



**Brookline High School**  
115 Greenough Street  
Brookline, Massachusetts 02445

## English Department

### How to Choose Between Points of View and Responding to Literature

There are two full-year English choices for freshmen:  
**Points of View** (standard) and **Responding** (honors).

**Points of View** has an academically challenging curriculum in which students:

- read literature from antiquity to the present, and discuss ideas.
- complete a variety of writing assignments, where complex assignments are broken down into steps.
- move through texts at a rate of 20-25 pages per night.
- receive more individual attention from the teacher because the classes are significantly smaller. The class lid for Points of View is 18; the lid for Responding is 25.
- focus more intensively on study skills-- in particular, strategies for completing reading and writing assignments successfully.

**Responding to Literature** is a good choice for students who are eager readers and writers. Teachers assume a certain facility with language and with abstract thinking (which comes earlier to some students than to others.) Students must be able to:

- tackle some complex and lengthy texts – for instance, Dickens and Homer -- at a quick pace: 30-35 pages per night. *Reluctant readers will really struggle here.*
- write competently -- and relatively independently – in a variety of modes: creative, analytical, personal.
- move with ease from concrete observations to abstract ideas using texts from antiquity to the present.
- balance assigned outside reading with other coursework.

**Core texts for both of the above courses:**

- The Oedipus Cycle
- A Shakespeare play (Twelfth Night, Julius Caesar, or Much Ado About Nothing)
- To Kill a Mockingbird
- Points of View (department collection of short stories).

**A student in the top 40% of his/her grade in reading, writing, and abstract thinking is generally a good candidate for the honors course**, but of course overall course/activity load must also be considered.

Please call or e-mail me if you have any questions.

Mary Burchenal  
English Department Chair  
617-713-5064  
Mary\_Burchenal@brookline.k12.ma.us



Re: BHS Course Offerings in Mathematics  
To: 8<sup>th</sup> Grade Parents  
From: Joshua Paris [joshua\\_paris@brookline.k12.ma.us](mailto:joshua_paris@brookline.k12.ma.us)  
Math Department Chair 617-713-5168

## I. Resources

### The Math Centers

- The math centers are places where students can drop-in to get math help from a BHS math teacher.
- There are two math centers: One for 9<sup>th</sup> grade students and one for upper class students.
- Each math center is staffed by two or three math teachers and is open every day from 7:30 AM to 8:15 AM.
- Students from all levels (from advanced to standard) attend the math centers.
- Students come to work on homework assignments, study for tests, get caught up when they've missed class time and generally enhance their overall mathematical understanding.
- The atmosphere in the math centers is very relaxed. Students feel comfortable asking for help.
- Groups of students from the same class come to the math centers to work on their assignments together.

## II. Overview of the BHS Math Program

Program or Level	Gr. 9	Gr. 10	Gr. 11	Gr. 12
Standard	Geometry	Algebra 2	Trigonometry	Foundations of Calculus
Honors	Geometry Honors	Algebra 2 Honors	Precalculus Hon.	AP AB Calculus
Advanced	Geometry Advanced	Algebra 2 Advanced	Precalculus Adv.	AP BC Calculus
IMP		IMP2 Honors	IMP3 Honors	IMP4 HOnors

### Other 10<sup>th</sup> grade option

Algebra 1: For students who need to strengthen their algebra skills before taking Algebra 2

### Other Senior Options

- Statistics
- AP Statistics
- Perspectives of a Mathematical Mind (21<sup>st</sup> Century Fund)
- Algebra Topics & Technology
- College Algebra Topics

## III. Course Placement Suggestions

To begin their math experience at BHS freshmen will take one of three courses: **Geometry Advanced (MA1040)**, **Geometry Honors (MA1030)**, or **Geometry (MA1020)**. Each of these courses is designed to accommodate individual interests and capabilities. The best advice I could offer for determining the 'right' math course for your child is to follow the advice of his or her 8<sup>th</sup> grade teacher and counselor. They know your child's learning style very well, are familiar with the high school math program and can thus match your child with the most appropriate math course.

