

The National High Magnetic Field Laboratory

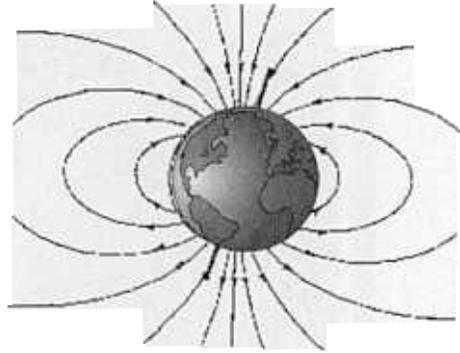
is a large building where scientists from all over the world come to work.



The magnets here are the strongest of their kind in the world.

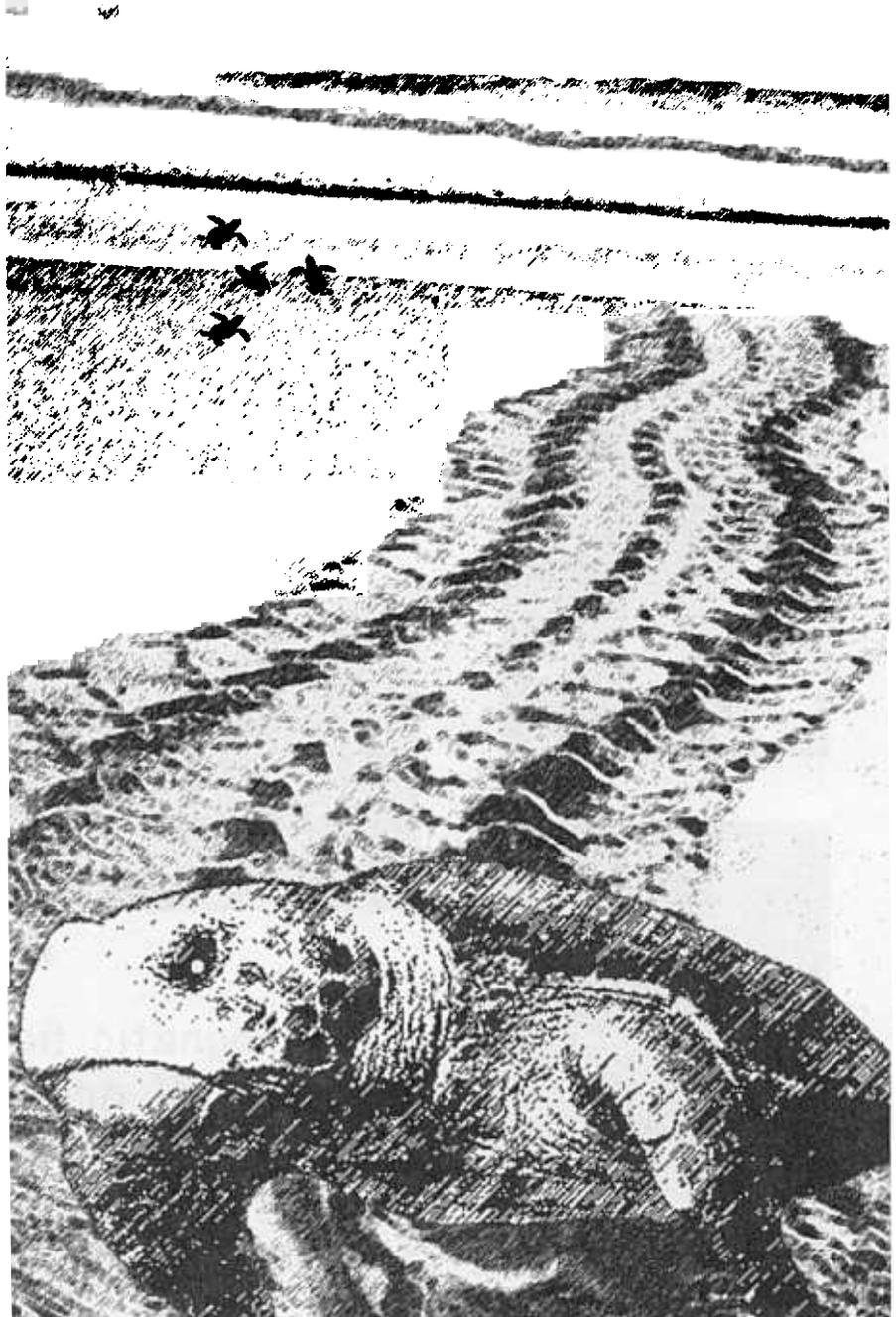


High magnetic field research is done in all areas of science: biology, biomedical, chemistry, geology, engineering, materials science, and physics.

