

STRATEGY TITLE: Independent study

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Curriculum Area(s):
Science

Grade Level:
5th Grade

Time Required : 5 days

Instructional Grouping: Heterogeneous - GT
Pull Out

Explanation of Strategy:

Independent study is a process through which the student, with guidance from the teacher, identifies a problem or topic of interest, plans a method of investigating the problem or topic, and identifies the type of product the student will develop to share the results of the student's research investigation. The product should address the problem and demonstrate the student's ability to apply skills and knowledge to the problem or topic. Independent study builds on student interest and curiosity while teaching the planning and research skills necessary for self-directed learning. It offers each student an opportunity to pursue in-depth study of a topic of particular interest to them using research skills appropriate to their readiness level and presentation formats which are tailored to their personal learning style. High-ability students also have the opportunity to work with more complex and abstract ideas and to work at a pace and to a depth which they do not experience with other instructional formats.

Overview:

The independent study process consists of the following steps. The amount of direct teacher involvement will vary according to the student's readiness level relative to research skills and prior experience with self-directed independent learning.

1. The student selects a general topic of interest, developing five or more questions to direct her research focus.
2. The student carries out "browsing research" on the questions to ascertain the availability of resources and to narrow the research focus to a specific topic.
3. The student and teacher establish a schedule for the project.
4. The student secures references and sources of data and information.
5. The student researches the topic, collecting data and taking notes.

6. The student conferences with the teacher to summarize the information gathered and to develop one or more final objectives (high-ability students should be encouraged to formulate new ideas and objectives based on higher levels of Bloom's Taxonomy).
7. The student selects a format for sharing her research findings and fulfilling her final objective(s) and develops a presentation.
8. The student presents her findings. The audience for the presentation should include peers, teachers, and, whenever possible, a professional in the discipline/field.
9. The process of the independent study is evaluated by both the student and the teacher. The final presentation is also evaluated by peers and, where appropriate, by an expert in the field.

Materials:

1 per student: Mission Statement, Independent Study Organizer, Alternative Work Agreement, Self-Evaluation Form, Peer/Professional Evaluation Form, Teacher Conference Form (copies of each attached), 1-inch three-ring binder
Other materials will vary according to topics/problems and presentations.

Examples of Use:

This strategy is especially useful for differentiation of content-area instruction when teaching students of widely varying levels of background knowledge. For example, the end-of-unit test, given as a preassessment in a science class, indicates that some students have already mastered the material related to the solar system, others have a general understanding of some concepts but are lacking significant information needed for mastery, and a few students have little or no prior knowledge or experience with the topic. The class is introduced to the unit as a NASA-style mission (see attachment). Student interests are also ascertained by answers to the final question on the preassessment: "If you could learn more about anything related to space, what would you choose?" Students are assigned to the mission team which appears to be the best "fit" for both their interest and existing knowledge:

Mission Team Beta—This team is in charge of informing the public about the nature of the planets and other elements of our solar system. Independent study topics might range from one requiring limiting existing research skills, such as "What Is Saturn and Why Should We Care?" to those utilizing much more extensive resources and skills, such as "How Do We Know There Are More Than Nine Planets?"

Mission Team Delta—This team is in charge of informing the public about the history and future potential of space exploration. Possible topics might include the history of telescopes (optical, radio, and space-based), the

development and uses of manned and unmanned spacecraft, the significance of the “race to the moon,” how astronauts are selected and trained.

Mission Team Gamma—This team is in charge of informing the public about the future potential of expanding our understanding of our solar system and beyond. Topics could include what progress has been made in the area of interplanetary travel, the development and important uses of space stations, the possibility and potential of colonization on Mars or elsewhere, the search for extraterrestrial intelligence.

Each student is issued a “Mission Organizer” (independent study organizer, see attachment) in a 1-inch binder, and an “alternative work agreement” (see attachment). After signing the latter (it’s fun and more “official” to have students recite the parts of the agreement aloud and check off each one), the student generates (with teacher support if necessary) a list of general topics within the scope of their team’s overall mission. She then proceeds through the steps of the independent study process. The final products are presented to the rest of the school community through a week-long event called “Let’s Get Spaced Out!” which is scheduled to coincide with an important anniversary date related to space, such as the anniversary of Sputnik, or the first manned space flight.

Practical Hints for Implementation:

Organization can be a very significant challenge for elementary students working independently. The following suggestions can help minimize student frustration:

- * Emphasize that independent study is a process, not just a product and weight grades accordingly. Students usually want to start thinking of their product before they’ve even begun their research, narrowing their focus prematurely and skipping steps in the process that are critical for the development of research and presentation skills.
- * When working with the student to set up a schedule for the independent study, “chunk” what needs to be done into smaller segments than you think is necessary and require the student to check off each one as completed. It is a great motivator to students to check off several items at a time on their schedule rather than working for an extended period of time in order to check off a larger “chunk.”
- * Set up a weekly conference schedule for each student, regardless of their apparent level of independence, so that you can check on their progress, answer questions, or suggest resources. Simply knowing that they must make a regular progress report keeps many students focused on their work;

knowing that they have a time set aside for them to ask for help if necessary encourages them to take risks with more complex topics or new skills or media.

* Inform potential resource support personnel (media specialist, instructional technology facilitator, gifted resource teacher, LD resource teacher) of the independent studies before the students get started, so that they are prepared to support students as needed.

Attachments:

[whiteindep.pdf](#)

[whiteindep1.pdf](#)

[whiteindep10.pdf](#)

[whiteindep11.pdf](#)

[whiteindep2.pdf](#)

[whiteindep3.pdf](#)

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