Man Solar

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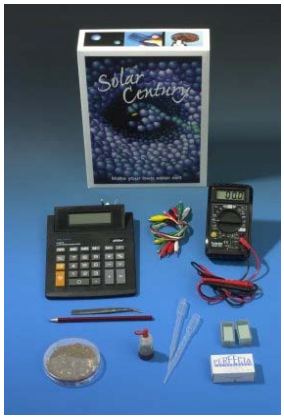
Electricity from berries or hibiscus leaves!



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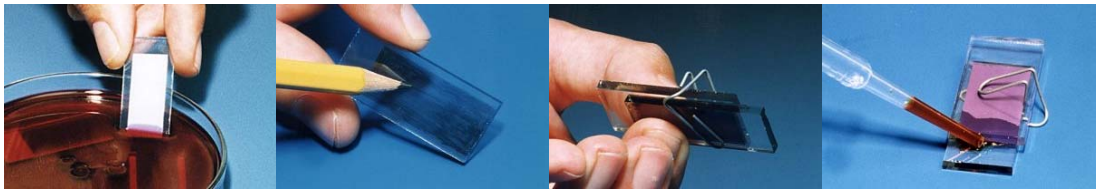
Are you looking for an innovative and engaging hands-on way to teach your students about photosynthesis, solar energy and new technologies in renewable energy sources?

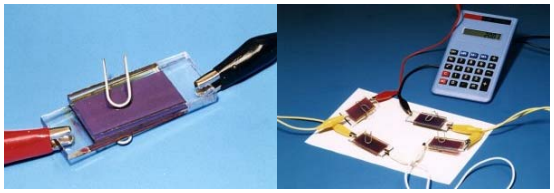
Your students can explore these concepts by constructing solar cells which can generate enough power to run an electronic device such as a calculator or melody module. These simple solar cells use the natural dyes found in plant materials such as blackberries and red hibiscus leaves. Students extract these dyes by simple techniques.

Once they have tried out their solar cells, students can then design and perform a range of quantitative and qualitative investigations by changing the variables. For example, dyes from different plants produce different results.

Teachers who have trialed these fascinating, hands-on experiments have reported that their students were engaged, inspired and challenged! Students can be further extended by participating in relevant research into this exciting new kind of solar cell and in inventing new applications.



Blending Physics with elements of Biology and Chemistry, the underlying technology involves the organic or nanocrystalline dye Graetzel cell. This relatively new type of solar cell partly bypasses photosynthesis and makes a shortcut conversion into electrical current. The inner part of the cell consists of molecules similar to chlorophyl. Research so far shows that the best molecules for direct conversion of sunlight into electricity are the purple-red dyes found, for example, in a wide range of berries.



The Man Solar product aims to show this genius dye solar cell in its most natural form. The kit has been developed by the Energy Research Centre of the Netherlands and is marketed in Australia and New Zealand by Intex Solutions Pty.Ltd. It contains all that is needed to make a series of six photovoltaic cells, the number needed to power a calculator or melody module. It comes with clear and fully illustrated instructions and provides enough materials for several students. It can be re-used many times and spare parts are available.