

COIN CLADOGRAM WORKSHEET

You and your partner will examine the features found in a penny, a dime, a nickel and a quarter and construct a cladogram of your own.

FEATURES	TYPE OF COIN			
	PENNY	NICKEL	DIME	QUARTER
A. Round				
B.				
C.				

- Before constructing a cladogram, scientists look for features in animals and note whether the feature is present or absent. You will do this for coins using the chart. Observe the coins. What feature do all the coins have in common? They are all round. Put a plus sign in the column under each coin for that feature.
- What other feature do most of the coins share? Identify this feature and write it in the column marked features. Put a plus sign if the coin has the feature. Put a minus sign if the coin does not have the feature.
- What other feature do most of the remaining coins share? Identify this feature and write it in the last space in the column marked features. Put a plus sign if the coin has the feature. Put a minus sign if the coin does not have the feature.
- Use the chart to complete the cladogram. The first node (branch in the tree) A is labeled Round. All the coins at this node and beyond share this feature. Label the other two nodes (letters B and C).
 - What coin is round, but does not share any more features with the other coins?
Write the name of the coin in number 1.
 - What coin shares the first and second feature with the other coins, but no more?
Write the name of the coin in number 2.
 - Which two coins share all the features you have identified?
Write their names in numbers 3 and 4.
- Use the cladogram to answer these questions:
 - Which two coins are the most closely related?
 - Which coin is a distant relative of these two coins?
 - What feature(s) does the nickel share with the dime?

