INTRODUCTION

Duke TIP instructional staff are responsible for creating challenging curricula, implementing exciting instructional strategies, fostering learning environments in which students are comfortable and willing to take intellectual risks, and maintaining high expectations for their students. To accomplish these important goals, Duke TIP instructional staff members need to be aware of the characteristics of gifted students and of effective strategies for working with gifted learners.

In response to staff, parent, and student feedback from previous summers, the educational programs staff requests that all instructors, new and returning, carefully consider all of the units, concepts, and instructional activities you are planning to use with your classes to ensure that all class periods are filled with challenging, high-order assignments and activities. The students with whom you will be working are among the top 1 percent in academic promise in the Duke TIP Talent Search region, and you will find they are capable of achieving at very high levels, often exceeding your expectations. We have advertised that our courses include college-level assignments and concepts, and we depend upon the instructional staff to provide these high-level learning experiences. As you are preparing to teach your TIP class(es) this summer, please remember that the main purpose of Duke TIP’s summer programs is to motivate and challenge our gifted students to achieve their maximum academic potential. Your daily schedule should be flexible enough to incorporate additional challenging topics and assignments if your students prove to be capable of higher-level work.

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THE DUKE TIP EXPERIENCE

In their local schools, gifted students stand out academically and often socially from their classmates. Duke TIP recognizes that gifted individuals rarely fit the norm; they are special and unique. The aim of the Duke TIP educational programs is to cultivate the special talents of gifted students.

Students are often much more comfortable with peers at face-to-face residential Duke TIP programs than with other students at home. Every student at Duke TIP’s residential programs is here not only for the intellectual stimulation but also for the opportunity to study and live with students whose interests and attitudes toward academic achievement and growth are similar. Duke TIP provides academic experiences that are bolstered by social experiences in and out of the classroom. For this reason, Duke TIP expects instructional staff to design classroom activities that require students to work cooperatively in large and small groups. In most Duke TIP programs, instructors are expected to never assign homework so their students are free to participate in the social and recreational activities that the residential staff plans for evenings and weekends. Together, these spheres complement each other and create a seamless learning environment for the students.

Duke TIP students cherish the whole TIP experience, both the academic and social aspects, throughout their lives. Not only do students acquire new academic skills and perspectives, but they also develop friendships that last a lifetime.

CHARACTERISTICS OF GIFTED STUDENTS

Joyce VanTassel-Baska (1998), a leader in gifted research, outlines the following characteristics of gifted students:

- Gifted students learn at a rate that is different from other students. Accommodation of this learning rate is important to the development of gifted students.
- Gifted students crave depth in academic areas that interest them. Superficial understanding of concepts is not enough. To achieve a deep understanding, gifted students often approach learning with a questioning, and at times critical, attitude. In regular classroom settings, this characteristic may frustrate the teacher and other students, who may resent the constant questioning.
- Gifted children need to be challenged and stimulated intellectually through interactions with other gifted students.
- A gifted child is most likely to reach his/her full potential when instructors and parents set high expectations.
- Gifted children need programs and services tailored to their needs throughout their education.


The gifted student may become alienated in a regular school setting. He/she may react as a “problem child” or may suffer in silence in a boring classroom where he/she is asked only to scratch the surface. Generally, most students adopt the attitude that as long as they know the material presented, they can make a good grade and move on to another chapter. However, curious gifted students desire a more enriched curriculum and often become discouraged when they find that it is unavailable.

Barbara Parker (1983) outlines some additional characteristics of gifted students that instructors and teaching assistants should consider as they plan their courses for Duke TIP. Gifted students display some, if not all, of the following characteristics:

- Mental flexibility, including a tolerance for ambiguity
- Openness to information
- Capacity to systematize knowledge, so that it is logical, structured, and sequential
- Capacity for abstract thought
- Fluency, the ability to produce new combinations and patterns of ideas
- Sense of humor
- Positive thinking
- Intellectual courage, which translates as high persistence and motivation
- Resistance to enculturation, or not forfeiting one’s own values in favor of those of society; ability to decide between what can and what cannot be believed and between what is and what is not important

Barbara Parker -- Rabat American School (from studies conducted by Karl Albrecht, 1980; 1983)

Many students come to Duke TIP from schools that do not have the available resources to offer appropriate curriculum and/or coursework for gifted students. Therefore, academic challenges may not be readily available unless the student and/or parents advocate for independent study opportunities or for permission to attend classes at a nearby college or university. Duke TIP’s mission is to help these students to develop to their full potential. It is imperative that instructional staff provide these opportunities and challenges.
CURRICULA FOR GIFTED STUDENTS

With some exceptions which vary by program, most Duke TIP instructors design their own curricula. To meet the needs of the highly gifted students in Duke TIP classes, please consider the following general and specific principles (suggested by VanTassel-Baska, 1998):

