


[MICROSOFT](#)
[PRODUCTS](#)
[SEARCH](#)
[SUPPORT](#)
[SHOP](#)
[WRITE US](#)
Microsoft

home

▶ [Lessons at a Glance](#)

Lessons

- [All About Me](#)
- [Animal Logic](#)
- [Bridging the Generation Gap](#)
- [Buy Low/Sell High](#)
- [Buying a Dream Car](#)
- [Campaign Hot Buttons](#)
- [Candy is Dandy](#)
- [Celebrate the U.S.A.](#)
- [Code Crackers Math Game](#)
- [Creating Your Own Web Site](#)
- [Don't Trash the Earth](#)
- [Endangered Species](#)
- [For the Record](#)
- [It's All in the \(Chocolate\) Chips](#)
- [Just Desserts](#)
- [Making Ends Meet](#)
- [Newsworthy Journey](#)
- [Nutrition Track](#)
- [Planning a School Event](#)
- [Solving Polynomial Equations](#)
- [Space Case](#)
- [Three Squirrels and a Pile of Nuts](#)
- [Traits R Us!](#)
- [Understanding Poetry](#)



Traits R Us!

Subjects: Science, Social Studies

Grade Level: High School

Required Software: Microsoft® Access 97

▶ [Teaching Guide](#)

▶ [Student Activity](#)

Teaching Guide

Summary

In this supplement to your study of genetics, students learn more about heredity by collecting and analyzing information about their own and their classmates' characteristics (such as hair color and height) and traits (such as ability to roll tongue or raise one eyebrow). As the activity progresses, students will be amazed to discover the genetic diversity within their own classroom!

Objectives

To deepen students' understanding of heredity through analysis of characteristics and traits in their peer group and to provide practice creating and using a Microsoft Access database, including hands-on experience in collecting, analyzing, and reporting data.

Prerequisite Skills

Fundamental understanding of genetic principles and familiarity with basic database design and terminology, with special focus on Microsoft Access.

Time Alloted

Three to five class periods

How to Begin

Ask the class: How many of you can roll your tongues? Raise one eyebrow? Take a quick tally. Ask: Why do some people have these traits while others do not? Guide students toward understanding that these traits are hereditary, passed along the same way that hair and eye color are. Note that other hereditary traits include left- and right-handedness and the ability to whistle.

Tell students that they will be creating a database of genetic characteristics and traits in their own classroom. Using a large monitor or a PC Viewer, open Access. Then:

1. From the File menu, choose New Database, then a Blank Database. Name and Save it.
2. In the next screen, click the Table tab. Choose New, click DesignView, then OK.
3. With your students' help, type field names in the Table design (see sample below).
4. For each field with a set number of choices (such as Left-/Right Handed), create a pull-down menu for easy data entry. Click on the Data Type cell and then down arrow. Select LookupWizard, click the

"type in values" option, then click Next. Enter your choices under Col 1. Click Next, and name your lookup column with the same name as the related field. Click Finish.

5. Save and close your table.
6. Divide your class into teams. Teams will work separately on Step A and combine forces for the remaining steps.

	Field Name	Data Type	Description
<input type="checkbox"/>	Name	Text	
<input type="checkbox"/>	Age	Text	
<input type="checkbox"/>	M/F	Text	
<input type="checkbox"/>	Height	Text	
<input type="checkbox"/>	Hair color	Text	
<input type="checkbox"/>	Eye color	Text	
<input type="checkbox"/>	Left-/Right-handed	Text	
<input type="checkbox"/>	Special traits1	Text	
<input checked="" type="checkbox"/>	Special traits2	Text	



Student Activity

Description

Are you the only "lefty" among your friends? How many kids in your class could wiggle their ears if you asked them to? With this activity, you and your classmates will create a database of your own genetic traits and characteristics. You'll compare your classroom results with statistics from "the real world," and then look for other patterns in your data. Some students may also want to look for characteristics and traits among members of their families.

STEP 1 *Create Your Data Form*

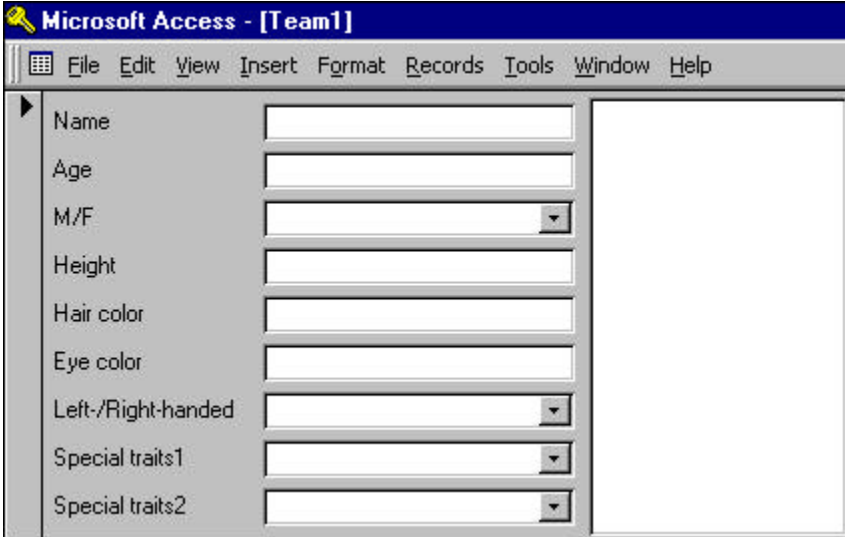
SOFTWARE: Microsoft Access

WHAT TO DO: With your teacher, you've already defined the fields in your database. Now you will work in a team to develop the form that you and your classmates will fill out on the computer to enter data into your database. Other teams in your class are working on form designs, too. When all are complete, the whole class will pick its favorite form and data entry can begin.

1. Open the empty database your class created with the teacher, click on the View menu, and choose Database Objects.
2. In the submenu, select Forms. Click the New button and choose the FormWizard option. Choose the Table you and your classmates just created with your teacher, then click OK. Then from the Available Fields listed below, choose the ones you most want classmates to fill in (which could be all of them) and add them to the list of Selected Fields in the order you want them to appear.
3. Now work through the remaining steps of Form Wizard. At the last

step, give your form your team name, and select the option that lets you Modify the Form's Design if you'd like to fine tune it; then click Finish. Be sure to Save when you are done tinkering!

4. Each team should present its finished form on the overhead viewer. Vote on a favorite, and go to the View menu. Choose Design View if you need to modify it. Then Save as Class Form.



The screenshot shows the Microsoft Access interface for a team named [Team1]. The menu bar includes File, Edit, View, Insert, Format, Records, Tools, Window, and Help. The form design view displays a list of fields on the left side, each with a corresponding input control on the right. The fields and their controls are: Name (text box), Age (text box), M/F (dropdown menu), Height (text box), Hair color (text box), Eye color (text box), Left-/Right-handed (dropdown menu), Special traits1 (dropdown menu), and Special traits2 (dropdown menu). The right side of the form is currently blank.

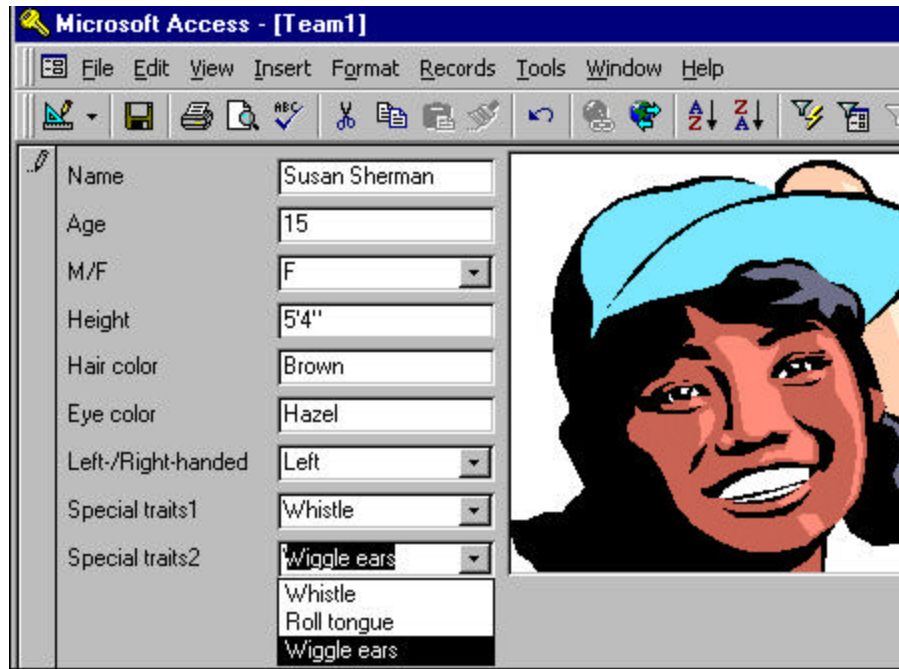
Compete with other teams to design the best database form.

