

**ORACLE**  
EDUCATION FOUNDATION



# **21<sup>st</sup> Century Learning**

## ***The New Balance***



***Bernie Trilling – Global Director, Oracle Education Foundation***

# What We'll Explore

***What*** must all students learn to be successful in the 21<sup>st</sup> Century?

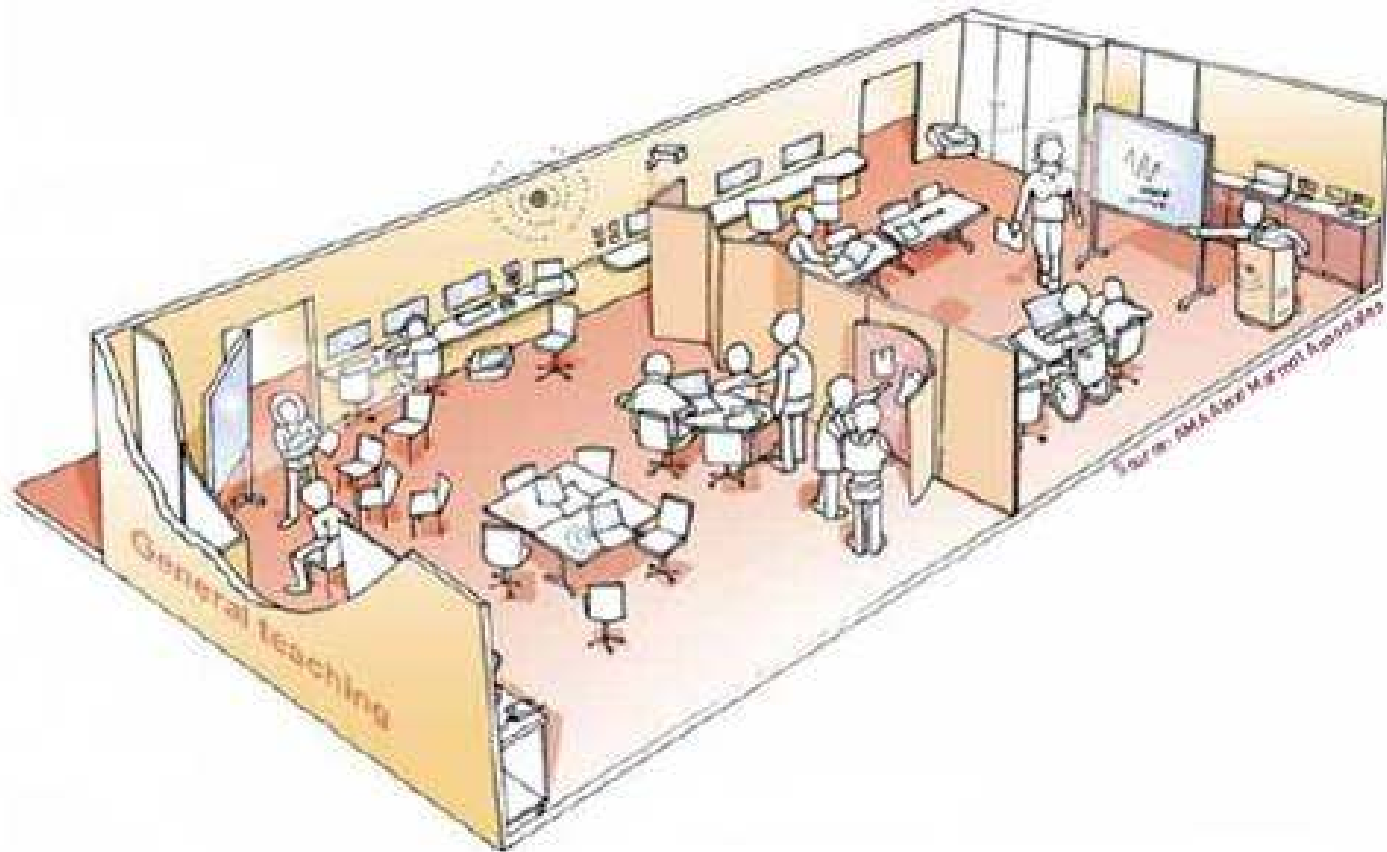
***How*** should they learn this - what does 21<sup>st</sup> Century Learning look like?

