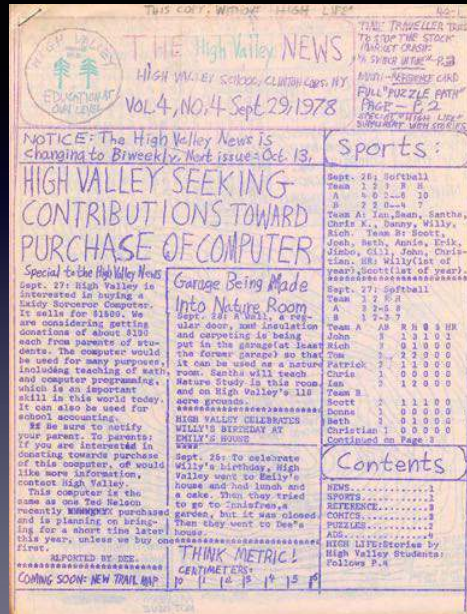
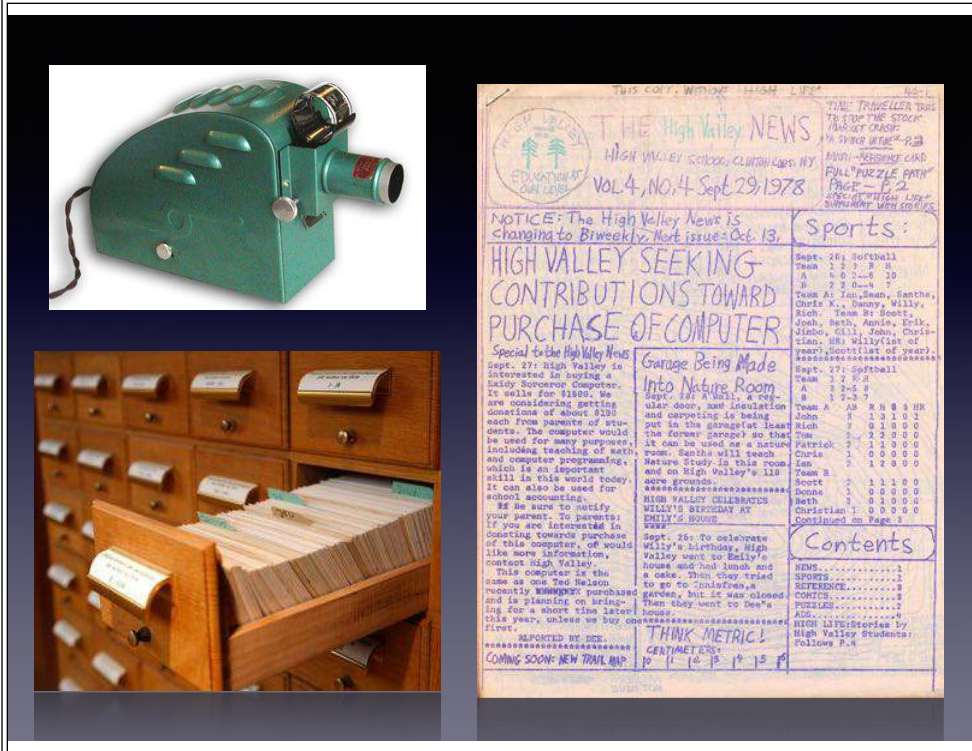


TEACHING IN THE
DIGITAL ERA

DIGITAL LITERACY

Sp Adobe Spark



A dramatic illustration of a dinosaur in a prehistoric landscape under a night sky with meteors and a large comet. The text "Digital Media" is overlaid in the upper left, and "OLD MEDIA" is overlaid in the lower left.

OLD MEDIA



Challenge for teachers:

What happens in schools, now that life's become an open book test?

Who is using the technology?



How are students using technology?



Create

Consume



Is BYOD leveraged
as an asset
or considered
a distraction?



I'll share five ideas for
teaching in digital era



Idea #1:
We need to be teaching
a new literacy



1. Find
2. Decode
3. Critically evaluate
information

4. Curate
5. Store
6. Responsibly share
information

Critically evaluate + responsibly share

Social Media

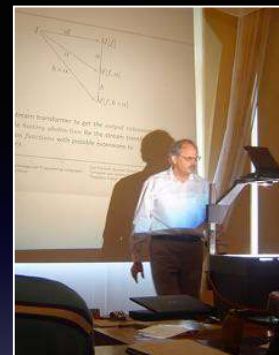


Social media promised us a voice for all

Instead we got troll farms and cyberbullies

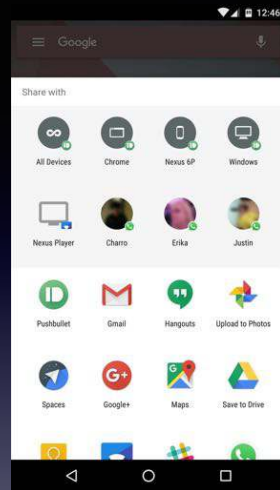
Idea #2: It's the information age

How does info move around the classroom?



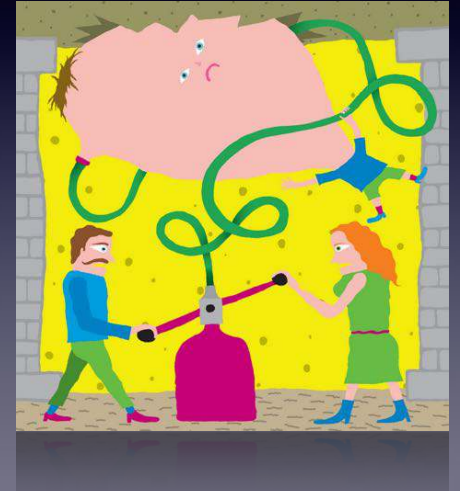
Inefficient info transfer





How do you share information?