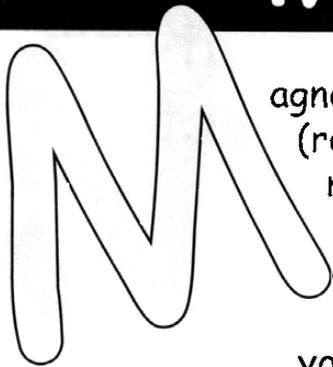


Female loggerhead turtles return to the beaches where they were born to lay eggs.

Scientists think it is possible for them to find "their" beach because turtles notice small differences in the earth's magnetic field.



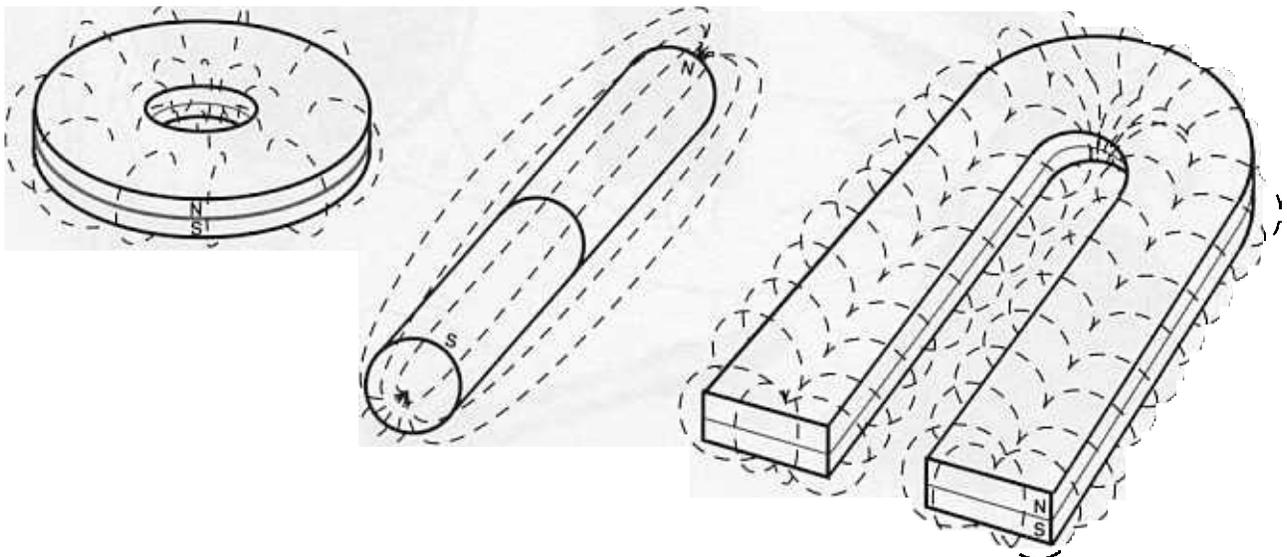
What Is A Magnet?

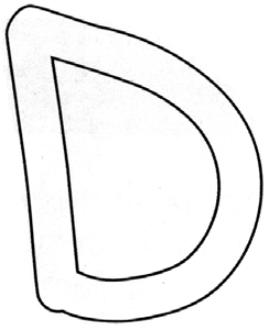


Magnets are attracted to other magnets or they push away (repel) each other. Magnets are also attracted to some metals. Each magnet has two areas where the force generated by the magnet is greatest. These are called the north and south poles. Like poles repel and opposites attract. If you cut a magnet in half, you will create two new magnets, each with a north and south pole. No matter how small you cut them, each piece will still have a north and south pole.

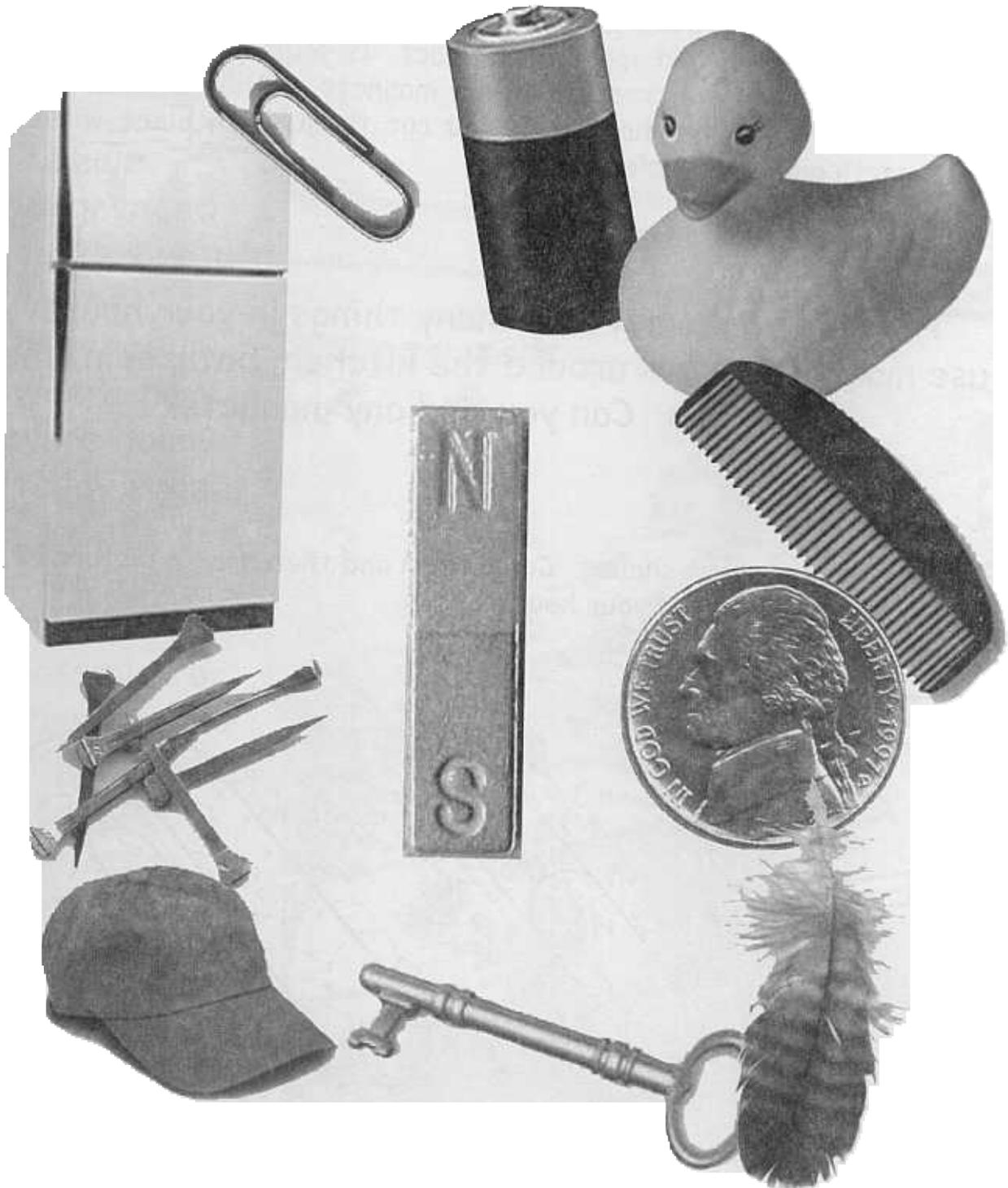
Try this at home: How many things in your house use magnets? Look around the kitchen, bathroom, and bedroom. Can you find any magnets?

Here are some magnet shapes. Color them and then draw a picture of the magnet you found at your house!



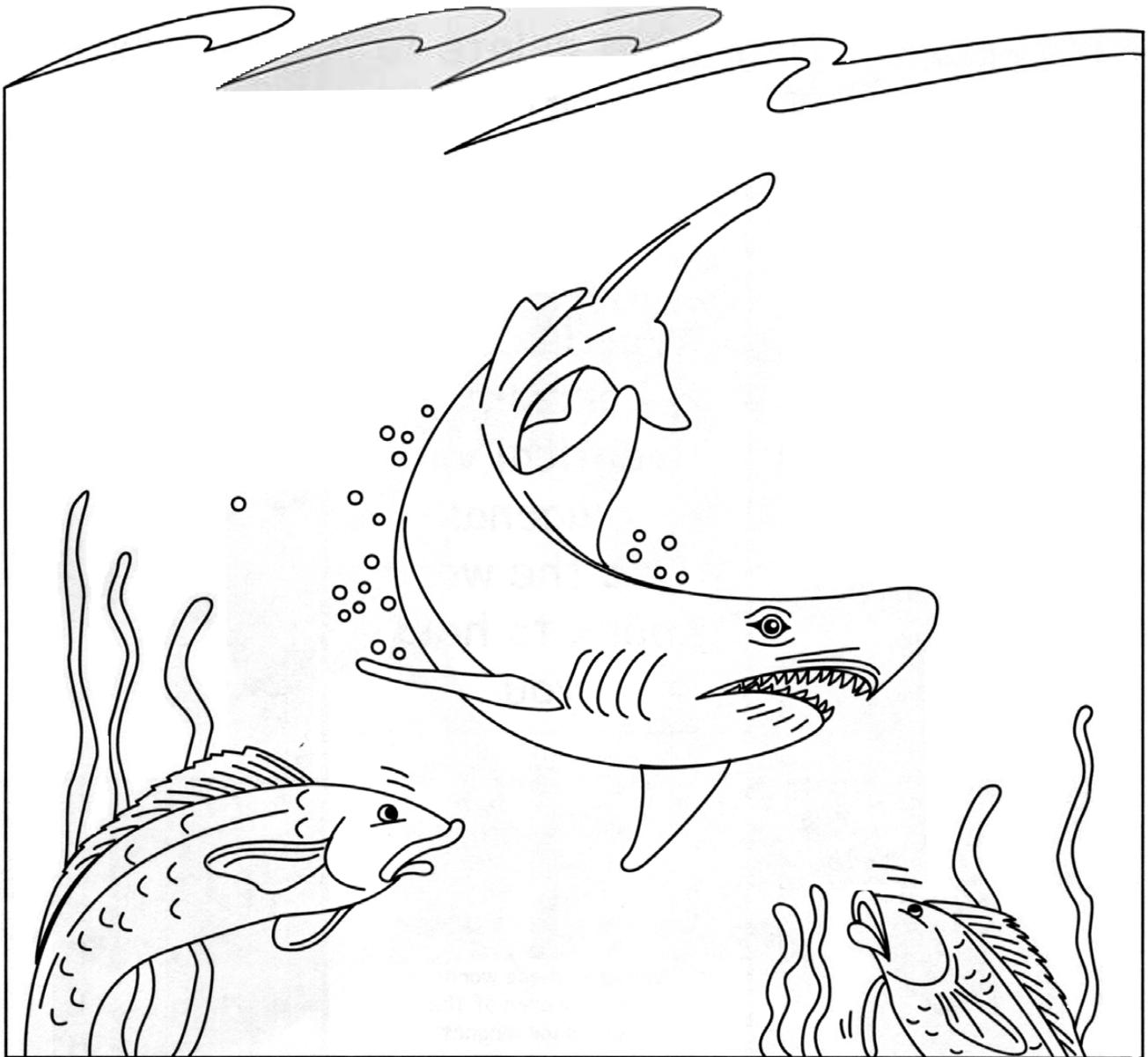


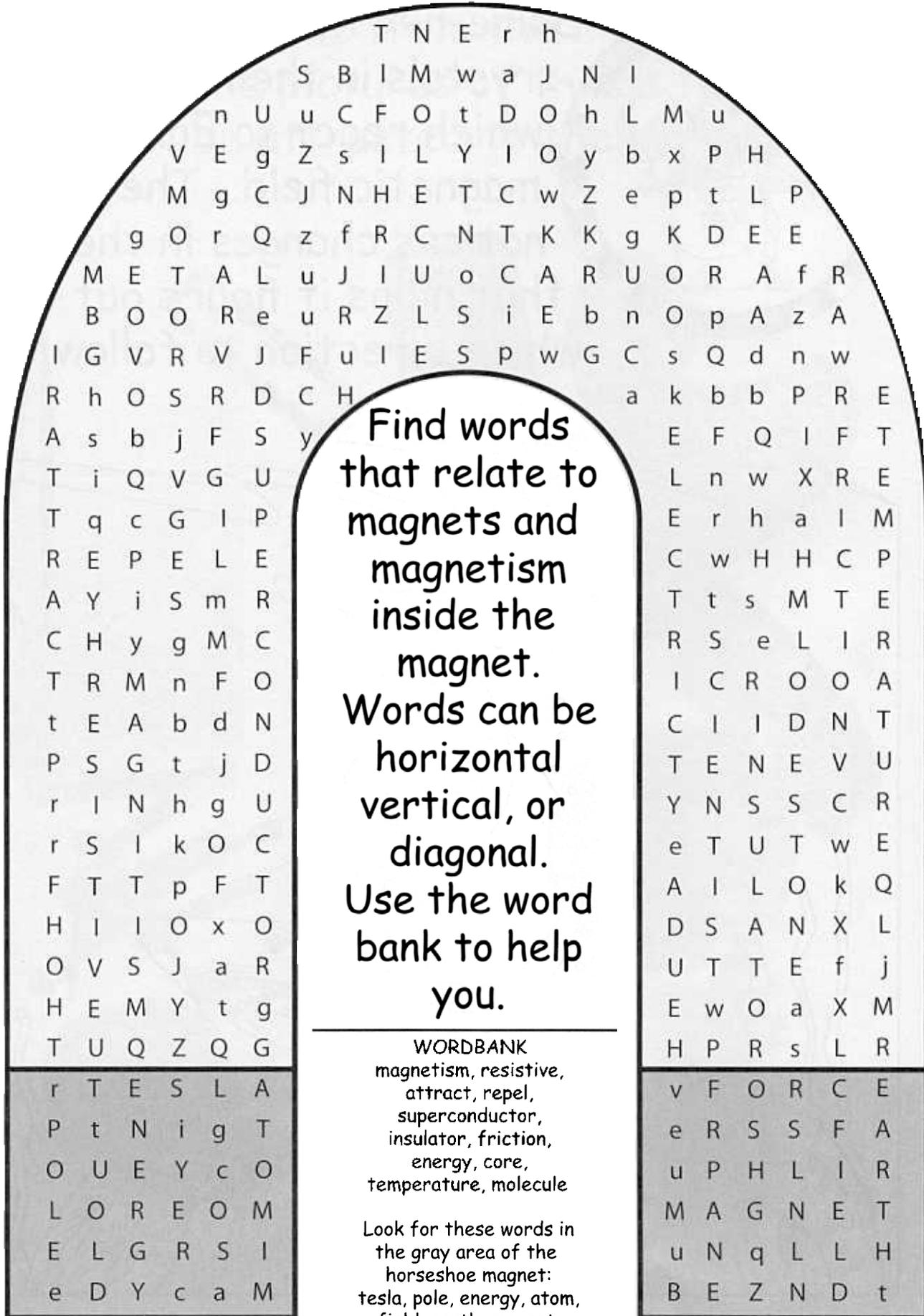
Draw a line from the magnet to the pictures of things that will be attracted to the magnet





Some fish have magnetic crystals in their brains which react to Earth's magnetic field. The fish notices changes in the field that helps it figure out which direction to follow





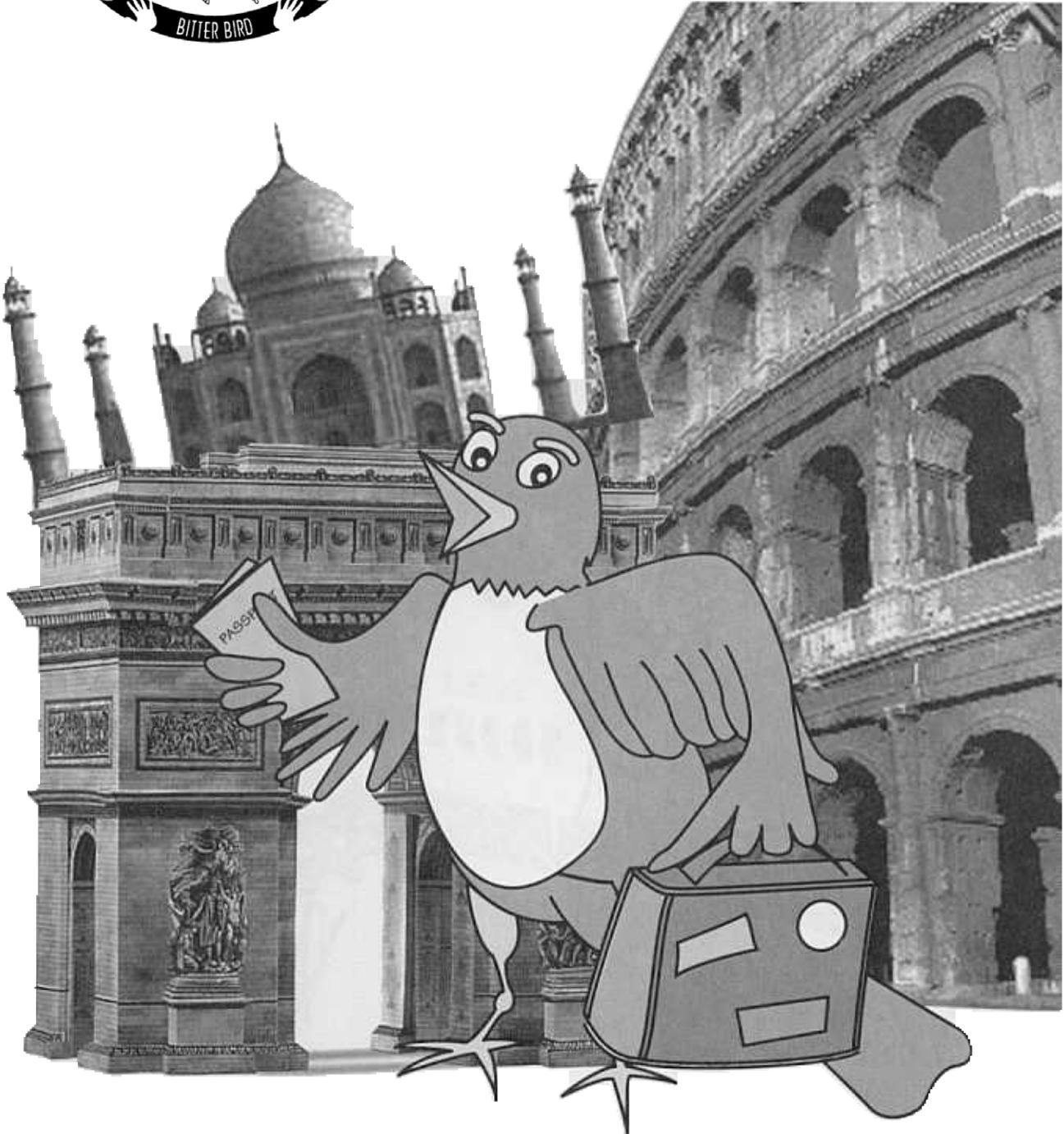
Find words that relate to magnets and magnetism inside the magnet. Words can be horizontal, vertical, or diagonal. Use the word bank to help you.

WORDBANK
magnetism, resistive, attract, repel, superconductor, insulator, friction, energy, core, temperature, molecule

Look for these words in the gray area of the horseshoe magnet:
tesla, pole, energy, atom, field, earth, magnet,



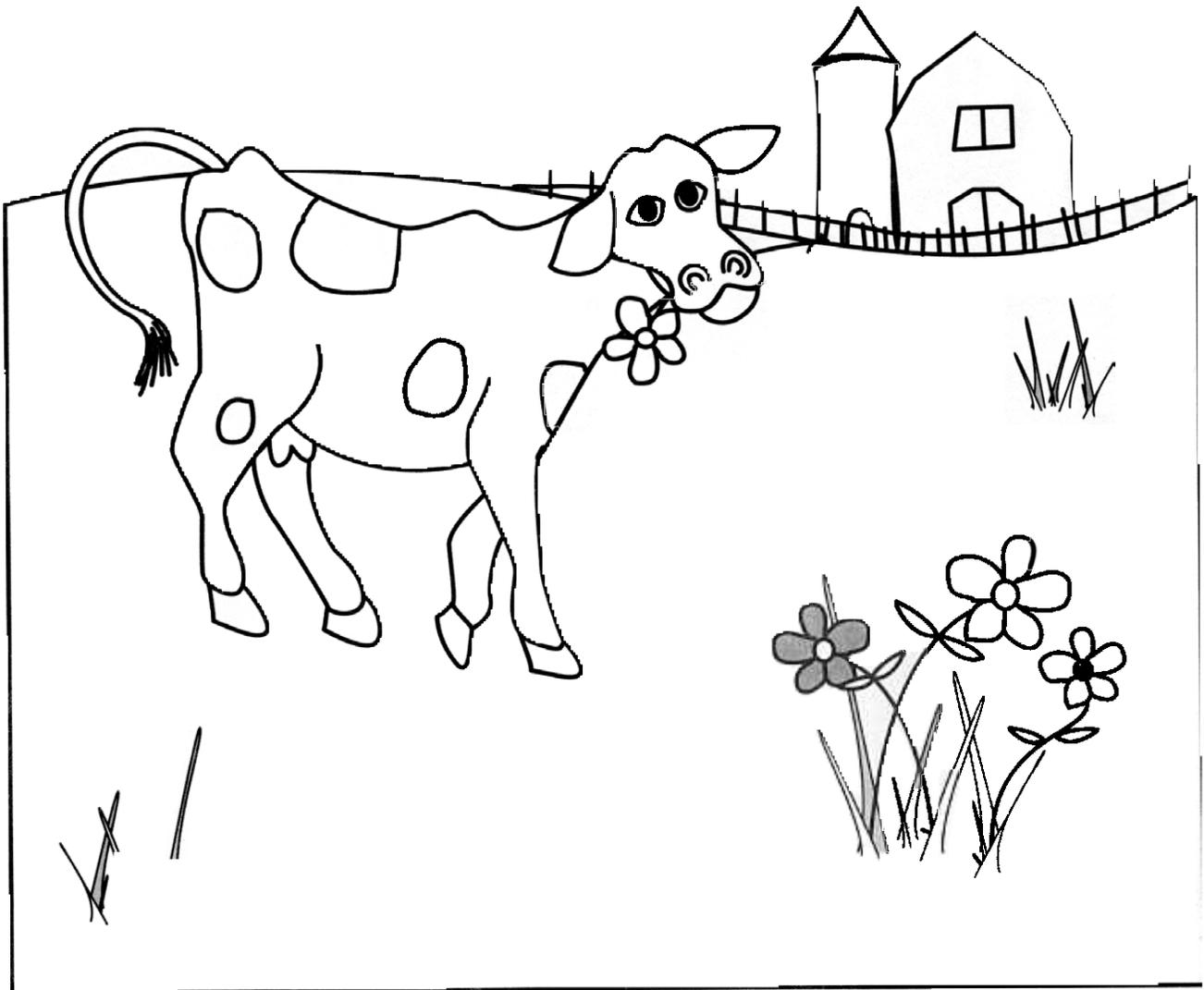
Some birds use the earth's magnetic field to find their way from one place to another



DID YOU KNOW?



