desired hat design.
- ★ **Communication:** Describe the powers of your magical hat and how you crafted it.
- ★ **Collaboration:** Collaborate with friends to share hat designs and imagine magical adventures.



TREE TOPPER CREATIONS

Materials: Craft paper, glitter, markers, glue, pipe cleaners, ribbons

Challenge: Design a unique tree topper for a Christmas tree. It could be a star, an angel, or something entirely different!



5-STAR CHALLENGE

- ★ **Curiosity:** What's the history behind tree toppers, and why are they placed on the tree's highest point?
- ★ **Creative Thinking:** Dream up an original topper that represents the spirit of the season.
- ★ **Critical Thinking:** Ensure your tree topper is balanced and can sit securely on top of a tree.
- ★ **Communication:** Describe the symbolism and inspiration behind your tree topper.
- ★ **Collaboration:** Collaborate with peers to create a series of tree toppers that tell a story or represent a theme when displayed together.



POLAR EXPRESS GOLDEN TICKET

Materials: Gold craft paper, scissors, markers, stickers

Challenge: Craft your very own golden ticket to board the Polar Express! Design it with unique symbols or words, and imagine where the train may take you.



5-STAR CHALLENGE

- ★ **Curiosity:** Why is the golden ticket essential for the Polar Express journey?
- ★ **Creative Thinking:** Personalize the ticket with designs or destinations.
- ★ **Critical Thinking:** Think about the importance of belief and magic in the story
- ★ **Communication:** Share your dream destination and the magic of the Polar Express.
- ★ **Collaboration:** Gather with friends to go on an imaginary train ride together, discussing each destination.



GRINCH'S HEART GROWTH

Materials: Red playdough or clay, rolling pins, heart-shaped cookie cutters in various sizes



Challenge: Start with a small heart made from playdough. After hearing the story of the Grinch, mold the heart to be three sizes larger, symbolizing the Grinch's heart growing.



5-STAR CHALLENGE

- ★ **Curiosity:** Why did the Grinch's heart grow three sizes?
- ★ **Creative Thinking:** Shape and modify the playdough heart in different ways.
- ★ **Critical Thinking:** Understand the concept of growth and kindness through the activity.
- ★ **Communication:** Share your thoughts on the Grinch's transformation.
- ★ **Collaboration:** Work with friends to compare heart sizes and discuss the story's message.



WREATH WONDER

Materials: Vine or wire wreath bases, faux flowers, ribbons, small ornaments, pinecones, glue or floral wire

Challenge: Craft a welcoming wreath for the front door or any room in the house or school.



5-STAR CHALLENGE

- ★ **Curiosity:** What's the significance of wreaths during the Christmas season?
- ★ **Creative Thinking:** Incorporate unique elements or themes into your wreath design.
- ★ **Critical Thinking:** Strategically place items for visual appeal and balance.
- ★ **Communication:** Describe the inspiration and elements of your wreath.
- ★ **Collaboration:** Work with others to design complementary wreaths for different parts of a space or building.



GARLAND GALA

Materials: Popcorn, cranberries, needle, thread, colored paper, scissors

Challenge: Craft your own festive garland using a combination of edible and non-edible items.



5-STAR CHALLENGE

- ★ **Curiosity:** What's the history behind using garland as decorations, especially during festive seasons?
- ★ **Creative Thinking:** Experiment with different patterns and combinations for your garland.
- ★ **Critical Thinking:** Consider the durability and placement of your garland to ensure longevity.
- ★ **Communication:** Discuss the choices of materials you used and their significance.
- ★ **Collaboration:** Team up to create longer garland that can be combined for a communal display.



ORNAMENT ARTISTRY

Materials: Blank ornaments (wooden, plastic or ceramic), paint, brushes, glitter, ribbons

Challenge: Design and paint your own Christmas ornaments. Create a theme or story with a series of ornaments.



5-STAR CHALLENGE

- ★ **Curiosity:** How have Christmas ornaments evolved over time in design and meaning?
- ★ **Creative Thinking:** Think of innovative designs or color combinations for your ornaments.
- ★ **Critical Thinking:** Strategize how to display your ornament so its design is showcased.
- ★ **Communication:** Share the significance or inspiration behind your ornament designs.
- ★ **Collaboration:** Group together with friends to create a collective set of ornaments that tell a shared story.



CANDY CANE CHEMISTRY

Materials: Candy canes, warm water, clear cups or bowls, stopwatch

Challenge: Predict and then observe how long it takes for a candy cane to dissolve in warm water. Document the process.



5-STAR CHALLENGE

- ★ **Curiosity:** Why does sugar dissolve in water?
- ★ **Creative Thinking:** Hypothesize what might happen if you change variables like water temperature or candy cane size.
- ★ **Critical Thinking:** Measure and document the dissolution process at regular intervals.
- ★ **Communication:** Share your observations and findings with others.
- ★ **Collaboration:** Compare results with a friend and discuss any differences or similarities in your experiments.



FESTIVE LIGHT PATTERNS

Materials: Colored cellophane sheets in festive colors (red, green, blue, etc.), flashlights, a white sheet or large roll of paper, tape, holiday stencils (stars, trees, bells, etc.)

