KIDS BUILD THEIR KNOWLEDGE AND SKILLS ABOUT THE WORLD THROUGH STEAM

TTopic: How much more/less does it weigh?

Resources for each team: Instruction card 450, materials for its construction; seven to eight small colored plastic balls; pairs of animals as follows: cat-brown piglet; chicken-baby whale; elephant-calf; rabbit-deer; calf-squirrel; dog-horse; hen-giraffe; giraffe-dog; two cardboard cups; numeral bricks from 1 to 4.

F-4

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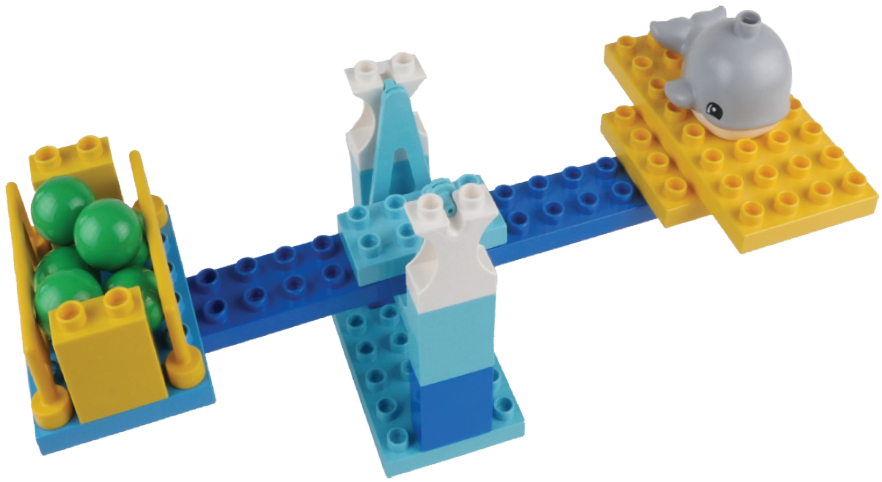
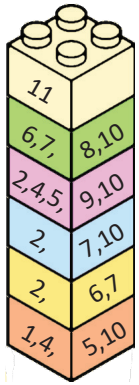
Activities:

1. The teacher gives to the teams: the instruction card and construction materials, a pair of animals, a set of seven to eight small coloured plastic balls, and the cardboard cups. The children are asked to build the model.
2. The teacher asks the teams to find out if their balance is accurate. How can they do this (hint: use the balls). The children check the accuracy of their balance.
3. The teacher explains that when working with the balance, they must place the animal in the middle of the platform (plate). The balls they put into the basket.
4. The teacher tells the teams to find out how much the larger animal weighs. The children weight it putting balls into the basket. Then they take the balls out of the basket and put them in one of the cardboard cups. They remove the animal from the platform and place it next to that cup.
5. The teacher now asks them to find out how much the smaller animal weighs. The children take the measurement, remove the balls from the basket and put them in the second cardboard cup. They remove the second animal from the platform and place it next to that cup.
6. The teacher asks each team to report the weights of the two animals and say which is the heavier.
7. Then the teacher tells each team to compare the number of balls in the two cups. They must calculate by how many balls the big animal is heavier than the small one. The team places a brick showing the corresponding numeral in the centre of the balance.
8. The teacher now asks the teams to conduct an experiment to confirm their answer. To do this, they place the large animal on the platform and put the small one in the basket. Then, to the basket with the small animal, the children must add as many balls as the numeral shown on the brick. If the balance balances, their calculation is correct. If it does not balance, their calculation is not correct.
9. The teams carry out this experiment to find out whether they calculated correctly, or not
10. With the help of the teacher, the teams exchange animals and repeat the whole process again.
11. The teacher and children analyze the results. They conclude that, with the help of a balance, it is possible to find out two things: first, whether there is a difference in the weight of two objects; and second, by how much the one is heavier or lighter than the other.