SCIENCE Topics	ISAT Sample Items
SIMPLE MACHINES, FORCE	
AND MOTION.	A force that slows down or stops the motion of a bicycle is
<ul> <li>Observe, measure (distances), analyze</li> <li>read.</li> <li>interpret data table or graph.</li> <li>make glossary.</li> <li>write summary.</li> <li>Take then analyze sample ISAT items about topic.</li> </ul>	Pat found a wooden box in his grandparents' garage. The top was nailed shut. He used a crowbar to pry off the top. What type of simple machine did Pat use? Which scientist discovered the laws of motion that describe how forces make objects move?
<ul> <li>MATTER</li> <li>observe, measure (weight), analyze</li> <li>read</li> <li>interpret data table or graph</li> <li>make glossary</li> <li>write summary</li> <li>Take then analyze sample ISAT items about topic.</li> </ul>	A student conducted an experiment to find out how temperature affects air in a balloon. He drew a line around the center of the balloon and measured the length of the line around the balloon. According to the chart, what conclusion can be made about how temperature affects air in a balloon? Which word is under the wrong heading? Brent noticed that when he held a piece of cork under water and then let it go, the cork rose to the surface. This occurred because the cork is less dense than water. Which of these is most similar to what happened to the cork?
<ul> <li>ENERGY/MAGNETISM ELECTRICITY AND LIGHT</li> <li>Students observe, analyze</li> <li>read.</li> <li>Students interpret data table or graph</li> <li>Students make glossary</li> <li>Students write summary</li> <li>Take then analyze sample ISAT items about topic</li> </ul>	<ul> <li>What happens when two negatively charged particles are next to each other?</li> <li>Which will be attracted to a magnet?</li> <li>An object is placed on a table. A magnet is slowly moved toward it. The object moves away from the magnet. The object is most likely</li> <li>Each picture shows a battery, a bulb, and a switch. Which bulb will light when the switch is closed?</li> <li>John has a red apple in his lunch. Why does the apple look red to him?</li> <li>A student places four T-shirts outside on a sunny day.</li> <li>Which color shirt will reflect the <i>most</i> light?</li> <li>Which scientist invented the light bulb?</li> </ul>
<b>BASIC EARTH SCIENCE</b> <ul> <li>observe, analyze, read</li> <li>interpret graph.</li> <li>make glossary.</li> <li>write summary</li> </ul>	Look at the diagram for the days Monday through Thursday. Which best describes the relationship between temperature and pressure for those days? What could be done to make this kite fly better? In this student's lunch bag, which item would decompose the quickest? Which of these is a renewable resource? This rock was brought to school. The class found fossils of water plants and shells in the rock. What does this tell us about the rock? How does freezing water cause the weathering of rocks? Which would slow erosion?

## 4<sup>th</sup> Grade ISAT Topics and Sample Questions

SCIENCE FOCUS	ISAT Sample Items
BASIC ASTRONOMY	Since stars give off their own light, they are like the
<ul> <li>□observe, analyze,</li> <li>□read</li> <li>□interpret graph.</li> <li>□make glossary.</li> <li>□write summary.</li> </ul>	Each year Earth moves once around
ENVIRONMENT AND INTERACTION OF LIVING THINGS observe, analyze, read. interpret graph. make glossary. write summary.	If a scientist wanted to find out how tall a plant grows each day, the scientist would Nine bean plants were grown in varying amounts of light. What conclusion can be drawn from the graph? The fish, dog, and bird are alike in many ways. One way is that they all have All of the following are needed for a fish to live in an aquarium except A girl found the skull of an animal. She did not know what the animal was, but she was sure that it preyed on other animals for its food. Which clue led to her conclusion? Decomposers are helpful to the food chain because they Which of these skulls is from a dinosaur that was probably a carnivore? Which bird beak would be most helpful for a bird that eats insects in the bark of trees? What do these animals have in common? A town passes a law that makes it illegal to hunt deer. Which will <i>most</i> likely happen during the following year in the town's forests? Which of these survives harsh winters by traveling to a warmer climate? Which is most similar to the skin of a human?
ISAT SCIENCE PREP— How to succeed on the test: Inquiry, Data Analysis, Measurement, Evaluation, Content	Which pieces of laboratory equipment are used for safety? Robert Hooke was one of the first people to identify cells. Which invention did he use in order to see cells?
Science Lab Safety and Technology SCIENCE RE-VIEW: students do three-minute presentations on core science they have learned.	What does the school nurse use to measure body temperature? Students were assigned to measure the length of the hallway outside their classroom in feet. Some tiles in the hall were 7 inches wide and others were 8 inches wide. Which technique for measuring the hall is the <i>most</i> accurate? Which is a learned behavior? Why is it so important for medical doctors to be able to use a microscope? Erin wants to make a tool that can be dipped into a bubble solution and used to blow bubbles. Which item would work best?