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fr.	
MOMENTUM	
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Jame	Period	Date
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"Understanding Car Crashes It's Basics Physics" Videa Cancept Organizer



TIME	Running Time: 22 minutes					
	Directions: To help you remember the key physics concepts discussed while viewing the video, fill in the blanks or circle the correct answer.					
2:15	Video Scenes & Key Concepts Test Trock Lows Why did the dummy get left behind? It's called, the property of matter that causes it to					
2:50	Isaac Newton's circle one 1st 2nd 3rd Law of Motion states: A body at rest remains at unless acted upon by an external, and a body in continues to move at a constant in a straight line unless it is acted upon by an external force.					
3:20	Croshing Dummies Now watch what happens when the car crashes into a barrier. The front end of the car is crushing and absorbing which slows down the rest of the car.					
4:00	In this case, it is the steering wheel and windshield that applies the that overcomes the dummy's					
4:35	Crosh-Borrier Cholkboord Newton explained the relationship between crash forces and inertia in his circle one 1st 2nd 3rd Law of Motion. (Fill in the blanks to explain what each letter in the formula represents.)					
	$F = \underline{\qquad} \rightarrow F = ma \qquad m = \underline{\qquad}$ $a = \underline{\qquad}$					
	$F = \frac{m\Delta v}{t} \qquad \Delta v = \frac{1}{t} = \frac{m\Delta v}{t}$					
	$Ft = \underline{\hspace{1cm}} \rightarrow Ft = m\Delta v \qquad m\Delta v = \underline{\hspace{1cm}}$					

"CRASH COURSE" ACTIVITY



"Understanding Car Crashes It's Basics Physics" Videa Cancept Organizer



TIME	Surfers, Cheeta	hs, and Elephantsc	sh my!			
5:20	Momentum is	ir	ı motion. It is the prod	uct of an object's		
0.20		and its	•			
5:35	Which has more momentum? An 80,000 pound big rig traveling 2 mph or a 4,000 pound SUV traveling 40 mph? circle one Big Rig SUV same					
	Seccen Kicks SI	ap Shots, and Egg T	, (655			
0.05			's momentum?	. It is		
6:05	the product of	ar	d the	for which it acts.		
6:18	If the eggs are of equal mass and are thrown at the same velocity they will have the same The wall and the sheet both apply equal					
. 0.45	The wall appli	es a	force over a	time, while		
6:45			force over a			
7:10	With panic braking the driver stops in less time or distance and experiences more					
8:20 9:04	instead of one Extending the	imated vehicle's from the decelor time of impact is t	ont end is less stiff so i eration to he basis for many of tl	 ne ideas about		
0.0	keeping people highway safet		ist three applications i	n vehicle or		
			3			
	1			1 10000		
9:42	In a collision of	erience much high	the Low! ual mass, the occupant er, he nts of the heavier car.			
12:55			Energ called			
13:50	At what point in the pendulum's swing is its potential energy equal to its kinetic energy? When is its kinetic energy at its maximum?					
14:30	(Circle) the cor	rect formula for ki	netic energy (KE).			
₩6.F1	KE = 1/2 m2v	KE = 1/2 2mv²	KE = 1/2 mv²	KE = 1/2 mv2		