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HUNTING THE ELEMENTS

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What are things made of? The answer is astonishing. There are about 90 naturally-occurring elements that are the ingredients for everything and everyone—combining in countless ways to form things from solid rocks to ethereal gases, from scorching acids to the living cells in our body. Of those elements, we are made of only six. But how can it be that it takes so few to make so much?

In *Hunting the Elements*, intrepid *New York Times* technology correspondent David Pogue—host of NOVA's popular *Making Stuff* series—takes viewers on a quest to understand chemistry and all of the materials of life: the 118 unique elements that make up the amazing periodic table, including the 90 naturally-occurring elements and those created by scientists. *Hunting the Elements* is a journey that delves into the elements that are essential to understanding everything from the Big Bang to the living cells within the human body.

The abstract periodic table is the link to understanding, and David Pogue uses this amazing chart as his guide to explore the chemistry used to predict the behavior of atoms anywhere in the universe.

Each element has unique properties and can be combined in a multitude of ways to compose everything in the universe, including the stars, the planets, and all living things. But what are the elements, where did they come from and how do they shape our modern way of life?

Pogue travels the globe, from St. Petersburg where Russian scientist Dmitri Mendeleev first cracked the code of the elements in the 1860s; to a U.S. gold mine and refinery; and a facility in Florida where researchers are testing sharks may be repelled by rare earth metals.

The film is also punctuated with surprising experiments, in which Pogue and researchers dramatically blow up more than a few items. At a research center at New Mexico Tech, the business of violent reactions is booming, and he pays a call on lively scientist Theodore Gray at his lair hidden amidst Midwestern cornfields, where the pair conducts more volatile chemistry experiments—including one in which they combine sodium and chlorine gases, a potentially hazardous scenario that instead yields some freshly salted popcorn for them to munch on!

According to Gray, the key to understanding the periodic table is to think like a matchmaker rather than a chemist. On the far right of the chart are the noble gases, confirmed loners that don't like to mix with the riff-raff; on the far left are the alkali metals, desperate lonely hearts that would react with nearly any element that comes along.

Using animations and eye-popping experiments, NOVA and David Pogue demonstrate how each element's internal structure has fundamentally determined its properties as well as its role in history in this visually spectacular documentary.

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NOVA

CREDITS

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