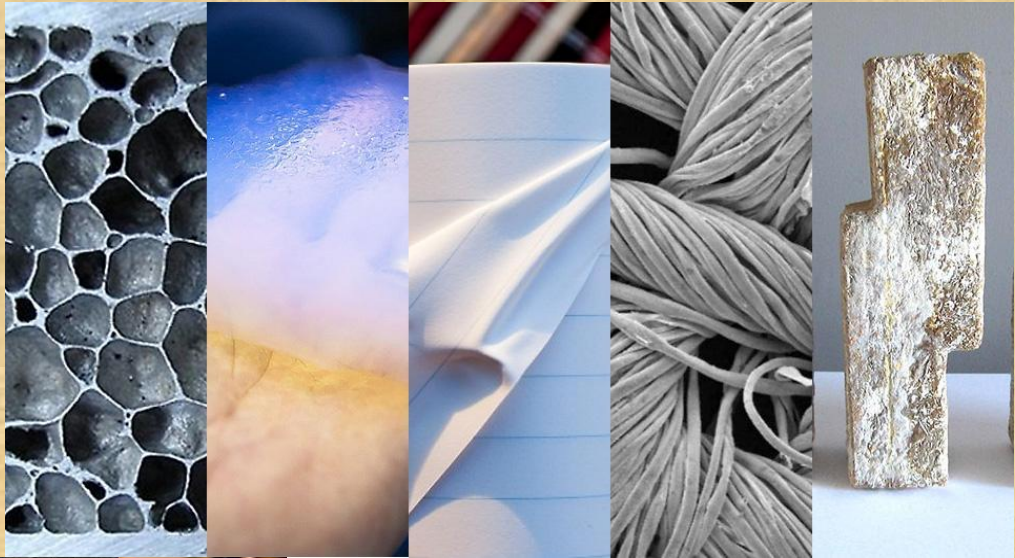


Materials

**Presentation was prepared by students of the group 23332/1
Ostashkov Alexander and Sergey Babkin**

Never thought about what it all consists of?



The main themes of the narrative

- tell about the history of materials development;
- to introduce you to a variety of types of materials;
- draw a conclusion about advantages and disadvantages materials.

Why this topic is very important for engineers?

- understanding the structure of materials allows you to create workable structures;
- there is an opportunity to improve the mechanism by replacing the material used;
- knowledge of specific properties allows you to avoid fatal errors.

PERIODIC TABLE OF ELEMENTS DMITRI MENDELEEV

H Hydrogen 1																	He Helium 2	
Li Lithium 3	Be Beryllium 4											B Boron 5	C Carbon 6	N Nitrogen 7	O Oxygen 8	F Fluorine 9	Ne Neon 10	
Na Sodium 11	Mg Magnesium 12											Al Aluminum 13	Si Silicon 14	P Phosphorus 15	S Sulfur 16	Cl Chlorine 17	Ar Argon 18	
K Potassium 19	Ca Calcium 20	Sc Scandium 21	Ti Titanium 22	V Vanadium 23	Cr Chromium 24	Mn Manganese 25	Fe Iron 26	Co Cobalt 27	Ni Nickel 28	Cu Copper 29	Zn Zinc 30	Ga Gallium 31	Ge Germanium 32	As Arsenic 33	Se Selenium 34	Br Bromine 35	Kr Krypton 36	
Rb Rubidium 37	Sr Strontium 38	Y Yttrium 39	Zr Zirconium 40	Nb Niobium 41	Mo Molybdenum 42	Tc Technetium 43	Ru Ruthenium 44	Rh Rhodium 45	Pd Palladium 46	Ag Silver 47	Cd Cadmium 48	In Indium 49	Sn Tin 50	Sb Antimony 51	Te Tellurium 52	I Iodine 53	Xe Xenon 54	
Cs Cesium 55	Ba Barium 56	La Lanthanum 57	Hf Hafnium 72	Ta Tantalum 73	W Tungsten 74	Re Rhenium 75	Os Osmium 76	Ir Iridium 77	Pt Platinum 78	Au Gold 79	Hg Mercury 80	Tl Thallium 81	Pb Lead 82	Bi Bismuth 83	Po Polonium 84	At Astatine 85	Rn Radon 86	
Fr Francium 87	Ra Radium 88	Ac Actinide 89	Rf Rutherfordium 104	Db Dubnium 105	Sg Seaborgium 106	Bh Bohrium 107	Hs Hassium 108	Mt Meitnerium 109	Ds Darmstadtium 110	Rg Roentgenium 111	Cn Copernicium 112	Uut Ununtrium 113	Fl Flerovium 114	Uup Ununpentium 115	Lv Livermorium 116	Uus Ununseptium 117	Uuo Ununoctium 118	
		La Lanthanum 57	Ce Cerium 58	Pr Praseodymium 59	Nd Neodymium 60	Pm Promethium 61	Sm Samarium 62	Eu Europium 63	Gd Gadolinium 64	Tb Terbium 65	Dy Dysprosium 66	Ho Holmium 67	Er Erbium 68	Tm Thulium 69	Yb Ytterbium 70	Lu Lutetium 71		
		Ac Actinium 89	Th Thorium 90	Pa Protactinium 91	U Uranium 92	Np Neptunium 93	Pu Plutonium 94	Am Americium 95	Cm Curium 96	Bk Berkelium 97	Cf Californium 98	Es Einsteinium 99	Fm Fermium 100	Md Mendelevium 101	No Nobelium 102	Lr Lawrencium 103		

Alkali metal

Alkaline earth metal

Transition metal

Lanthanide

Actinide

Post-transition metal

Metalloid

Polyatomic nonmetal

Diatomic nonmetal

Noble gas

How it all began



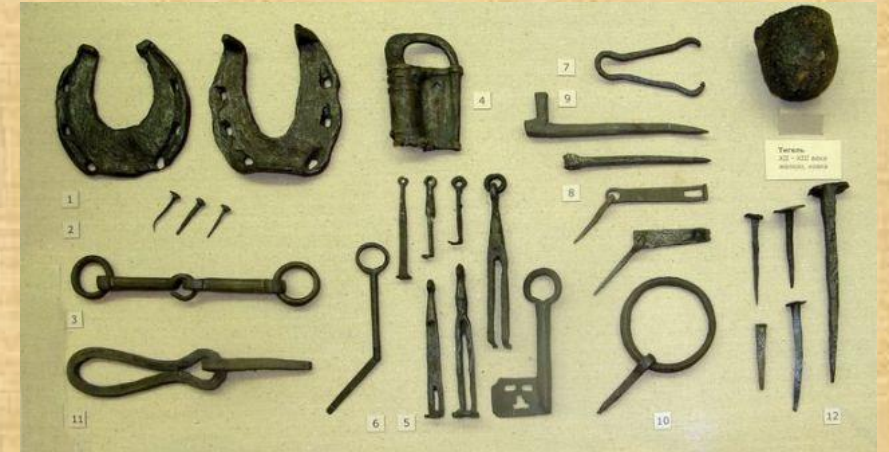
The first building materials were stone and wood

