NOVA Video Questions:	Name:	NOVA Video Questions:	Name:	
	Per: Seat #:		Per: Seat #:	
http://www.pbs.org/wgbh/nova/physics/hunting-elements.html http://www.pbs.org/wgbh/nova/physics/hunting-elements.html				
The questions are in chronologic	<u>cal order.</u>	The questions are in chronologi	<u>cal order.</u>	
Times are estimates. You do not need full sentences.		<u>Times are estimates. You do not need full sentences.</u>		
		1) Where does an element take its identity from? (4:30)		
1) Where does an element take its i	identity from? (4:30)			
		(\mathbf{x})	(7,00)	
		2) How much gold (Au) is extracted per ton of rock ore? (7:30)		
2) How much gold (Au) is extracted per ton of rock ore? (7:30)				
		3) How much doos a gold $(\Lambda_{\rm H})$ bar	woigh and how much is	
		3) How much does a gold (Au) bar weigh and now much is it worth? (12:00)		
 How much does a gold (Au) bar weigh and how much is it worth? (12:00) 				
		4) Why is copper (Cu) so widely so	ught on the world market and	
		New York Mercantile Exchange? (15:00)		
4) Why is copper (Cu) so widely sought on the world market and New York Mercantile Exchange? (15:00)		New Tork mercantile Exchange:	Now Fork Moroanino Exonango: (10.00)	
		5) What is copper (Cd) combined with to make bronzes (17:00)		
5) What is copper (Cu) combined with to make bronze? (17:00)				
		6) What makes metals like Conner	(Cu) conductive to	
 What makes metals like Copper (Cu) conductive to electricity? (19:00) 		electricity? (19:00)		
7) Bronze is an alloy. What is an alloy and why are they preferable at times? (21:00)		7) Bronze is an alloy. What is an alloy and why are they preferable at times? (21:00)		
		8) How does the atomic arrangeme	nt of atoms lead to its crystal	
8) How does the atomic arrangement of atoms lead to its crystal structure like was seen in the sample of bronze with gold (Au) and tin (Sp) atoms2 (21:00)		structure like was seen in the sar	mple of bronze with gold (Au)	
		and tin (Sn) atoms? (31:00)		
		9) What is the atomic number and v	what does the atomic number	
9) What is the atomic number and what does the atomic number		indicate? (33:00)		
indicate? (33.00)				
()				
		10) Most of the periodic table is ma	de of what type of	
 Most of the periodic table is made of what type of elements? (34:00) 		elements? (34:00)		
 How did early chemists like Mendeleev classify the elements? (37:00) 		11) How did early chemists like Mei	ndeleev classify the	
		elements? (37:00)		
		12) How is the nericalis table structu	und with record to classest	
 How is the periodic table structured with regard to elements with similar properties? (39:00) 		12) How is the periodic table structured with regard to elements with similar properties? (39:00)		
		13) What makes noble gases stable	2 (42.00)	
		10) What makes house gases stable	=: (+2.00)	
13) What makes noble gases stable? (42:00)				

14) Why is an alkali metal element like Sodium (Na) so 14) Why is an alkali metal element like Sodium (Na) so reactive? (44:00) reactive? (44:00) 15) What does chlorine (CI-) do for sodium (Na+)? What 15) What does chlorine (CI-) do for sodium (Na+)? What tasty substance is produced when this happens? (47:00) tasty substance is produced when this happens? (47:00) 16) What powers explosions and fire? (54:00) 16) What powers explosions and fire? (54:00) 17) What elements are basic to all living things? (58:00) 17) What elements are basic to all living things? (58:00) 18) Why is Carbon (C) so good for forming the structure of 18) Why is Carbon (C) so good for forming the structure of life? (1:05:00). life? (1:05:00). 19) What are at least three (3) other elements that are used for life 19) What are at least three (3) other elements that are used for life functions and what are their uses? (1:11:00) functions and what are their uses? (1:11:00) 20) Why are cyanobacteria from places like volcanic pools so 20) Why are cyanobacteria from places like volcanic pools so important for the production of oxygen in our important for the production of oxygen in our atmosphere? (1:16:00) atmosphere? (1:16:00) 21) What was the original element formed moments after the Big 21) What was the original element formed moments after the Big Bang? What then created higher order elements? (1:18:00) Bang? What then created higher order elements? (1:18:00) 22) How does silicon shape our technological reality? (1:21:00) 22) How does silicon shape our technological reality? (1:21:00) 23) How are rare earth elements like neodymium (Nd) important to 23) How are rare earth elements like neodymium (Nd) important to our technological world? (1:26:00) our technological world? (1:26:00) 24) What is an isotope like Carbon-14? (1:41:00) 24) What is an isotope like Carbon-14? (1:41:00) 25) How can an isotope like Carbon-14 be used to date dead How can an isotope like Carbon-14 be used to date dead organisms? (1:43:00). organisms? (1:43:00). 26) What is an unstable radioactive isotope? (1:45:00) 26) What is an unstable radioactive isotope? (1:45:00) 27) Why don't the man-made radioactive elements exist for very 27) Why don't the man-made radioactive elements exist for very long? (1:57:00) long? (1:57:00)