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Research on Student Learning

By the end of 5th grade, students know that babies result from the fusion of sperm and eggs. However, they often don't understand how the fusion brings new life. Before students have an early understanding of genetics, they may believe that the baby exists in the sperm but requires the egg for food and protection, or that the baby exists in the egg and requires the sperm as a trigger to growth. ^[1]

Lower elementary-school children understand that death is irreversible and inevitable. ^[2] They usually think death is caused by an external agent but do not connect death with what happens within the body as a result of these external events. ^[3] Around 3rd or 4th grade, students understand that death means the cessation of bodily functions. ^[4]

References

[1] Bernstein, A.C., Cowan, P.A. (1975). Children's concepts of how people get babies. *Child Development*, 46, 77-91.

Goldman, R.J., Goldman, J.D. (1982). How children perceive the origin of babies and the role of mothers and fathers in procreation: A cross-national study. *Child Development*, 53, 491-504.

[2] Lazar, A., Torney-Purta, J. (1990). The development of the subconcepts of death in young children: A short-term longitudinal study. *Child Development*, 62, 1321-1333.

[3] Carey, S. (1985). *Conceptual change in childhood*.

[4] Carey, S. (1985). *Conceptual change in childhood*.