

any of the parts used in making them. He is interested only in promoting the idea of using this type of projection in educational work and for the interest of the general public. He believes, as do all educators who have seen his exhibit, that this method can be used with great advantage in school and college classrooms, and for popular lectures and demonstrations as well. Various types of projectors can be had at reasonable prices, or if you have a microscope and an old-fashioned stereopticon lantern you can even build one yourself. But to deal with the animals you will need patience and experience.

Other fascinating biological exhibits in the Hall of Science win their crowds not because they are alive, but because they are so ingeniously constructed that they seem to be alive. Prominent among these is one showing just three cells of a green plant, painted out so huge that the tiny green color-disc or chloroplasts in them show up as big as soup-plates. These cells demonstrate the processes that go on in all green plants, in the manufacture of food and in its use by the plant itself.

Trains of moving light-flecks, projected against the transparency from behind, show the courses followed by water, oxygen and carbon dioxide in the vital economy of the plant. One set of these moving light-flecks shows how carbon dioxide enters the cell and passes into the chloroplast. Into the same chloroplast water is also being absorbed. The sun shines upon it, and the carbon dioxide and water unite in the presence of the green color-stuff, chlorophyll, to form sugar, the foundation of all food-stuffs. Out of the chloroplast comes oxygen, which passes from the cell.

All this illustrates but one of the two outstanding vital processes that takes place in the living plant cell. The other is the reverse, consisting of the use of food in respiration. Into the same cell you see another train of moving flecks passing, representing oxygen, this time going in, not coming out. In the cell it combines with sugar or other food, releasing energy for the use of the plant. The products of this chemical reaction are carbon dioxide and water, which are shown passing from the cell.

Thus plant cells, unlike animal cells, both make food and use it up. It is their trick of taking in carbon dioxide, which animal cells do not do, that led to the old-fashioned botanical heresy that the respirations of the plants and animals are opposite processes. Plant and ani-

mal respiration are exactly alike: the intake of oxygen, its combination with food, the outgo of carbon dioxide and water. The opposite process, which plant cells alone carry on, has nothing whatever to do with respiration: it is the building of food which respiration eventually uses up. This graphic display in the Hall of Science should do something toward the correction of the ancient error.

Another exhibit, showing cells on a smaller scale but more of them, is an exact reproduction of a bit of corn leaf, shown as though in cross-section under a gigantic magnifying glass. It shows the layers of skin-cells on top and bottom, the masses of green food-making cells between, the mouth-like openings that control the plant's intake and outgo of gases and water vapor, and the complicated structure of the veins that carry water and dissolved foods—the plumbing and supply pipes of the plant. The realization that every corn plant in the millions of acres now growing in the Midwest repeats this same structure millions of times, not to mention similar repetitions in other green plants everywhere, is a bit dizzying when you stop to think about it.

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PSYCHOLOGY

Most Intelligent College Men Choose Most Intelligent Mates

THE OLD idea that men prefer "dumb" women for wives is disproved by a study made by Wesley Carroll, graduate student at Iowa State College, under the direction of Dr. M. F. Fritz.

Intelligence ratings of boys and girls whose engagements were announced in the college newspaper show that the men tended to choose girls of equal or superior intelligence, either intentionally or unintentionally.

Nearly 200 announcements of engagements were collected from the files of the newspaper. For 126 of the couples, the scores which both boy and girl made in the college aptitude tests were available.

The men tended to choose women who were mentally equal or superior, Dr. Fritz said, explaining that when the rating of each boy was compared to that of his intended wife, a slightly



DR. GEORGE ROEMMERT

His "Microvivarium," which projects enormously enlarged images of living microscopic plants and animals on a screen, is a prime attraction of the Hall of Science at the Century of Progress. It has given thousands who have never looked through a microscope their first view of the amazing life that can be found in a drop of water.

positive correlation was discovered.

Of the 126 cases, 51 high ranking boys became engaged to high rating girls and 34 low rating boys became engaged to girls with high intelligence ratings. Twenty-six high rating boys became engaged to low rating girls. Fifteen low ranking boys chose girls of similar intelligence rank.

The study also indicated that more engagements were made among the students of high intelligence than among the ones with low ratings but this assumes that no selection in the reporting of engagements has occurred. Dr. Fritz suggests it is possible that the more intelligent students may be confident of their ability to make a living and a success of life.

Similar results were obtained a few years ago at Kansas State College where such a test was conducted, Dr. Fritz said.

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