

Good practices SCIEN_706BC_EN

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Description of the problem / exercise: **Connection of bones**

The teacher provides students with information about the connections between the bones. The bones are connected by joints, on the structure of which the mobility of different parts of the body depends. The fixed connection between the bones is called the suture. In this way, the bones of the skull are connected. The serrated ends of one bone fit into the serrated ends of the other and thus grow together, closing the skull that protects the brain). Some bones are connected by cartilage – it is an elastic, poorly mobile connection. In this way, the ribs and sternum are connected, as well as the spinal vertebrae. In the movable joint, usually, one bone has a bulge – the apple, which enters the recess – the cup, the other bones.

Students analyze this information as well as a picture on which bone connections are presented and with using the Poly-UNiverse create the models of connections.

After the creation, students present their models to the rest of the classmates, which discuss them and provide feedback. Simple models created from Poly-UNiverse are depicted in the photo below.

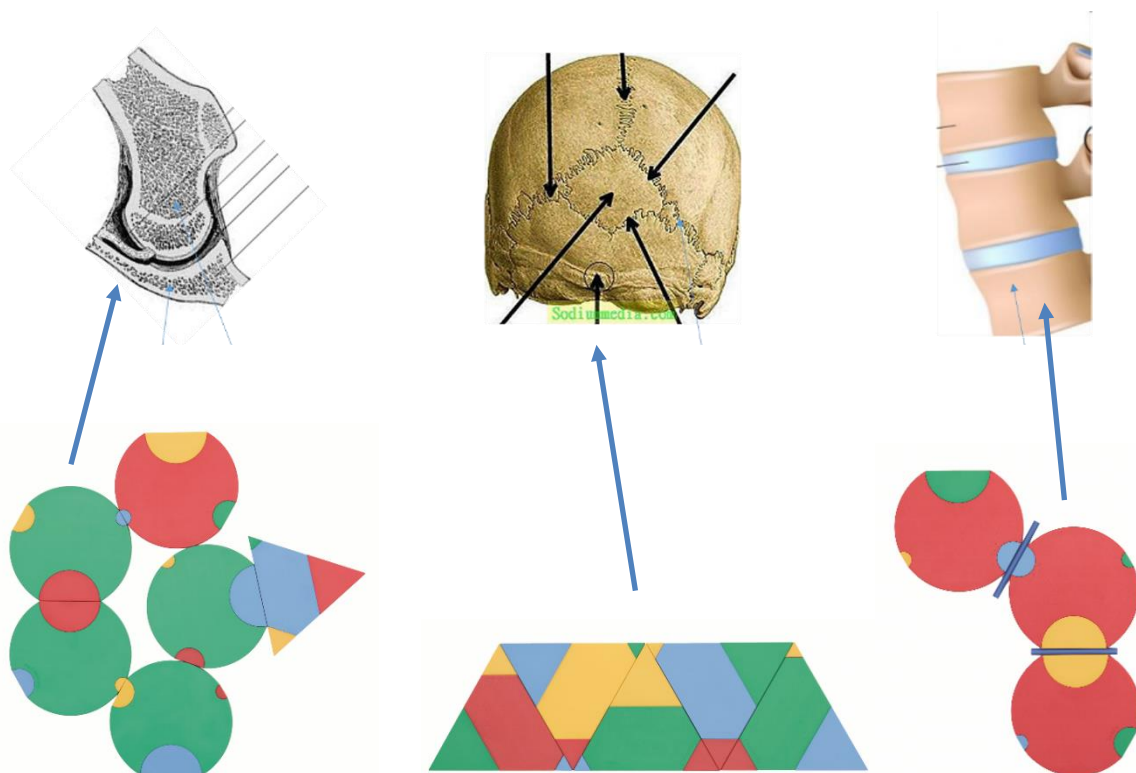


Figure: Some possible solutions are presented in below

- *Why this exercise is good:* This exercise contributes to the students better understanding the connection of the bones in the human body, allows the students to express their creativity and implement knowledge from the different subjects during the learning.
- *Level of teacher training:* Upper primary school, secondary school
- *School subject(s):* Biology, math, art
- *Comments:* Teachers can adapt this task to the students with learning difficulties on the way to provide to them photos, 3D models and models from Poly-University on which are presented types of connections between the bones and assign them to connect the models and photos, which present the same type of bone connections. To the gifted students, teachers can assign additional tasks, such as trying to find a place in the body where the bone connection which you are created is presented.