In terms of curriculum, the 9<sup>th</sup> grade math courses are very similar. However, they do differ in three ways:

- Pace
- Amount of formal geometric proof
- Amount of algebra

The primary difference in the courses, however, lies in the type of instruction that is utilized. The students in Advanced Geometry complete independent investigations on a daily basis and, thus, must possess a certain level of academic independence. In Geometry, on the other hand, the teachers use direct instruction much more frequently. Geometry Honors lies somewhere in the middle, incorporating both of these types of instruction. To help you see which course best meets the academic needs of your child I have included a description of a student who is likely to be successful in each of the courses. Please do not hesitate to contact me if you have any further questions.

In order to be successful in **Geometry Advanced** a student should:

- Really like thinking about problems and how to solve them
- Have very well developed analytical reasoning and computational skills
- Have really good math intuition
- Be able to pick up concepts quickly and easily
- Be able to solve complex problems by making connections between many concepts
- Be able to apply concepts to problems s/he hasn't seen before
- Understand math both conceptually and procedurally
- Want to work independently
- Not need or want a lot of direct instruction
- Be able to work cooperatively in small groups
- Say to the teacher, when s/he is stuck on a problem: "Don't tell me. Just give me a hint."
- Be super conscientious, mature and diligent in his/her approach to school

In order to be successful in **Geometry Honors** a student should:

- Like and need direct instruction
- Be able to reason well analytically
- Have good organizational and study skills
- Ideally say to the teacher, when s/he is stuck on a problem: "I don't get it, can you help me get started." But more often say, "Can you show me how to do it? "

In order to be successful in **Geometry** a student should:

- Need a very structured class environment
- Respond well to direct instruction
- Need time to develop analytical reasoning and algebraic skills
- Be a responsible and diligent student who is able to complete daily homework assignments



# Brookline High School

Science Department

115 Greenough Street

Brookline, MA 02445

(617) 713-5365

Dear Parents of 8<sup>th</sup> Graders,

While deciding on which science courses your child will take over the four years at BHS, the 9<sup>th</sup> grade is the most simple. The courses are *Physics 1* or *Physics 1 Honor*. After that, students take *Chemistry* and then *Biology* with additional choices based on pedagogy as well as level of difficulty. Then, there are 15 optional courses to choose from, as you can see in the table below.

To help decide which course to take, I offer the following statements and an example of the type of learning for each course, on the back of this page:

- *Physics 1* is for all students. The rigor is in understanding the concepts profoundly. Problems are solved step-by-step.
- *Physics 1 Honor* is for all students. The rigor is in linking concepts together. Students who prefer this course are inquisitive about science, and they take pride in solving multi-step problems for themselves. Algebra is used to a higher degree.
- While the level of math skills is an indicator for the level of physics, it is not necessarily an obstacle for selecting any science course. Students may be in *Geometry Honor* and *Physics 1*, however, these students are often ready for *Physics 1 Honor*. Students should mainly select their choice based on their level of curiosity in science.
- Also, please know that we do not track students into levels. Students have gone from *Physics 1* to *AP Physics* by senior year.

Sincerely,

Ed Wisner

Curriculum Coordinator for Science 9-12

[Ed\\_Wisner@brookline.k12.ma.us](mailto:Ed_Wisner@brookline.k12.ma.us)

## BHS Science Course List and Sequence

<b>BHS Science Course List and Sequence</b>	
<u>9<sup>th</sup> Grade</u>	<u>Optional Courses</u>
Physics 1	Physics 2 Honor
Physics 1 Honor	AP Physics – 1&2
	AP Physics - C
<u>10<sup>th</sup> Grade</u>	Chemistry 2 Honor
Chemistry 1	AP Chemistry
Chemistry 1 LBC Honor	Biology 2 Honor
Chemistry 1 Honor	AP Biology
	AP Environmental Science
<u>11<sup>th</sup> Grade</u>	Body/Mind Honor
Biology 1	
Biology 1 BSCS (Standard or Honor)	
Biology 1 Honor	
	Anatomy & Physiology (S/H)
	Astronomy (S/H)
	Marine Biology (S/H)
	Meteorology (S/H)
	Forensic Science (S/H)
	Genetics (S/H)

BROOKLINE HIGH SCHOOL  
 115 Greenough Street  
 Brookline, MA 02445  
 617-713-5000



February 2015

Dear Parents of 8<sup>th</sup> Graders:

At Brookline High School, in most subjects, we level classes. We designate some classes ‘standard’ and some ‘honors’ (and at the upper grades, in some subjects, we add ‘AP’). The purpose of this letter is to explain how and why we do this, and to help you to understand the placement recommendation made by your child’s current Social Studies teacher for 9<sup>th</sup> grade.

The main differences between standard and honors in 9<sup>th</sup>-grade Social Studies are described in the following chart, originally composed by Andrew Cook at Heath School:

	<i>Standard</i>	<i>Honors</i>
<i>Class Size</i>	18 maximum	25 maximum
<i>Nightly Homework Reading</i>	3-4 textbook pages	5-6 textbook pages
<i>Writing Assignments</i>	Shorter (2-3 pages) and less frequent	Longer (4-5 pages) and more frequent
<i>Use of non-textbook sources for reading and instruction</i>	Part of curriculum; shorter and fewer primary and secondary sources	Part of curriculum; longer and more difficult primary and secondary source selections
<i>Class support and scaffolding of assignments</i>	Class work and assignments typically have more structure – explicit steps to follow, more in-class work	Greater expectation of independence – less in-class support and structure
<i>Pace and depth</i>	Slightly slower with less depth	Slightly faster with more depth

As you can see, the main structural difference between standard and honors World History is class size. That reflects the fundamental philosophical difference between standard and honors instruction – in a word, independence. While we work on content literacy skills at every grade and level, in honors classes, we assume that students can read independently with a fair degree of comprehension and accuracy. Likewise, we assume that students have facility in applying concepts to cases and in generalizing from specifics. Teachers in standard classes, by contrast, will work more frequently and explicitly on skill development. They will break down and supervise reading, note taking, and writing. Formal essays will have lots of parts completed in class. And teachers will spend lots of time monitoring the progress of individual students. Hence the

smaller classes. In honors, teachers assume that students have the literacy, conceptual, and organizational skills to work much more independently, and with less direct supervision of progress – hence the larger classes.

This difference is substantial, and for some kids, it makes all the difference. That said, keep in mind what's common: the curriculum, the textbook, and the faculty. First, all students at BHS, regardless of level, will study the classical civilizations of the pre-modern era: China, India, Christian Europe, and Islam. Each will learn about the improbable rise of the West and its consequences from the Age of Exploration and the conquest of the New World to the scientific revolution and Enlightenment. Second, all 9<sup>th</sup> graders at BHS will be using the same reasonable, though still imperfect, textbook. Third, everybody in the Social Studies Department teaches both honors and standard classes. We don't have designated 'honors' teachers or 'standard' teachers. (For example, all of this year's AP US History teachers also currently teach standard classes; one of them has two 9<sup>th</sup> grade standard sections.)

The goal of level placement is to get the challenge in the sweet spot. There's nothing more demoralizing for a young person than to sit in a room watching other kids discuss something they don't understand. Second to this is the agony of sitting in a room while kids learn painstakingly how to master something you already know how to do. We level so that kids can get the challenge where they need it – so that they can be stimulated and provoked and can experience success after a reasonable amount of effective effort.

Your child's current Social Studies teacher is the expert on his or her progress and current abilities in the subject. The district gives you the authority to override their judgment, but that's not a decision to make lightly. I particularly urge you to give me a call should you be considering making that decision. And, of course, feel free to get in touch any time you have questions or concerns about your child's education in Social Studies.

Best Wishes,

Gary Shiffman  
Social Studies Curriculum Coordinator  
gary\_shiffman@brookline.k12.ma.us  
617-713-5045

**BHS World Language Placement for Grade 9 (01/22/15)**

[Agnes\\_Alberola@brookline.k12.ma.us](mailto:Agnes_Alberola@brookline.k12.ma.us)

617-713-5094

All students need at least two years of WL (in the same language) to graduate from BHS.

Most colleges want to see a progression of at least three years of a WL.

The vast majority of our students take four years of WL.

Don't wait until Sophomore year to begin.

**1) Students can begin any language at BHS:**

WL0100 Chinese I

WL1100 French I

WL5100 Japanese I

WL3100 Latin I

WL4101 Beginning Spanish I (two teachers and small class size)

WL4130 Beginning Spanish (1&2) Honor (See #2 below) taught with Beg. 1 students if low enrollment

**2) Students who have successfully studied a WL for at least two years can go in an accelerated Spanish program.**

WL4130 Beginning Spanish (1&2) Honor. In that class, students cover the first two years of the language in one year. If enrollment is low they are mixed with students in Beg. 1 and provided with independent study material to cover Beg. 2 curriculum.

**3) Students who have studied a WL in grade 8 can continue studying the same language:**

Please use the recommendation indicated by the grade 8 teacher. Changes made in September may not be possible due to classes being full.

For Spanish, the most typical recommendations are:

WL4220 Intermediate Spanish II

WL4230 Intermediate Spanish II Honor

WL4240 Intermediate Spanish II Advanced (used to be named AP)

For French, the most typical recommendations are:

WL1220 French II

WL1230 French II Honor

WL1240 French II Advanced (used to be called AP)

For Chinese, the most typical recommendations are:

WL0200 Chinese II

WL0230 Chinese II Honor

**4) Heritage speakers or native speakers can sometimes study that language at BHS.** They need to contact Agnès Albérola to decide if we offer the right course for them and which level would be best.

**5) Students who want to take two WL:**

In very rare instances, students might be able to take two languages at BHS, provided that no new classes need to be created to accommodate these additional students, and provided that the two language classes fit in the students' schedule without prejudice to the inclusion of required courses such as 3 years of elective courses over their four years of high school. Make sure to let your elementary school guidance counselor know which language is the first choice. In case of conflicts, priority will go to students' first choice.

