

# Medicinal Plant Brainteaser Challenge

## Student Sheet

Student name: \_\_\_\_\_ Class/section: \_\_\_\_\_

### Background Information and Directions

All around us, plants are growing, and all around us, a host of insects, rodents, molds, and other living things are trying to eat them. What's to prevent all these predators from eating every plant in sight? How can the plants still survive, stuck where they are and apparently defenseless?

One very effective way plants protect themselves is by producing poisons to repel and even kill the living things that want to devour them. Since a great variety of plant predators exists, plants have come up with an equally huge selection of poisons to drive them away. All these poisons affect living things in an enormous variety of ways. There are a lot of ways to be a poison!

Scientists are very interested in finding and learning about these plant poisons. There are so many that scientists are constantly discovering new compounds that they had never dreamed of. But why should they go to all this trouble? It turns out that poisons can actually serve as medicines. The enormous diversity of plant poisons that exists affects the human body in an equally diverse number of ways. But what might be harmful in one situation can be beneficial in another. Carefully applied in the right circumstances, in fact, plant poisons can help, not harm, us and even save lives. Whether a compound is a poison or a medicine, therefore, depends upon its dosage and how it is used.

The brainteaser challenge below illustrates this. The chart introduces 20 plants, the compounds they make, and what the compounds do to living things. Look the compound descriptions over and try to predict how we use them as medicines. Your teacher may give you medicine cards that provide the answers and ask you to match them with the plant descriptions. Or, your teacher may ask you to come up with the answers on your own. In either case, see how closely you can predict how scientists have figured out how to turn poisons into medicines. Have fun!