Are YOU Teaching or Educating?
A Beginner’s Guide to Interdisciplinary Education

What is Interdisciplinary Education?
Interdisciplinary Education is the integration of multiple disciplines in order to accomplish a common goal.
The common goal could be:
- Finding the solution to a “real world” problem
- Meeting certain curriculum criteria
- Developing student interests

How and Why does Interdisciplinary Education work?
(Remember the box and the spider web, xenon and the color wheel!)
There are 5 philosophies of education. Two teacher-centered, and three student-centered. More and more research is coming out to show that student-centered philosophies are more effective teaching methods than teacher-centered ones. Those philosophies are:
- **Progressivism** – stresses experimentation, scientific method, intrinsic motivation. Teachers encourage problem solving and action.
- **Social Reconstructionism** – stresses reforming society, community, democracy. Teachers facilitate learning, not dictate it.
- **Existentialism** – stresses free will, individual development, subjective assessment of success. Teachers allow the students to drive the learning process.

All of these encourage students to get involved and take action in their own educational process instead of being handed information for rogue memorization.

The brain has a special way of learning and remembering. It makes connections between neurons, which are called neural connections. These connections build over time and through repeated use. The more the connections are used, the stronger they get, which leads to faster recall of information. They form webs of connections, and the more connections a neuron has to other neurons, the more pathways one has to remembering a piece of information. A greater amount of neural connections also leads to longer retention of stored information.

How can YOU apply Interdisciplinary Education?
We all have certain criteria and curriculum goals that we as teachers have to meet. How can one meet the criteria of one subject while at the same time teaching multiple other subjects? It’s actually not as hard as you may think. It just takes some time, effort, and creativity.

Here are some simple steps for beginners:
- **Step 1: Identify your curriculum goals**
  What are the things you NEED to teach for your class? Make sure you don’t overlook these while your having fun planning group activities and field trips.
- **Step 2: Make connections and collaborate**
Look through other curriculums and try to find connections between their goals and yours. Collaborate with other teachers in your school to see if they can help you make connections and strategize. See if other teachers want to use your discipline in their classes as well. Maybe you can blend curriculums and follow a similar structure.

- **Step 3: Get creative**
  It takes time, effort, and creativity to be able to use interdisciplinary teaching methods as effectively as possible. If you’re stuck though, don’t hesitate to look up fun ideas on the Internet, or ask around. You can even email me!

- **Step 4: Educate!**
  You became an educator for a reason! Your top priority should always be to educate your students. Use the techniques and strategies learned today as a tool to ensure that your students come out with the best education they possibly can.

Some methods you could use to integrate other disciplines are:

- **“Real World” problem solving** – relate your subject matter to things that your students experience outside of school. These could be local, national, or global current events.
  - Relate Mathematics, Statistics and Economics to what is currently happening in the stock market.
  - Relate Politics and Literature to local newspaper articles that are covering elections, or popular social issues your area.
  - Relate Psychology and Biology easily, because the mind and body go hand-in-hand.

- **Student-driven activities** – involve the students by letting them explore their personalities, passions, interests, and aspirations. (If you teach high school, this is a very confusing time for students who are trying to find their own identities, and student-driven activities could help them work out personal conflicts.)
  - Relate their interests to Literature through personalized research projects.
  - Relate their hobbies to Science through openly creative projects or experiments.

- **Common Themes** – look for common themes or trends between disciplines.
  - Relate History to almost every other discipline through related times and dates.
  - Relate Physics, Chemistry, and Biology through the human body.

- **School-wide projects or events** – involve the entire school if you can.
  - Use a “knowledge fair” where students get to show off their ideas on how they were able to relate multiple disciplines to accomplish a goal.

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Group Activity!

Today we are going to practice applying our understanding of Interdisciplinary Education. Groups will work collaboratively and creatively to come up with at least 5 ways of relating their topic to various other disciplines. (You may repeat disciplines, or strategies. For example, If you had more than one way of relating history to science, or if you wanted to use multiple school projects to promote certain disciplines.) Groups will have 15 minutes to brainstorm, and then we will spend 10 minutes sharing our amazing ideas with the other groups! Let’s go!

Step 1: Introduce yourselves!
- What are everyone’s backgrounds, interests, disciplines?

Step 2: Brainstorm!
- Can you find a way to relate your topic to other disciplines? Some examples:
  - History
  - Math
  - Literature
  - Art
  - Physics
  - Biology
  - Music
  - Language
  - Chemistry
  - Economics
  - Politics
  - Psychology
- Can you think of some fun and interesting methods for doing so? Some examples:
  - School-wide projects/events
  - Current events
  - Popular culture
  - Experiments
  - Poetry
  - Role-play
  - Involving student’s aspirations/passions/interests
  - Solving “real world” problems in math or science.

Step 3: Share!
- Pick your group’s top 2 ideas and choose a presenter to share them with us.