



**Main Ideas, Key Points,  
Questions:**

*After watching the video segment, write down key points, main ideas, and big questions.*



**Objective(s):**

- *Recognize the characteristics of elastic and inelastic collisions with regards to the motion of objects after collisions and the conservation of momentum and energy.*
- *Understand how the law of conservation of momentum applies to all collisions.*



**Notes:**

*During the video segment, use words, phrases, or drawings to take notes.*



**Summary:**

*After watching the video segment, write at least three sentences explaining what you learned. You may ask yourself: "If I was going to explain this to someone else, what would I say?"*

**Answer the following.**

1. What are the two types of collisions?

*Collisions are classified as either elastic or inelastic.*

2. Define an elastic collision in your own words.

*The objects involved in an elastic collision bounce off each other.*

3. What quantities are conserved in elastic collisions?

*Momentum and kinetic energy are both conserved in elastic collisions.*

4. In a collision, if two objects are moving in opposite directions, what does that mean for their momentum values?

*Momentum is a vector quantity, so the direction of an object's motion is represented by its sign.*

*If two objects are moving in opposite directions, their momentum values will have opposite signs.*

5. Define an inelastic collision in your own words.

*The objects involved in an inelastic collision stick together after colliding.*

6. What quantities are conserved in inelastic collisions?

*Only momentum is conserved in inelastic collisions.*

7. How does the final kinetic energy of the system in an inelastic collision compare to the initial kinetic energy?

*The final kinetic energy of the system is less than the*

*initial kinetic energy because kinetic energy is lost in the collision.*

8. How do the final velocities of the objects involved in an inelastic collision compare to each other?

*Because the objects involved in an inelastic collision*

*stick together, they will have the same final velocities.*