Technology Integration

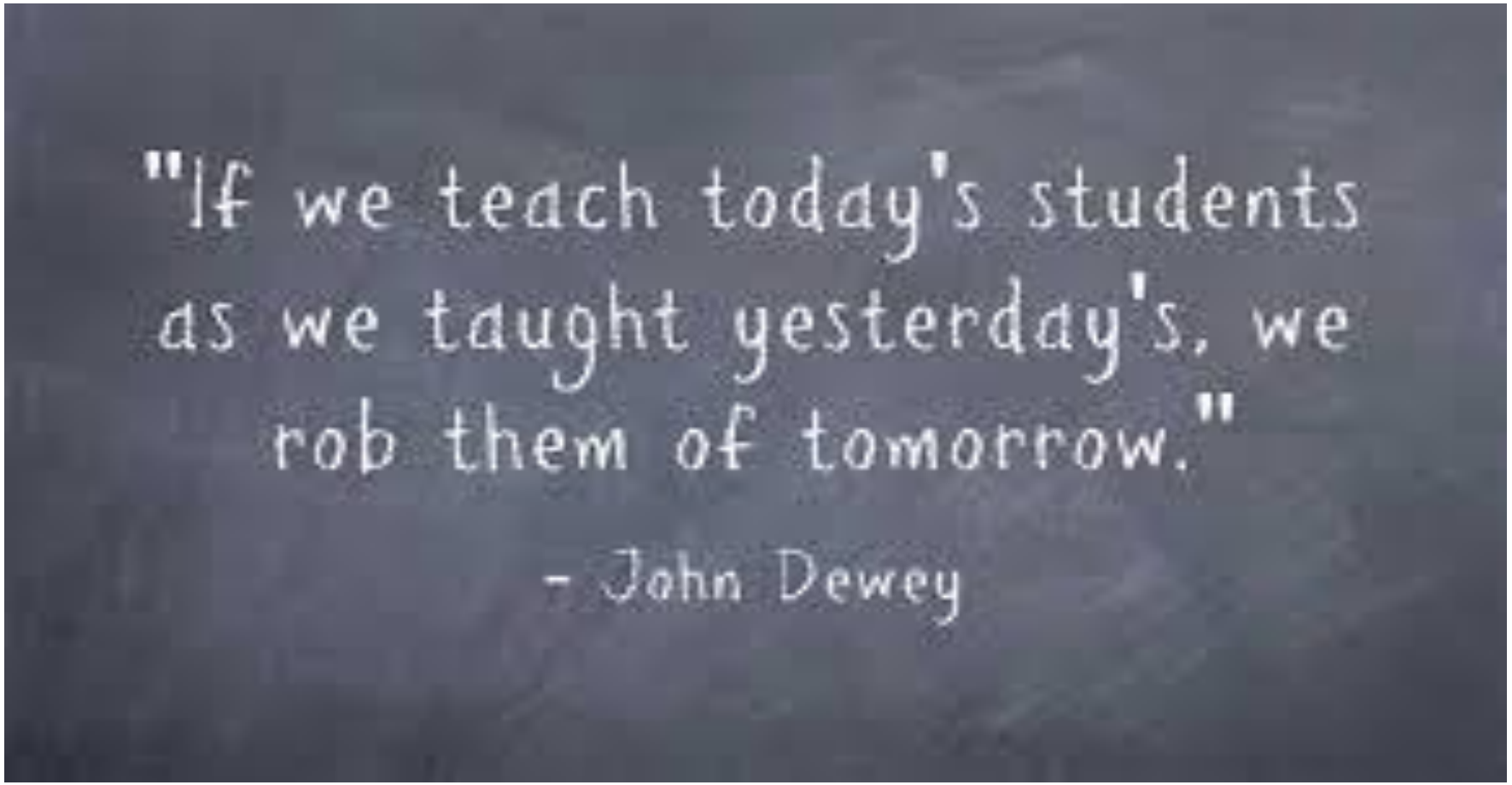
Success and Challenge of Technology Integration

Fusion Project Empower

Edu-Tech Immersion 2019

Dorenda Davis

Innovation – Change



Shift In Teaching

Our methodology has to change in order to successfully integrate technology.

