

Age: 5+

B IS FOR...BALANCE

What is balance? When there is equal weight or force

Examples:



Equal weight on both sides



Left side if heavier than right

Activity: DIY Balance Scale

Materials:

- Shoe box lid
- Toilet paper tube

Instructions:

- Find lightweight items around your home
 - Examples include: Legos, pencils/markers, chapstick, beads, small toys, rice, etc.
- Test the weight/force by placing an item on each side of the 'balance scale'. Experiment until you find 2 different objects that create an equilibrium (equal weight on both sides)



JOB EXPLORATION:

- **Civil Engineer:** Civil engineers conceive, design, build, supervise, operate, construct and maintain infrastructure projects and systems in the public and private sector, including roads, buildings, airports, tunnels, dams, bridges, and systems for water supply and sewage treatment
- **Mechanical Engineer:** An engineer designs and builds complex products, machines, and system. A mechanical engineer works with how things are made and how machines operate. They also design and builds complex products, machines, and systems. Mechanical engineers also help with the invention of many machines, including the early inventions of simple machines like the wheel and axle.
- **Sports Engineer:** Sports engineering is the application of engineering principles to solve problems in sports. Example applications include designing sports equipment, building sports facilities, analyzing athlete performance, developing performance and safety standards, and developing coaching and training tools. Sports engineering is generally concerned with external factors; i.e., how athletes interact with equipment or their environment. Examples of sports engineering research activities include measuring and simulating equipment performance, aerodynamics, friction, and protective equipment. Applications cover summer and winter sports and include baseball, softball, soccer, football, hockey, and skiing.
- **Chemical Engineer:** Chemical engineers develop and design chemical manufacturing processes. Chemical engineers apply the principles of chemistry, biology, physics, and math to solve problems that involve the production or use of chemicals, fuel, drugs, food, and many other products.