

### ТЕМА: 2.3.3. МЕТАЛЛИЧЕСКОЕ СТЕКЛО CONCRETE AND STEEL

**1. Complete the text Concrete and Steel with appropriate forms of the word reinforce. Sometimes there is more than one possible answer. Translate the text Concrete and Steel in written form.**

#### CONCRETE AND STEEL

... concrete is one of the most widely used construction materials, and one we take for granted. However, using steel bars to (2) ... concrete structures located outdoors is only possible thanks to a fortunate coincidence: concrete and steel have practically the same coefficient of thermal expansion - in other words, as atmospheric temperature varies, the concrete and the steel (3) ... expand and contract at the same rate, allowing uniform movement. Using a (4) ... material with a different coefficient of expansion would not be feasible. For example, aluminium - (5)... concrete would quickly disintegrate.

**2. A. Use the QR-code and put building materials in the groups they belong to.**



**B. Use the QR-code and do the crossword. Find out the key word.**



**3.A. Make up a short report on modern building materials, their characteristics and use in building construction.**

**B. Present your report to the groupmates.**

**4.A. Give Russian equivalents to the word combinations. Use the dictionary if necessary**

Metallic glass; elastic energy; sports equipment; resistant to corrosion; minor-like surface; room temperature; anatomic structure.

**B. Read the statements. Use the QR-code and watch the video What is Metallic Glass. While watching mark the statements as true (T) or false (F).**

1. Plastic is not only shapeable, but it is also strong and hard as steel.
2. Metallic glass is a way stronger than most metals and can withstand a lot of force without getting bend.
3. Metallic glass can't store and release elastic energy that is why it is not suitable for sports equipment.
4. The first metallic glass was made in 1960 from gold and titanium.
5. The first metallic glasses were thick enough for practical use.
6. Today there are hundreds of bulk metallic glasses (BMGs).
7. BMGs are too expensive for practical use.



**C. Watch the video What is Metallic Glass again and make notes about advantages and disadvantages of metallic glass.**

**D. Work in pairs. Discuss if you would like to have a house built using metallic glass. Explain your answers.**