Simply having ‘tools’ will not result in successful integration.

Our View Of Technology

If we view technology only as computer related devices - we limit ourselves and our ability to integrate it into our teaching.

What Is Technology

The tools and machines that help to solve problems or do new things; The techniques, skills and methods for solving a problem

21st Century Skills

- Personal and social responsibility
- Planning, critical thinking, reasoning, and creativity
- Strong communication skills
- Cross-cultural understanding
- Visualizing and decision-making
- Knowing how and when to use technology


THE 21st CENTURY LEARNER
Knowledge and Content
Collaboration
Critical Thinking and Reasoning
Technology Literacy
Self Direction
Information Literacy
Invention

21st Century Skills 4 C's

Sharing thoughts, questions, ideas and solutions.

Working together to reach a goal. – putting talent, expertise, and smarts to work.

Looking a problems in a new way, linking learning across subjects and disciplines

Trying new approaches to get things done equals innovation & invention

ALL IN ONE, REAL WORLD, INTEGRATED PROJECT DELIVERED IN THE CLASSROOM!

Student – Teacher Roles

- Student as learner
  - Student as teacher
- Teacher as teacher
  - Teacher as mentor and guide

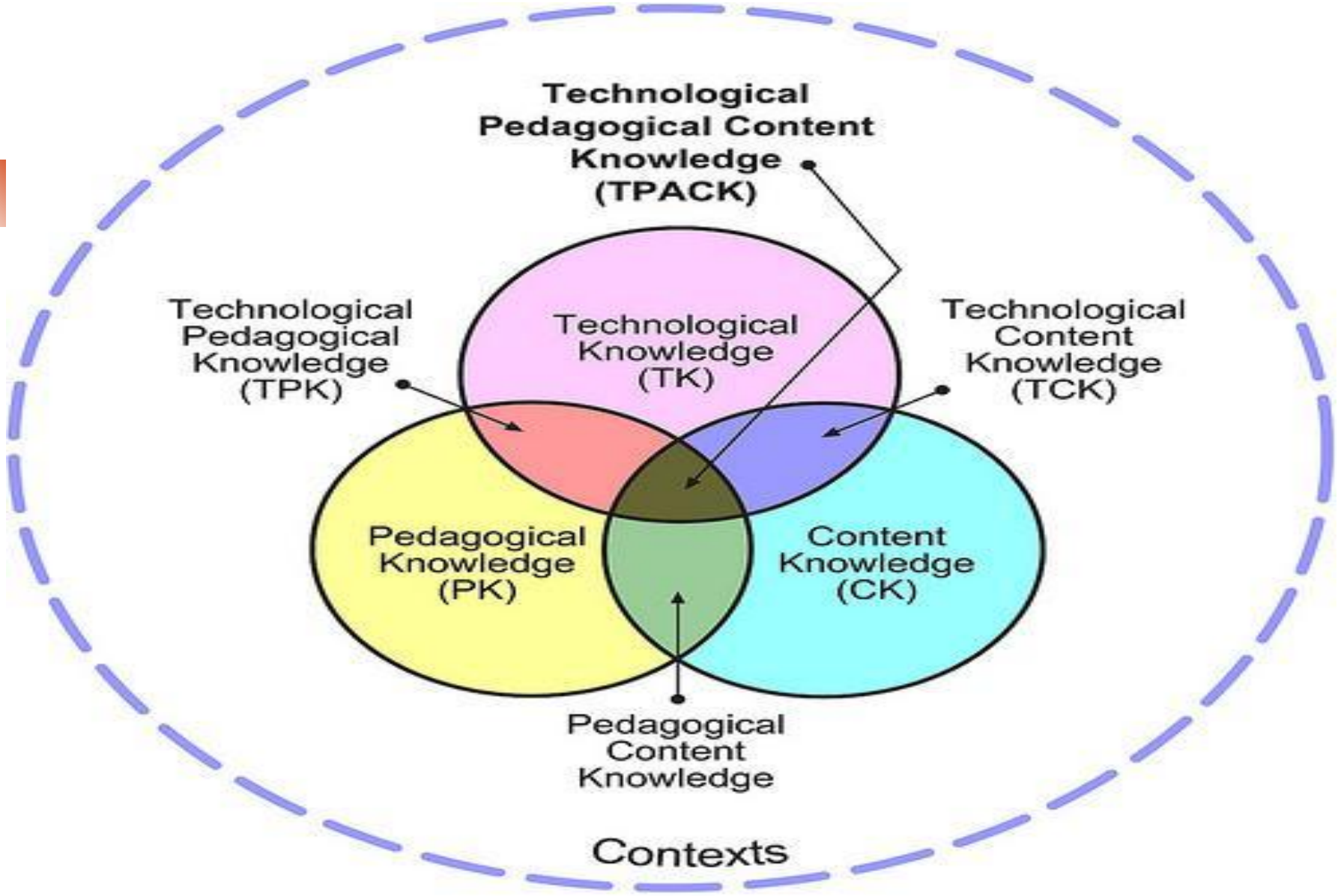
Preparing for Integration

- TPACK Framework - (Mishra, P., & Koehler, M. J. (2006)

