A government study on US kids found Tuesday that just one in three show proficiency in science in middle school and junior high, while that number drops to one in five of those graduating high school.

And even fewer, between one and two percent, showed a grasp of advanced science, said the National Assessment of Educational Progress (NAEP), issued by the US Department of Education.

The study looked at nationwide samples of 156,500 fourth-graders (age 9-10), and 151,100 eighth-graders (age 13-14), and 11,100 12th-graders (age 17-18).

The assessment method, which analyzed how kids answered questions relating to physical, Earth, life and space sciences, was devised in 2009 so the findings could not be compared to prior years, the report said.

One percent of fourth-graders, two percent of eighth-graders, and one percent of twelfth-graders performed at the advanced level.

And many students fell short of even basic understanding of science concepts at their grade level: 72 percent of fourth graders performed at or above the basic level in 2009, while the same could be said for 63 percent of eighth graders and 60 percent of 12th graders.

Boys scored higher than girls in every grade measured, while white students outperformed other races in the younger grades but were on an even keel with Asian American students by 12th grade.
City kids fared the worst, while those attending school in the suburbs performed best.

Assignments to assess a level of "proficient" included "Recognize that gravitational force constantly affects an object (grade 4)" and "Evaluate two methods to help control an invasive species (grade 12)."

Advanced students could design an investigation to compare types of bird food (grade 4), predict the Sun's position in the sky (grade 8), and recognize a nuclear fission reaction (grade 12).

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