***Which*** practices and models will help us move toward a new balance?

# Out with the Rear-view Mirror!



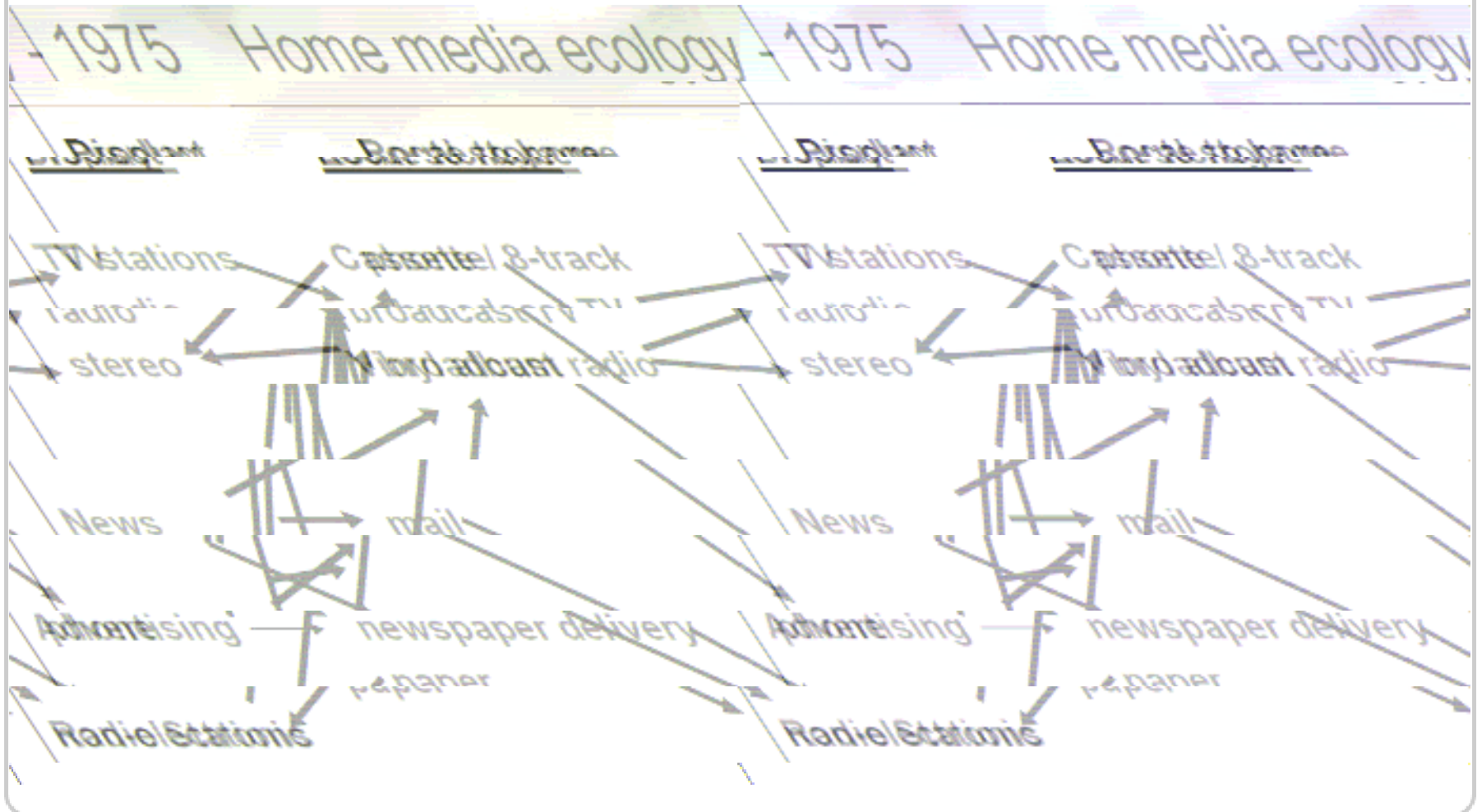
# Look Straight into the Future!



# Four Question Exercise

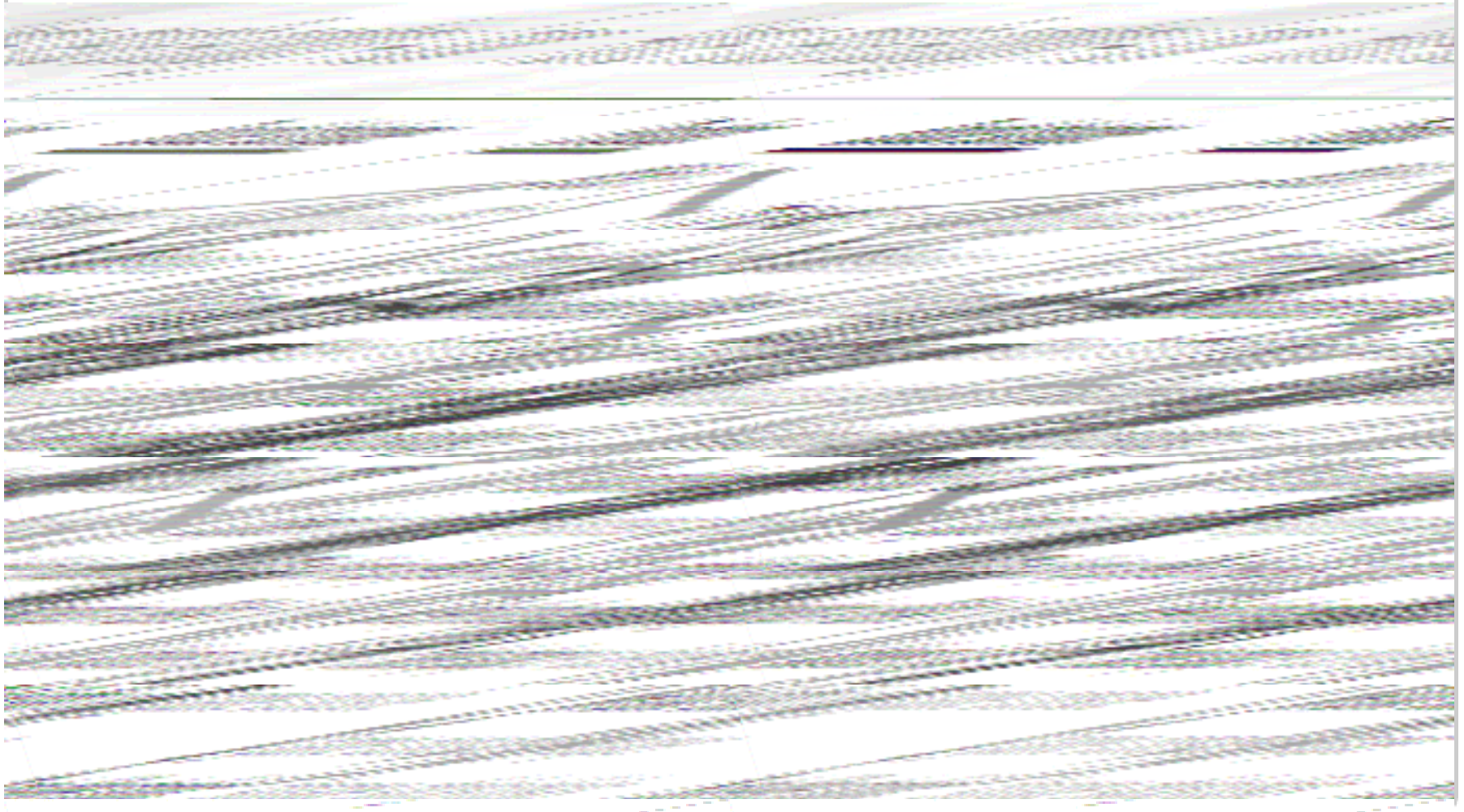
- 1. What will the world be like 20 years from now?***
- 2. What skills will your child need to be successful in that world?***
- 3. What were the conditions around your peak learning experiences?***
- 4. What would learning look like if it was designed around your answers?***