What the teacher should know

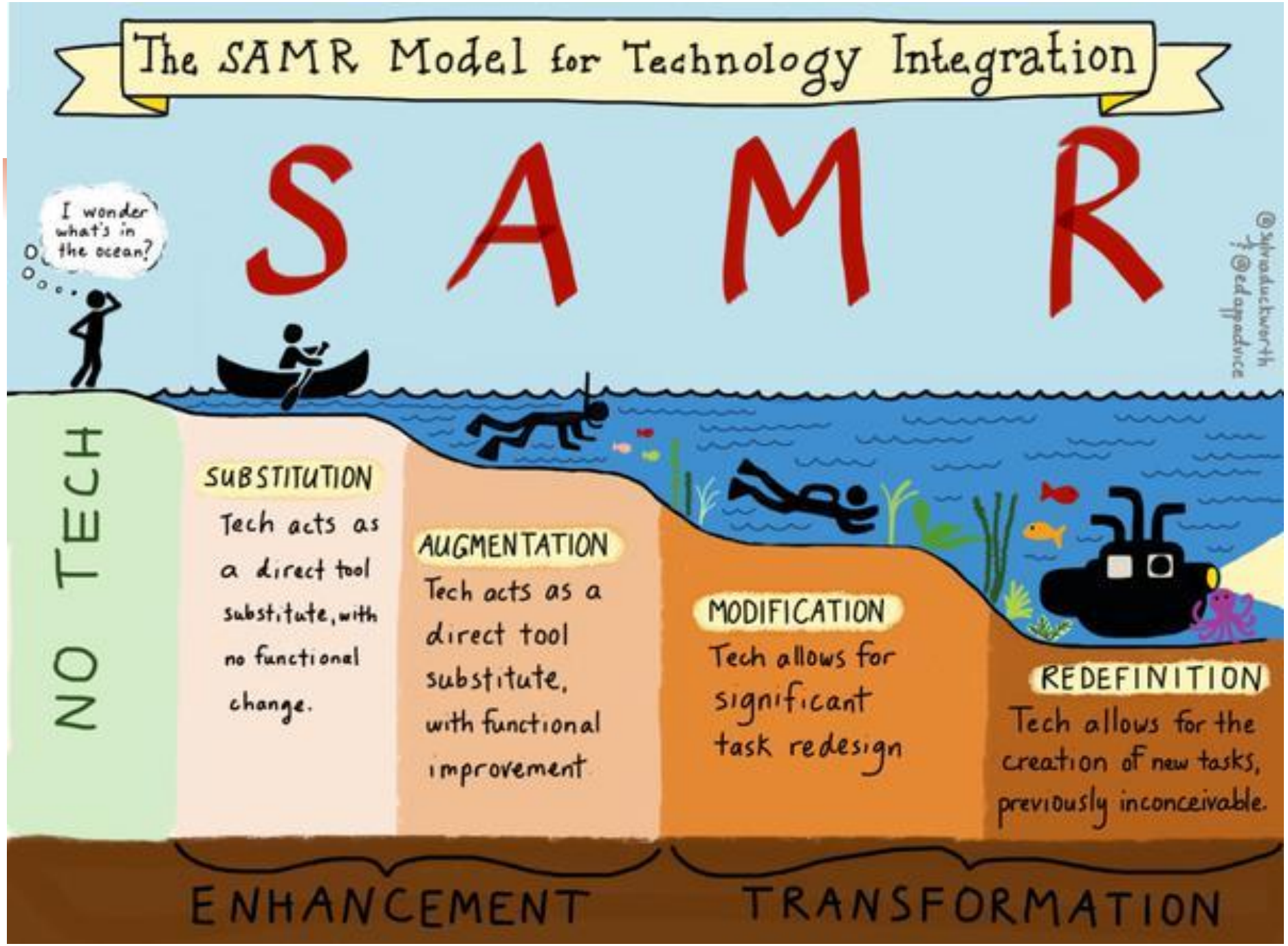
- SAMR Model - Dr. Ruben Puentedura

What the teacher can use


Technological Pedagogical Content Knowledge (TPACK)
Technological Pedagogical Knowledge (TPK)
Technological Knowledge (TK)
Technological Content Knowledge (TCK)
Pedagogical Knowledge (PK)
Content Knowledge (CK)
Pedagogical Content Knowledge
Contexts


Redefinition
Tech allows for the creation of new tasks, previously inconceivable
Modification
Tech allows for significant task redesign
Augmentation
Tech acts as a direct tool substitute, with functional improvement
Substitution
Tech acts as a direct tool substitute, with no functional change
Transformation
Enhancement

The SAMR Model for Technology Integration



What is Technology Integration?

- Media
- Models
- Visuals
- Software
- Hardware
- The Internet
- The Curriculum

Technology Integration Is …

- Access to primary source material
- Methods of collecting and recording data
- Learning strategies
- Storage of images, sound, and text
- Training for publishing and presenting

SAMR and Tech Integration

- Consider the higher level in the model.
- Let students know the model.
- Students decide the outcome.

Activity

- Create a technology integrated lesson for grade 2 on the water.
  - Water sources
    - how is it used,
    - conservation,
    - access to water
  - Consider concept as opposed to content only

Objectives

- Students will:
- Describe the process of the water cycle.
- Examine sources of water in The Bahamas
- Record and analyze rainfall levels.
- Inform others about the importance of water conservation.

First Considerations (TPACK)

- What is the content to be taught? (Content)
- What are the different methods to teach this? (Pedagogy)
- What technology resources are available to achieve objectives? (Technology Knowledge)
- Which 21st century skills can be developed? **(10 mins)**

Content

- What is it?
  - Tools to teach – ATT
    - Flipped Classroom
    - Self Discovery - Online Research
    - NearPod lesson on Water Cycle

Pedagogy

- Methods to teach it?
  - KWL
  - Inquiry Based
    - Flipped Classroom
    - Guided research
  - Cooperative Learning – Think-Pair-Share

Technology

- What tools are available for ATT?
- What tools are available for ATL?
  - Consider:
    - 21st Century Skills that can be addressed in the objectives
    - What skills can we help to develop at each stage in the unit/topic?
    - Web2.0 tools

Activity Tools

- What hardware and software applications are available to you and your students?
- What opportunities can you give your students to use technology in the curriculum?
- What challenges do your foresee for your situation?

SAMR & Technology

- What tools can be used to help students develop higher level skills?

Web 2.0 Tools/Resources

- Discovery Education - http://web2014.discoveryeducation.com/web20tools.cfm
- EdJUDO - http://edjudo.com/web-2-0-teaching-tools-links
- OEDB - http://oedb.org/ilibrarian/101-web-20-teaching-tools/
- Web 2.0 Cool Tools for Schools – http://cooltoolsforschools.wikispaces.com/Home
- Web 2.0 Guru https://web20guru.wikispaces.com/Web+2.0+Resources

Activities

- What do you think of when you hear the words “technology integration”?
- Read Broadband, Big Screen! Getting English Learners Up to Speed in Southeast Los Angeles
- Watch A Remarkable Transformation
- Read A 'Fantastic Super' Use of Technology
- How was technology integrated?
- What steps can you take to integrate technology into your teaching environment?