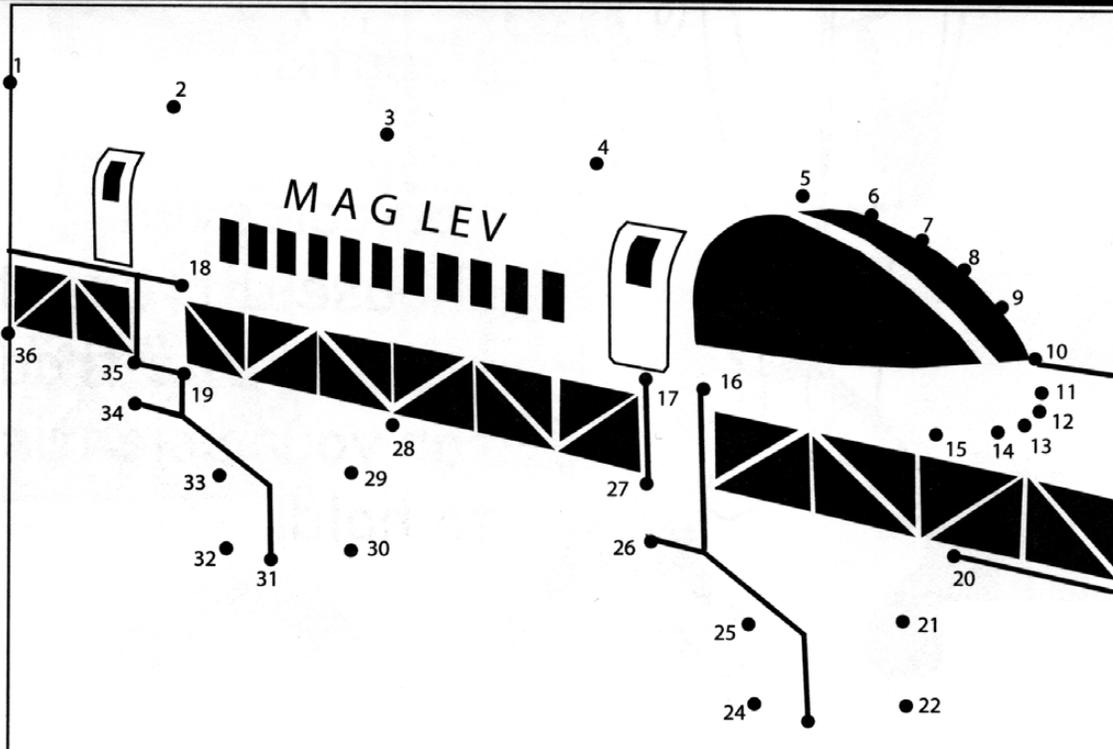
Farmers use magnets to keep cows healthy. The magnets attract pieces of metal that cows swallow when they are grazing. This keeps the metal from moving through the cow's digestive system. This cow is healthy because the farmer had a veterinarian (animal doctor) place a large magnet in its stomach.



