

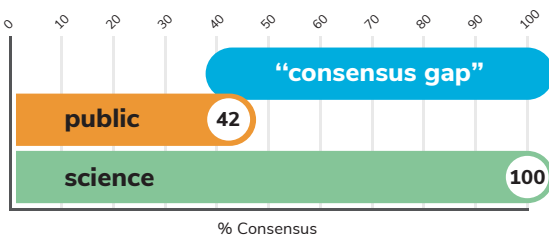


Human reproduction and early human development make headlines for an increasing number of serious issues today. However, even the fundamental aspects of the science are missing from life science lesson plans across the United States, and sex ed programs contain scientifically inaccurate and incomplete content (i.e., MISINFORMATION).

America’s latest K-12 science guidelines, the Next Generation Science Standards, exclude this essential, far-reaching, and powerful science; Virginia’s Department of Education recently removed human biology from the state science standards. This is a massive problem. Science illiteracy regarding the basic, objective scientific embryological facts is precluding accurately informed decisions and consent, and endangering human lives.

When a Human Being Begins to Exist: The “Consensus Gap” Between Public Perception and Science Reality

A Human Life Starts at Fertilization: Science vs. Perception



SCIENCE KNOWS when a human being begins to exist, and has known officially and internationally since 1942 with the [Carnegie Stages](#) of Human Embryonic Development. Science also knows that a human being is the same human organism throughout all of the various stages of his or her biological existence.

Yet a recent Marist Poll found that nearly 60% of American adults did not know a sexually reproduced human being begins to exist at fertilization, and 44% were unaware that a human fetus is a human being.

We have AN OPPORTUNITY to close this “consensus gap” between science reality and public perception/ science denial as it is largely due to science education policy failure.

The Solution:
Explicitly address human embryology in U.S. science standards and school curriculums.



Plus, new [research](#) out of the University of Chicago found that if it was more widely known that a human fetus is a human being beginning at fertilization, related destructive trends would decline.

The Value of Human Embryology in the Science Classroom

There is an urgent need for standards-based science education about human embryology:

1

Human embryology is the study of the human being from beginning to end, with an emphasis on the embryonic and fetal periods, and is the only biological science that specializes in when a human life starts and the continuum of human life.

2

The science is relevant and important to all human beings as a matter of basic science education.

- The journey from a single-cell or a multi-cell human organism to a 100 trillion cell human adult is one of the most remarkable phenomena in all of science and nature.
- Many significant scientific concepts are extremely deficient if students are not learning about the structure, function, growth, and development of early human organisms/lives too.
- Apart from the inherent interest in knowing how a single-cell or a multi-cell human being develops into an adult being, human embryology contributes to a deeper understanding of many topics across the K-12 science curriculum (e.g., human reproduction, human anatomy, life science, biochemistry, evolution, developmental biology, comparative biology, climate science).

3

The science is the key to empowering accurately informed decisions and consent about many serious issues. Denying the objective scientific facts (the truth) about our own existence and development is wrong and harmful; it leads to malformed consent and is contributing to a public health and human rights crisis.

- The science should be the starting point to deriving legitimate personal positions about the human embryo, human fetus and every other stage of human development, and as such is the foundation for philosophy, ethics, civics and other classes as well.
- Students are current and future activists, voters, lawmakers, politicians, scientists, parents, teachers, investors, business owners, etc., and knowing the objective scientific facts about human development changes everything.