1/14/2013	Japanese	Chinese	Spanish	French	Latin
<b>A successful learner has or should be developing...</b>	Good fine motor skills for writing characters, strong reading skills, visual learning skill, enjoy learning unique culture. Loves learning Japanese pop culture and history.	Good fine motor skills for writing characters, strong reading skills, visual learning skills	Strong verbal skills, good listening comprehension, and understanding of grammar	Strong verbal skills, good listening comprehension, an understanding of grammar	Good reading comprehension skills (analysis of grammatical relationships and context.) Enjoyment of learning new words.
<b>Challenges</b>	From the start: Recognition, memorization, and writing of characters are crucial.	Memorization and writing of characters are crucial.	Responding to speaking prompts in Spanish and getting used to a grammar that is different from English (verb tenses, etc.)	Responding to speaking prompts in French, getting used to a grammar that is different from English, and to a pronunciation that does not correspond to the spelling	Extracting meaning from a language w/ grammar different from English: endings of words change according to grammatical function.
<b>Writing Skills</b>	Very important: memorization and production of characters starting the first month. Grammar rules are relatively simple compared to romance languages.	Very important: memorization and production of characters starting the first month. Visual clues are provided in early stages.	Attention to a different spelling and grammar is needed	Attention to a different spelling and grammar is needed	Writing assignments are usually translations based on material covered in class. A few original compositions.
<b>Reading Skills</b>	Recognition of characters starting first month.	Recognition of characters starting first month.	Relatively easy thanks to words similar to English and similar word order.	Relatively easy thanks to words similar to English and similar word order.	Students use grammar (cases) and context to understand reading. Students learn many English SAT-words based on Latin roots. Relatively easy: 60-80% of English words come from Latin
<b>Listening Skills</b>	Many cognates and words that are similar to English. Own alphabet for foreign words.	No words similar to English (cognates) to help guess the meaning.	Heavily emphasized, most of the instruction and activities are in Spanish. Many words similar to English.	Heavily emphasized, most of the instruction and activities are in French. Many words similar to English.	Hearing and reading Latin read aloud supports learning. Most directions are given in English. Many English cognates introduced.
<b>Speaking Skills</b>	Most Japanese sounds are also found in English and pronunciation is very simple for English speakers. No tones used to differentiate between words..	Most Chinese sounds are also found in English. Tones (voice going up/down) can change the meaning of a word. Students will use pinyin (English letters) to pronounce Chinese words.	Heavily emphasized, a willingness to talk is an asset. Spanish is generally easy to pronounce for English speakers.	Heavily emphasized, a willingness to talk is an asset. French has sounds that are not used in English, so the pronunciation presents a challenge.	Learning to read Latin aloud is easy because it is phonetic, and close to English pronunciation. Students learn some phrases and ask/answer simple questions in Latin.
<b>Assessments</b>	Initial emphasis on reading and writing but quickly emphasis on speaking and listening builds. Using Japanese in authentic situations is critical.	Reading characters; at first writing in pinyin, but later writing in characters; speaking; listening	4 skills are assessed in situations that reflect "real life."	4 skills are assessed in situations that reflect "real life."	Reading comprehension, vocabulary and grammatical relations are assessed in situations that reflect "real Roman life"..



-BROOKLINE HIGH SCHOOL  
115 Greenough Street  
Brookline, Massachusetts 02445



**Curriculum Night – Grade 8 Parents  
Health and Fitness Department  
2-4-15**

Health and Fitness is designed to give students skills and knowledge that will allow them to make healthy decisions that will last a lifetime.  
This is the one course that is just about them.

Research tells us that parents are the most important factor in reducing risk behaviors. We encourage conversations at home (sometimes through a homework assignment) about our current health topics. Please visit B-PEN.org (Brookline Parent Education Network) where you'll find valuable guidance and support.

**Health and Fitness is required for one semester per year.**

Grade 9 Integrated Health and Fitness (HF0900) meets 4 days/week for one semester; and is taught by teachers licensed in both Health Education and Physical Education. It is an integrated model, coordinating 2 classroom and 2 physical activity experiences each week.

**This course emphasizes understanding choices and consequences of those choices throughout all of our content units. Students discover how to be resilient.**

**Samples of skills practiced include:**

Refusal skills  
Listening  
Assertiveness  
Coping Skills  
Communication  
Decision Making  
Goal Setting  
Media Literacy

**Content Areas:**

- 1. Cardiopulmonary Resuscitation (CPR)-** opportunity for certification
- 2. Nutrition**
- 3. Sexuality Education-** relationships, review anatomy/physiology, prevention, sexually transmitted infections
- 4. Substance Awareness and Violence Prevention-**
  - Skills to resist pressure, bystander behaviors, laws learned through recently piloted curriculum, Class Action by Project Northland (an exemplary model approved by the State).
  - Supported by our Community Police Officer, substance abuse/violence prevention staff, and peer leaders.
- 5. Mental Health  
Stress Management**
  - Understanding stress

-Controlling stress (mind-body relationship)

**Suicide Prevention:**

Break Free From Depression Curriculum (Children's Hospital)

**Activity Days: 2x/week**

**Adventure:**

Group challenges, problem-solving activities, bouldering on our traverse walls and boulder rock wall

**Introduction to the fitness center:**

Nautilus, Free Weights, Cardiovascular machines (using new H7 Polar Heart Rate Sensors and related software)

