

What in the world are

Everything
is made of **something**.

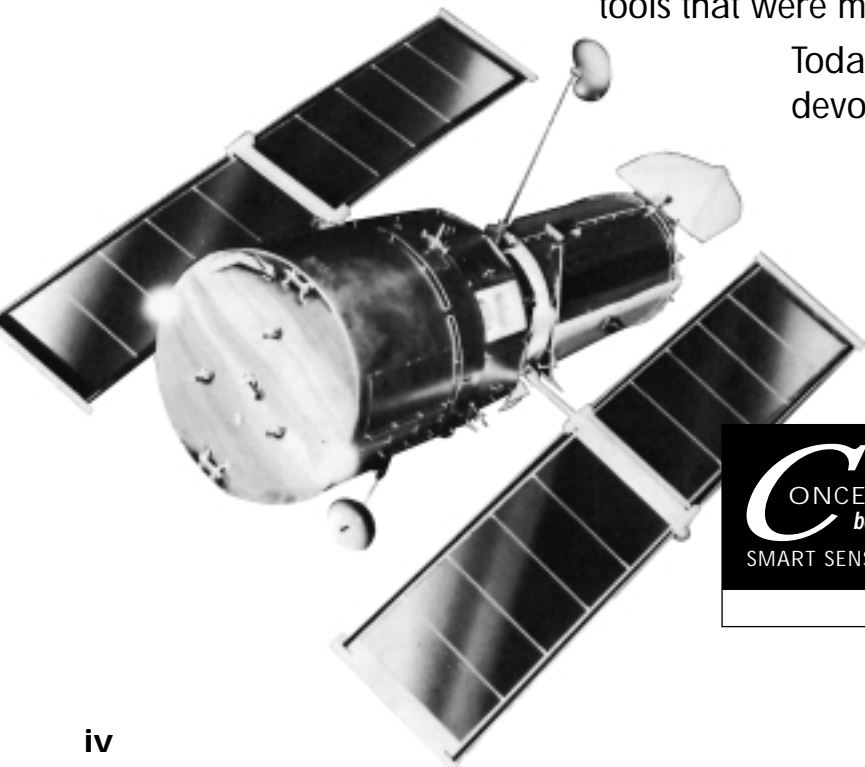
We call the stuff that things
are made of **materials**.


People have been experimenting with
materials since prehistoric times.



At first, they made tools from stones they happened to find.
Later, they learned to mine and forge metal for
tools that were more durable.

Today, scientists and engineers
devote their entire lives to studying
and developing new and
better materials for a
variety of purposes.



 **CONCEPTS**
behind
SMART SENSORS

Smart sensors are made of
materials that respond to
stress by generating a
voltage.

Materials World Modules?

Smart Sensors. What are they?
Where can you find them?
Why are they useful?



Activities

With this module, you'll ask your own questions and
find your own answers about a material called
polyvinylidene fluoride, or PVDF, which is used in
devices known as smart sensors. Use the activities to
learn how to construct and operate smart sensors with
PVDF. Talk with your classmates about what you
learned.



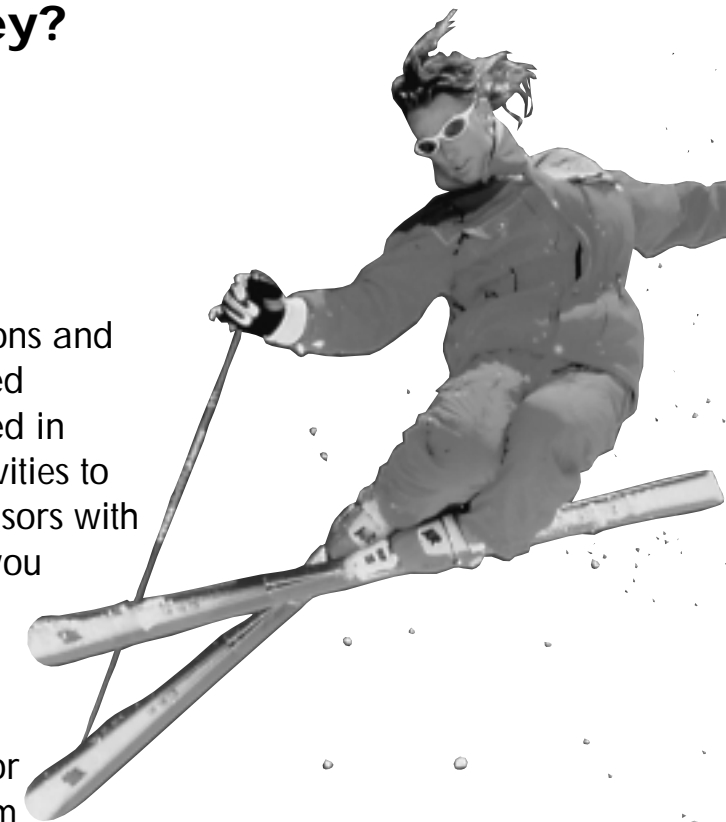
Design Projects

Once you know something about smart sensor
materials, you'll use what you've learned from
the activities to design your own sensing device. You'll
test the device, too. Does it have the right sensitivity?
Will your sensor function the way you want it to?

You're the scientist.

Tell us about your success.

mwm@nwu.edu



***All life is an
experiment.
The more
experiments
you make
the better.***

Ralph Waldo Emerson,
American writer