

An Instance of Team Work

Throughout my teaching career I've been searching for ways of visualizing the new information. My students did also find it interesting and effective to think and express their thoughts in images.

This is a productive level of knowledge. A visualized answer is far much persuasive for the examiner and it's really beneficial to the rest of the class - it increases the other students' interest and deepens their understanding of the topic discussed.

I'm very grateful to my colleagues Zhivka Nikolova, Stefka Kitanova and Keith Kelly for the teaching ideas they shared with us. These ideas helped me a lot in the realization of my own teaching concepts. Here is an example of student teamwork illustrating the ideas discussed above. I plan offering these texts to my new 9th grade students next year. Kind of teaching material based on both teachers' and students' ideas of presenting information. An instance of team work!

I'd like having the opportunity to read in this periodical not only teachers' as well as students' ideas of presenting information. Students are perfect partners when the teachers themselves are willing to share...!

The example:

The Tissues

At the beginning of the lesson I explained that the covering epithelium is like the cork sheet of the notice board on the wall - it's composed of little pieces arranged close to each other - close enough to prevent any microorganisms from entering and any water from leaving the body. Thus the epithelium is a good but not perfect protector. Its cells will disintegrate easily when the layer is folded - just like the cork pieces.

Several different kinds of tissues build up the skin - is this complexity really necessary?

And here is the team answer:

✓ To compose the nature of Nature the four elements need to be different. It's hard being a different element in Nature...!

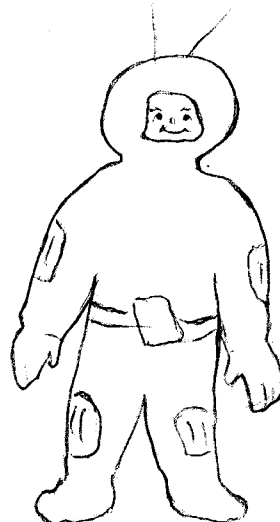
(Tsveta Krusteva - 9th grade)

✓ The skin is the link between the body and the outer world. And since their interaction covers a huge diversity of aspects - the skin's structure has to meet the same variety of requirements.

(Natalia Ivanova - 9th grade)

✓ When the astronauts leave the spaceship and go into the open cosmos, they wear special space suits. These space suits are composed of a lot of different layers to protect the astronaut against the same variety of dangers. For a skinless body the Earth's atmosphere will be as unfriendly as the open cosmos is for the astronaut - since all cells are born to live in a water milieu and any gaseous one will be harmful to them.

(Damyana - 9th grade)



Special effects:
Detelina Milcheva - 9th grade

✓ Imagine a volleyball player who hits the ball with his hand. The ball scrapes out the outer layers of the covering epithelium. No kind of living cell would endure such a contact. But the dead-celled outer epithelial layers are specially designed to be scraped off. The inner layers' cells divide and replace them continuously. The loose fibrous connective tissue, localized beneath, protects the fragile epithelium from tearing. And the lipids in the subcutaneous adipose tissue cushion the muscles and the bones against injuries caused by the hit.

(Verguil Raikov - 9th grade)

✓ To keep her slender figure, a model goes on a variety of diets. She eats low-fat foods and her subcutaneous adipose tissue decreases in volume. In some accident this could appear to be fatal to her bones. Robbed of their lipid cushion, her bones will break easily.

(Miroslava - 9th grade)

✓ The skin has to be unpermeable, elastic and play the role of a cushion. No kind of tissue can meet all these requirements alone. The kinds of tissues we spoke about are complementary to each other and together they form a perfect protector.

(Petya Koleva - 9th grade)



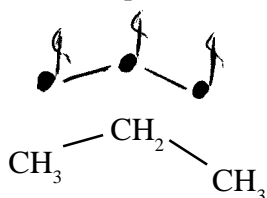
Special effects:

Yavor Milchev - 10th grade

✓ Just like the geographic components! Waters, climate, soils, ...etc. They all exist independently and together they form the Earth!

(Victoria Beleva - 9th grade)

✓ 'Propane' sonata!



(Martin Razhdashki 10th grade)

Other student-works I liked

The hereditary information of the cell - what is it used for?

✓ "Reveal for me the secrets of the plainness, Earth, and as a painter I shall get complete the image now as natural as You are."

Genady Aigy

In this world everyone serves oneself all alone and needs to know one body well.

(Gueorgui Karadjov - 9th grade)

✓ Something ghostly happens with the hereditary information when the cell divides - it's like splitting a pencil and obtaining two whole pencils For the whole stories of two new cells to be written!

(Natalia Vassileva - 9th grade)

✓ The cellular membrane is the outer brain of the cell. This brain "knows" what to let in and what to let out!

(Galya Hristova - 9th grade)

✓ Bi-ology is the science about double logic - the choice between being you or what you are...!

(Persiana Pastuchova - 9th grade)

✓ The habitat of a gorilla can be defined as the type of hotels it would inhabit - and a biotope is a top list of those...!

(Inna Leontieva - 10th grade)

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