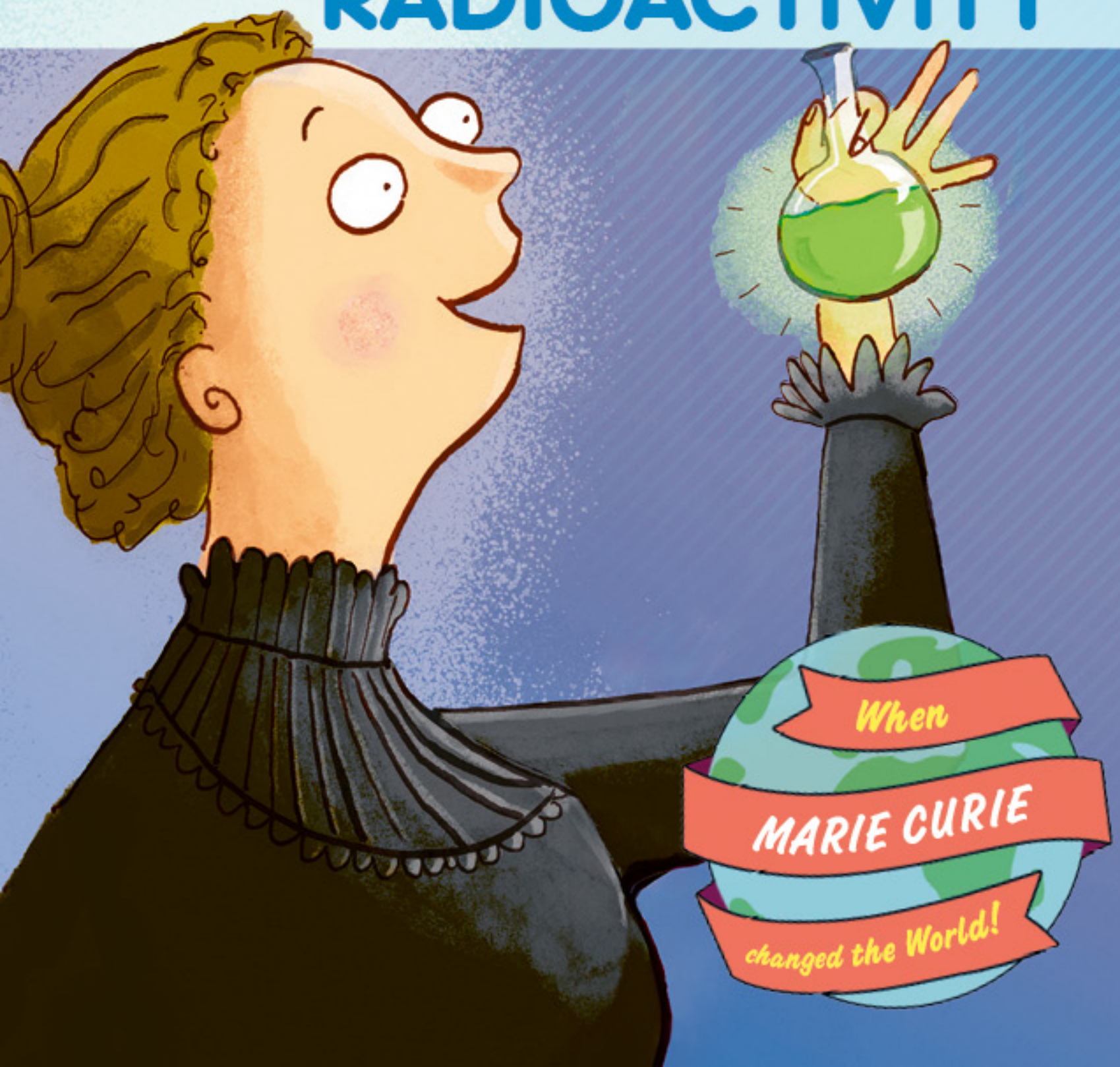
THE EUREKA! MOMENT

Marie Curie and RADIOACTIVITY



about it. They all thought that I must have made an error somewhere in my work. They looked down their noses at me and told me to do my experiments again and be more careful this time. But I knew I hadn't got it wrong. There had to be another reason for these unexpected results. When I thought more about it, the answer suddenly seemed obvious. The extra radiation must be coming from a new element, an element no one had seen before. I was sure it was there and I had to find it.

When I told Pierre, he agreed with me. He was so excited at the possibility of discovering a new element that he stopped his own research and came to work with me. We crushed some pitchblende to powder, heated it and mixed it with water, acids and other chemicals to divide it up into the different materials it contained. We finally produced a tiny sample, just a few grains of radioactive material. When I tested it, I wrote

the result in my notebook. It was so surprising that I underlined it. I could scarcely believe it. Later, I read it out to Pierre, "150 times more active than uranium." I'd done it. I'd found a new element.

Pierre said, "You discovered it, so you can

Pitchblende

Pitchblende is a natural material that contains uranium and thorium. A piece of rock that is all made of the same mixture of substances, like pitchblende, is called a mineral. And minerals that contain valuable substances like uranium are called ores. Today, pitchblende is called Uraninite.


IS IT REALLY ALL MINE?


THIS IS LIKE GOLD DUST TO ME. LOOK, IT'S FULL OF PINE NEEDLES FROM THE FOREST.


THIS IS WHEN THE HARD WORK BEGINS.


HELP ME ADD THE WATER AND ACID.


THE SMOKE AND SMELL ARE TERRIBLE.
THEY CAN'T BE AVOIDED. WE'LL JUST HAVE TO GET USED TO THEM.


THIS SAMPLE IS DEFINITELY RADIOACTIVE.

Chapter 5

1914

As 1914 began, I was bringing up my two beautiful daughters, Irène and Eve, on my own. My husband, Pierre, had died in a road accident eight years earlier. Life went on, but I was very unhappy. He was in my thoughts all the time and I missed him dreadfully.

The Sorbonne asked me to take Pierre's place. I became the first woman professor there and head of research in the science department. I taught Pierre's science classes and also carried


I'M SORRY, MADAME, IT WON'T START. I'LL TRY TO FIND A MECHANIC.
NO NEED. I'LL FIX IT MYSELF.
RADIOLOGIE
MONSIEUR, LET US GO WITH ALL HASTE. OUR BRAVE SOLDIERS NEED US.
WHY HAVE WE STOPPED?
MADAME, WE HAVE ORDERS NOT TO LET WOMEN PASS. YOU MUST TURN BACK.
MADAME, ARE YOU ALL RIGHT?
I'M FINE. KEEP GOING.


MADAME, I'M SO SORRY. I DON'T KNOW WHAT HAPPENED.
LET'S GET THE CAR BACK ON THE ROAD.
HE MAY DIE IF WE CAN'T FIND ALL THE SHRAPNEL IN HIS CHEST.
TRY TO LIE STILL.
CAN YOU SEE YOUR PATIENT'S SHRAPNEL NOW, MONSIEUR?
IT'S AS CLEAR AS DAY. THIS SOLDIER OWES HIS LIFE TO YOU AND YOUR X-RAY CAR.