# 20<sup>th</sup> Century Tools





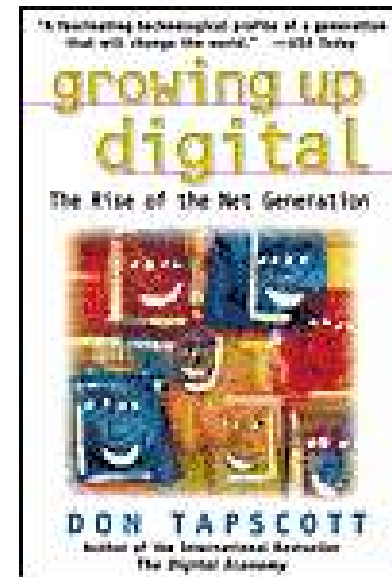
# 21<sup>st</sup> Century Tools



# 21<sup>st</sup> Century Learners

## Digital Learners

- ❖ **Multitasking**
- ❖ **Multimedia learning**
- ❖ **Online social networking**
- ❖ **Online info searching**
- ❖ **Games, simulations & creative expressions**





# 21<sup>st</sup> Century World

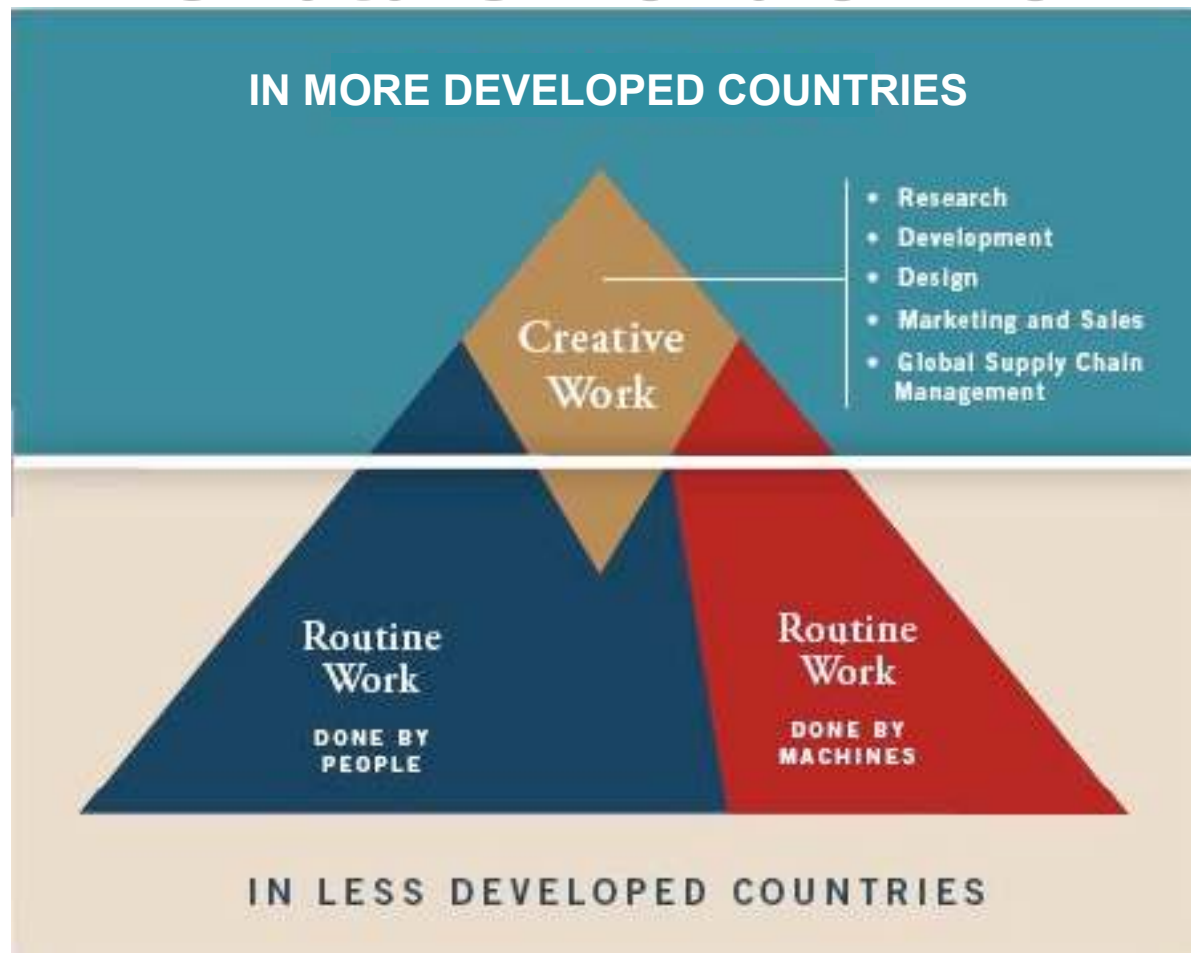
**The World is Flat!**



**and Knowledge Work can be done by  
skilled, connected workers anywhere!**

# 21<sup>st</sup> Century Work

## The Future World of Work



# 21<sup>st</sup> Century World

**The World is Flat!**



**and all knowledge workers everywhere  
need 21<sup>st</sup> Century skills to compete!**

**ORACLE**  
EDUCATION FOUNDATION

# Partnership for 21<sup>st</sup> Century Skills



Education



Ford Motor Company Fund



Junior Achievement



lenovo



sesameworkshop  
The nonprofit educational organization behind Sesame Street and so much more



