Elementary Math Tasks

Which One Doesn't Belong (Grades K-12+): a math routine that gives four choices, but each answer is correct! Since students know that their answer is correct regardless of the choice, they are at ease to consider the why behind their choice. This website is a bank of visual, open-ended sets where you justify "which one doesn't belong." Can you or your students come up with a justification for each selection presented?

<u>NCTM Problems of the Week</u> by NCTM (Grades K-12+): a bank of high-quality mathematical problems curated by the National Council for the Teachers of Mathematics.

Nrich (Cambridge University) (PK-12+): NRICH is an innovative collaboration between the Faculties of Mathematics and Education at the University of Cambridge which focuses on problem-solving and on creating opportunities for students to learn mathematics through exploration and discussion. NRICH provides thousands of free online mathematics resources for ages 3 to 18, covering all stages of early years, primary and secondary school education - completely free and available to all.

<u>Clothesline Math</u> (K-12+): The Clothesline is a manipulatable number line that makes the facilitation of class discourse on number sense much more efficient and effective. The Clothesline is dynamic, meaning that the "benchmark" numbers may be adjusted when needed, as well as the values that are placed on the line.

<u>Teacher Desmos</u> (K-12+): Desmos wants to build a world where every student learns math and loves learning math, where a student's access to the power and beauty of math doesn't depend on their place of birth, race, ethnicity, gender, or any other aspect of their identity.

<u>Brilliant Daily Challenge</u> (Grades 4-12+): Can you use your logic and reasoning skills to solve these high-cognitive demand puzzles?

<u>YouCubed</u> by Jo Boaler (Grades K-12): Low threshold, high ceiling tasks, naturally differentiating, highly engaging, and aligned with grade levels. YouCubed tasks aren't specifically aligned with a math standard but allow students to access and experience rigorous mathematics. The only drawback is not enough content!

Graphing Stories by Dan Meyer (Grades 4-12+): Can you make a graphical representation based on a story?

Open Middle Math Robert Kaplinsky (Grades K - 12): Tasks complete with teacher lesson plans that include engaging, current topics with rigorous mathematics. These tasks are all tied to grade-level content areas. The only drawback is not Achieve the Core Coherence Map (Grades K-12): The Coherence Map shows the connections between State Standards for Mathematics. They help build student understanding by linking together concepts within and across grades. The map assists in identify gaps in a student's knowledge by tracing a standard back through its logical pre-requisites and it helps you visualize and understand how supporting standards relate to the major work of the grade. Embedded in the map are over 45 math tasks tied to standards.

<u>Would You Rather</u> (Grades K-12): A comprehensive series of mathematical tasks that ask students to pick an option based on the popular "Would you rather...." series. Highly engaging and content that spans all K-12 grade bands.

<u>Visual Patterns</u> (Grades K-12): A set of visual patterns—can you figure out what the next set of shapes will look like? How do you know? Could you find the 28th set? How many would be in it? Is there a set that has 86 objects? How do you know?

<u>Tiled Area Problems by Steve Wyborney</u> (Grades K-12): Can you use your knowledge of area and fractions to figure out the area of the entire shape? How do you know?

<u>Data Nuggets</u> (Grades 4-12+): Explore different "data nugget" sets to make meaning or discover trends.

<u>SolveMe Puzzles</u> (Grades K-12): A set of high-cognitive tasks divided into three categories Mobiles, Who Am I?, and MysteryGrid (funded by the National Science Foundation). Each problem gets consecutively more cognitively demanding—try it out and see what happens!

<u>When Math Happens</u> by Dan Meyer (Grades 3-12): 3-Act Tasks with engaging video clips and simple questions that are of the "What do you notice? What do you wonder? What do you need to know?" style. These tasks are all tied to grade-level content areas. The only drawback is not enough content!