**General Principles in Curriculum Design**

- **Continuity**: a well-defined set of learning activities that reinforce the specified curriculum objective. Consider how each activity is related to the overall concept. Activities must be appropriately sequenced to build on previous knowledge.
- **Diversity**: provisions for alternative means to attain determined ends within a specified framework (e.g., creative problem solving).
- **Integration**: integrative use of all abilities, including cognition, emotion, and intuition. Consider more than just written and oral products.
- **Substantive learning**: inclusion of subject matter, skills, products, and awareness that are of consequence to the learner and to the discipline. Help students to relate the material to their lives and experiences. Consider how to present material so it is relevant and interesting. Indicate how experts in the field use the information in their work.
- **Consistency with good teaching/learning methodologies**: inclusion of varied teaching practices that allow for motivation, practice, transfer of training, and feedback. Please read the additional information about instructional strategies in this document.
- **Interaction with peers**: provisions to learn about and meet with individuals who possess both similar and different talents and gifts. Incorporate small and large group work to help students to develop interpersonal skills as they learn new material.
- **Value system**: inclusion of consistent opportunities to develop and examine personal and societal values and to establish a personal value system. Incorporate classroom discussions on controversial topics, and encourage reflective writing.
- **Communication skills**: development of verbal and nonverbal systems and skills to discuss, share, and exchange ideas through classroom discussion, written work, and presentations.
- **Multiple resources**: provision of a variety of material and human resources as part of the learning process. Whenever possible, provide authentic artifacts and incorporate a variety of media (film, books, guest speakers, software, etc.).

**Specific Principles in Curriculum Design**

- **Appropriateness**: curriculum based on assessment of abilities, interests, needs, and learning styles of gifted students (as discussed in the characteristics section). Instructors may wish to have students complete an interest inventory at the beginning of the class to determine what the students’ special interests are.
- **Openness**: elimination of preset expectations that limit the learnings within the curricular framework. Expect gifted students to make connections between current and past content.
importance and eliminate unimportant, irrelevant topics.

- **Challenge**: provision for a sophisticated level of learning experience that requires gifted learners to stretch their understandings. Never assume something is too complicated to be presented. Find the line between frustration and comfort.

- **Exposure to nontraditional school subjects**: presentation of material not generally included in middle and secondary schools. Duke TIP provides the perfect opportunity to incorporate non-traditional content, current events, and topics usually reserved for college students and professionals.

- **Concentration on higher level thinking skills and concepts**: see the Bloom’s Taxonomy information that follows. To encourage higher level thinking, use questioning strategies that encourage students to analyze, synthesize, and evaluate the topics they are learning.


**HIGHER-LEVEL THINKING AND BLOOM’S TAXONOMY**

As indicated by the final specific principle listed above, one of Duke TIP’s major goals is to provide an educational experience that emphasizes higher order thinking skills. Benjamin Bloom (1956) developed a framework that classifies the questioning techniques and assignment instructions that teachers design to lead students to engage in various cognitive processes. Bloom’s Taxonomy is based on complexity; therefore, the more complex the question or task, the more a student must access his/her higher order thinking skills. A summary of Bloom’s Taxonomy follows.


<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
<th>Useful Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Defining terminology; recalling facts, names, rules, categories; recognizing trends, causes, relationships; acquiring principles, procedures, theories</td>
<td>list, identify, define, label, repeat, fill in, who, what, when, name</td>
</tr>
<tr>
<td>Comprehension</td>
<td>Rephrasing definitions; illustrating meanings; interpreting relationships; drawing conclusions; demonstrating methods; predicting consequences</td>
<td>paraphrase, explain, review how, match, discuss, describe, translate, restate, interpret, summarize, why</td>
</tr>
<tr>
<td>Application</td>
<td>Applying principles, rules, theories; organizing procedures, conclusions, effects; choosing methods; restructuring processes, generalizations, phenomena</td>
<td>apply, construct, demonstrate, simulate, sketch, illustrate, show, employ, restructure, predict, how, report, use</td>
</tr>
<tr>
<td>Analysis</td>
<td>Recognizing assumptions, patterns; deducing conclusions, hypotheses, points of view; analyzing relationships, themes, evidence, cause and effect; contrasting ideas, parts, arguments</td>
<td>contrast, classify, dissect, distinguish, differentiate, compare, analyze, organize, categorize, separate, subdivide, examine, survey</td>
</tr>
<tr>
<td>Synthesis</td>
<td>Producing products, compositions; proposing objectives, means, solutions; designing plans, operations; organizing taxonomies, concepts, schemes, theories; deriving relationships, abstractions, generalizations</td>
<td>integrate, assemble, combine, relate, collect, create, compose, design, produce, invent, construct, modify, propose</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Judging accuracy, consistency, reliability; assessing errors, fallacies, predictions, means and ends; considering efficiency, utility, standards; contrasting alternatives, courses of action</td>
<td>judge, argue, assess, appraise, decide, defend, justify, verify, debate, evaluate, choose, select, critique, recommend</td>
</tr>
</tbody>
</table>

INSTRUCTIONAL STRATEGIES

There is considerable data that supports the notion that students do not learn material as well nor do they have prolonged retention of the material when the instructional presentation is the lecture format. Students respond much better in an active/interactive educational environment. Lecture certainly has its place in education, especially in the presentation of knowledge-based material. However, lecture coupled with classroom discussion is a much stronger approach. Thus, with the gifted student, even more than with any other student, instructors are wise to minimize lecture and to structure lessons that require active learning. The following graph indicates the percentage of knowledge acquired by the typical student when engaged in particular types of instructional activities.

Appropriate instructional strategies for gifted students actively involve the student in the process of learning. Often, the gifted student in a normal academic setting has been frustrated and disenchanted because the regular classroom environment offers no challenge—no opportunity to learn in a self-paced manner. Because active/interactive activities positively engage students and enhance meaningful learning, instructional staff should employ teaching strategies that require students to think more critically. Thus, the student will perform at higher levels of thinking and will thrive on every challenge. The following teaching strategies illustrate activities that encourage active/interactive learning:

- **Thinking / Problem Solving Lessons:** Problem solving should be an integral part of a curriculum. Activities that foster higher order thinking skills allow students to access their knowledge base and apply this knowledge to new situations. Such activities require students to think, often to work cooperatively, and to generate new and unique ideas and solutions. For example, a mathematics instructor may present an engineering problem that students must solve using the trigonometric principles that they have been studying.

