Symmetry in Goldbach Numbers

Leader

State and illustrate examples of Goldbach's Conjecture about a connection between even numbers and prime numbers.

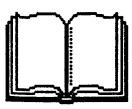
You will need:

- ❑ Pencil
- ❑ Paper
- ❑ Hundred numbers chart (or any listing of the prime numbers less than 100)

Do this:

- With only the help of a short vocabulary, a number chart, and a sample illustration to use or reference, a student (or group) composes, on his own, *many* answers to the following question:

  Is it true that every even integer is the sum of two prime numbers? (See example illustration on Student Page.)



Student_____

Do this:

- Answer the following question in as many examples as you can list. (They will be examples of a well-known mathematical statement called Goldbach's Conjecture.)

Is it true that every even integer is the sum of two prime numbers?
(Sample: 18 = 7 + 11)

For relevant review, think over the following facts:

a. A *prime number* is a number that has exactly two factors; itself and one.
b. A *conjecture* is a good, general guess about numbers, but which cannot be called a rule because it has never been proven.

Can some even numbers be expressed as the sum of two prime numbers in more than one way?_____

WHAT I FOUND