

A Systems Activity about Our Universe

How and why this visual framework might benefit advanced 6th graders and above



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CHILDREN WANT TO understand their world. Since this is the case, it is important that we do our best to offer them truthful, beautiful, and energizing information. After all, our world is a marvelous symphony of life — if only we can appreciate it! Systems theory is one of contemporary science’s best tools for translating the buzzing, burgeoning noise of empirical facts into lovely, moving melodies; for transforming data into understandable concepts. This is particularly true when systems theory is presented within an evolutionary, cosmological perspective. The activity that we’re offering here is a direct and visual way for you to introduce your students to the “nested levels” feature of systems thought. Besides fostering “both/and” thinking and thereby helping youngsters move beyond concrete literalism, this little diagram prompts them to review and order many of the principle scales of organization and some of the relationships that characterize physical reality. The actual project, including instructions for students, appears on the opposite page.

Actually working with an image/schema such as this one allows young people to better comprehend and unify their expanding trove of knowledge. This, in turn, can facilitate their ongoing quest for wisdom and meaningful involvement. It helps prevent them from feeling too overwhelmed or discouraged by all the new data that they’re trying to assimilate. As Mathew Arnold stated so concisely in his acclaimed essay “Literature and Science,” 1882:

“Following our instinct for intellect and knowledge, we acquire pieces of knowledge; and presently in the generality of men [humanity], there arises the desire to relate these pieces of knowledge to our sense for conduct, to our sense for beauty — and there is weariness and dissatisfaction if the desire is balked... [because in striving to fulfil this integrative psychological tendency] we are following the instinct of self-preservation in humanity.” (Arnold, 369-370).

Or, as Alfred North Whitehead advised in *Process and Reality*, in a passage cited by Ervin Laszlo at the beginning of his book *The Systems View of the World*: