

Petters Research Institute

Overview of Adolescent Psychology and Student Evaluations

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Overview of Psychology

- Trying to understand how they relate to the world
- A teenager's development can be divided into three stages -- early, middle, and late adolescence.
- Growth during adolescence is greater than at any other stage of life after birth.
- Each teenager is distinct and unique in his or her own way; so processes vary from student to student

Early Adolescence 12-14 yrs

- Improved abilities to use speech to express oneself
- More likely to express feelings by action than by words
- Close friendships gain importance
- Tendency to return to childish behavior
- Peer group influences interests and clothing styles
- Increasing career interests
- Mostly interested in present and near future

Middle Adolescence 15-16 yrs

- Intellectual interests gain importance
- Extremely concerned with appearance and with one's own body
- Effort to make new friends
- Examination of inner experiences, which may include writing a diary
- Increased desire for independence

Late Adolescence 17-19 yrs

- Firmer identity
- Ability to think ideas through
- Stable interests
- Greater emotional stability
- Ability to make independent decisions
- Pride in one's work
- Self-reliance
- Greater concern for others
- More defined work habits
- Higher level of concern for the future

Student's Evaluation: Self-Efficacy

- **Two important goals for all students are:**
 - ◆ **1) They learn to value mathematics and science.**
 - ◆ **2) They become confident in their ability to do mathematics and science.**

Student's Evaluation: Self-Efficacy (Start of Summer Academy)

- **I can solve most problems if I invest the necessary effort.**

Not at all descriptive of me	0%
Slightly descriptive of me	11%
Moderately descriptive of me	16%
Mostly/Completely descriptive	74%

Student's Evaluation: Self-Efficacy

I can always manage to solve difficult problems if I try hard enough.

Not at all descriptive of me	5%
Slightly descriptive of me	11%
Moderately descriptive of me	26%
Mostly/Completely descriptive	58%

Student's Evaluation: Career Aspirations

- **How far would you like to go in your education?**

Junior College	0%
University	18%
More than University (Graduate or PhD work)	82%

Student's Evaluation: Career Aspirations

- **What type of Job would you like?**

I am still considering; I haven't come to a conclusion as yet. I think it would be between a Scientist, Lawyer or maybe a Teacher I guess. Anything that will make me have enough money so I can maintain a house, car and a family. I want an exciting job where I will enjoy my time.

Student's Evaluation: Career Aspirations

- **What type of Job would you like?**

When I grow up I'd like to pursue a job in the Engineering field or in the Piloting field so that I will be able to encounter new things when I travel about the world. I'd also like it because you get to do and see extraordinary things that people don't see everyday, so this institute will help me furthermore.

Student's Evaluation: Learning Gains

- On a scale of 1-5
 - ◆ 1=Not at all
 - ◆ 2=A little
 - ◆ 3=Somewhat
 - ◆ 4=A lot
 - ◆ 5=A great deal

Student's Evaluation: Learning Gains

- To what extent did you make gains in any of the following as a result of what you did in this class?
 - ◆ A. Ability to think through a problem or argument
 - ◆ B. Ability to do math and science
 - ◆ C. Feeling comfortable with complex ideas
 - ◆ D. Enthusiasm for subject

Student's Evaluation: Learning Gains

- In the past two weeks, about 80% of the students scored 4-5 for their gain in learning.

How to Support your Child's Learning

- Invite your children to explain what was learned in math or science class, or have them teach it to you.

It provides an opportunity for children to help clarify their thinking, to practice new skills, and to practice communicating mathematically and scientifically.

How to Support your Child's Learning

- Look for ways to point out and reinforce math skills at home. For example:
 - ◆ Help to calculate shopping budget
 - ◆ Involve children in tasks that require computing, measuring, estimating, building, following directions, problem solving and reasoning

How to Support your Child's Learning

- Help them to set short term goals for the school year
 - ◆ Improve multiplication skills
 - ◆ Learn life cycle of the cell
- Expose them to a variety of career ideas

How to Support your Child's Learning

- Look for games and activities that teach and/or reinforce analytical thinking.
- When you see articles that have data that might interest your children (e.g., sports statistics, facts about natural disasters), share them and talk about what the numbers mean.
- If your children have access to a computer, help your children learn to use math utilities such as spreadsheets and graphing programs.