# 21<sup>st</sup> Century Skills Needed!



# What Must be Learned?

## Learning & Innovation Skills

- Creativity & Innovation
- Critical Thinking & Problem-solving
- Communication & Collaboration

## Information, Media & Technology Skills

- Information Literacy
- Media Literacy
- ICT Literacy

## Life & Career Skills

- Flexibility & Adaptability
- Initiative & Self-direction
- Social & Cross-cultural Skills
- Productivity & Accountability
- Leadership & Responsibility

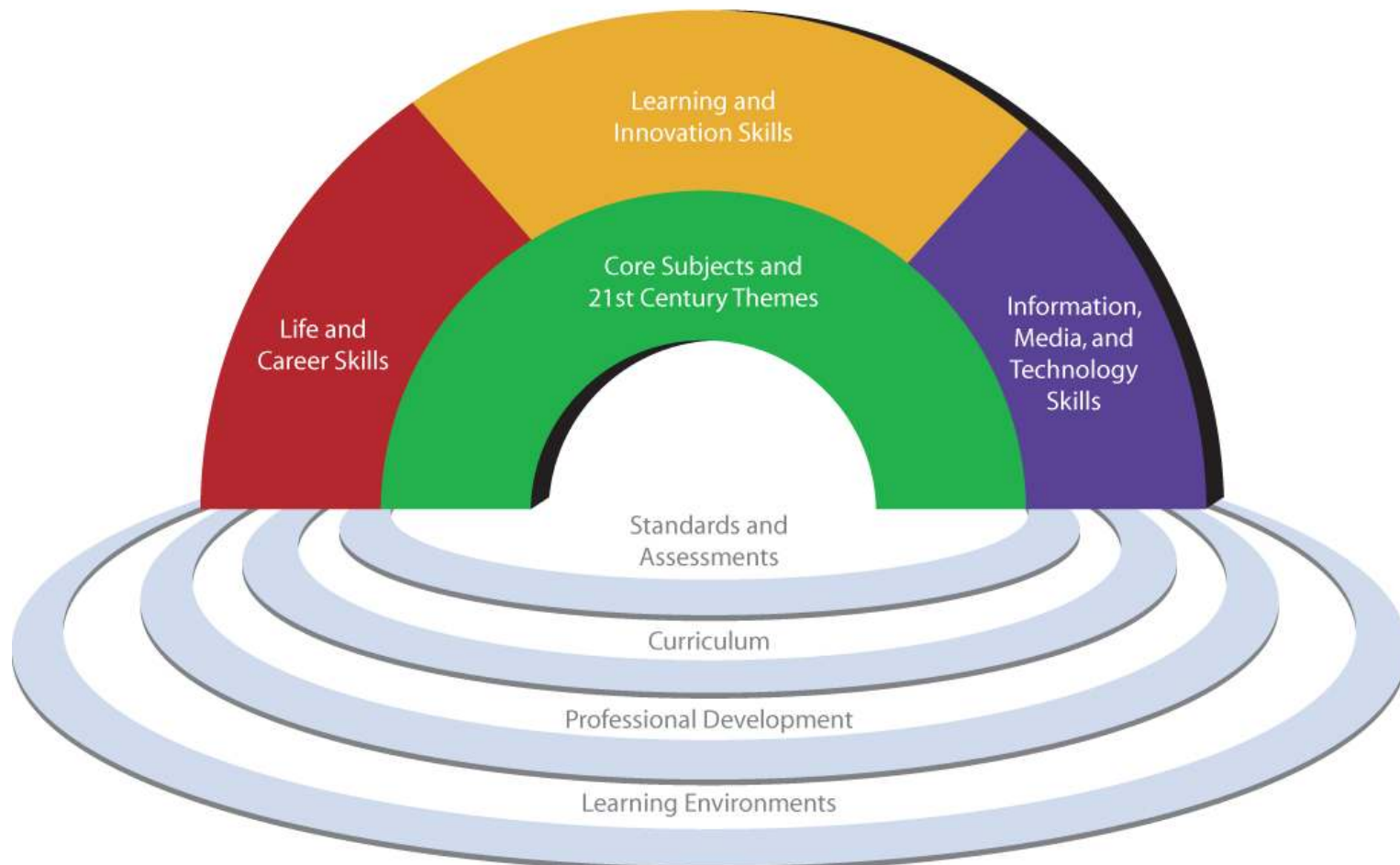


PARTNERSHIP FOR  
21ST CENTURY SKILLS

[www.21stcenturyskills.org](http://www.21stcenturyskills.org)  
[www.21stcenturyskills.org/route21](http://www.21stcenturyskills.org/route21)



# 21<sup>st</sup> Century Skills Framework





# What Must be Learned?

## 21<sup>st</sup> Century Skills

### Seven Cs

### Component Skills

**Critical Thinking  
& Problem-solving**

Research, Analysis, Synthesis,  
Project Management, etc.

