

news

Kentucky Fried Chicken

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FOR IMMEDIATE RELEASE

CAPE CANAVERAL, Fla. -- When people begin living in space, they'll never ponder the age-old question of which came first, the chicken or the egg. In space, the answer will be, "The egg."

Thirty-two chicken eggs will be aboard NASA's Space Shuttle Challenger when it lifts off on a six-day mission in late January, in an experiment to determine whether embryos can develop successfully under weightless conditions.

The experiment was designed by the 1983 winner of NASA's National Science Competition, John Vellinger, 20, of Lafayette, Indiana, and is funded by a grant from Kentucky Fried Chicken Corporation.

"We hope this will give us valuable data about embryo development under zero-gravity conditions, toward the goal of determining the feasibility of raising food sources in space," explains Vellinger. "Longer term, this can help us determine whether humans can reproduce in a weightless environment."

Chicken eggs were selected for the experiment because of their relatively rapid development which is well-suited to the length of the shuttle mission.

Vellinger, a mechanical engineering student entering his sophomore year at Purdue University, began his project five years ago as a ninth-grader, winning NASA's regional competition three times before becoming the national winner.

Vellinger has designed a heated cradling carrier that will fit into one of the shuttle's lockers, protecting the embryos as much as possible from the effects of the gravitational phenomena and vibrations created by the shuttle's journey through space.

When the shuttle returns to earth, the eggs will be analyzed and compared to a control group of eggs that will be incubated under identical conditions -- except for the fact that they will be in a gravity environment -- on the ground, at Mission Control. Some of the eggs will be hatched and observed throughout their life cycle.

Vellinger will be turning the earthbound eggs five times a day to simulate the movement of the hen in the nest. The hen's movement corrects the effect of gravity, which causes the yolk to settle to the bottom of the egg.

"In space, since there's no gravity, the yolk will be perfectly suspended inside the egg," he notes, "which may make a difference in the way that the chick develops."

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"My hypothesis is that without gravity dragging the yolk down, the embryo will develop more efficiently, producing a better chicken."

Vellinger adds, "It takes 21 days for an egg to hatch. But the embryo's main development occurs in the first 11 days. If differences occur, it's going to be during that time."

Working as an intern at Kentucky Fried Chicken's research and development laboratories in Louisville, Ky., Vellinger has refined his carrier design and completed assembly of the space and ground incubators.

Everything has to be carefully documented, he notes.

"There's a good chance we may learn something extremely valuable from this project," Vellinger says. "In case we do, we're going to have it well-documented."

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