

ADVANCED LEARNING LABS

Collaboration between NC Department of Public Instruction and AIG Teachers across the state

TO ENGAGE, ACTIVATE, AND GROW OUR STUDENTS

GRADES

4-5

Balance



ENGLISH LANGUAGE ARTS

Choose an informational article or book to read about a topic that interests you. As you read, become an 'architect' looking for at least three key points the author uses to support each main idea—similar to the need for at least three legs to help balance a stool and be able to confidently sit on it.

Create a set of stool blueprints in which you detail the main ideas given (seats) and which legs (reasons/evidence) help to support which seats. How many main ideas did your informational text have? Are they balanced and well-stabilized points?

Want an extra challenge? If you find that some main ideas aren't well-stabilized, research to discover additional evidence to help support the main ideas.



SOCIAL STUDIES

Balanced budgets are often a focus in politics and business, but they are important on a personal level, too. As a consumer, it is important to be able to evaluate and balance the costs and benefits of spending, borrowing and saving.

Watch this video: <https://vimeo.com/398340269>; reflect on the balance between spending, borrowing and saving. Think about your own budget and how you want to balance your income (allowance, jobs, gifts, etc.) and your expenses (fun, food, gifts, etc.) with what you choose to save or share/donate.

Create your own budgeting sheet or choose one of the free budgeting worksheets that can be found here: <https://www.moneyprodigy.com/kids-budget-worksheets/>. Set financial goals for yourself in areas you'd like to improve and/or grow.



SCIENCE

Animal extinction, pollution, and climate change are just some of the ways an ecosystem's balance can be affected. On the "Conscious Challenge" website, there is much information about how the delicate balance of earth is being upset and what we can do to help.

Visit the website and read more about extinction at this link: <https://www.theconsciouschallenge.org/ecologicalfootprintbibleoverview/extinction-animals>

Brainstorm with your family how you can help be a part of balance restoration for our earth. How will you help reduce your carbon footprint? Will you donate to an endangered species fund? What can you do to inform others about the need to make changes in their lifestyles?



MINDFULNESS

School, friends, sports, family, chores and more... you're juggling lots and often things can feel unbalanced. How can you balance care of both your mind and body? Visit the following site regarding self-care for kids and read about the different ways in which you can keep your mind and body healthy: <https://kidshelpline.com.au/teens/issues/looking-after-yourself>

Choose a couple of options from each focus area (sleep, diet, movement, self-expression and taking a break) to try to put into practice to keep a balance of both mental and physical health. Reflect at the end of the week on how you feel physically, mentally and emotionally. Do you feel more centered and balanced?



LOGIC PUZZLE

You have \$50, and spend all of it...but where did the extra \$1 come from?

Spent	Balance
20	30
15	15
9	6
6	0
50	51

Spending only \$50, can you create a spending scenario where the "spent" total equals the "balance" total?

Now, create another scenario where the "balance" total is greater than \$51. How large can you make the "balance" column while still only spending \$50?



FIELD STUDIES

Dating back to ancient Greece, funambulists (tightrope walkers) often performed their seemingly superhuman feats of balance as entertainment. This tradition has been passed down through family generations to the present day. Where have you seen tightrope walkers?

There is also evidence of tightrope walking out of necessity for a small village in Russia. What do you imagine the reason is for this need? Research here to learn more: <https://uk.reuters.com/article/russia-dagestan/russian-villages-tightrope-walking-prowess-idUKNOA03867920070830>

For extra fun, watch a video and train yourself to walk a tightrope!

<https://allarts.org/programs/circus/circus-circus-diy-how-to-walk-a-tightrope/>



RESEARCH EXPLORATIONS

Cooking shows on tv talk a lot about balancing flavors and flavor profiles. What do they mean? Explore the following links to learn more about different flavor profiles and how chefs around the world use them: <https://www.cooksmarts.com/articles/study-flavor-profiles/>

<https://youtu.be/TBBuY-sQrR4>

Then update one of your favorite dishes or create a completely new dish, balancing the flavor profiles.

You can choose to do this in a couple ways: video your own cooking show episode with you as the host, or design your own menu of balanced flavor dishes with brief descriptions of each.

Take it a step further and cook the actual dish to allow your family and friends to taste the balance of flavors themselves!



MATH

Balance Quest Goal: Fill in the gaps to "balance," or zero out, each side of the puzzle at the link below. One side will equal a negative number and the other side will equal the same positive number.

Rules:

- Values in each white box equal the sum of the adjacent half-height boxes.
- Shaded boxes must include ALL numbers from -8 through 8 (except 0)
- Numbers must NOT duplicate among the white boxes, or among the shaded boxes, but duplicate numbers CAN exist between the white and shaded boxes.

<https://www.puzzles-to-print.com/number-puzzles/balance-quest/small-grid-easy.pdf>



North Carolina Department of
PUBLIC INSTRUCTION



Balance Reference Guide

2-3 Logic Puzzle:

Solution:

blue = 12; orange = 12

blue ball = 12; blue star = 4

blue = 12; orange = 6

blue = 12; green = 6

https://drive.google.com/file/d/0B624p_lrRSi0QzU3bGpBOWw5S0U/view

4-5 Logic Puzzle:

Solution: The "balance" and "spend" columns do not have to match, and in most cases, will not match. They are not always equivalent because you cannot compare them in that way. The amount in the "balance" is what is left over and depending on how much you "spend," equals what is left (the "balance") and therefore, if you only spend \$1 at a time, you will always have large numbers left over. Whereas, if you spend all of it at one time, you will have \$0 in the "balance."

6-7 Logic Puzzle:

Solution: If the coin picked by the warden is real then the scale would display 0 or an even number. If the coin is fake then the scale will display an odd number.

8-9 Logic Puzzle:

Solution: If the coin picked by the warden is real then the scale would display 0 or an even number. If the coin is fake then the scale will display an odd number.

10-12:

Logic Puzzle Solution: <http://www.bridbles.com/2011/10/hardest-balance-logic-puzzle.html>.

Math Solution: \$156.83

Work on more problems with IXL: <https://www.ixl.com/math/algebra-2/continuously-compounded-interest-word-problems>

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K-12

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NC Standards Alignment

Grade Span	English/ Language Arts	Social Studies	Science	Math
K-1	W.1.1	1.E.1.3 1.E.1.2 1.E.1.3	K.P.2.1 science K.MD.2 -math	NC.1.OA.4 NC.1.OA.7 NC.1.OA.2
2-3	RI.3.2	3.E.1.2 3.E.1.4	3.L.2.2	Mathematical Practice Standard 2
4-5	RI.5.8	5.E.2.2 5.E.2.1 5.E.2.2	4.L.1.1	Mathematical Practice Standard 2
6-7	W.6.1	7.H.2.1 7.H.1	7.P.1.2	NC.6.EE.7 NC.7.EE.4
8-9	W.9-10.2	8.G.1.1 8.G.1.3	8.L.5.2	NC.M1.A-CED.1 NC.M1.A-CED.2
10-12	W.9-10.2	AH2.H.4	PSc 2.2.4	AFM 2.01