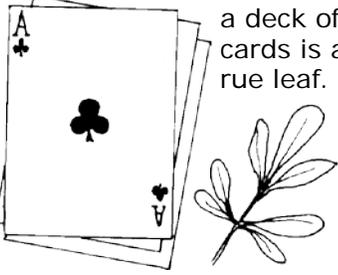


RUE Science Page

DID YOU KNOW?

The club on a deck of cards is a rue leaf.



THE RUE PLANT

Rue is a small evergreen shrub that is shaped like a mound. It grows up to 60 cm high.



The silver-green leaves have a strong smell.



The tiny yellow flowers are in loose clusters above the leaves.

ORIGINS

Rue is native to the Mediterranean region. Ancient Egyptians, Romans, and Greeks believed that rue could treat many illnesses. During the Middle Ages, Europeans believed it had magical powers.

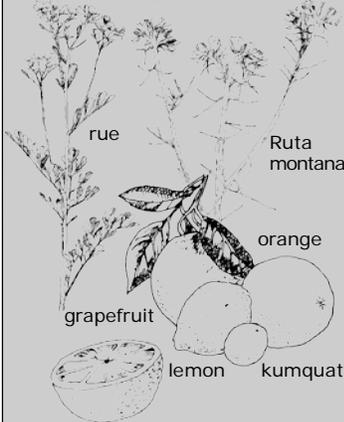
During the Middle Ages, rue was hung in doorways and windows to keep evil spirits out.



CLASSIFYING RUE

FAMILY
Rutaceae
(Citrus family)

There are more than 1,600 species of shrubs and trees in this family. Most have strong scents.

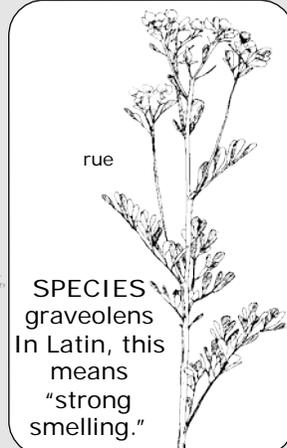


The best-known members of this family are those that produce edible fruits.

GENUS
Ruta

In Latin, this means "bitter."

The plants in this genus have leaves that taste bitter.



SPECIES
graveolens
In Latin, this means "strong smelling."

GROWING RUE

Rue thrives in well-drained soil in full sun.

Rue is a bush that grows year after year. You can start new rue plants from seeds. You can also start a new plant by cutting a piece of stem and sticking it in potting mix.

Sometimes little plants start growing around a rue plant. They can be dug up and replanted.



I'm going to transplant these little rue plants all around my garden.

USES

Today, rue is mostly used as an ornamental plant in rock gardens and herb gardens. It has also been used as a medicine for earaches, an insect repellent, and an herb for flavoring foods. Some processed foods are flavored with rue. Some cosmetics and perfumes also contain rue.

Be careful if you grow rue in your garden. Some people get a rash when they touch it.





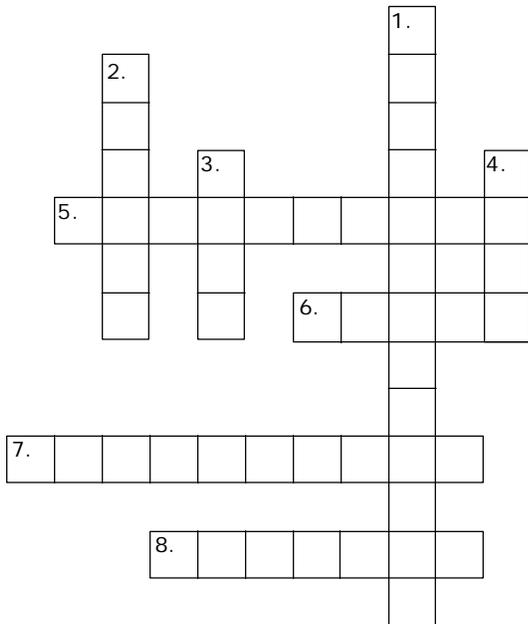
CROSSWORD PUZZLE

Across

- Rue is mostly used as an _____ plant in gardens.
- Rue is a small evergreen _____.
- The scientific name for rue is *Ruta* _____.
- In the Middle Ages, Europeans thought rue had _____ powers.

Down

- Rue is native to the _____ region.
- Rue belongs to the _____ family.
- Some people get a _____ from touching rue.
- A _____ on a deck of cards is a rue leaf.



TRY THIS

A RUE SURVEY

Rue has been used as a medicine and “anti-magic” herb for centuries. People have used it to treat almost every kind of sickness. During the Middle Ages, people used rue in a potion to protect themselves from the black plague and to defend against witches. Artists, including Michelangelo and Leonardo da Vinci, thought they could improve their creativity and eyesight by eating rue. Rue is a symbol of regret, sorrow, and repentance. Catholics used sprigs of it to sprinkle holy water on worshippers.

How are people in your area using rue today? You can do some research to find out.

What you need

- * paper and pencil

What to do

Find someone who is growing rue. Ask them what they use it for. Also ask if they have heard any stories, sayings, or beliefs about rue. Take notes as you conduct your interview. (You may wish to work with a partner. One person could do the interview, and the other could take notes.) Discuss your findings with others. As a group, prepare a presentation of your findings. This could be in the form of a written essay, a picture essay, a poster, or a video.



SPOTLIGHT ON RESEARCH

Rue: A New Cancer Drug?

Medical researchers are always looking for new drugs to treat cancer. Many of the drugs now used to kill cancer cells also kill a lot of normal cells. This causes serious side effects. Patients often get very ill from the drugs that they have to take. An ideal cancer drug would be one that only kills cancer cells, and not normal cells.

One promising new drug, called *Ruta 6*, comes from rue! Researchers have been testing the cancer-killing activity of *Ruta 6*. They treated 15 patients who had brain cancer with *Ruta 6* and tricalcium phosphate. Seven of these patients had glioma, which is a cancer of the connective tissue in the brain. Of these, six showed complete regression of tumors. That means their tumors disappeared! Researchers have been working with cancer cells in the laboratory to find out exactly how *Ruta 6* works. Results so far indicate that *Ruta 6* prevents cancer cells from dividing. Normal cells are not affected. The researchers propose that *Ruta 6* could be an effective new drug for treating brain cancers, especially glioma.

Source: Pathak, S., A. S. Multani, P. Banerji, and P. Banerji. (2003). *Ruta 6* selectively induces cell death in brain cancer cells but proliferation in normal peripheral blood lymphocytes: A novel treatment for human brain cancer. *International Journal of Oncology*. 23 (4), 975-82.



RIDDLE

What does a rue plant do when it doesn't feel like going to work?

Answer: It takes a leaf of absence.

Crossword puzzle answers
Across: 5. ornamental; 6. shrub; 7. graveolens; 8. magical.
Down: 1. Mediterranean; 2. citrus; 3. rash; 4. club.