**What Are Gears? What Do They Do? Post-Quiz**

**Answer Key**

1. **What is a gear?**

**A gear is a wheel with teeth that meshes together with other gears. It is usually made of metal or plastic.**

**2. How do we select the gear ratio for a particular application?**

**Some applications (machines) may need to be fast, while other machines may need to be strong. When designing gears for a machine, it’s important to know whether speed or torque (strength) is more important. Remember that power = torque x speed. So, if the EV3 motor power setting is kept fixed, then increasing the torque decreases speed, and vice versa. In general, if you need to have more torque, select a large gear ratio. If you need to move fast, then use a smaller gear ratio.**