

Strategies for Increasing Student Achievement Using Digital Cameras

Identifying Similarities and Differences

- **Representing similarities and differences in graphic or symbolic form enhances students' understanding of and ability to use knowledge.**
- Use images taken with your digital camera to provide explicit guidance in identifying similarities and differences.
- Use images taken with your digital camera to ask students to independently identify similarities and differences.
 - Ask students to compare images
 - Ask students to classify images (using photo organizing software like Picasa)
 - Ask students to create and/or represent metaphors using images
 - Ask students to create and/or represent analogies using images

Summarizing and Note Taking

- Ask students to summarize using images taken with your digital camera.
- Ask students to delete, edit, or keep images (using photo organizing software such as Picasa) in order to facilitate analysis of the information at a deep level.
- Use images taken with your digital camera as a visual "summary frame" designed to highlight the critical elements of a lesson or topic. (See p. 35-42 for a discussion of six types of summary frames.)
- Provide or allow students to use images as a study guide for tests.

Reinforcing Effort and Providing Recognition

- **Abstract symbolic recognition is more effective than tangible rewards.**
- Use images taken with your digital camera to communicate the importance of believing in effort, and ways students can learn to change their beliefs to an emphasis on effort.
- Use images taken with your digital camera to recognize student effort, achievement, and mastery.
 - Create awards including images.
 - Create slide shows, class books, bulletin boards, or websites including images.

Homework and Practice

- Use images taken with your digital camera to enhance or add meaning to homework assignments, or to help illustrate the purpose of homework.
- Ask students to take images with a digital camera as part of a homework assignment. (Students can also adapt and shape what they have learned by manipulating images using software such as Picasa.)
- Use images to provide feedback on homework.

Nonlinguistic Representations

- Use images taken with your digital camera to increase the variety of non-linguistic representations of knowledge in your classroom.
 - Use images to create graphic representations
 - Use images to create models
 - Use images to generate mental pictures
 - Use images to guide or inspire kinesthetic activity
- Use images taken with your digital camera to elaborate (or “add to”) student knowledge.
- Or, ask students to elaborate on the images and to justify their elaborations.
- Use images to create time-sequence patterns.
- Use images to create process or cause-effect patterns.
- Use images to create episode patterns.
- Use images to create generalization/principle patterns.
- Use images to create concept patterns. (These patterns can all be created using image organizing software such as Picasa.)

Cooperative Learning

- Use images to applaud group successes and efforts.
- Use images to document individual and group accountability.
- Use images to facilitate group reflection.

Setting Objectives and Providing Feedback

- Use images taken with your digital camera to represent instructional goals.
- Allow students to take pictures with your digital camera in order to represent their personalized goals.
- Use images to support “corrective” feedback. (The instant nature of digital images – and means of sharing digital images – can facilitate timely feedback.)
- Allow students to use images to support their own feedback.

Generating and Testing Hypotheses

- Ask students to form hypotheses based on images taken with your digital camera. Then ask students to clearly explain their hypotheses and conclusions.

- Use images to support systems analysis, problem solving, and historical investigation.
- Use images to prompt invention.
- Allow students to use images to document or facilitate experimental inquiry and decision making.

Cues, Questions, and Advance Organizers

- Use images taken with your digital camera as cues and advance organizers.
- Use images as visual support for higher-level questions, especially before a learning experience.
- Use images to focus on what is important.
- Using images may be most useful with information that is not organized.

Reference:

This material has been adapted or quoted from...

Marzano, R. J., Pickering, D. J., Pollock, J.E. (2001). *Classroom instruction that works: research-based strategies for increasing student achievement*.

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