

Development of Eighth Grade Students' Epistemological Beliefs through Writing-to-Learn Activities

Şengül Atasoy^{1}, Osman Küçük²*

¹Faculty of Education, Recep Tayyip Erdogan University, Çayeli-Rize, Turkey


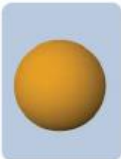






²Department of Animal Nutrition, Faculty of Veterinary, University of Fırat, 23100 Elazığ, Turkey

*Corresponding Author. sengulatasoy@hotmail.com

Appendix A

The Historical Development of Atom Models (WTL Activity of Week 1)

Scientists developed models as a result of the findings of the research they conducted on the structure of atoms.

 	 	 	 
Dalton's Atom Model Atoms are filled, solid and indivisible spheres.	Thomson's Atom Model The electron was discovered. The atom resembled a cake with sultanas.	Rutherford's Atom Model The structure of the atom resembled the Solar System.	Bohr's Atom Model The electrons travel in defined circular orbits.

1. Could you please explain the properties of atoms taking into consideration the current information regarding atoms?

.....
.....
.....

2. What do you think the development of different atom models signify?

.....
.....
.....

3. Does the modern atom theory convey all the information about atoms? Can a new atom model be proposed in the future? Why?

.....
.....
.....

4. How could the scientists who developed these models obtain their knowledge on atoms?

.....
.....
.....

5. Do you think the scientists who conducted research on atoms arrived at their proposal of atom models instantly? What do you think about the developmental process of the atom models?

.....
.....
.....

6. If you sought a model regarding the structure of atoms, at what point and how would you start the process? How would you evaluate your knowledge construction process?

.....
.....
.....

Appendix B

Semi-Structured Interview Questions

1. UncleAli wants to enlighten his son's bicycle. He knows how to connect the equivalent lamps he bought so that he can obtain brighter light. How do you think he obtained this knowledge?

2. When students are asked the reason underlying their failure, some of them state that their foundation is weak, that they are not successful because they passed onto a higher grade level without completely learning the information in the lower grade level, while other students claim that passing onto a higher grade level without learning the knowledge in the lower grade level does not have any impact on learning the new knowledge. What is your opinion?

3. As a result of their studies, some scientists have claimed that white light is pure light. Later, having done some research and experiments, Newton discovered that white light was not pure, that it was formed by the combination of the other lights. How would you interpret this situation? What kinds of conclusions can be drawn from this situation?

4. When you listen to a topic taught in class, do you immediately learn it? If you cannot learn it, is it possible for you to learn the topic by reviewing it and by doing exercises and activities at home?

5. Even though Ahmet studied harder than his peers did to prepare for an exam, he gets a low, failing score. Do you think the reason why he is unsuccessful is that he has no talent in the course? Do you think he can be successful if he changes the way he studies?