STEP 2 *Enter Your Data*

SOFTWARE: Microsoft Access

WHAT TO DO: You and your classmates will now go to the computer one at a time and:

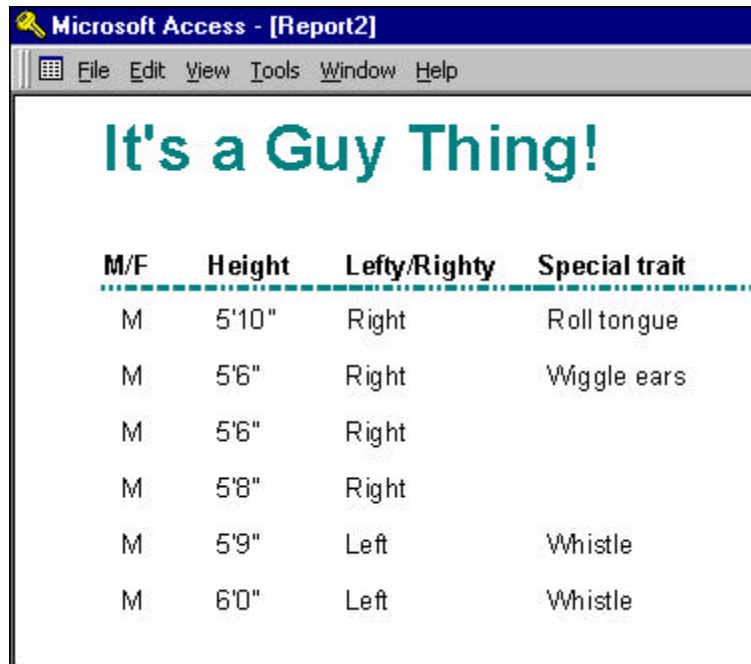
1. Launch the class database and open the Class Form. At the bottom of the form (in Form View), click on New Record and type in your data. Everyone else in class will do the same.
2. For an extra touch, scan in a photo of yourself. Hint: Ask the Office Assistant how to add an unbound picture.



STEP 3 Analyze the Data

SOFTWARE: Microsoft Access

WHAT TO DO: When all of your class's data has been entered, your team should decide on one main variable to explore. For example, you might want to focus just on the boys in your class, and then find out what characteristics and traits they have. Here's how:



Use the Query and Report functions in Access to explore various combinations of genetic characteristics and traits in your class.

1. On the View menu, choose Datasheet Views. Under the M/F field, click in a record that contains Male (or M). On the Records menu, choose Filter, then choose Filter by selection. Those records will appear on

the screen.

2. Next, choose several sub-variables, such as: How many boys in your class are left-handed? What is the range of heights among the boys? Choose the correct columns one at a time, click on Records, and Sort.
3. When you find a pattern worth noting, create a printed report on it. On the Window Menu, choose the name of your database. Click the Reports tab, then click New. Click the ReportWizard and your query or table. Select the variables you want to focus on, such as Gender (M/F) or Left-/Right-Handedness (see sample, above). Then let Report Wizard guide you through creating a report based on that Query. Share with your classmates, and conduct additional Queries.
4. Use the ChartWizard to present some of your data visually. Post your findings on a bulletin board, and find answers (from the library and your science teacher) to questions the data raises about genetics.



[© 1998 Microsoft Corporation. All rights reserved. Terms of use.](#)

Last Updated: January 1, 1998