

## **INTERDISCIPLINARY YO-YO PROGRAM**

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The Interdisciplinary Yo-Yo Program is a total curriculum merging the educational disciplines of social studies, language arts, math, science, and physical education together with the yo-yo. There is a connection between learning disciplines, just as the world's systems do not exist independently, but are very much in co-existence with one another. In addition, students generally learn best when the subject being taught relates to their world. It has also been proven that learning is reinforced in profound ways through the use of hands-on experiments and activities. This program has been developed with these ideas in mind. It can be used for students ranging from grades 1 to 8, and can be taken in whole or in part, as desired. The program will not only be a fun learning experience for the students, but because it relates to an object that they enjoy, the information they learn throughout the process, like the yo-yo itself, will easily return to them.

The subjects will vary in length and will contain information about the yo-yo and how it relates to the subject being discussed. At the conclusion of each subject unit, there will be a list of suggested activities which relate to the information just presented.

Throughout their education, students are to gain skills in learning and productive thinking, in addition to specific subject knowledge. Individual school districts or states determine graduation standards for mastery of these skills for predefined grade levels. The learning activities proposed in the Interdisciplinary Yo-Yo Program relate to many of them. Those being addressed in the program are called Standards of Learning and Productive Thinking Skills and are listed below.

### **Standards of Learning**

Students should be able to:

1. Read, view and listen to complex information in the English language.
2. Write and speak effectively in the English language.
3. Use and interpret the arts
4. Solve problems by applying mathematics
5. Conduct research and communicate findings
6. Understand and apply scientific concepts
7. Understand interactions between people and cultures
8. Use information to make decisions

### **Productive Thinking Skills**

Students should develop skills in:

1. Fluency - i.e. how many things can you think of that...
2. Flexibility - i.e. taking something and making something else
3. Originality - i.e. creativity

## **SUBJECTS**

### **Physical Education**

Yo-yoing helps to develop eye-hand coordination, enhances motor and catching skills and teaches the sequencing, patience and the benefits of practice. Various skills and tricks are taught to correspond with the age of the student. Ultimately, the goal of yo-yoing is to raise the self-esteem of the student. It is an individual sport where size, speed, physical prowess and gender are irrelevant. Best of all, yo-yoing is FUN!

### **Science**

Identifying the yo-yo as a gyroscopic object, students learn the concept of gyroscopic stability, planes of spin and distribution of mass. Performing various experiments with the yo-yo and spin top can demonstrate the concepts of motion, friction, gravity, gyroscopic stability, planes of spin, distribution of mass and the exchange of potential and kinetic energy.

### **Math**

Mathematical calculations, measurements, and graphing can be learned and reinforced by performing various experiments with the yo-yo. Through the use of such things as a yo-yo's dimensions, spin speed, length of spin or percentage of string length, students learn how math can help them to determine a product's value.

### **Social Studies**

The Social Studies curriculum begins with the history of the yo-yo, which is believed to be in China. The first historical mention of the yo-yo, however, was from Greece in the year 500 B.C. Students learn the history and cultural dispersion of the yo-yo and are presented with various activities such as timelines, mapping and word searches to reinforce their learning. Patents and trademarks, which had significant implications in the development of the yo-yo in the United States are also presented.

### **Language Arts**

The Language Arts curriculum develops and reinforces skills of reading, creative writing, information search, demonstration and fluency. Students are presented with short stories related to yo-yoing in an attempt to spark their creativity in developing their own stories. Various activities are encouraged to help to develop skills of list making, research, creative thinking and word recognition.

### **Music**

Students love fun music! Using age appropriate yo-yo songs, students can be encouraged to enhance their rhythmic skills in singing and dance. They can be encouraged to create their own yo-yo jingle!

### **Art**

Students can be challenged to create various art projects revolving around the subject of yo-yos. Activities suggested are making a yo-yo, designing yo-yo logos, drawing

pictures containing hidden yo-yos and using the concept of color wheels to create yo-yo sides that appear to change color when spinning.