**Creativity & Innovation**

New Knowledge Creation, "Best Fit"  
Design Solutions, Artful Storytelling, etc.

**Collaboration, Teamwork  
& Leadership**

Cooperation, Compromise, Consensus,  
Community-building, etc.

**Cross-cultural Understanding**

Across Diverse Ethnic, Knowledge  
& Organizational Cultures

**Communication  
& Media Fluency**

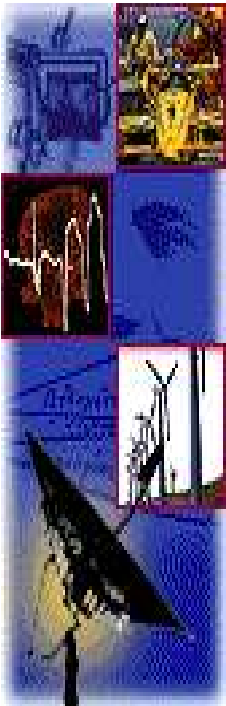
Crafting & Analyzing Messages  
& Using Media Effectively

**Computing & ICT Fluency**

Effective Use of Electronic Information  
& Knowledge Tools

**Career & Learning Self-reliance**

Managing Change, Lifelong Learning  
& Career Redefinition



# The 21<sup>st</sup> Century Learning Formula

3Rs X 7Cs = 21<sup>st</sup> Century Learning

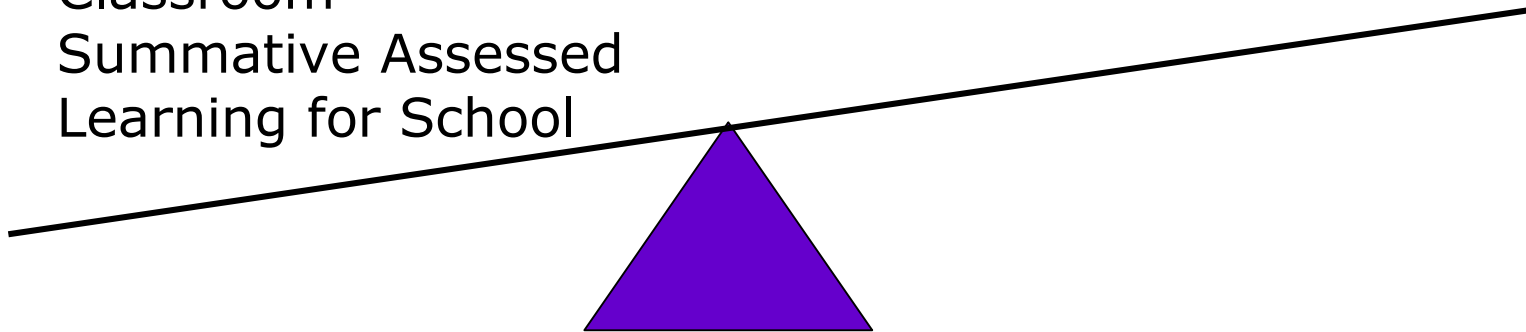
# ***The Key 21<sup>st</sup> Century Skill?***

***“Learning is what most adults  
will do in the 21<sup>st</sup> Century”***

***S.J. Perleman***

# 20<sup>th</sup> Century Learning

Teacher-directed  
Direct Instruction  
Knowledge  
Content  
Basic Skills  
Theory  
Curriculum  
Individual  
Classroom  
Summative Assessed  
Learning for School



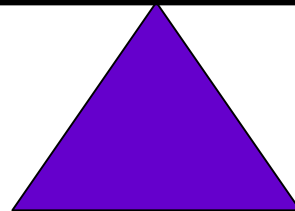
# 21<sup>st</sup> Century Learning

Teacher-directed  
Direct Instruction  
Knowledge  
Content  
Basic Skills  
Theory  
Curriculum  
Individual  
Classroom  
Summative Assessments  
Learning for School

Learner-centered  
Collaborative Construction  
Skills  
Process  
Higher-order Thinking  
Practice  
Life Skills  
Teamwork  
Community  
Formative Evaluations  
Learning for Life

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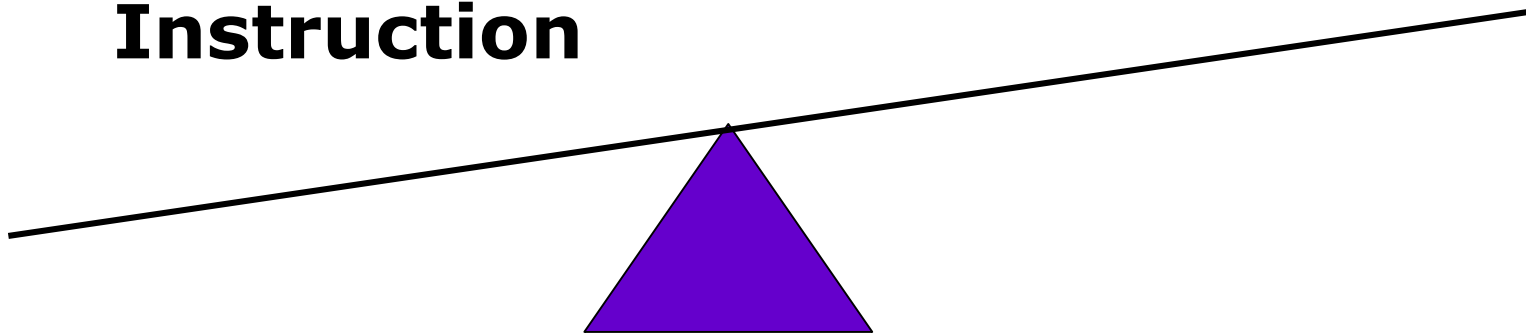
**A Better**



**Balance**

# 20<sup>th</sup> Century Learning

**Direct  
Instruction**



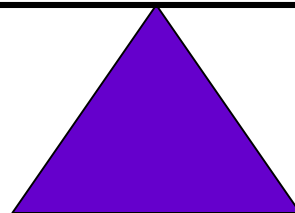
# 21<sup>st</sup> Century Learning

**Direct  
Instruction**

**Project  
Learning**

**A Better**

**Balance**





***How should students learn?  
What does 21<sup>st</sup> Century Learning  
look like?***

# **Oracle Education Foundation** **A Public Charity**

**We inspire students to  
think, connect, create, and share;  
using technology to help  
fulfill individual potential,  
dissolve boundaries,  
and create a better society.**

Over 7,500 student-created websites in the ThinkQuest Library

The image shows a screenshot of a student-created website titled "The Digital Divide: Information Inequality". The website is displayed in a browser window with the URL "http://thinkquest.org/library". The navigation menu includes "Physical Barriers", "Digital Barriers", "Human Barriers", "Socioeconomic Barriers", "Our Project", "Interactive FUN", and "About". Language options for "English (Full Version)", "English (Text-Only)", and "French (Text-Only)" are also visible. The date "Wednesday, March 14, 2007" is shown. The website content includes:

- eBrochure**: "What is eDivide? Get an overview of the topic! Spread awareness to your friends and families! Click below to download our brochure on the Digital Divide!" with links for "eBrochure 1", "eBrochure 2", and "eBrochure 3".
- WELCOME**: "Welcome to e-Divide! The Digital divide—the inequality in access to information technology—is an issue of growing interest in all countries and organizations, yet the public awareness of the issue is low. This website discovers how the Digital Divide affects the young generation—people like ourselves. We hope to spread awareness of the Digital Divide, its causes, its implications, and potential solutions. This site is dedicated to educators, high school students, policymakers, the general public, and in general the young generation of the new millennium. We also carry out our own first-hand investigations to discover the current issues of the Digital Divide in education and propose action plans to bridge the Digital Divide. Discover the concept of the Digital Divide interactively through a series of animations, first-hand investigations, interviews, games, photos, and more!"
- TOOLBOX**: Includes a "Print" button and a "Printer-Friendly Page" link with the description: "Allows you to open a less graphically intense version of the web page."
- QuickQuiz**: "What are the digital b... The inability to afford software. The inability to afford digital equipments."

A blue robot mascot with a friendly face and antennae is positioned in the bottom right corner of the website screenshot. The word "ThinkQuest" is written in large white letters at the bottom left of the image.

10,000 participants in 2,000 teams from over 70 countries in the annual ThinkQuest competition



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# ThinkQuest

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# 21<sup>st</sup> Century Learning

## 21<sup>st</sup> Century Skills

### Seven Cs

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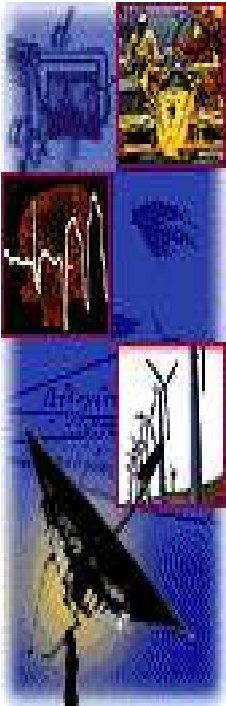
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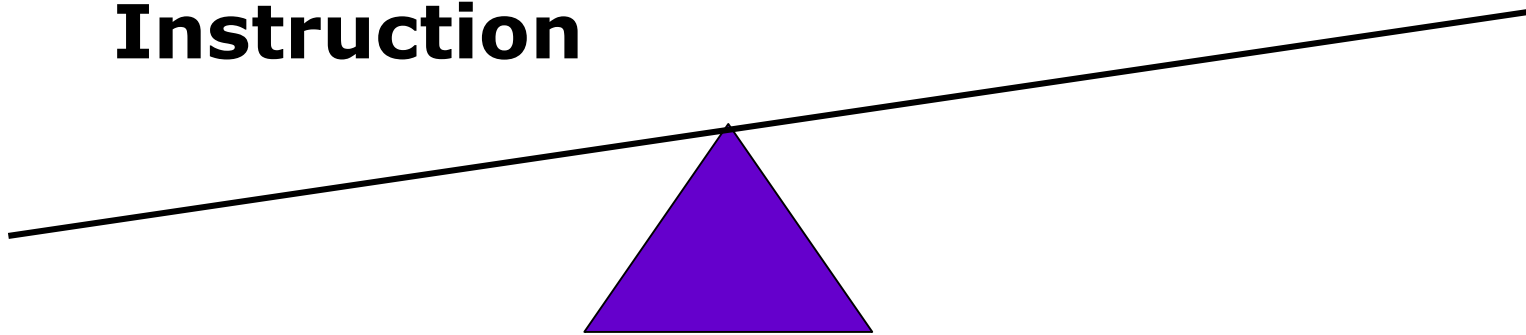
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***Which practices and models  
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# 20<sup>th</sup> Century Learning

**Direct  
Instruction**





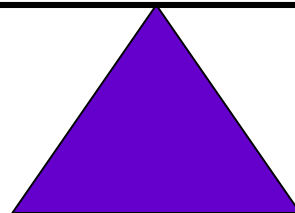
# 21<sup>st</sup> Century Learning

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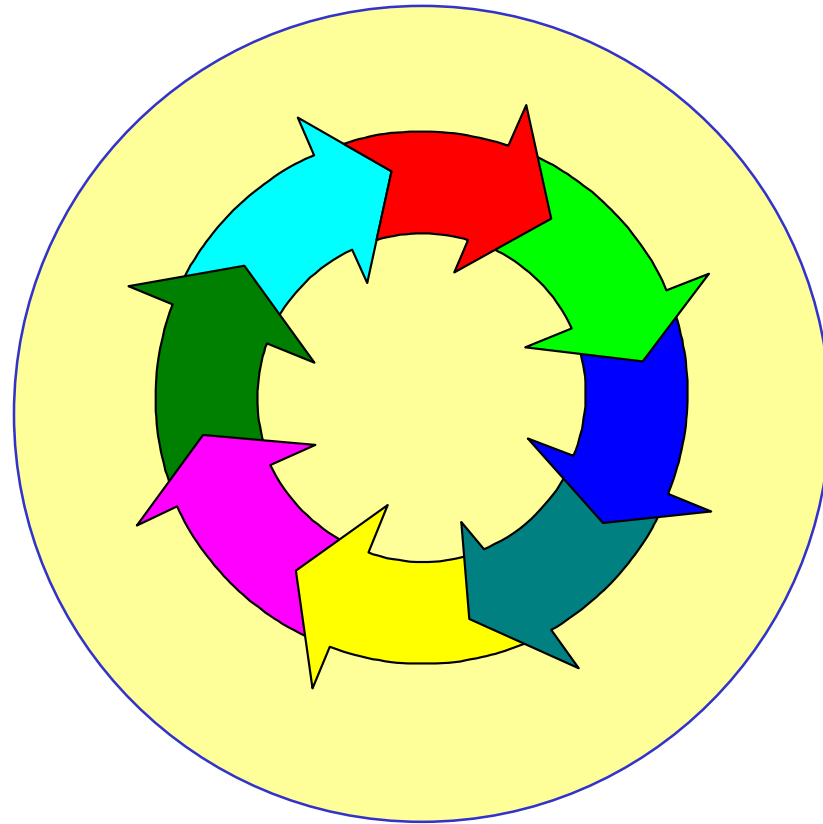
**Balance**



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# 21<sup>st</sup> Century Learning

