

# MATHIKIT WITH ACTIVITY CARDS





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#### What's inside your experiment kit:



Checklist:

J	No.	Description	Quantity	Part No.	
0	1	Left arm	1	1603-W10-A1LB	-
0	2	Right arm	1	1603-W10-A2LB	۱
0	3	Base	1	1603-W10-B3LG	
0	4	Pillar	1	1603-W85-B1LG	
0	5	Weight	10	1603-W10-C1LY	
0	6	Adjuster	4	19-W10-E1W	
0	7	Challenge card	18	K16#1603-TK	
0	8	Sticker sheet	1	R20#1603-1	

# PLEASE NOTE ...

(1) THERE ARE TWO SIDES OF THE NUMBER BALANCE TO HELP CHILDREN VISUALIZE NUMBERS IN DIFFERENT WAYS. (2) THE SPECIFIC NUMBERS SHOWN IN THE LESSONS ARE ONLY EXAMPLES. TRY THE ACTIVITIES WITH OTHER NUMBERS! (3) THE FIRST EXAMPLE IN EACH CATEGORY SHOWS THE CORRECT ANSWER.

#### **WARNING!**

Good to know!

(see back cover).

- >> Not suitable for children under 3 years. Choking hazard — small parts may be swallowed or inhaled.
- >> Before starting, check the parts list to be sure that all of the correct pieces are included in the kit. Keep the packaging and instructions as they contain important information.
- >> Store the experiment material and assembled models out of the reach of small children.

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### Dear Parents and Supervising Adults!

Children want to explore, understand, and create new things. They want to try things and do them by themselves.

They want to learn! They can do all of this with Thames & Kosmos experiment kits. With every single experiment, they grow smarter and more knowledgeable.







If necessary: Add adjusters and slide until the left and right arms are balanced perfectly.



To **disassemble** the number balance, push down on the green tabs while lifting up the left and right arms.



#### **COUNTING & COMPARING VALUES**



# ADDITION If you have 4 flowers and a friend gives you 2 more, how many flowers do you have? >> What is 4 plus 2? >> What is the sum of 4 and 2? >> What is 4 added to 2? What is 4 plus 2 Q P Try the colorful side of the number balance first so kids get a sense of what the numbers mean using the pictures of the apples. What is 5 plus 31 Put a weight on the right to balance the weights on the left. >> What is 5 plus 3? 34567891

What is 2 plus 1?



#### MULTIPLICATION



#### DIVISION



Ty and Karlie's parent has 10 pieces of candy. She divides the pieces evenly between the 2 children. How many pieces will Ty and Karlie each have? (Hang 1 weight on the left side on the number 10, representing the total number of candies. Take 2 weights and figure out where to put them on the right side — on the same number — so that the scale balances.) >> What is 10 divided by 2?

Did you notice that multiplication and division are inverse operations? 10 2=5 and 5x2=10!



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Put 2 weights on the right side (on the same number) to balance the left side. >> What is 8 divided by 2?

5

Put 3 weights on the right side (on the same number) to balance the left side. >> What is 3 divided by 3?

#### **BASIC ALGEBRA (ADDITION & SUBTRACTION)**



Put another weight on the right side to balance the left side. >> What plus 4 equals 5?

30

>> What is 5 minus 4?

This type of problem is identical to the subtraction problems. That's because you use inverse operations to solve algebra problems!





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#### **BASIC ALGEBRA (MULTIPLICATION & DIVISION)**

<sup>\*</sup>



Put 3 weights on the right side (on the same number) to balance the left side. >> 2 plus 4 is the same as what times 3?

The question mark on the card is the **unknown variable.** In algebra, this is often noted with the letter x.

Put another weight on the right side to balance the left side. >> 4 times 2 is the same as 5 plus what?



Put 2 weights on the right side (on the same number) to balance the left side. >> 7 plus 3 is the same as 2 times what?

# WANT MORE MATH?

Scan this QR code for more printable worksheets to practice addition, subtraction, multiplication, division, and basic algebra.



## **ADDITIONAL CHALLENGES:**

(1) CREATE A BALANCED EQUATION USING ALL 10 WEIGHTS!

#### (2) CREATE A BALANCED EQUATION WHERE MORE THAN 1 NUMBER IS NUMBER MULTIPLIED!

#### (3) CREATE A NUMBER BALANCE CHALLENGE THAT WILL STUMP A GROWNUP!

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