- **Demonstrations and Simulations:** These activities encourage active and interactive learning and assume that students will employ higher order thinking skills. For instance, a law class stages a mock trial in which students use the legal knowledge they have acquired in a courtroom setting.

- **Team Teaching and Integration:** Can often be an excellent option for the instructor and the teaching assistant or for several instructors and teaching assistants to pursue, especially if each person has a unique background that could offer a more diverse presentation. For example, Genetics and Introduction to Medical Sciences classes may work together to complete a unit on bioengineering.

- **Seminar / Socratic Teaching (Paideia):** The traditional lecture certainly has its place in teaching the gifted student. However, the seminar, or interactive approach, offers an effective alternative, in which students discuss and explore issues of interest. The students in a given classroom may divide into two groups, such as an inner circle/outer circle technique, with those in the inner circle participating in a discussion while those in the outer circle observe and take notes on the discussion process. At discussion’s conclusion, all students share their notes and reactions.

The Learning Curve

<table>
<thead>
<tr>
<th>Activity</th>
<th>Learning Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simulating the real thing</td>
<td>High</td>
</tr>
<tr>
<td>Doing at dramatic presentation</td>
<td>High</td>
</tr>
<tr>
<td>Giving a talk</td>
<td>High</td>
</tr>
<tr>
<td>Participating in a discussion</td>
<td>High</td>
</tr>
<tr>
<td>Seeing it actually done</td>
<td>High</td>
</tr>
<tr>
<td>Watching a demonstration</td>
<td>High</td>
</tr>
<tr>
<td>Looking at an exhibit</td>
<td>High</td>
</tr>
<tr>
<td>Watching a movie</td>
<td>High</td>
</tr>
<tr>
<td>Looking at pictures</td>
<td>High</td>
</tr>
<tr>
<td>Hearing words</td>
<td>Low</td>
</tr>
<tr>
<td>Reading</td>
<td>Very Low</td>
</tr>
</tbody>
</table>

end, those students who have been observers will huddle, compare notes, and compile a final presentation that summarizes the important points and conclusions raised during the discussion.

Instructors frequently find the seminar approach to be an excellent activity to use at the beginning of a unit/topic of study. Students can exchange ideas before exploration begins, thus helping the instructor to gauge students’ prior knowledge and understanding. For example, the International Relations class may conduct a seminar about the impact of the various U.S. policies on the international political climate.

An instructor may choose to use this approach as a culminating or exit activity before the unit or topic is concluded. The outer circle’s report on the discussion will be particularly useful at the culmination of the unit. Seminars can serve as a before and after measure of progress made. The time at which this technique is used is less important than the understanding that the use of this technique requires that the discussion become student-based instead of instructor-driven.

- **Collaborative Learning:** These activities incorporate strategies designed to foster group cooperation and interaction. For instance, teams of students in Primate Biology often observe lemurs and record data together to create a more complete analysis of primate behavior than one student could have produced working alone. There is an art to selecting student groups and, more often than not, careful group planning produces the most successful group interactions.

This is also a strategy that demands that students collaborate in order to achieve goals. It is an opportunity to develop students’ decision-making skills and to aid in their understanding of the process of consensus. The ability to cooperate and collaborate is an essential skill for gifted students in the 21st century.

**Collaborative learning components:**

- Positive Interdependence: Students perceive they need each other to complete the group’s task. Establish mutual goals (learn and make sure that all other group members learn), joint rewards (rewards if all group members are successful), shared resources (one instruction sheet, one calculator, etc., per group), and assigned roles (summarizer, elaborator, etc.).
- Face-to-Face Promotive Interaction: Students help each other, share thoughts and resources, and encourage all their group members to learn.
- Individual Accountability: Each student’s performance/achievement is assessed.
- Interpersonal and Small Group Skills: Teachers should teach collaborative skills including leadership, decision-making, trust building, communication, and conflict management.
- Group Processing: Groups need time to assess progress on the assigned task and to discuss effective working relationships among members.


- **Laboratory Work:** Direct observation and experimentation engage students in the process of science. Laboratory work is conducted not only to find the right answer but also to investigate the nature of phenomena and to arrive at satisfactory explanations. Laboratory work offers hands-on, active learning and can be used in more than just science courses. It is an appropriate strategy to the teaching of any process in which students may employ trial and error in discovery. For example, a vital component of the Introduction to Lab Sciences class is the examination of chemical reactions in the lab rather than simply reading about them in the text.

- **Student-conducted Research:** A gifted student is an able researcher when given the materials and the opportunities that facilitate his/her ability to question and experiment. In scientific study, instead of reading about and discussing phenomena, gifted students need the opportunity to investigate through hands-on activities. In the humanities, simply presenting a topic should be avoided; instead, instructors should provide students the opportunity to research many aspects of the topic and formulate their own assumptions. For instance, after conducting library research on human behavior, the Social Psychology class may design and conduct its own original experiment in which students stage an unusual scenario in the dining hall and record the reactions of TIPsters passing by.

Not only does the research process enhance critical thinking skills, but it also develops independent learners to whom the instructor can offer individual assistance. Thus, the instructor becomes the conduit of knowledge who provides the opportunities, materials, and challenges, while each student assumes his/her own responsibility for independent avenues of approach to knowledge.

- **Independent Study and Peer Teaching:** Within the framework of any classroom, there is always the opportunity to allow students to pursue independent research. Many high schools offer this as a course choice to allow students to investigate and learn about subjects of interest. Likewise, independent study is also an appropriate approach to learning in a TIP session. It provides an opportunity for the student to explore an aspect of the curriculum of particular interest to him/her. For example, after investigating the basic principles of advertising, a Strategic Entrepreneurial
Leadership student may select a target group (e.g., teenagers, athletes, elderly people) that interests him/her and conduct independent research to develop successful marketing strategies for that group.

Allowing students to be peer teachers for topics in which they have special interest or ability can be beneficial for them as well as for the other students who receive help. Peer pairing to share ideas, insights and information can also be an excellent teaching or study/review strategy. Any time these strategies are employed, there should be a clear expectation, established by the instructor, with which the student concurs.

**Student-Led Conferencing:** This strategy is an excellent way to encourage students to plan and conduct an activity during which course-related work is displayed and explained/discussed. This allows for interaction involving process and product. The student can structure the conference to involve his peers and instructor, or the student may choose to invite participants who are knowledgeable in the field to be part of the conference. Conferencing allows for the development of organizational and oral presentation skills. For instance, students in Philosophy may research a branch of philosophy that interests them, present their findings to the class, and lead a discussion of similarities and differences of other branches.

**Role-Play** is an interactive strategy that allows students to assume an assigned personality or play a part in a particular situation/event. The instructor may assign a student to role-play a character as nonspecific as the protagonist in a conflict, or as specific as Katie Couric in a newscast. This strategy may be used as an interesting and challenging way of presenting material, or it may be used as a vehicle that enables students to immerse themselves more actively in the learning process.

However, role-play is most effective when it is related to the current course topic. Simply presenting a newscast by having a student play the role of Katie Couric is exciting, but using this activity as a vehicle to enhance course curriculum is even more meaningful to the student. For example, a student in Politics and Economics may stage a newscast as Katie Couric to illustrate how new U.S. foreign trade policies are expected to affect the international economy.

**Product Development:** Students can transform the knowledge and concepts gained from independent study and research into creative products. Such products should be similar to those developed by professionals in the field of study.

Examples of products: abstract, advertisement, annotated bibliography, broadcast, commercial, presentation, critique, cross section, diagram, geometric model, graphic organizer, handbook, literary analysis, logic puzzle, mural, newsletter, photojournalism, play, sculpture, sign, simulation, tessellation, time capsule, video.


The 11 instructional strategies above are but a few of the many ways to stimulate active learning and to encourage problem solving and critical thinking. Inviting guest speakers, taking field trips, showing clips of videos/movies, attending special events, interviewing people who have had unique experiences, keeping journals, utilizing technology, and many other activities serve to enhance the classroom experience as well as to augment cultural development.

CREATING A SAFE AND PRODUCTIVE COMMUNITY IN THE CLASSROOM

In most classes, there are students with diverse backgrounds and divergent points of view. Some are outspoken about their ideas and thoughts while others sit quietly and do not share their thoughts without encouragement from the instructor. This scenario is especially prominent in Duke TIP’s classrooms since students come from a broad geographic region with a great deal of ethnic, political, religious, and environmental diversity. Creating a welcoming classroom at TIP is quite challenging since students, for the most part, do not know one another. The instructional staff must design classroom activities that enable students to become acquainted quickly as well as inspire a tone of respect and trust.

Comfortable Classroom Discussions

One of Duke TIP’s goals is to encourage the quiet, shy students to participate actively in classroom discussions and in brainstorming sessions. For this to occur, the instructional staff must create a receptive and welcoming class atmosphere in which all students feel comfortable sharing their thoughts and ideas. To foster this classroom community, staff and students should establish rules for participation on the first day of class and should continually review and enforce these rules on a daily basis. James Gallagher (1985) suggests that instructors establish and enforce the following procedures to create a safe environment for productive brainstorming:

- **No criticism allowed.** Students will feel more comfortable sharing their thoughts and suggestions when they understand that no critical comments from the instructor, teaching assistant, or other students will be tolerated during the discussion period.
- **The more the better.** Help students to understand that the greater the number of ideas proposed, the more likely an excellent solution or plan of action will result. A premium could be placed on unusual or unique ideas or suggestions.
- **Integration and combinations of ideas welcomed.** Students should be alerted to consider how to combine several suggestions to improve the quality of the solution or plan.
- **Evaluate after all ideas have been presented.** When the instructor perceives that the fluency and inventiveness of the class are slowing, he/she should encourage students to begin to evaluate the ideas that have accumulated to determine the best plan of action or to decide if the solution process was appropriate and efficient.


Student-Centered Model

Another key to creating a productive learning environment for gifted students is shifting from the traditional teacher-centered approach to instruction to a student-centered model. Classrooms that are teacher-centered involve a high proportion of class time devoted to the instructor’s lectures, a perceived pressure to learn the “right” answers to achieve a high grade, and a general discussion pattern that includes the instructor as the central figure. While this classroom structure is familiar and comfortable to many students and teachers, it is far from the productive and challenging student-centered approach that inspires gifted students to engage fully and to derive the maximum benefit.
Student-centered classrooms are characterized by a majority of class time during which students are doing most of the talking, an emphasis on problem solving in situations where there are no “right” answers, and a general discussion pattern that is student-to-student rather than student-to-teacher. Creating a student-centered classroom can seem daunting for an instructor who has limited teaching experience or who has only experienced teacher-centered environments. With careful planning and practice, however, instructors will discover that this classroom structure is much more productive and stimulating than the teacher-centered alternative. Following are some tips for creating a student-centered discussion:

- **Establish discussion rules** during the first class meeting (see Dr. Gallagher’s suggestions above).
- **Limit preliminary lecture** to only a few minutes and provide only the most essential facts from which discussions can arise.
- **Prepare to ask open-ended, high-level questions** in advance (see Bloom’s Taxonomy, page 4). Remind students as you pose the questions that there are no “right” or “wrong” answers.
- If the discussion is slow to begin, **affirm student responses** without judging them, and ask the class to respond. “Thank you, Johnny. What do you think about Johnny’s statement, Ann?”

  - **Tolerate brief periods of silence**. Allow several moments between contributions. Students may simply be assimilating their thoughts, and interjecting comments may sidetrack their trains of thought.

- **Redirect discussion** if it goes off topic. If a student asks you a question, **redirect the question** to the class. “That’s a good question. What do you think?”
- Force students to respond to the ideas of their classmates. “Allison, James’ point of view seems to be the opposite of yours. What do you think about his opinion?”
- Once the discussion does start, **step back and allow students to take the lead**. Only intervene if the discussion steers far off topic or if the discussion becomes heated or unproductive.
- If **interesting points** are raised but not pursued, **write them down**. When appropriate, bring them up again. “Susie mentioned earlier that…, but there was no further discussion. What are your thoughts about her statement?”
- At the conclusion, **ask students to summarize the discussion**. “OK. We’re about to break for lunch. Let’s take a few moments to highlight the major points of discussion. Alex, could you summarize what we’ve discussed this morning?”

Although you may be initially uncomfortable in facilitating a student-centered discussion, practice will help you to become more confident in future attempts. Most importantly, be willing to try innovative strategies in the classroom. Prepare carefully, and consult the academic coordinator for advice in the planning process. If a strategy does not work well, reflect upon it in order to identify which aspects did not work and to formulate ideas for improving the strategy in the future.

Thanks to David Meyers for his ideas and suggestions about journal use.

**AN ACADEMIC TOOL: THE JOURNAL**

During the intense time that is summer with Duke TIP, instructors can sometimes find it difficult to find time to become acquainted with each individual student. The journal, a powerful learning tool, offers a way to deepen the instructor/teaching assistant/student relationships on a personal level. Duke TIP encourages instructors to experiment with having their students keep journals to record their academic and social experiences. In addition, journal activities enable students to reflect on their experiences and their newly acquired knowledge; this reflection is an essential component of the learning process.

Instructors may request that students bring notebooks to use as journals. Duke TIP suggests that five to ten minutes of class time daily be devoted to journal writing. On the most basic level, this activity is wonderful for settling a class and for helping students to focus. Journal activities should occur first thing in the morning, right after lunch, or at the beginning of evening session. Each day, pose a specific question. Ask students to copy the question and respond freely to it. Alternatively, ask students to answer the assigned question and then continue writing on any topic they choose. Instructional staff must inform students that, although they will collect the journals frequently, read the entries, and respond to them, the writings in journals will not be graded or used in grading. Instructors may also offer students the option to fold the pages of journal entries they wish to remain private. Once staff establish a schedule for collecting and reading/responding to journal entries, they should strictly adhere to that schedule since students may interpret journals as an important means of communication and may be depending on an immediate response from the staff.

When responding to journal entries, provide positive feedback and, if appropriate, constructive criticism. Use responses to validate student experiences. Through this process, instructional staff can create a valuable bridge of trust and respect. Often, students will share thoughts and ideas in journals that they would never mention aloud in class. Remember, however, that instructional staff should not attempt to serve as counselors or therapists to students in their classes. If a student indicates in a journal that he/she is in crisis, the staff should immediately consult the psychological counselor, on-site director, and/or site supervisor for assistance.

Thanks to David Meyers for his ideas and suggestions about journal use.
CLASSROOM MANAGEMENT TIPS

Classroom management is defined as all of the procedures and practices employed by instructors to create and maintain a classroom environment in which all students can learn. Effective teachers are necessarily good classroom managers. Wong and Wong (2001) indicate that, in well-managed classrooms, (1) students are deeply involved in their work, (2) students know what is expected of them and are successful, (3) there is little wasted time, confusion, or disruption, and (4) the classroom is both work-oriented and pleasant. Following are some classroom management suggestions to consider as you plan your course:

Establish a safe and productive classroom environment very early.

• Greet your students as they enter your class for the first time.
• Learn students’ names as quickly as possible. Use name tags on desks if necessary to facilitate this process. Address students by their names.
• Familiarize yourself with the Duke TIP discipline policy and have your own classroom procedures ready. Share them with the students during the first meeting.
• Post classroom rules and policies (five or fewer) in a prominent location in the classroom, and refer to them frequently in the early days of the program.

Be prepared for class every day.

• Prepare your classroom before student arrival. Make sure your furniture arrangement and decorations are neat and pleasant.
• Have your teaching materials (including supplies, photocopies, notes, electronic media) ready daily before the beginning of class.
• Plan lessons thoroughly. Write out detailed notes and have contingency plans in place.
• Try to plan at least two days in advance. TIP students often work more quickly than you may anticipate.
• Review papers and assignments promptly and keep good records.

