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Issues and Science , Teacher Resources

The following resource on Talking Drawings is from the Diverse Learners chapter of the full-year curriculum from SEPUP, *Issues and Science*. It can also be used to support classroom instruction with any material, particularly Lab-Aids kits available on this site.

The results of 20 years of research on the SEPUP program indicates positive effects on student learning in the following areas: content knowledge, problem-solving, decision-making, investigation skills, increased interest in science, and increased perception of the relevance of science to students' lives.



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TALKING DRAWINGS

What It Is

Talking Drawings appear in *Issues and Science* when students are asked to construct diagrams to visually communicate their ideas about a concept. After completing an activity or activities, they adjust the picture to represent their new understanding. The strategy asks students to explain how their diagram, and thus their understanding, has changed. Literacy Student Sheet 10, “Talking Drawing Template,” is a template for this strategy.

Why to Use It

When constructing a Talking Drawing both before and after an activity, students experience the reflective process by which skilled science learners incorporate new conceptual understanding with previously held ideas. Scientists create diagrams to describe concepts and hypotheses, and they go back and refine those models as necessary. This draw-and-explain strategy is also helpful to visual learners.

How to Use It

Scientific diagram exercises are provided on Student Sheets in *Issues and Science*. Before students begin a learning activity, the teacher hands out the Student Sheet and asks students to draw what the exercise calls for and write explanations on it as instructed. After the activity, the teacher has students return to their initial drawings and record thoughts or changes, or create new drawings that represent their more developed conceptual understanding. Once complete, ask students to discuss with a partner how their ideas changed. This opportunity to verbalize their revised impressions encourages students to reflect on how their understanding has changed and reinforces their new understanding.

The teacher may incorporate a scientific diagram whenever it is appropriate for students to express their understanding in pictorial form. Always provide an opportunity for students to return to their diagram, make adjustments based on their new understanding, and discuss the changes with a partner.

