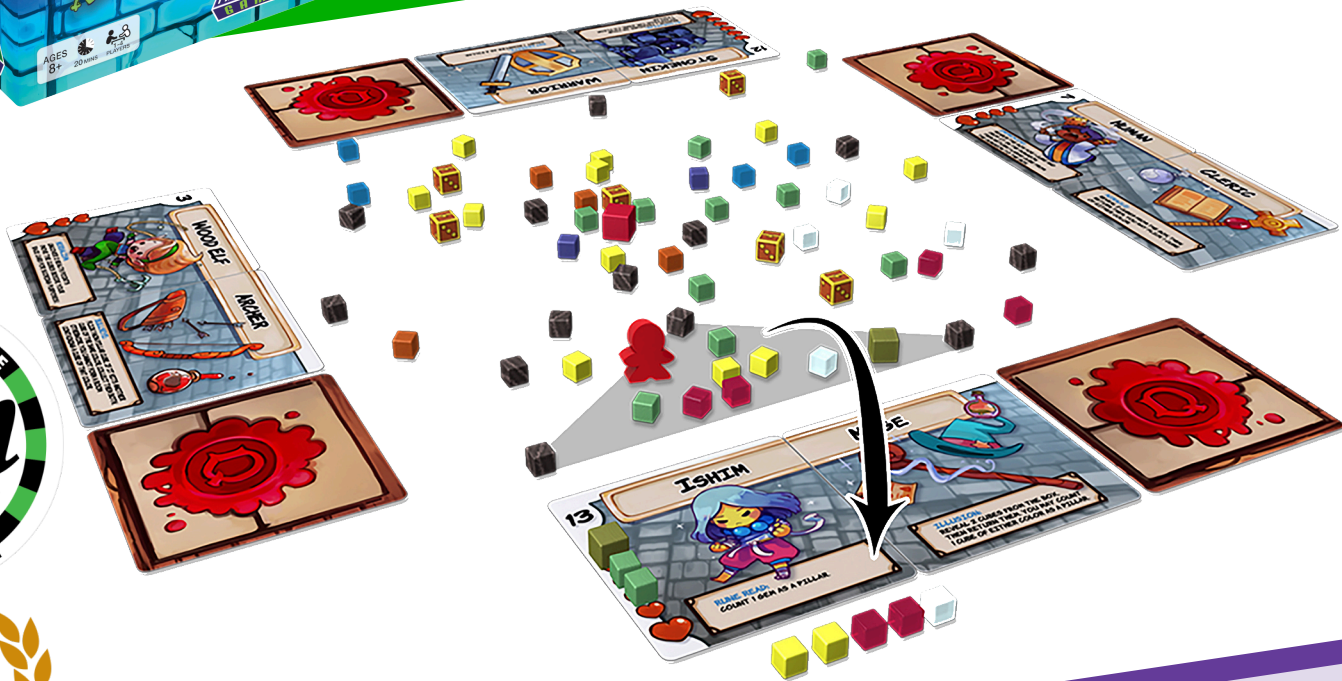




# Dungeon Drop

Remembering | Understanding | Applying | Analyzing | Evaluating | Creating



## Game details



How-to-play

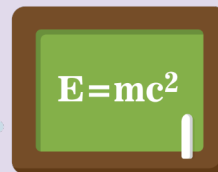


<https://phaseshiftgames.com/pages/dungeon-drop>

## Learning objectives

- Remembering: Recognizing, recalling
- Understanding: Interpreting, classifying, summarizing, inferring, comparing, explaining
- Applying: Executing, implementing
- Analyzing: Differentiating, organizing, attributing
- Evaluating: Checking
- Creating: Generating, planning, producing

## Topics



- Matter
- Motion and Stability
- Counting & Cardinality
- Operations & Algebraic Thinking
- Measurement
- Geometry



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# Dungeon Drop curriculum standards

Common Core State Standards for Mathematics ([corestandards.org](http://corestandards.org))