NEGATIVE CLASSROOM PRACTICES

Teaching to the “T”

Classroom seating arrangements can often send signals to students about the instructor’s expectations of them and can encourage or hamper each student’s learning. Every instructor has particular seating arrangements that appeal to him/her, and some seating arrangements fit the tasks at hand better than others. However, when students are placed in rows within your classroom, be aware of some of the pitfalls. Classroom seating should not be an afterthought or a stumbling block for academic growth.

Some students have made a “science” of carefully choosing a seat in which they can feel secure and not threatened. Though Duke TIP students are gifted, not all are extroverted classroom participants. Some students will rarely comment while others discuss every issue with enthusiasm and pleasure. If students are seated in rows, beware of “teaching to the ‘T’ ” in your classroom. “Teaching to the ‘T’” occurs when the teacher concentrates primarily on students in the front rows and the middle columns of the room (see diagram).

When students are arranged in rows, instructors often inadvertently ignore the students who sit to one side or to the rear of the classroom. Thus, those students who wish to go unnoticed sit outside the “T” and are “safe” from the attention of the instructional staff. In addition, students who wish to participate, but are seated outside the “T,” find that they often go unnoticed and unrecognized. Duke TIP is a perfect place for gifted students to discover the voices that they have wanted...
to find in their local schools. By encouraging every student to participate in class, the instructor can foster the development of stronger self-esteem and greater confidence.

There is no perfect classroom seating arrangement; however, some configurations work better than others and encourage stronger class participation from everyone. Be creative in your use of seating; vary it by activity, and enjoy the opportunities and proximity to your students that various seating arrangements will offer.

Bias in the Classroom

At Duke TIP, diversity among staff members and students is welcomed and celebrated. Therefore, Duke TIP instructors must strive to eliminate all forms of bias in the classrooms. Do all teachers have the same expectations for all students? Are all students treated fairly, regardless of race, gender, ethnicity, religion, and sexual orientation? Most educators would say that they work hard to eliminate bias in their classrooms. Often, however, their stated philosophy of fairness and equality does not match their actions. Educators must understand that their facial expressions, body language, and even their choices of texts and course materials can send subtle messages of bias and prejudice to their students.

Educators should continually revisit and revise their own ideas about social and gender differences—ideas that have settled into their consciousness in such a subtle way that they often do not recognize them. At Duke TIP, instructional staff should be aware of their interactions with students. Allow every student to be an active learner and to be involved in the educational process. Carefully consider the biased messages that may be present in the texts and supplementary materials that you use with your students. Make conscious efforts to encourage all students to reach their maximum potential. Instructors are encouraged to consult with the academic coordinator and/or psychological counselor if they are concerned that bias is affecting their teaching.

DISABILITIES AMONG GIFTED STUDENTS

The occurrence of learning disabilities in gifted children is not uncommon, and each summer a number of students with diagnosed learning disabilities attend Duke TIP. In addition, a few TIP students also have medical conditions, such as depression, severe asthma, serious allergies, diabetes, obsessive/compulsive disorder, epilepsy, and physical disabilities. Parents of students with learning or medical disabilities may submit a voluntary disability disclosure form/exchange of information release to request that Duke TIP provide reasonable accommodations for their children. The director of educational programs reviews each form on a case-by-case basis and notifies each parent if the requested accommodations are approved.

Voluntary disability disclosure forms that have been approved are included in the students' files. Duke TIP requires that the instructional staff carefully review the file of each student in the class before the students' arrival to best prepare for what each student may need. In some instances it may also be helpful to discuss these cases with the academic coordinator and/or psychological counselor. Duke TIP staff members are legally required to provide any modifications that have been approved by the director. If the staff have questions about a specific learning disability or the required modifications, they should consult the academic coordinator, the psychological counselor, or the site supervisor. If the instructor needs to request more information directly from the parent, they should arrange a telephone call with the academic coordinator, the psychological counselor, or the site supervisor present.

Among the most common conditions that affect Duke TIP students are attention deficit disorders such as Attention Deficit/Hyperactivity Disorder (ADHD). Instructors frequently request information about characteristics of students with attention issues and strategies that can help these students be successful. Some common areas of difficulty associated with attention deficit disorders are summarized in the following chart along with some possible strategies for instructors and teaching assistants.

Note: Sometimes a student may exhibit behaviors that seem related to learning disabilities or medical conditions; however, there may be no indication or parental disclosure of such conditions in the student's paperwork. Although Duke TIP instructional staff members are encouraged to discuss such behaviors with the academic coordinator or psychological counselor, they should never, under any circumstances, suggest to a parent or guardian that they suspect the child has a learning disability or medical condition. Duke TIP staff should not conduct any diagnostic procedures or make assumptions about certain behaviors. Duke TIP staff should, however, treat all Duke TIP students with the utmost respect and aim to accommodate their needs as they arise during their time at TIP.

Communicating with Exceptional Children:

With the guidance of the administrative team, instructional staff should speak privately with any student in their class who is demonstrating behaviors that could be related to a documented learning disability or medical condition. They should ask the student what they can do to help and explain to him/her that all information regarding the learning or medical disability will remain confidential. Most importantly, the instructional staff should be sensitive to the student’s feelings and should express a genuine desire to help the student in any way possible.

Under no circumstances should an instructional staff member discuss a student's learning disability or health concern in the presence of other students or staff members who are not directly involved.
## SUGGESTED TEACHING STRATEGIES TO CHALLENGE STUDENTS

<table>
<thead>
<tr>
<th>Area of Difficulty</th>
<th>Related Behaviors</th>
<th>Suggested Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organization</strong></td>
<td>Doesn't complete assignments</td>
<td>Incentive system, alternative assignments</td>
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<tr>
<td></td>
<td>Loses homework/possessions</td>
<td>Daily check-ins, checklists, reminders, routines, targeted incentive systems</td>
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<td></td>
<td>Doesn't come to class prepared</td>
<td>Spare materials in classes that students can borrow</td>
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<tr>
<td></td>
<td>Disorganized notebooks</td>
<td>Daily notebook checks</td>
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<tr>
<td></td>
<td>Messy work</td>
<td>Specify clear criteria and have students resubmit work that does not meet criteria, modify expectations</td>
</tr>
<tr>
<td><strong>Remembering</strong></td>
<td>Handing in assignments, knowing due dates</td>
<td>Daily check-in, incentive system</td>
</tr>
<tr>
<td></td>
<td>Math facts/other rote memory tasks</td>
<td>Memory aids, use of calculators when possible, reduce demands</td>
</tr>
<tr>
<td><strong>Following Directions</strong></td>
<td>Verbal</td>
<td>Provide study partner, repeat directions individually</td>
</tr>
<tr>
<td></td>
<td>Written</td>
<td>Check-in with student, provide clarification when needed, highlight directions for student</td>
</tr>
<tr>
<td><strong>Written Production</strong></td>
<td>Poor fine motor skills/motor impersistence</td>
<td>Access to computers for writing assignments when available, reduce writing requirements</td>
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<td></td>
<td>Difficulty organizing thoughts</td>
<td>Assistance with prewriting activities (e.g., brainstorming, outlining), write ideas on index cards so they will be easy to reorganize</td>
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<td></td>
<td>Proofreading problems</td>
<td>Use spell check, have another student/adult proofread, use a proofreading checklist to cue for specific errors</td>
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<tr>
<td><strong>Problems with Test-Taking</strong></td>
<td>Careless mistakes</td>
<td>Supervise checking over work</td>
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<tr>
<td></td>
<td>Cannot finish within time limits</td>
<td>Allow extra time, break testing into several smaller sessions</td>
</tr>
<tr>
<td><strong>Social Skills</strong></td>
<td>Impulsive, disruptive, apathetic, discouraged</td>
<td>Incentive systems, negotiated behavior contract, high rate of personalized positive feedback, hands-on learning</td>
</tr>
<tr>
<td><strong>Cognitive Style</strong></td>
<td>Fast and sloppy</td>
<td>Assign shorter tasks with criteria for accuracy, teach self-evaluation, set goals</td>
</tr>
<tr>
<td></td>
<td>Low frustration tolerance</td>
<td>Modify assignments, ensure high rate of success, frequent reinforcement, provide individual help</td>
</tr>
<tr>
<td></td>
<td>Craves novelty/hates repetition</td>
<td>Avoid lecture format or heavy rote learning requirements, use computers and technology when available, use cooperative learning and hands-on learning, avoid unnecessary repetition, build in breaks, vary formats within class periods</td>
</tr>
</tbody>
</table>

## ARTICLES AND RESOURCES

- **Common Myths and Truths about Gifted Students** by the Special and Gifted Education Center
  [http://www.edgateteam.net/sped_gifted/giftandtalent2.htm](http://www.edgateteam.net/sped_gifted/giftandtalent2.htm)

- **Gifted But Learning Disabled: A Puzzling Paradox** by Susan Baum
  [http://www.kidsource.com/kidsource/content/Gifted_learning_disabled.html](http://www.kidsource.com/kidsource/content/Gifted_learning_disabled.html)

- **Differentiating Curriculum for Gifted Students** by Sandra L. Berger
  [http://www.kidsource.com/kidsource/content/diff_curriculum.html](http://www.kidsource.com/kidsource/content/diff_curriculum.html)
EVALUATION AT DUKE TIP

While evaluation procedures can vary from program to program within TIP’s different instructional models, certain aspects apply across the board. Instructors must establish or follow the established goals and objectives of their course’s curriculum, plan instructional activities that promote optimal learning, and then evaluate each student’s progress. Duke TIP’s philosophy presents a unique challenge. Duke TIP is a non-graded program; however, instructors continually assess student progress and regularly communicate with students about their performance. At the end of the term, the instructional staff jointly complete a rubric evaluation instrument for each student. The rubric provides a broad picture of the student’s academic performance, learning behaviors, and social interactions in the classroom. Depending on the program model, instructors share the rubrics with students during individual conferences on the last full day of class or digitally after the end of the full Duke TIP session.

For some Duke TIP programs, another vital component of the evaluation process is a final interaction with the parent or guardian of every student, which can take the shape of a conference or an open house. During the conference model, the instructor individually shares the rubric evaluation and discusses the student’s academic progress. Parents who are traveling to the site on the final day may choose to have their final conferences in person with the instructor. The rest of any such conferences should be conducted by telephone during the final week and weekend of the program. During the open house model, parents/guardians attend a classroom open house on departure day. At this open house they experience what their student has learned throughout the week and have an opportunity to speak with the instructional staff.

Although Duke TIP does not assign grades, some students attempt to receive credit at their local schools for the courses that they complete at some Duke TIP programs or to be placed into the next level course. Students and parents are responsible for negotiating issues of credit and placement with their local school officials since Duke TIP is not a credit-granting institution. In the final evaluation packets sent to students after the program, Duke TIP includes the student’s rubric evaluation and, in some programs, a course description and syllabus that can be presented to school officials as verification of work completed. Since Duke TIP courses are non-graded, final grades or transcripts cannot be issued, and instructors should never agree to provide grades to parents, students, or school officials.

