Cornell Notes **99**	Topic/Objective: Momentum and Impulse	Name:
		Class/Period:
		Date:

Essential Question: How are momentum and impulse related to Newton's second law?

Questions:	Notes: Momentum is inertia in motion.
	momentum = mass x velocity
	Example:What is the momentum of a 10 kg bowling ball moving at 20 m/s ?
	What would you have to change to change momentum?
	What does it take to cause an _____?
	A _____ is needed to cause an _____.
	The longer a _____ is applied, the greater the change in
	momentum.
	_____ is a physics term that relates a force and the amount of
	time it is applied.
	force x time = impulse

Summary:

Questions:	**Notes:** Example: What impulse is applied to a baseball if the batter uses a 50 N force for 0.2 seconds?
	It is impulse that causes a change in momentum.
	Δ is a symbol used to indicate a change in something.
	So $Ft = \Delta$ mom
	A change in anything is the final value – the initial value.
	Example: What is the change in your bank account if you start with $100 and end up with $500?
	Example: What is the change in momentum if a 1000 kg car accelerates from 20 m/s to 50 m/s?

Summary:

Questions:	**Notes: Example:** A 5 kg mouse is moving at 10 m/s. If he comes to a stop, what was his change in momentum?
	Since impulse causes a change in momentum…… $Ft = \Delta mom$
	Example: A 20 kg object starts at rest. In 5 s, it has a speed of 100 m/s. How much force was used?
	Give examples of a moving object coming to a rest.
	How could you minimize the force felt by these objects?

Summary:

Questions:	**Notes: Example:** A 800 kg car is moving at 30 m/s. The driver slams on the breaks. It takes the car 3 s to stop. What force did the brakes supply?
	If the driver of the car above eased on the breaks for 30 s to come to a stop, how much force did the breaks supply?
	Example: A 40 N force is applied to a 5 kg object for 10 s.
	If the object was initially moving at 20 m/s, what is its new speed?

Summary: