

ADVANCED LEARNING LABS

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

TO ENGAGE, ACTIVATE, AND GROW OUR STUDENTS

GRADES

K-1

Balance



ENGLISH LANGUAGE ARTS

Forming an opinion can be like a balancing act because you must consider the pros (positive things) and cons (negative things) of that issue.

Choose an issue like “Should students have nightly homework?” and consider the pros and cons. Decide where you stand on the issue.

Write a short article using correct punctuation, capitalization, and spelling, that introduces your topic and states the opinion you selected. Provide a reason that includes how you developed your opinion based on a balanced examination of the issue.

How did thinking about both sides of the issue prior to writing help you form an opinion?



SOCIAL STUDIES

The relationship between supply and demand works to create an economic balance. Supply refers to the amount of goods available, and demand refers to how badly people want the goods. Think about how supply and demand relate with this activity.

Pretend you see this headline, “Eating Watermelon Improves Your Eyesight.” Think about the impact this headline might have on supply and demand:

- How might this headline impact people’s demand for watermelon?
- If more people start buying watermelon, how will the supply be impacted?
- How does demand impact the cost of goods?

Extension: Create your own headline. Think about the ways it might impact supply and demand. You might think about items related to recent events in your headline, like toilet paper, or disinfectant wipes.



SCIENCE

A balance scale is a tool scientists use to measure. Visit this website to practice using a balance scale: <https://pbskids.org/sid/games/pan-balance>.

Use this experience to think about how much objects weigh. Collect 5-10 objects around your home. Hold two objects, one in each hand. Determine which one is heavier. Continue comparing the objects in pairs and organize them in order from lightest to heaviest. After you have made your prediction, if you have a scale (digital, kitchen scale or a balance), have a family member help you weigh each object and record the weight.

- Was your prediction of lightest to heaviest correct?
- How can balance help us determine the weight of an object?
- When is using a balance not effective for measuring weight?



MINDFULNESS

How do you maintain balance while you walk? Find a straight path in your house or in your yard like a line in your flooring or the sidewalk. If needed, you could also put a long piece of yarn or masking tape on the floor. Stand on the line with one foot in front of the other, and feel your feet rooted to the ground. Try holding your arms out and slowly walking the line without looking down at your feet. Now try walking it more quickly but with continued awareness of your feet on the line.

- What strategies did you use to keep your balance?
- How was walking in this way different from normal walking?
- In what other areas of your life is balance important?



LOGIC PUZZLE

Analogies are comparisons that require examination of the relationships between objects. In order to balance an analogy, you must determine the relationship between the first two items in order to find a similar relationship between the last two items.

Example: Knife is to cut, as ruler is to __? The answer would be "measure" because a knife is used to cut the way a ruler is used to measure.

Complete the following analogies:

- Apple is to fruit as broccoli is to __?
- Up is to down as on is to __?
- Car is to road as boat is to __?
- Toe is to foot as finger is to __?
- Big is to giant as small is to __?
- Bed is to bedroom as stove is to __?

Create your own analogies and have someone in your family solve them.



FIELD STUDIES

Humans need balance in our foods so we can be healthy and strong. What is a balanced diet? Watch this video and then answer the question, "Why do we need to eat a balanced diet?" <https://www.pbs.org/video/d4k-nutrition-video-short-gioayd/>

Now that you know WHY we need a balanced diet, it is your turn to create a delicious balanced meal. Watch this video to learn about My Plate and what our plates should look like each meal. https://www.youtube.com/watch?v=Ebm04EO91_U

Now, plan a meal so that your plate is balanced with healthy food.

Challenge: Ask a family member to help you plan and cook a balanced meal. How did you and your family like the meal?



RESEARCH EXPLORATIONS

Structures must be balanced to support weight. In this exploration, you must build a structure that can hold as many pennies as possible. The place where you put the pennies must be 4 inches above the base of the structure. You may only use 10 sheets of paper, 6 straws, and 1 foot of tape in your design.

Reflection Questions:

- How many pennies did your structure hold?
- How was balance important in the design?
- What was most difficult in the building process?
- What additional materials do you wish you had been able to use?
- How could you change your design to hold more pennies?



MATH

Fill in the empty boxes so the scales balance.

$$5 + \square = \square + 4$$



$$\square + 10 = \square - 10$$



$$50 - 25 = 15 + \square$$



$$12 + 2 + 10 = 6 + 6 + \square$$



- Which ones can you fill in with more than one answer?
- Can you explain how a math equation is like a scale that is balanced?



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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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