Rocking Block Balance

Children Are Exploring

The ***ROCKING BLOCK BALANCE*** is an early physical science and math concept manipulative that is appropriate from the toddler age through early childhood. The see-saw motion of the balance and the cause-effect relationship between that motion and the addition and removal of balancing blocks is a rich learning experience for young children. While playing with the balance, children are experiencing:

- Exploring with senses
- Using simple tools
- Size and spatial relationships
- Cause and effect
- Problem solving
- Comparing and contrasting
- Properties of materials
- Weight
- Scientific observations
- Inquiry skills
- Critical thinking
- Expanding vocabulary

Balanced Beginnings

LET'S INVESTIGATE!

- What is balance? Introduce the concept of balance through familiar experiences. Use the teeter-totter on the playground or children's own bodies on a balance beam to experiment with their sense of balance. When things are balanced, they are equal on both sides. What does balance look like? If you carry two baskets of blocks in one hand, how does the other hand feel? What happens when you use two baskets of blocks, but carry one in each hand?
- Introduce the ***ROCKING BLOCK BALANCE*** by placing it on a flat surface in the balanced position with two short and two tall balancing blocks standing upright in mirror positions on either side.
- Invite the children to discover what happens when a block is removed or changes position. What can you do with this balance? What can you do to make it work? How can you make it move up on this side? How can you try it another way? Which side do you think has the heavier pieces?

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Rocking Block Balance (continued)

Bigger and Heavier

LET'S INVESTIGATE!

- For successive ***ROCKING BLOCK BALANCE*** experiences, gradually place more and different combinations of the balancing blocks out for use. Always allow a child time to examine and manipulate the pieces first; then you can begin interacting with them - talking about their actions and observations, asking questions, or just quietly observing. Let the child take the lead!

CHANGE THE VARIABLE:

- Lay two unequal lines of blocks horizontally end to end on a table. Which line do you think will be heavier? Invite a child to place the blocks on the balance to check the prediction.
- When the child has a balance in an unbalanced position, ask them to take the pieces out and stack them up end on end. Which side weighs more? If we stack these blocks, which side do you think will make a taller column? Replace the blocks on the balance and verify the prediction.

Balanced Patterns

LET'S INVESTIGATE!

- When playing with a child using the balance, create a pattern with the balancing blocks: short block, tall block, short block, tall block.
- Encourage the child to duplicate your pattern by placing balancing blocks in a row in front of yours. If we put these on the balance, do you think these two rows of blocks will balance or not? Why?
- Invite the child to check the hypothesis by placing one row of blocks on the right and one on the left side of the balance.

CHANGE THE VARIABLE:

- Place more balancing block pieces out and invite another child to join to play. Ask the children to take turns making up the pattern and copying the pattern. What have you discovered about patterns? Do you think that the matching patterns will always balance? Why do you think that is so?

The Language of Balance

LET'S INVESTIGATE!

- Use the ***ROCKING BLOCK BALANCE*** to help children learn to identify and describe matter in terms of simple properties such as size, shape, and weight. What shape are the blocks? What are their sizes? Which blocks are heavier, lighter?
- Use the vocabulary of comparison when playing with balance. Reinforce terms such as: taller, shorter, smaller, larger, lighter, and heavier when helping children to compare and contrast the blocks.
- Invite children to isolate the variables that distinguishes the blocks and makes them different from each other. Can you sort the blocks? Is this pile of blocks different from those in the other pile?
- Use a voice recorder and record children's language as they describe their experiences with weight measurement.

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