Challenge: Create holiday-themed light patterns on a sheet or paper using flashlights covered with colored cellophane. Use stencils to shape the light into holiday symbols and combine the colored lights to see how they blend and create new colors.



5-STAR CHALLENGE

★ **Curiosity:** How can we use light to create holiday images, and what new colors emerge when we overlap them?

★ **Creative Thinking:** Arrange the cellophane and stencils to form holiday scenes or patterns.

★ **Critical Thinking:** Make hypotheses about color blending with light and test the outcomes by overlapping different colors through the stencils.

★ **Communication:** Describe the process of creating your festive light patterns and what you discovered about light and color.

★ **Collaboration:** Work in a group to orchestrate a dynamic holiday light show, with each child responsible for a different color or stencil.



COOKIE CUTTER ENGINEERS

Materials: Play dough, cardboard, scissors, foil

Challenge: Create your own unique cookie cutters out of cardboard. Cover them with foil and use them to shape play dough cookies.



5-STAR CHALLENGE

★ **Curiosity:** How can we create different shapes with homemade tools?

★ **Creative Thinking:** Invent a brand-new holiday cookie shape.

★ **Critical Thinking:** Engineer a cookie cutter that is durable and easy to use.

★ **Communication:** Describe the inspiration behind your cookie-cutter designs.

★ **Collaboration:** Share cutters with friends and compare the shapes you've all created.



RECYCLED MATERIAL ORNAMENTS

Materials: Recycled materials (bottle caps, fabric scraps, cardboard tubes), glue, glitter, paint

Challenge: Use recycled materials to create eco-friendly Christmas ornaments. Decorate them to hang on a tree or in a window.



5-STAR CHALLENGE

- ★ **Curiosity:** How can we reuse materials to make something new for the holidays?
- ★ **Creative Thinking:** Design an ornament that reflects a Christmas tradition or story.
- ★ **Critical Thinking:** Choose materials that can be combined to hold together as ornaments.
- ★ **Communication:** Share the story of your ornament's design and its environmental impact.
- ★ **Collaboration:** Organize an ornament-making workshop with peers.



JINGLE BELL DANCE

Materials: Bells, elastic bands or ribbons, music player

Challenge: Attach bells to your wrists, ankles, or waist using elastic bands or ribbons. Dance to music and observe the jingling rhythms you create.



5-STAR CHALLENGE

- ★ **Curiosity:** How do movements translate to sound?
- ★ **Creative Thinking:** Invent a dance that emphasizes the jingle bell sounds.
- ★ **Critical Thinking:** Match your movements to the rhythm and tempo of the music.
- ★ **Communication:** Teach others your jingle bell dance routine.
- ★ **Collaboration:** Choreograph a group dance where everyone contributes to the overall sound with their bells.



SANTA'S PARACHUTE DELIVERY SYSTEM

Materials: Coffee filters, string, tape, small toy figurines, paper clips

Challenge: Design a parachute that Santa might use to drop presents quickly and safely. Attach a toy figurine as the 'present' and test how well your parachute glides.



5-STAR CHALLENGE

- ★ **Curiosity:** How do real parachutes slow down an object's fall?
- ★ **Creative Thinking:** Decorate your parachute with festive colors and designs.
- ★ **Critical Thinking:** Experiment with different sizes and shapes to see what works best.
- ★ **Communication:** Discuss why Santa might need a parachute and the physics of your design.
- ★ **Collaboration:** Test parachutes with friends and share findings to improve designs.



REINDEER RING TOSS

Materials: Cardboard tubes, paper plates, construction paper, tape, homemade rings (can be made from twisted paper or rope)



Challenge: Construct a reindeer antler toss game using cardboard tubes as the antlers and a paper plate as the base. Use construction paper to add details and decorations. Try tossing the rings onto the standing antlers.



5-STAR CHALLENGE

- ★ **Curiosity:** What methods can we use to make the cardboard tubes stand up like antlers on the paper plate?
- ★ **Creative Thinking:** Decorate your reindeer and rings festively.
- ★ **Critical Thinking:** Experiment with different ways to make the game challenging but fun.
- ★ **Communication:** Share the rules of your game and how you came up with the design.
- ★ **Collaboration:** Invite friends to play and offer feedback on how to improve the game.



CHRISTMAS TREE BALANCE CHALLENGE

Materials: Green playdough, toothpicks, small decorative items (beads, buttons, etc.), timer

Challenge: Build the tallest free-standing Christmas tree using play dough and toothpicks. Decorate it without letting it fall over. Time the challenge for added fun.



5-STAR CHALLENGE

- ★ **Curiosity:** What structures can support a tall, narrow shape like a Christmas tree?
- ★ **Creative Thinking:** Decorate your tree in a unique and innovative way.
- ★ **Critical Thinking:** Strategize the best way to balance the tree while adding decorations.
- ★ **Communication:** Discuss the design choices and structural strategies used.
- ★ **Collaboration:** Team up with a friend to build and decorate, then share tips and tricks.



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