Are we squandering valuable instructional time with basic transfer of information?



Sharing information is easy
- the tough part is assimilation



What is the best use of my face-to-face class time?



bit.ly/flipC

Idea #3: Make sure we are teaching higher-order thinking skills and using the best tools to support mastery



Higher order thinking

- **Creating** - generating new combinations
- **Evaluating** - justifying a decision or choice
- **Analyzing** - discovering patterns

Lower order thinking

- **Applying** - using info in a new setting
- **Understanding** - explaining idea or concept
- **Remembering** - recalling information

SECTION 3

READING WARM-UP

Objectives

- Explain how cells produce more cells.
- Describe the process of mitosis.
- Explain how cell division differs in animals and plants.

Terms to Learn

cell cycle
chromosome
homologous chromosomes
mitosis
cytokinesis

READING STRATEGY

Paired Summarizing Read this section silently to pairs, take turns summarizing the material. Stop to discuss ideas that seem confusing.

cell cycle: the life cycle of a cell. One of the structures in the nucleus that are made up of DNA and protein, in a prokaryotic cell, the main ring of DNA.

Figure 1 Bacteria reproduce by binary fission.

42 Chapter 2

The Cell Cycle

In the time that it takes you to read this sentence, your body will have made millions of new cells! Making new cells allows you to grow and replace cells that have died.

The environment in your stomach is so acidic that the cells lining your stomach must be replaced every few days. Other cells are replaced less often, but your body is constantly making new cells.

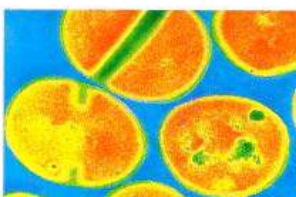
The Life of a Cell

As you grow, you pass through different stages in life. Your cells also pass through different stages in their life cycle. The life cycle of a cell is called the **cell cycle**.

The cell cycle begins when the cell is formed and ends when the cell divides and forms new cells. Before a cell divides, it must make a copy of its deoxyribonucleic acid (DNA). DNA is the hereditary material that controls all cell activities, including the making of new cells. The DNA of a cell is organized into structures called **chromosomes**. Copying chromosomes ensures that each new cell will be an exact copy of its parent cell. How does a cell make more cells? It depends on whether the cell is prokaryotic (with no nucleus) or eukaryotic (with a nucleus).

Making More Prokaryotic Cells

Prokaryotic cells are less complex than eukaryotic cells are. Bacteria, which are prokaryotes, have ribosomes and a single, circular DNA molecule but don't have membrane-enclosed organelles. Cell division in bacteria is called **binary fission**, which means "splitting into two parts." Binary fission results in two cells that each contain one copy of the circle of DNA. A few of the bacteria in **Figure 1** are undergoing binary fission.



"Summarize text in your own words."

Higher or lower order thinking?

Students can create and share higher-order summaries

Curate



padlet

Animate



Toontastic

Publish



BOOK CREATOR

Idea #4:

Is learning *personalized* by student choice and reflection on their progress?



A. understands how this information or skill **has some application in their life.**

B. has an opportunity to **follow their own process** rather than just learn “the facts.”

C. **reflect on their work** and their **progress as learners.**

Learning is relevant when the student:



Personalize learning with student choice

Content - what knowledge and skills will be studied?

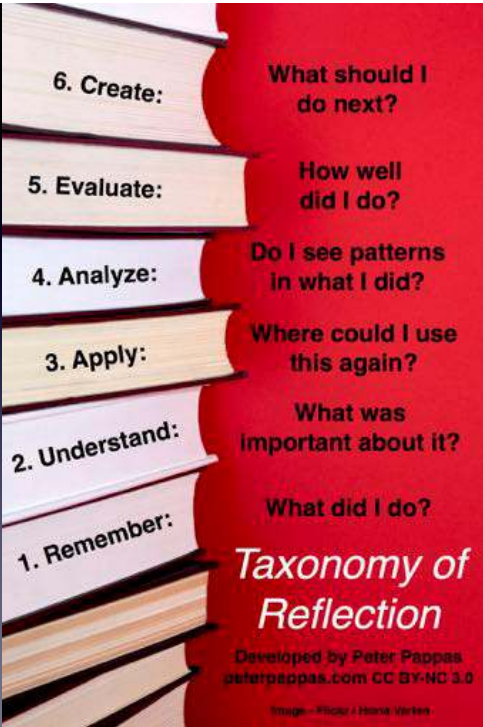
Process - what materials, procedures, etc will be used?

Product - what will students produce to demonstrate their learning?

Evaluation - how will the learning be assessed?



Good instruction provokes student reflection



My Taxonomy of Reflection

bit.ly/tax-re

With prompts for students, teachers, and leaders

Taxonomy of Reflection
Developed by Peter Pappas
peterpappas.com CC BY-NC 3.0

6. Create: What should I do next?

5. Evaluate: How well did I do?

4. Analyze: Do I see patterns in what I did?

3. Apply: Where could I use this again?

2. Understand: What was important about it?

1. Remember: What did I do?

Idea #5: Find the courage to be less helpful





Figure out my own approaches.

Share and defend my thinking.

Evaluate my progress.

Increasing student choice

Work as directed by the teacher.



Learning in the digital age

Task - Are students asked to do *genuine* higher order thinking?

Interaction - Does the learning include a social component?

Choice - Are students exploring their own options for content, process, product and assessment?