Grade level	Domain name	Domain code	Standards	Equivalent game mechanics
K	Counting and Cardinality	K.CC	Know number names and the count sequence.	Character initiative ratings are numbered from 0 to 14
K	Counting and Cardinality	K.CC	Count to tell the number of objects.	Count treasure of different types
K	Counting and Cardinality	K.CC	Compare numbers.	Compare different players' stashes of treasure
K	Operations and Algebraic Thinking	K.OA	Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.	Treasure is added to your score; monsters subtract from your health
K	Number and Operations in Base Ten	K.NBT	Work with numbers 11–19 to gain foundations for place value.	Characters with higher initiative ratings
K	Measurement and Data	K.MD	Describe and compare measurable attributes.	Different types of treasure are worth different amounts of points, sometimes based on their size
K	Measurement and Data	K.MD	Classify objects and count the number of objects in each category.	Count number of treasure and monsters of different types
K	Geometry	K.G	Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).	Triangles (all possible types) and environmental relative positioning of cubes
K	Geometry	K.G	Analyze, compare, create, and compose shapes.	Treasure and monsters of different sizes, textures, and colors; ability to stack cubes to create other shapes
1	Operations and Algebraic Thinking	1.OA	Represent and solve problems involving addition and subtraction.	Treasure is added to your score; monsters subtract from your health
1	Operations and Algebraic Thinking	1.OA	Add and subtract within 20.	Adding higher amounts and values of treasures
1	Operations and Algebraic Thinking	1.OA	Work with addition and subtraction equations.	Need to have enough health to enter a room with monsters; need to have highest score to win
1	Measurement and Data	1.MD	Measure lengths indirectly and by iterating length units.	Measure distance between cubes in card lengths
1	Measurement and Data	1.MD	Represent and interpret data.	Cubes of differing shapes, sizes, colors, and textures that can be organized, counted, and compared
1	Geometry	1.G	Reason with shapes and their attributes.	Draw triangles in order to form a room; rooms contain different attributes
2	Operations and Algebraic Thinking	2.OA	Add and subtract within 20.	Adding higher amounts and values of treasures
2	Operations and Algebraic Thinking	2.OA	Work with equal groups of objects to gain foundations for multiplication.	Cubes of differing shapes, sizes, colors, and textures can be used for grouping and array equations
2	Measurement and Data	2.MD	Measure and estimate lengths in standard units.	Measure distance between pillar cubes, or any other type of treasure or monster cube
2	Measurement and Data	2.MD	Work with time and money.	Different treasures are worth different amounts of points
2	Measurement and Data	2.MD	Represent and interpret data.	Measure lengths between objects; graph data based on treasure and monster cube categories
2	Geometry	2.G	Reason with shapes and their attributes.	Draw triangles of varying sizes and shapes to form rooms; use the mechanic to draw rooms using other criteria / shapes
3	Operations and Algebraic Thinking	3.OA	Represent and solve problems involving multiplication and division.	Groups of treasure cubes that are worth a specified amount of points each
3	Operations and Algebraic Thinking	3.OA	Understand properties of multiplication and the relationship between multiplication and division.	Groups of treasure cubes that are worth a specified amount of points each, which can then be reversed
3	Number and Operations—Fractions	3.NF	Develop understanding of fractions as numbers.	Use groupings of treasure cubes to demonstrate fractions
3	Measurement and Data	3.MD	Represent and interpret data.	Measure lengths between objects; graph data based on treasure and monster cube categories
3	Measurement and Data	3.MD	Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	Use cubes and dungeon mats to demonstrate and calculate area of squares and rectangles
3	Measurement and Data	3.MD	Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	Use cubes and dungeon mats to demonstrate and calculate polygonal perimeters
3	Geometry	3.G	Reason with shapes and their attributes.	Use cubes and dungeon mats to demonstrate different geometric shapes and attributes; perform area calculations
4	Operations and Algebraic Thinking	4.OA	Use the four operations with whole numbers to solve problems.	Use treasure and monster cubes to represent problems to be solved
4	Measurement and Data	4.MD	Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	Use cubes and dungeon mats to demonstrate and calculate polygonal perimeters
4	Measurement and Data	4.MD	Geometric measurement: understand concepts of angle and measure angles.	Use cubes and dungeon mats to demonstrate and calculate angles
4	Geometry	4.G	Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	Use cubes and dungeon mats to demonstrate parallel or perpendicular lines, line symmetry, angle types, etc.
5	Geometry	5.G	Graph points on the coordinate plane to solve real-world and mathematical problems.	Use cubes and dungeon mats to demonstrate coordinate systems and interpret coordinate values
5	Geometry	5.G	Classify two-dimensional figures into categories based on their properties.	Use cubes and dungeon mats to demonstrate that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category; classify two-dimensional figures based on properties
6	Ratios and Proportional relationships	6.RP	Understand ratio concepts and use ratio reasoning to solve problems.	Calculate ratio / average number of points per treasure type
6	Geometry	6.G	Solve real-world and mathematical problems involving area, surface area, and volume.	Use cubes and dungeon mats to draw and calculate area of triangles, quadrilaterals, and polygons; draw polygons based on given coordinates

NGSS (Next Generation Science Standards):

- **PS1 Matter and its Interactions**
- **PS2 Motion and Stability: Forces and Interactions**