SECTION 2: MAKING A MAGNET

LAB

INTRODUCTION

Steel objects left next to a magnet will become a magnet. Each atom in a magnetic material (steel, iron, nickel) is a tiny magnet with north and south poles. Atoms are grouped in domains (groups of billions of atoms) which are usually scattered in all directions in magnetic materials. When you stroke a nail with a magnet, the domains line up. The magnetic forces of the domains add together resulting in a magnetic force.

ASSESSMENT ANCHORS ADDRESSED

S4.A.2.1 Apply skills necessary to conduct an experiment or design a solution to solve a problem.

S4.A.2.2 Identify appropriate instruments for a specific task and describe the information the instrument can provide.

S4.C.1.1 Describe observable physical properties of matter.

S4.C.3.1 Identify and describe different types of force and motion, or the effect of the interaction between force and motion.

PURPOSE

Students will stroke a nail in one direction with a magnet to make the nail a magnet and test the stroked nail to see how many staples or paper clips it will pick up.

MATERIALS

For Each Student

5 nails
10 staples/ paper clips*
1 magnet
1 plastic tray
*Teacher provides items marked with **