

Books and Materials for Design Challenges

Design Challenge	Book Suggestions	Materials Other Than Reusable Resources, Connectors, and Tools
Baby Bear's Chair	<i>Goldilocks and the Three Bears</i> <i>A Chair for Baby Bear</i> <i>A Chair for My Mother</i> <i>Peter's Chair</i>	Broken or nonworking toys or small appliances Scale and 5 lb. weight
Beautiful Buildings	<i>Iggie Peck, Architect</i> <i>Dreaming Up: A Celebration of Building</i> <i>First Shapes in Buildings</i> <i>How a House Is Built</i>	Photos of tall buildings 100 pennies
Box It!	<i>Not a Box</i> <i>A Box Story</i> <i>Clancy and Millie and the Very Fine House</i> <i>What to Do With a Box</i>	Items for decorating
Bug City	<i>Roberto: The Insect Architect</i> <i>The Best Book of Bugs</i> <i>A House Is a House for Me</i> <i>Insects and Spiders</i>	Building toys Nonfiction books and videos about insects Blueprints and graph paper Small toy insects 8 oz. weight
Build a Bridge	<i>The Three Billy Goats Gruff</i> <i>Pop's Bridge</i> <i>This Bridge Will Not Be Gray</i> <i>Twenty-One Elephants and Still Standing</i>	Photos of bridges Scale and three 5 lb. weights

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Crazy Catapults	<i>Olympig!</i> <i>Explore Simple Machines! With 25 Great Projects</i> <i>The Knight and the Dragon</i> <i>Simon and Catapult Man's Perilous Playground Adventure</i>	Small, lightweight objects (pom-poms, cotton balls, etc.) Photos of catapults
Float Your Boat	<i>Who Sank the Boat?</i> <i>The Gingerbread Boy</i> <i>Mr. Gumpy's Outing</i> <i>Toy Boat</i>	Pennies, packing peanuts, bottle caps, or other weights Large container of water
Gizmos Galore	<i>Rosie Revere, Engineer</i> <i>Papa's Mechanical Fish</i> <i>Violet the Pilot</i> <i>What Do You Do With an Idea?</i>	Everyday objects (backpack, toothbrush, piggy bank, etc.) Toys to take apart that have moving parts
Help! It's Stuck!	<i>Stuck</i> <i>Bubble Gum, Bubble Gum</i> <i>My Truck Is Stuck!</i> <i>Tikki Tikki Tembo</i>	Small, lightweight objects to suspend Photos of (or objects with) scissor linkages
A House for the Three Little Pigs	<i>The Three Little Pigs</i> <i>The Three Horrid Little Pigs</i> <i>The Three Little Pigs: An Architectural Tale</i> <i>The True Story of the 3 Little Pigs!</i>	Toys for building (LEGO bricks, blocks, small building planks, etc.) Fan or other wind-making device

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If the Shoe Fits	<i>The Elves and the Shoemaker</i> <i>Pete the Cat: I Love My White Shoes</i> <i>Shoes for Me!</i> <i>Shoes, Shoes, Shoes</i>	Variety of old shoes Items for decorating Old sneaker cut to show layers (optional)
Juice It!	<i>Caterina and the Lemonade Stand</i> <i>Lemonade for Sale</i> <i>Lemonade in Winter: A Book About Two Kids Counting Money</i> <i>Once Upon a Company...: A True Story</i>	Juicing gadgets and sealable sandwich bags Kitchen utensils (cups, bowls, measuring spoons) Fruits
Move Like an Animal	<i>Fraidyzoo</i> <i>Put Me in the Zoo</i> <i>A Sick Day for Amos McGee</i> <i>What If You Had...!?: (series)</i>	Items for decorating Picture books, photos, or videos of animals
Paper Airplanes	<i>The Great Paper Caper</i> <i>Float</i> <i>Kids' Paper Airplane Book</i> <i>Whoosh! Easy Paper Airplanes for Kids: Color, Fold, and Fly!</i>	Paper clips and brads to use as weights
Pet Carrier	<i>A Home for Dixie: The True Story of a Rescued Puppy</i> <i>Before You Were Mine</i> <i>A Home for Dakota</i> <i>Yoda: The Story of a Cat and His Kittens</i>	Scale and a 5 lb. weight Pet toys, blankets, and water bowls

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Repurpose It!	<i>The Most Magnificent Thing</i> <i>Awesome Dawson</i> <i>The Branch</i> <i>Choose to Reuse</i>	Old toys to take apart (toy car, cash register, etc.)
Roller Coaster	<i>Roller Coaster</i> <i>Curious George Roller Coaster</i> <i>Harriet and the Roller Coaster</i> <i>The Roller Coaster Kid</i>	Small balls or marbles Stopwatch
Squirrel-Proof Birdfeeder	<i>Those Darn Squirrels!</i> <i>Nuts to You!</i> <i>The Secret Life of Squirrels</i> <i>The Tale of Squirrel Nutkin</i>	Items for decorating
Strike Up the Band	<i>Olivia Forms a Band</i> <i>Ah, Music!</i> <i>Max Found Two Sticks</i> <i>Tito Puente: Mambo King/Rey del Mambo</i>	Items for decorating Musical instruments
A Sturdy Nest	<i>Mama Built a Little Nest</i> <i>Are You My Mother?</i> <i>The Best Nest</i> <i>Have You Heard the Nesting Bird?</i>	Natural items (twigs, branches, leaves, etc.) Toy bird and plastic eggs Bird nest (optional)

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Tower Power	<i>Rapunzel</i> <i>Gustave Eiffel's Spectacular Idea: The Eiffel Tower</i> <i>Pull, Lift, and Lower: A Book About Pulleys</i> <i>The Tree House That Jack Built</i>	Building materials (blocks, boxes, Pringles cans, etc.)
Trouble With Bubbles	<i>Bubble Trouble</i> <i>Bubble Bubble</i> <i>The Bubble Factory</i> <i>Chavela and the Magic Bubble</i>	Bubble solution (dish soap, water, and glycerin) Trays and buckets Fan
What a Car!	<i>If I Built a Car</i> <i>Cars: Rushing! Honking! Zooming!</i> <i>My Little Car</i> <i>Otto: The Boy Who Loved Cars</i>	Pictures of different cars Old car parts (mirrors, hubcaps, etc.) Toy cars to take apart Items for decorating
Wind Wonders	<i>The Wind Blew</i> <i>The Boy Who Harnessed the Wind: Picture Book Edition</i> <i>Flora's Very Windy Day</i> <i>I Face the Wind</i>	Table tennis balls and pom-poms Drinking straws Egg timers
Yarn Magic	<i>Extra Yarn</i> <i>Just How Long Can a Long String Be?!</i> <i>Noodle's Knitting</i> <i>The Very Busy Spider</i>	Items for decorating Natural items (sticks, pinecones, leaves, etc.) Yarn Mobile to take apart