# The Science of Twins

**Have you ever reconnected with someone from your past? Read the web article about twins who lived apart for many years. What surprised the twins when they reconnected?**



Twins, especially identical twins, have always fascinated scientists. Identical twins develop from one egg, have identical DNA, and are usually very similar in appearance and behavior. There have been many studies of identical twins raised in the same family. There have also been a number of studies of identical twins separated at birth and raised in separate families. These studies have provided interesting information about the impact of nature (genetics) and nurture (the environment) on the development of the individual. However, some of the studies have been controversial.

Take the case of Elyse Schein and Paula Bernstein. Elyse and Paula were identical twins separated at birth. Both girls knew that their parents **had adopted** them as infants, but neither girl knew about her twin. When Elyse grew up, she longed to meet her biological mother, so she contacted the agency that **had arrange** the adoption. She **had been doing** research on her birth mother when she made a surprising discovery. She had an identical twin. Even more surprising, she learned that she had been part of a secret scientific study. At the time of the adoption, the agency **had allowed** different families to adopt each twin. The agency **hadn't told** the families that their child was part of a scientific study. However, it **had never told** the families the goal of the study: for scientists to investigate nature versus nurture.

When Elyse and Paula finally met as adults, they were amazed. They had many similarities. They looked almost identical. They **had studied** film. They both loved to write. Together, the twins discovered that the researchers **had stopped** the study before the end because the public strongly disapproved of this type of

research. Although that study ended early, many scientists today make a strong case for the dominant role of nature. Schein and Bernstein agree that genetics explains many of their similarities. However, recent research suggests that nurture is equally important. It is clear that the nature versus nurture debate will occupy scientists for years to come.

**#1 Comprehension Check: Answer the questions.**

1. What was surprising about the twins' adoption?

2. What characteristics and interests did Elyse and Paula have in common?

3. What is the nature versus nurture debate?

**#2 Notice: Underline the verbs in each sentence.**

1. Both girls knew that their parents had adopted them as infants.
2. She had been doing research on her birth mother when she made a surprising discovery.
3. She learned that she had been part of a secret scientific study.

**Which event happened first in each sentence? What event followed? Write the verbs. What do you notice about the form of the verbs?**

| | |
|---|---|
| **First:** | **Then:** |
| **First:** | **Then:** |
| **First:** | **Then:** |

**Complete the sentences about twins who met as adults. Use the <u>past perfect</u> form of the verbs in parentheses.**

1. Two separate Illinois families (**ADOPTED**) Anne Green and Annie Smith before the twins were three days old. 2. When (**MEET**) were fascinated by their similarities. For example, they (**LIVE**) near each other before the Greens moved away. 3. As children, both Anne and Annie (**GO**) to the same summer camp. 4. Anne (**GO**) to college, and Annie (**HADN'T ATTENDED**) college, either. 5. Both (**MARRY**) for the first time by the age of 22. 6. Anne (**HAD GOT / GET**) divorced and (**REMARRY**). Annie (**GOT / -**) divorced and was still married. 7. Both Anne and Annie were allergic to cats and dogs and **(OWN / NEVER)** pets. 8. Both (**GIVE**) the same name – Heather – to their daughters. 9. Both previously (**WORK**) in the hospitality industry. 10. Anne (**WORK**) as a hotel manager. However, Annie (**WORK**) in hotels; she (**BE**) a restaurant manager.