Instructors may design their own evaluation and assessment procedures. In addition to traditional tests and quizzes, most TIP instructors employ a variety of alternative methods of assessment, including class presentations, papers, and group projects. Instructors must consider carefully how they will transfer the assessment data they collect throughout the term into appropriate rubric evaluations at the conclusion of the program. For some programs, the academic coordinator provides an evaluation prep sheet that mirrors the rubric and can be used as one method of record-keeping. Some instructors may choose to keep note cards with student assessment summaries or may use other recording processes. During the first class meeting, instructors must share both the evaluation instrument format (including rubric if applicable) and their assessment procedures with students so students will know from the beginning how they are to be evaluated.

Duke TIP instructors should also recognize that many TIP students are the most successful students in their local schools and are not accustomed to being surrounded by equally bright students. Students who receive a score that is not “top of the class” (or lower than those to which they are accustomed) will naturally be concerned. Instructional staff should be sensitive to these concerns and should make special efforts to help students to put grades into perspective. Instructional staff should encourage students to remain focused on the material and their own individual progress. This is not an easy task because the grade has been the measure of success in their previous academic experiences. However, students who put behind them the need to make perfect scores on every assignment will have a much more successful and enriching experience at TIP. Frequent feedback and encouragement from instructional staff can be instrumental in helping students to become less grade-conscious and more focused on individual progress and improvement.

Evening Study

At most sites, teaching assistants or instructional counselors supervise an evening study session each Monday through Thursday evening after dinner. This session is a good time for students to read and complete assignments. This is also a good time for instructional staff to provide individual assistance and tutoring or to help students prepare for upcoming evaluations. Instructors should ensure that staff leading evening study and students understand what is to be accomplished each evening.

ADDITIONAL NOTES

Instructors, Teaching Assistants, and Instructional Counselors:

Remember that at most sites the academic coordinator will be available during the session to assist you with all of your academic needs. He/she may provide instructional ideas and suggestions, intervene with particularly difficult student situations, visit classes and provide feedback, and serve as a liaison between the instructional staff and the main Duke TIP office. Plan to communicate frequently with the academic coordinator about your class, and please invite him/her to exciting class activities.

# Programs Overview

<table>
<thead>
<tr>
<th>Philosophy</th>
<th>CRISIS</th>
<th>Summer Studies</th>
<th>Field Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Philosophy</td>
<td>Students explore a crisis from a variety of academic perspectives. Problem-based learning model gives students a hands on and in depth look at particular subject area.</td>
<td>Students select an area of study, typically one that is not covered in a traditional classroom. Through engaging and challenging learning opportunities students have an opportunity to explore an area of interest in the level of depth and breadth typical of an AP or college level course.</td>
<td>Students explore a potential career choice while taking advantage of the opportunities afforded by learning in a setting unique to the topic of study.</td>
</tr>
</tbody>
</table>

| Program Logistics | |
|-------------------|-----------------|-----------------|-----------------|
| Student Program Length | 1 week | 3 weeks | 2 weeks |
| Students | Rising 5–6th graders | Rising 8–9th graders and rising 9–11th graders | Rising 9–12th Graders |
| Courses | Same 7 courses offered at each campus, called research teams, max class size is 15 | 5–16 different courses offered at each site, max of 16–20 students per class | 11 Domestic offerings, 2 Field Studies that travel internationally, Max of 24 students per Field Study |

| Curriculum and Instruction | |
|-----------------------------|-----------------|-----------------|-----------------|
| Curriculum Development Responsibilities | Instructors are provided with a curriculum | Instructors are responsible for developing their syllabus, determining course texts, and requesting materials needed for instruction. In some cases, you may be working with pre-existing materials and resources. | |
| Daily Teaching Responsibilities | Sundays: 3–7 pm, Monday–Friday: 8 a.m.–5 p.m. | Arrival day parent meeting, Monday–Friday: 8 a.m.–5 p.m., and Saturday: 9 a.m.–noon, teaching assistants also supervise evening study for an hour in the evening | Schedule varies by location, approximately 6–7 teaching hours |
| Field Trips | Each research team participates in one off campus learning experience per week planned and facilitated by the instructor | Instructors are encouraged to plan a field trip or two when taking students off campus can enhance their learning | Instructional staff are expected to take students off campus to enrich student understanding |
| Student Assessment in addition to regular verbal feedback | Students are assessed using a rubric assessment and short narrative completed by the instructor. Students demonstrate learning at parent open house. | Students are assessed using a rubric assessment and short narrative completed by the instructor. The academic coordinator provides additional training in this process. Often, instructional staff conference with each student individually as well. Many classes also have a large project or presentation at the end. | Students are assessed using a rubric assessment and short narrative completed by the instructor. Most programs have a cumulative project. |
| Parent Communication | Instructors provide the academic coordinator with a daily update to the parent website. Instructional staff participate in the parent orientation on Sundays. | Instructional staff participate in the parent meeting at the beginning of the term. Parents are contacted as needed throughout the term. Instructors conduct a conference with each student’s parents at the conclusion of the term. | Parents are contacted as needed throughout the program. |

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For information on Duke TIP Talent Search, summer and weekend programs, and resources for students and parents, visit [www.tip.duke.edu](http://www.tip.duke.edu)