**Square and line dance:**

Focus on social skills

**Introduction to yoga:**

Breathing, postures, guided relaxation

**IN GRADES 10-12, WE ENCOURAGE STUDENTS TO TAKE ADVANTAGE OF OUR UNIQUE OPPORTUNITIES:**

Weight Training and Cardiovascular Fitness - develop personal fitness plans

Tennis specialization

Swim class for all levels

Yoga

Rock Climbing

The Revolution- Improving Brain Performance (cardio. class, meets daily)

Lifetime Activities- explore a variety of activities

Peer Education and Fitness

Dance

**INTRAMURALS**

**M, W, Th 3-4:30 generally**

Indoor soccer, basketball, badminton, yoga, table tennis, rock climbing, spinning, and fitness center

**ATHLETICS**

42 sports and 73 teams

We have an athletics orientation for all sports on March 10 at 7:00 in the auditorium. Students and parents welcome.

**PLEASE CALL TEDDI JACOBS WITH ANY QUESTIONS PERTAINING TO HEALTH AND FITNESS at 617-713-5291.**

**Thank you!**

BROOKLINE HIGH SCHOOL  
115 Greenough Street  
Brookline, MA 02445  
617-713-5000



### **Brookline High Performing Arts**

Dear Parents and Guardians,

The Performing Arts Department at Brookline High offers students many opportunities to develop their artistic technique and creative expression through a rich array of courses in drama, dance, and music. We have classes for students with all levels of experience, as well as for those who have never before taken a performing arts course. We encourage students to continue to develop skills they have been working on in elementary school as well as try something they have never done and discover a new passion.

While some of our courses have prerequisites, many are open to all. Here below you will find a list of classes open to all students, as well classes 8<sup>th</sup> grade students can audition in to. Below this list of classes, are auditions times and details for students to advance place into higher-level classes. For more a more comprehensive list of classes with descriptions, please refer to the Performing Arts section of the BHS Course Catalog.

Please contact me if you have any questions.

Sincerely,

Kenny Kozol  
K-12 Performing Arts Coordinator  
kenny\_kozol@brookline.k12.ma.us  
617-713-5228

**Dance Classes:**

Beginning Dance (full year)	Open to all students
Beginning Dance 1-A (half year)	Open to all students
African, Latin American and Hip Hop Dance	Open to all students

**Drama Classes:**

Drama I (full year)	Open to all students
Drama I-A (half year)	Open to all students
Backstage: Powertools and Special Effects (stage design and creation, lighting and effects)	Open to all students

**Music Classes:**

Jazz/Rock Ensemble	Open to all students
Jazz Band/Music Collective	By audition
Digital Music Production and Composition	Open to all students
Camerata Honor (chorus)	By audition
Concert Choir	Open to all students
Piano Class	Open to all students – for students with little or no prior piano experience
Concert Band	Open to all woodwind, brass and percussion students with previous school or private instruction on instrument
Orchestra	Open to all violin, viola, cello and bass students with previous school or private instruction
Intro to World Music: Africa, Latin America and the Caribbean	Open to all students

### **Advance level Performing Arts course auditions:**

#### **Dance:**

Friday, March 6 and Friday March 13, (students only need to come to one of these days), 3:15pm to 4:30pm in Dance Studio One (Downstairs in the BHS Tappan Street Gym). Advanced Placement Audition for any student who wishes to take an upper level dance class – Intermediate, Advanced, or Choreography - and has not already taken the prerequisite BHS dance classes. Students only need to attend one of these days. Students should go to the BHS Dance Studio One (Downstairs in the BHS Tappan Gym) and dress properly for a movement class. No dance shoes necessary. You can simply show up at one of the audition days ready to dance, however, if you would like more information, please contact Mr. Polos at [christien\\_polos@brookline.k12.ma.us](mailto:christien_polos@brookline.k12.ma.us), or at 617-713-5217.

