Three scientists wondered. Could they get X-ray energy from sticky tape? That may sound like a silly question. After all, X-rays are what doctors use to look deep inside the human body. They are a kind of energy. Could such powerful energy come from the stuff people use to wrap presents?

Maybe. When you rub things together or pull them apart, you produce energy by friction. When you unroll sticky tape you produce energy by friction too. But do you produce X-ray energy?

The scientists made a machine to find out. They put a roll of 3M Scotch tape inside a little box with a clear lid. There was no air inside the box. A scientist put his finger over the lid. Then he set a piece of X-ray film over his finger.

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As the tape unrolled inside the box, X-rays were produced. This X-ray energy shot up through the finger onto the film. It made an X-ray picture of the bones in the scientist’s finger!

Now what? The scientists want to turn their invention into a low-cost X-ray machine. It would help give people in poor countries better medical care. So, their question about sticky tape and X-rays was not so silly after all.

Portable, cheap X-ray machines could be used anywhere people need them.

Sparks from Candy

Sticky tape is not the only thing that gives off energy. Candy does too. You have to stand in front of a mirror in a dark room to see it. Bite down on a Wint-O-Green Life Saver®. As the candy crunches, you’ll see sparks.

Oil in the candy makes the sparks. The oil picks up invisible light and makes it visible to our eyes. That’s why, when you bite down, all those blue sparks fly from your mouth.

X-ray

Continued from page 1

Think of things you have seen that glow in the dark. Make a list. For each one, think about why. Does it glow just for fun? Or is there another reason? Put your thoughts into writing.

Sparks from Candy

Patient: What does the X-ray of my head show, Doctor?
Doctor: I’m afraid I have bad news.
Patient: What?
Doctor: I hate to say this, but the X-ray shows nothing at all!

NoXe

X-rays are like detectives. Airport guards use X-ray machines to see into suitcases. They want to make sure there is nothing dangerous inside.