Recommended Resources for Tasks that Promote Reasoning and Problem Solving

The following list contains information about some sites that provide rich and engaging math tasks (in alphabetical order). Live links are included in the online version at the NCTM website. This information is current as of March 3, 2019. With the exception of some NCTM resources, all of the resources below are freely available. Some sites require users to submit personal information before downloading resources.

Name and URL	Description	Grades included	Searchable by content standard?	Printable tasks?
Balanced Assessment https://hgse.balancedassessment.org/	Over 300 tasks developed at the Harvard Graduate School of Education between 1993 and 2003. The tasks are rich and can be used for assessment or instruction. Because the tasks predate the Common Core, they are not explicitly aligned to current standards.	K-12	No	Yes
CCSS Math Activities http://ccssmathactivities.com/performance-tasks/	Performance tasks for may of the Common Core standards. The site also includes other resources, including supports for *Engage NY*, and the *Smarter Balanced Assessment*.	perfor-mance tasks for 2-12	Tasks are organized by domain	Yes
Corwin Mathematics *https://us.corwin.com/en-us/nam/math/rich_tasks*	A handful of rich tasks for each grade.	K-12 (tradi-tional HS pathway)	Tasks for each grade are in a single PDF	Not in the original format
Dan Meyer's Three-Act Math http://blog.mrmeyer.com/archives/	Dan Meyer's blog has a link to his famous Three-Act Math Tasks. The tasks include videos of interesting real-world experiences, with mathematical questions for each act.	6-12 (plus 1-2 tasks each for 3-5)	Yes	No
Desmos https://teacher.desmos.com/	Technology-based explorations for Algebra and Geometry. Each topic includes a bundle of activities.	9-12	No	No
Emergent Math https://emergentmath.com/my-problem-based-curriculum-maps/	A great starting place! At Emergent Math, Geoff Krall has compiled tasks from several other sources to create Common Core Problem Based Curriculum Maps. The high school maps include traditional and integrated pathways.	3-11	Yes	Some (all tasks are from other sources)
Geogebra https://www.geogebra.org/	Technology-based activities. Many of the activities focus on geometry topics, but other topics are included as well. All levels are included, but the majority of activities are for upper grades.	K-12	Searching by domain (e.g. 6.NS) yields better results	No
Howard County Public School System https://hcpss.instructure.com/courses/5972/pages/howard-county-mathematics	Howard County, Maryland, has published their complete curriculum for K-Algebra 2, with tasks and lesson plans for every day. Within each course, the Scope & Sequence provides tasks for each standard within the quarter, many of them developed by HCPSS.	K-6 currently 7-12 coming soon	Not easily. It takes some clicking and exploring.	Yes

Illustrative Mathematics https://www.illustrativemathematics.org/content-standards	These tasks illustrate the meaning and intent of each Common Core standard. Some tasks are intended as assessment items, while others are engaging instructional activities. IM also offers a full free curriculum for grades 6-8, which contains tasks that promote reasoning and problem solving throughout all units. The High School curriculum is due out July 2019, and K-5 is due out in 2021.	K-12	Yes	Yes
Inside Mathematics http://www.insidemathematics.org/problems-of-the-month/download-problems-of-the-month	A collection of rich problems designed to engage an entire school across grade levels. The tasks are sorted by grade, but each PDF includes related tasks at different levels that can be used as a school-wide theme.	K-12	No	Yes
Robert Kaplinsky's Lessons https://robertkaplinsky.com/lessons	Robert Kaplinsky has created highly engaging tasks that relate interesting real-world experiences and pop culture events to mathematics. Each task relates to standards from a range of grade levels, so tasks may need to be adapted to meet grade-specific expectations.	K-11 (traditional HS pathway)	Not easily	Not easily
Mathematics Assessment Project https://www.map.mathshell.org/	The "Lessons" tab includes rich instructional tasks sorted by grade (6-8) and conceptual category (high school). The "Tasks" tab provides a collection of summative assessment tasks. Each task includes a scoring rubric, and many include samples of student work. Tasks are sorted by grade and by difficulty ("novice, apprentice, expert").	6-12	Sortable by cluster	Yes
Math Pickle http://mathpickle.com/puzzles-and-games/	Puzzles, games, and explorations that encourage mathematical thinking and reasoning. Each puzzle is tagged with selected Standards for Mathematical Practice.	K-12	No	Some
National Council of Teachers of Mathematics https://www.nctm.org/	NCTM's website includes countless resources for teachers of all levels. These resources are available to members only. Under the "Classroom Resources tab, you will find: • Activities with Rigor and Coherence • Student Explorations in Math • Illuminations & More Online Resources • Reasoning & Sense Making Task Library • Problems of the Week Resources Each of these resources is slightly different and worth exploring.	K-12	No	Some
youcubed https://www.youcubed.org/	Designed by Jo Boaler and her colleagues and students, youcubed offers a variety of resources. Under the "Tasks & More" tab, you will find: • "low-floor, high-ceiling" tasks for every level. • Week of Inspirational Math tasks designed to spark students' growth mindset early in the school year (or any time) • a four-week course on "Mathematical Mindset Algebra"	K-12	No	Some (some tasks are from other sources)