the RESEARCH for

SRA Snapshots Simply Science™

Science and Literacy Integration

Research fully supports the integration of science content and concepts and literacy skills. ***SRA Snapshots Simply Science™*** effectively combines the two in a successful read-aloud based science program. Research shows that learning science content at the same time as learning reading and comprehension skills will help young students in both their content area classes and in reading classes in the future. Supporting research includes the following:

- Coskie, T.L. 2006. The synergy of science and reading. *Science and Children,* 62-63.
- Gelman, R. & K. Brenneman, 2004. Science learning pathways for young children. *Early Childhood Research Quarterly,* 19, 150-158.
- Holliday, W.G. 2003. Teaming up for science and reading Success. *Science and Children,* 38-40.
- Royce, C.A., & D.A. Wiley, 2005. The common ground: a rationale for integrating science and reading. *Science and Children,* 40-42.
- Santoro, L.E., D. Chard, L. Howard, S.K. and Baker, 2008. Making the very most of classroom read-alouds to promote comprehension and vocabulary. *The Reading Teacher,* 61 (5), 396-408.
- Yopp, HK & R.H. Yopp, 2006. Primary students & informational texts. *Science and Children,* 22.

Multimedia Science Instruction

Research documentation fully supports the use of video and other media to increase student understanding and retention of content in the science classroom. Videos in ***SRA Snapshots Simply Science™,*** generate excitement, allow for classroom flexibility, and enhance instruction. Supporting research includes the following:

- King, K., S. Lietz, and L. Shumow. 2000. Science education in an urban elementary school: Case studies of teacher beliefs and classroom practices. *Science Education, 85,* 2, 89–110.
- Kumplainin, K., & M. Mutanen. 1998. Collaborative practice of science instruction in a computer-based multimedia environment. *Computer Education, 30,* 75–85.
- Marzano, R. J. 2004. Building background knowledge for academic achievement: Research on what works in schools. Alexandria, VA: Association for Supervision and Curriculum Development.
- Mayer, R.E., & R. Moreno. 2002. Animation as an aid to multimedia learning. *Educational Psychology, 14,* 87-99.

Specialized Vocabulary Development

Research documentation fully supports the specialized vocabulary skills instruction, practices, and strategies found in ***SRA Snapshots Simply Science™.*** Examples of supporting research include the following:

- Brassell, D., & J. Flood. 2004. *Vocabulary strategies every teacher needs to know.* San Diego, CA: Academic Professional Development.
- Graves, M. F. 2006. *The Vocabulary book: Learning and instruction.* Williston, VT: Teacher's College Press.
- Saul, E. W., ed. 2004. *Crossing borders in literacy and science instruction: Perspectives on theory and practice.* Arlington, VA: NSTA Press.

Differentiated Instruction Opportunities

To foster science education for all, ***SRA Snapshots Simply Science™*** employs a systematic approach in which students see science, hear science, and learn science. Research fully supports this method, which gives ample opportunities for differentiated instruction. Examples of supporting research include the following:

- Klahr, D., & M. Nigam. 2004. The Equivalence of learning paths in early science instruction: Effects of direct instruction and discovery learning. *Psychological Science*, *15,* 661–67.
- Rothenberg, C. & D. Fisher. 2007. *Teaching English language learners: A differentiated approach.* Upper Saddle River, NJ: Pearson Education.
- Tomlinson, C. A., & J. McTighe. 2006. *Integrating differentiated instruction and understanding by design: Connecting content and kids.* Alexandria, VA: Association for Supervision and Curriculum Development.

Core Science Content

The core science content found in ***SRA Snapshots Simply Science™*** is based on the recommendations of the National Academy of Science and the National Science Teachers Association, as outlined in the following:

- Lowery, L. F. 1997. *NSTA Pathways to the science standards: Guidelines for moving the vision into practice.* Elementary School Edition. Arlington, VA: National Science Teachers Association.
- National Academy of Science. 2005. *National Science Education Standards.* Washington, DC: National Academy Press.