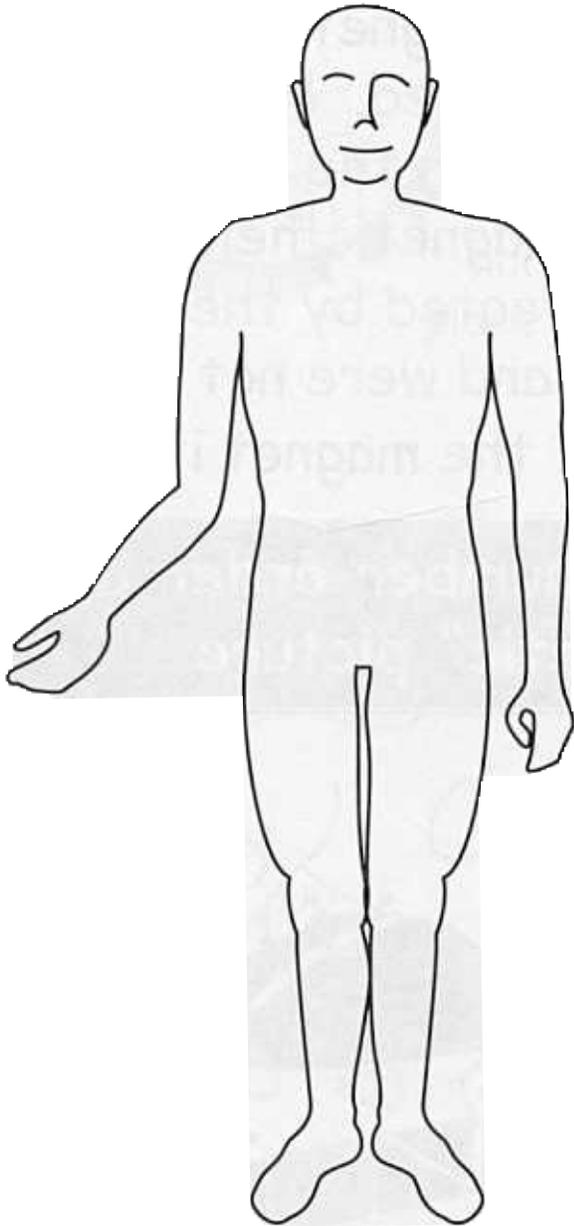


Michael Faraday
(1791-1867)
discovered that
electricity and
magnetism were
related. He came up
with the idea that
magnetic fields were
created by the magnet
and were not inside
the magnet itself

Connect the dots in number order and
create a "magnetic" picture.



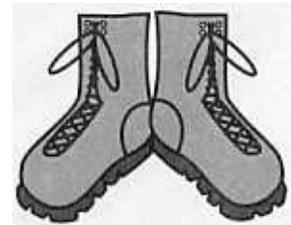
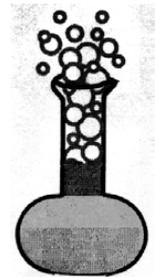
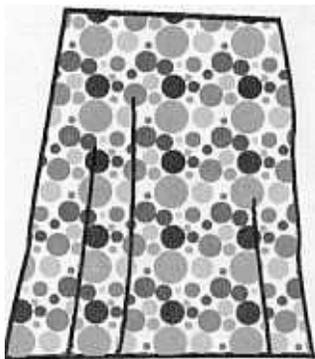
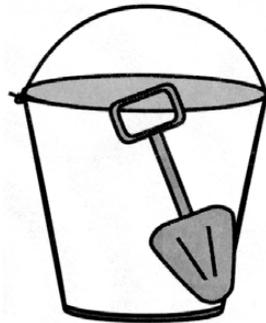
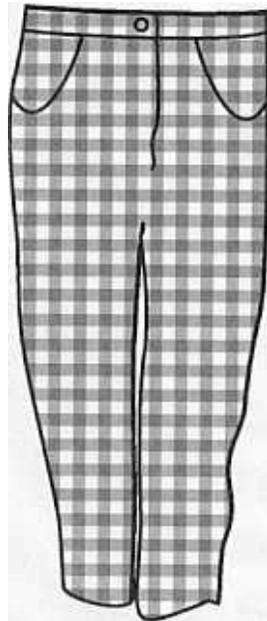
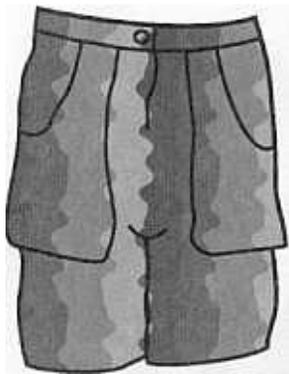
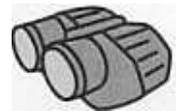
What does a scientist look like?



Give the scientist hair, eyes, and anything else you think of when you imagine a scientist.

Then, color and cut out the clothes on the next page to dress your scientist.

You can even choose different tools of the trade for your scientist to hold!



Homing Pigeon Maze



Help the homing pigeon find its way home.
Choose the path that will lead to
the bird's nest.



Did You Know?

Pictures of things that have magnets in them.

We use magnets every day. Magnets are found in surprising places.

All of the things on this page have magnets in them or need magnets to make them work.



Marie Curie (1867-1934)

received a Nobel Prize in 1903 for work on radioactivity. In 1911, she received a second one for Chemistry. Curie is the only woman to receive two Nobel Prizes. The prize was first given in 1901 with money left by Alfred Nobel who invented dynamite. Prizes are awarded each year in: Physics, Chemistry, Medicine, Literature, and World Peace.



Try this at home: How many things in your house use magnets or magnetism? List them here.





Bee behavior is affected by the earth's magnetic field. Scout bees "dance" to tell other bees where they have found food.

