Standard	Lesson Description	Evidence of Alignment	Notes
1.OA.7	Understand the equals sign	Equals sign is introduced during standard prgression.	Standard includes determining whether equations involving addition or subtraction are true or false, not currently part of DragonBox.
1.OA, 2.OA	Add and subtract to solve problems for an unknown in any position, which is represented by a picture or symbol.	Manipulate cards/symbols on a game board through addition and subtraction to isolate an unknown.	Doesn't include word problems, game is just symbols.
3.OA.8	Solve two-step problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity.	DragonBox levels include all four operations and use a "box" as the unknown, which is later replaced with a letter.	Standard refers to word problems, includes “Assess the reasonableness of answers using mental computation and estimation strategies including rounding.”
4.NF.4.a	Understand a fraction a/b as a multiple of 1/b. For example, use a visual fraction model to represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4).	This is implicit in the game when multiplying cards in fraction form by another card.	
4.NF.4.c	Solve problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem.	Levels where players must multiply cards in fraction form side by a value or values.	Standard refers to word problems and visual fractions models in addition to equations.
4.OA.2	Multiply or divide to solve problems involving multiplicative comparison by using equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	Levels where players must multiply or divide on both sides of the equation to solve for a symbol while using cards for values. Game distinguishes between additive situations and multiplicative situations.	
4.OA.3	Solve multistep problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity.	Levels where players must solve for the unknown quantity using multiple steps and with all four operations.	Standard refers to word problems, includes interpreting remainders, and assessing the reasonableness of answers using mental computation and estimation strategies including rounding.
5.NF.3	Interpret a fraction as division of the numerator by the denominator (a/b = a ÷ b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.	Solve levels through fraction manipulation.	Doesn't include word problems.
6.NS.5	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values.	Concept of "night" cards introduced in standard progression, which are eventually replaced with negative letter values.	Standard also includes: Use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.
6.EE.6	Use variables to represent numbers and write expressions when solving a mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	By starting with cards in the standard progression, expressions are created and manipulated without numbers.	Standard also refers to real-world problems (not just math problems).
6.EE.7	Solve mathematical problems by solving equations of the form x + p = q and px = q for cases in which p, q and x are all nonnegative rational numbers.	Covered by the standard progression in which cards stand in for rational numbers, the cards are eventually replaced by numbers and letters as the game goes on.	Standard also refers to writing and solving real-world problems.
7.NS.1.a	Describe situations in which opposite quantities combine to make 0.	Night and day cards, numbers, variables.	
7.NS.1.b	Show that a number and its opposite have a sum of 0 (are additive inverses).	Standard progression includes cards of opposite value (e.g. 5, -5) that are combined into zero and eliminated.	Standard also includes: Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Interpret sums of rational numbers by describing real-world contexts.
7.NS.1.c	Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (–q).	Implicit in Chapter 5 of the game, though the subtraction symbol is never used.	Standard also includes: Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.
8.EE.7.b	Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.	Game does not currently include distributive property, but does include collecting like terms to some degree.	
A-CED.4	Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.	Game does this at higher levels (and at lower levels with pictures and numbers).	
A-REI.3	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	Game currently does not include inequalities.	Note: We could get at standard A-REI.1 if students could explain and justify the steps of solving the equation.