# Profiles 4A, 5A, 6A

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Differentiated Instruction Report:

 Grade/Level:
 Grade 3 / Level 9

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Class: Avinger School: GRANITE BAY ACADEMY District: SOUTHVIEW

#### **Students**

#### Recommendations

### **Profile Explanation**

Students with these profiles have consistently low-average (stanine 4), average (stanine 5), or high-average (stanine 6) scores on *CogAT*. An "A" profile means that the scores are at about the same level on the verbal, quantitative, and nonverbal (spatial) reasoning batteries.

#### **Characteristics of Students with These Profiles**

Profile 4A to 6A students have adequate cognitive resources for learning in most academic situations. Although the majority of these students have similar levels of achievement in all academic areas, some show high levels of interest and achievement in particular domains. Because their knowledge base is often not extensive or well organized in memory, these students may encounter difficulty recalling and applying their knowledge and skills to accomplish unfamiliar tasks. By middle school, students with average levels of reasoning abilities typically have developed a number of learning and problem-solving strategies. Often, these strategies are fairly context-bound, so these students may not always choose the most effective strategy for a task. Their flexibility is limited, and, if they try a strategy that does not work, they may not know what to do next. Profile 4A to 6A students need help to achieve objectives requiring transfer such as high-level reading comprehension skills, problem solving, and critical thinking.

# Instructional Suggestions for Profiles 4A, 5A, 6A

**Build on Strength.** Since these students have comparable levels of verbal, quantitative, and spatial reasoning abilities, strengths will be primarily evident in interests, and, to a lesser extent, in levels of achievement in particular domains. At all ages, but especially during adolescence, students strive to achieve individuality. One route is through recognition of excellence from peers and adults. Although such recognition is commonly attained through nonacademic activities such as sports, music, and other extracurricular activities, teachers should find ways to encourage student's particular academic accomplishments. Profile 4A to 6A students can be recognized for their high levels of knowledge in particular domains. Sometimes they excel in other ways, such as in leading discussions, presenting reports, creating science projects, writing essays, or assisting other students in learning. Finding and nourishing the islands of excellence in all student's schoolwork spreads encouragement.

**Focus on Working Memory.** Students with levels of reasoning abilities that are typical for their age frequently must learn at the limits of their working memories, especially when tasks are new or require the simultaneous execution of several processes. Changes in instructional methods that reduce these burdens on working memory can, therefore, have a significant impact on their success in learning. For example, if a task involves comparing two concepts, it will be much easier if both are simultaneously in view. Have students put all the needed information in one place--on a single sheet of paper or a single concept map.

Educators can also reduce working-memory burdens for these students by using familiar concrete concepts rather than unfamiliar abstract symbols. Familiarity is greatest for overlearned concepts and skills. Practice on low-level skills can free working memory for higher-level processing. Monitoring themselves as they execute a skill is especially troublesome for these students, particularly in the primary grades. Offloading monitoring to another individual by having students work in pairs can be especially effective early in the process of acquiring a new skill or strategy.

**Scaffold Wisely.** Students with all average scores tend to learn more effectively in school environments that are somewhat, but not highly, structured. These students tend to learn best when instruction is moderately paced and when there is frequent monitoring and feedback on their progress. The goal of this instruction is to provide students with enough support in the form of strategies, memory prompts, and task structure to enable them to infer, deduce, connect, and elaborate--in short, understand--for themselves. Highly structured instruction that disallows such thinking may succeed in the short run but leave students less able to reason well on the next occasion.



**Encourage Strategic Thinking.** Memory burdens can be reduced and thinking made more systematic if students learn to be more strategic in their thinking. Since they may make errors when carrying out learning strategies, these students need frequent monitoring as they practice a new strategy, so that errors can be corrected. Modeling how to perform a strategy is likely to be more effective than describing it to students. Profile 4A to 6A students will generally need help in developing more effective and sophisticated strategies as learning materials and tasks become more difficult and complex. This help is likely to be most effective if it is given in the context of a realistic learning task, such as a specific reading or mathematical task that is a part of ongoing instruction. Supervised practice in identifying other situations where the use of the strategy is appropriate will also be beneficial.

Profile 4A to 6A students tend to benefit from direct instruction in certain types of study skills such as note taking, outlining, diagramming, planning use of time, and formulating questions to guide the study of new material. These students need help to learn how to break up complex problems into simpler units so that they can work on the complex materials more effectively. They also need assistance in learning how to keep track of their progress in solving complex problems. These planning and self-monitoring processes are often ignored when instruction is structured by the teacher or by a text, as it often must be for such students. Ultimately, however, the goal is to help students learn which strategies work best for them and which are most effective in different contexts. Such knowledge and skills are not acquired unless they are routinely exercised in situations where feedback is provided.

When Grouping, Aim for Diversity. Students typically learn how to think in new ways by first enacting new skills externally. Only after much overt practice can a skill be executed internally, that is, cognitively. Many cognitive skills seem to be acquired by first observing other students or adults as they model an interaction and, then, by gradually learning to participate in the same sort of exchanges. Frequently, these exchanges proceed as conversations between a more knowledgeable participant and a less skilled participant. A critical aspect of learning new ways of thinking, then, is the availability of persons who can converse in ways that capture the type of processing one hopes the less-skilled participants will eventually internalize. This is unlikely to occur when all group members are at the same level of competence. Diversity of cognitive competence is thus an essential requirement for groups if less-skilled students are to learn how to think in more sophisticated ways.

Much more is required than simply gathering students into diverse groups, however. Research shows that students of average ability are sometimes overlooked during group interactions. Able students learn because they assume the role of teacher. Less-able students profit if they ask questions and receive good explanations. Students in the middle are easily left out of such exchanges. Therefore, it is often helpful to provide structures that ensure greater participation by all students during group activities. For example, one can rotate students through the position of discussion leader or summarizer. Then, at the conclusion of a discussion, the classroom teacher can provide feedback on things that the student did well and give one suggestion for improvement.