#### **Camerata Honor (chorus):**

Students who wish to audition for Camerata should set up a specific 30-minute time from one of the dates/times here below either by contacting Mr. Driscoll via email at [mike\\_driscoll@brookline.k12.ma.us](mailto:mike_driscoll@brookline.k12.ma.us), or sign up for a time slot on the bulletin board outside the Chorus Room (324) at Brookline High. Students should expect to be at the audition for 20-30 minutes. The audition consists of singing scales to check for vocal range/voice part, singing "My Country 'Tis of Thee" (or Happy Birthday), singing back pitches played on the piano, sight singing of a melody and a written diagnostic exam of basic music theory.

Tuesday, March 10, 4-5:30pm  
Wednesday, March 11, 3-5:30pm  
Thursday, March 12, 3-5:30pm  
Friday, March 13, 3-4pm

#### **Jazz Band/Music Collective:**

March 9, 3:00pm to 4:00pm in the BHS Band Room (room 120 – next to the Cafeteria)

March 11, 3:00pm to 4:00pm in the BHS Band Room (room 120 – next to the Cafeteria)

\*Students only need to attend one of these days.

\*Please request additional audition information sheet from music teacher or writing to Carolyn Castellano at [carolyn\\_castellano@brookline.k12.ma.us](mailto:carolyn_castellano@brookline.k12.ma.us), or see Performing Arts Auditions letter.

#### **Needs Improvement (Drama)**

Auditions for Needs *Improvement* will be on Thursday, March 12, from 3:00pm - 4:30pm. Students auditioning do not need to prepare anything. Everyone will audition together, and can just show up. 8<sup>th</sup> grade students are not eligible for this class, but are welcome to participate in this hand-on, fun audition to learn a bit more about what we do in Drama at BHS.

# Visual Arts Courses

2015-2016

## Begin (Level 1)

Drawing 1

Jewelry and Metals 1

Digital Design Studio 1

Photography 1

Documentary Film Making 1

Drawing for Understanding in Field Science

Painting 1

Printmaking 1

Sculpture 1

Art Studio

Digital Video 1

Comic Drawing

Ceramics 1

TV Production 1

Animation 1

Some Notes from "A Recipe for Artful Schooling" by Eric Booth (Educational Leadership February 2013)

### INTRINSIC MOTIVATION

You can't compel someone to create, or make a new, personally relevant connection, or learn from experience—the fundamental acts of learning—through extrinsic motivators.

They must choose to invest themselves to truly learn and understand. This need for creative engagement applies to all fields, including science, technology, engineering, and mathematics, as well as the arts.

.... in arts education we dedicate a lot of energy to nurturing intrinsic motivation.

It requires an act of courage by students to bypass all the entrenched systems of reward and punishment to engage in activities that have no correct answers and that reveal something about who they are.

### THE ESSENTIAL SKILLS OF CREATIVITY

#### BRAINSTORMING

"If you want to get a great idea, first get a lot of ideas." Good arts educators develop not only student's capacity for multiplicity, but also their pleasure in the process. As students learn to play with generating lots of possibilities, using this skill comes to feel good.

#### DIVERGENT THINKING

Divergent thinking is the capacity to come up with original, unexpected, or surprising ideas. It doesn't merely celebrate the originality aspect of creativity but rather highlights the ideas that are unexpected *and* valuable.

#### METAPHORIC THINKING

Metaphoric thinking connects two unusually disconnected categories of things in a way that provokes meaning. A good metaphor makes a ringing impression.

All strong communicators use metaphors effectively.

#### FLEXIBLE THINKING

Artists are flexible thinkers. They seamlessly go back and forth between considering parts and wholes.

Artists are also masters at playing with multiple points of view.

#### MULTISENSORY ENGAGEMENT

The arts remind us that the human body is more than a gizmo for transporting a head.

Good arts educators guide students to learn by doing something physically, "on your feet," ....

#### EMPATHY

Arts educators can provide teachers with practical tools to address empathy. When students make things together in a well-prepared project, taking modest risks together, documenting the process, and switching roles along the way, they interact in new ways.