Later people started using more progressive materials

Bronze



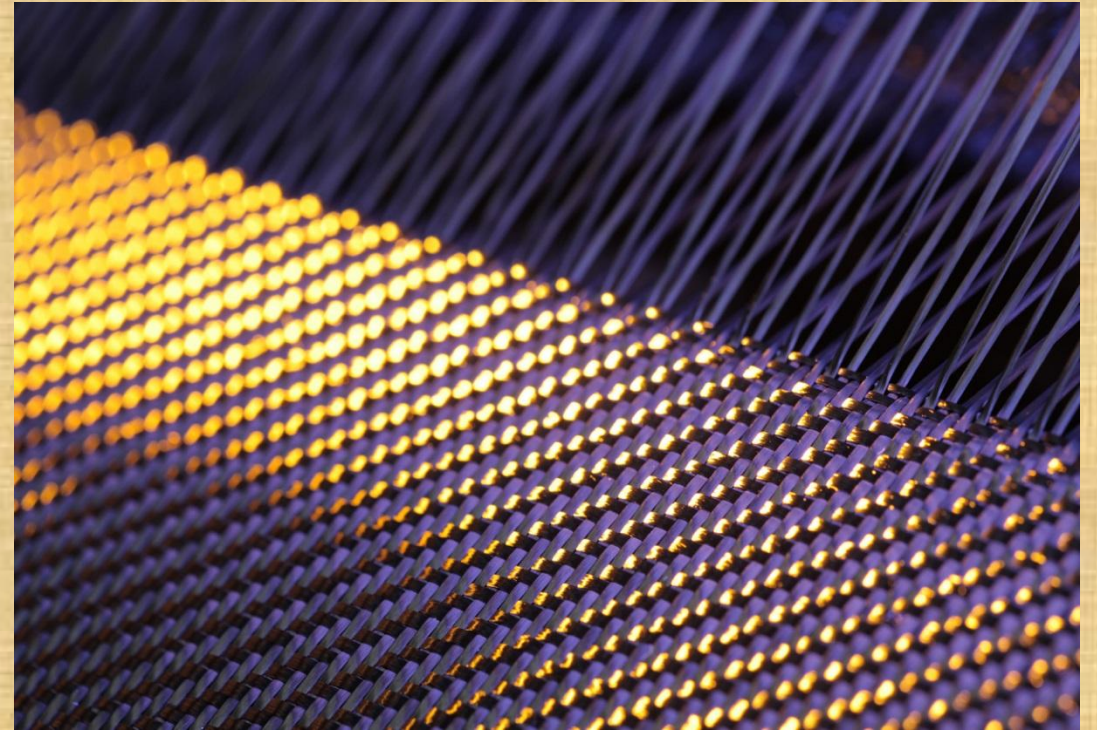
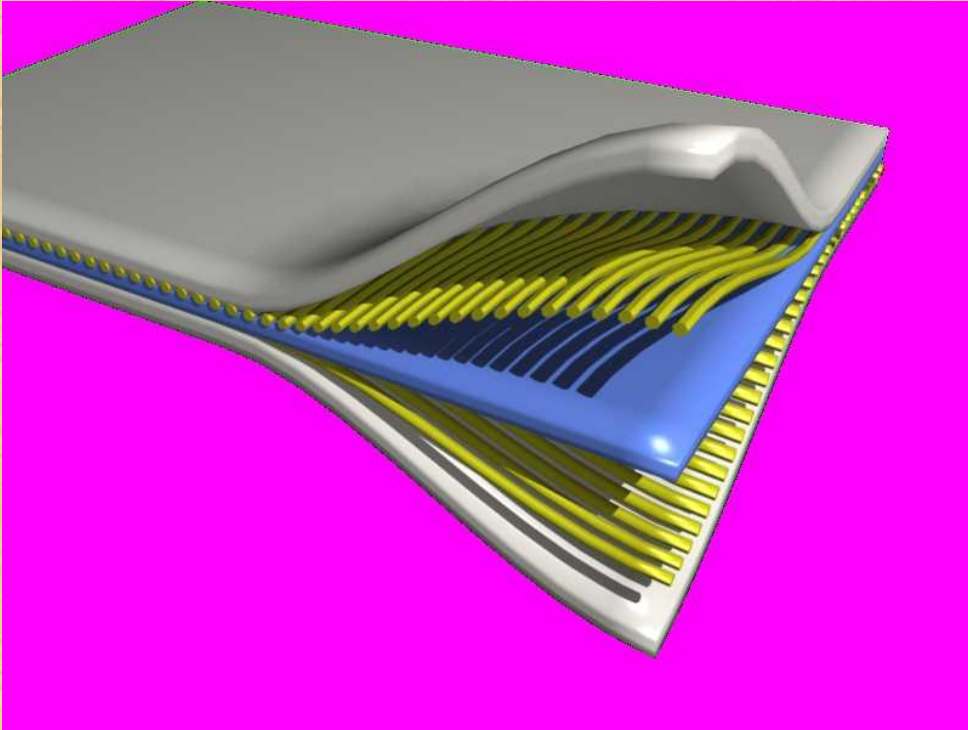
Metal



Steel



Advanced materials



Composite materials allow constructing mechanisms with special properties

At the end



At the end of our narrative I would like to ask you what is the most common material in the modern world? And why?

Thank you for attention