

STEM challenges

Back to School: energizers- spaghetti and tape tower, hoop gliders, foil boats with coins

K review: QR code scavenger hunt to tour the school solving riddles

1. What is a Pal?: interview friend, make friendship bracelet with beads justifying choices based on interview
2. The Storm: build a shelter to protect Mr. Cottonball
3. Curious George: design and build mini-mop
4. Lucia's Neighborhood: build a "neighborhood" with buildings, layout on paper with roads, draw map
5. Gus Takes the Train: given 8 various size blocks, design packaging to keep items "safe" during trip (fall off table, train wreck!)
6. Jack and the Wolf: build pen to protect cottonball sheep (This year we researched Cherokee folktales for new SS standards and acted it out for other classes.)
7. How Animals Communicate: make duck calls with straws
8. A Musical Day: different instrument each day- drums, pipe, guitars, maracas, water xylophone
9. Dr. Seuss: clay animation with rhyming text Koma Koma
10. A Cupcake Party: design and build party game with various items given with complete instructions, also invitation with movable and popup parts
11. At Home in the Ocean: oceanographer who discovers new sea creature, name it, state needs and characteristics
12. How Leopard Got His Spots: hide plastic bugs to show benefit of camouflage, design/create bug and design habitat
13. Seasons: research 4 seasons, holidays, sports, weather- design outfit for bear to match researched season
14. The Big Race: Christmas Around the World
15. Animal Groups: Christmas Around the World
16. Let's Go To The Moon: build robo-arm to collect "moon rock"
17. The Big Trip: 100 day of school (100 items- each kid brings 20 and works in teams of 5) build something related to transportation- display at STEM fair

18. Where does food come from? Mayfield Dairy field trip, Discovery Center
You are what you Eat, ice cream in a bag with ice, milk, sugar, salt and SHAKING!
19. Tomas Rivera: www.softschools.com timeline maker
20. Little Rabbit's Tale: rollercoaster challenge- cause and effect
21. The Garden: 20oz bottle terrariums or herbs, flower observations/experiments with light, no water, darkness, and color
22. Amazing Animals: build turtle shell to protect playdoh turtle body
23. Whistle for Willie: plan outdoor space for Willie with 20 cube budget, design on ActivInspire
24. A Tree is a Plant: solving elapsed time problems with gardening and harvesting, use clocks and StopMotion to show elapsed time and sequencing of garden
25. A New Friend: Research American symbols, use iMovie to create movie trailer for American documentary
26. The Dot: research stippling art, design picture on 10x12 graph paper, transfer to large graph chart paper with dots using drawing as grid guide, solve addition problems to total 120 dots.
27. What Can You Do?: farther (hoop gliders), taller (paper tower), faster (ten cups stacking), funnier (iPad photo booth) longer (playdoh snake) Use comparative endings -er and -est, rotate stations, use measurement and time to judge
28. The Kite: build a kite to fly outside
29. Hi Fly Guy!: research parts of insects, build insect, label parts
30. Mia Hamm: create field with best material as surface to move ball quickly to the goal