## The Project Learning Cycle



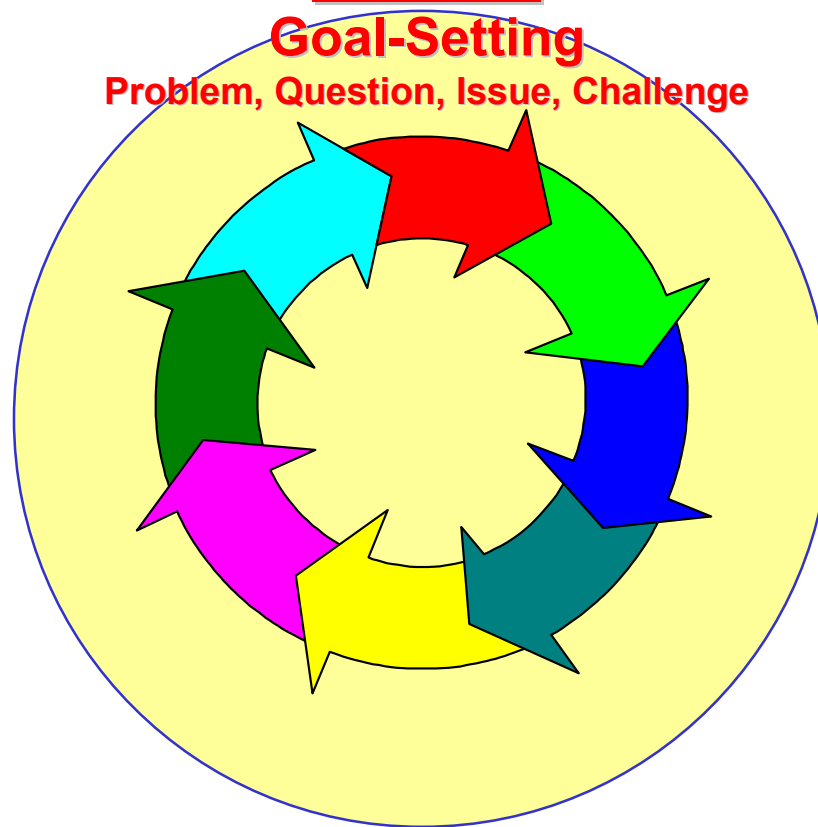
# 21<sup>st</sup> Century Learning

## The Project Learning Cycle

### Define

#### Goal-Setting

Problem, Question, Issue, Challenge



# 21<sup>st</sup> Century Learning

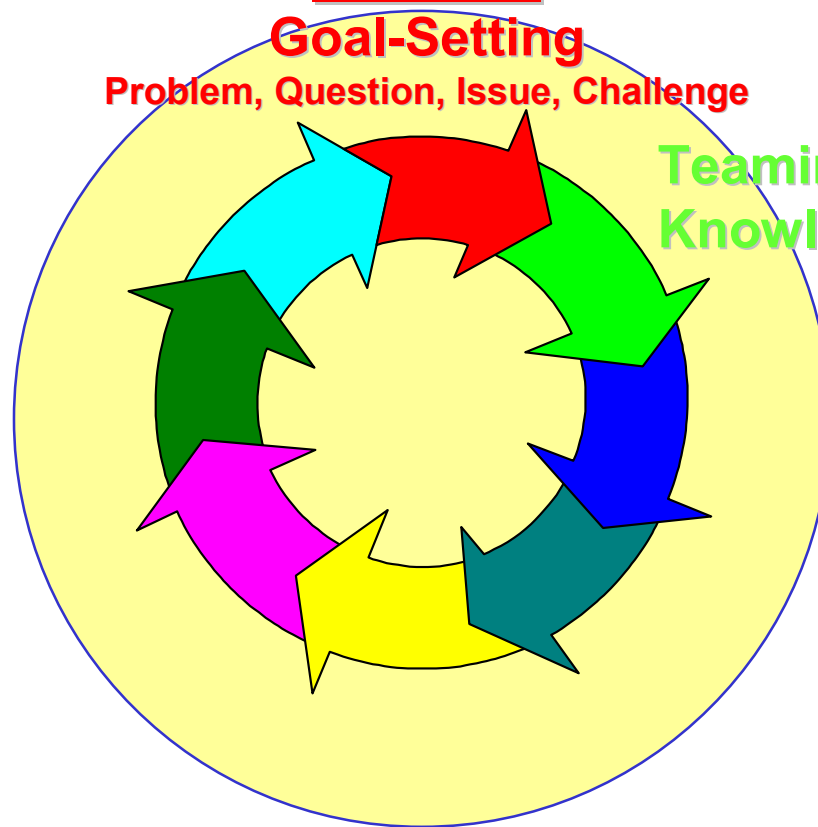
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### Define

#### Goal-Setting

Problem, Question, Issue, Challenge

Teaming &  
Knowledge Sharing



# 21<sup>st</sup> Century Learning

## The Project Learning Cycle

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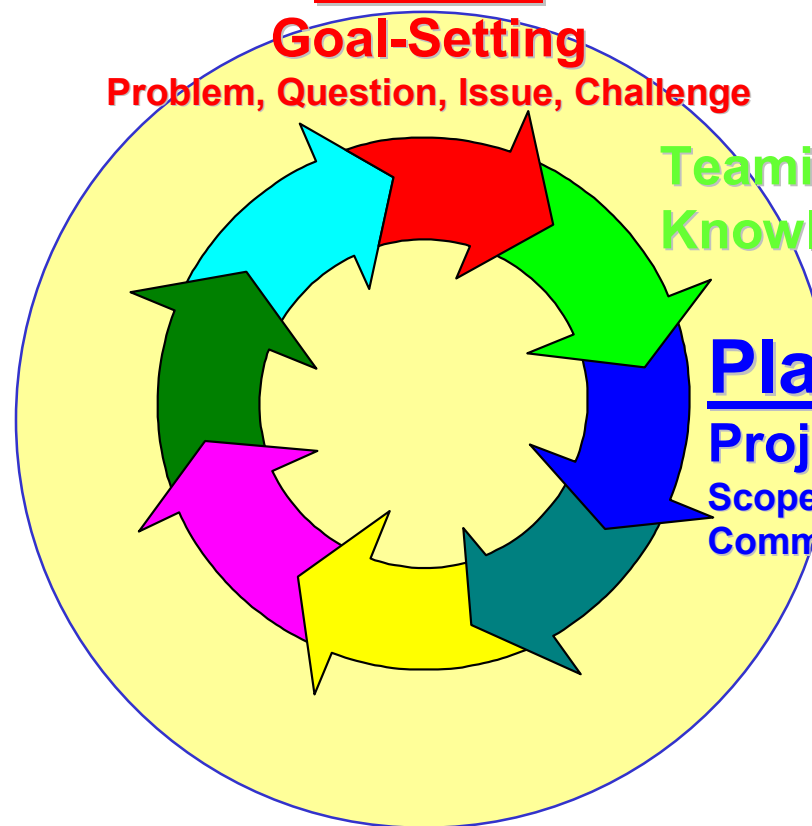
Problem, Question, Issue, Challenge

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### Plan

#### Project Planning

Scope, Timelines, Resources,  
Communications, Quality, Risks



# 21<sup>st</sup> Century Learning

## The Project Learning Cycle

### Define

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Problem, Question, Issue, Challenge

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### Plan

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Scope, Timelines, Resources,  
Communications, Quality, Risks

### Do

Researching &  
Documenting



# 21<sup>st</sup> Century Learning

## The Project Learning Cycle

### Define

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Problem, Question, Issue, Challenge

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Researching &  
Documenting

Communicating  
& Sharing



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## The Project Learning Cycle

### Define

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Problem, Question, Issue, Challenge

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### Plan

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Scope, Timelines, Resources,  
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### Do

Researching &  
Documenting

Presenting

Communicating  
& Sharing





# 21<sup>st</sup> Century Learning

## The Project Learning Cycle

### Define

#### Goal-Setting

Problem, Question, Issue, Challenge

Teaming &  
Knowledge Sharing

### Plan

#### Project Planning

Scope, Timelines, Resources,  
Communications, Quality, Risks

### Do

Researching &  
Documenting

Communicating  
& Sharing

Presenting

Review  
Evaluating



# 21<sup>st</sup> Century Learning

## The Project Learning Cycle

### Define

#### Goal-Setting

Problem, Question, Issue, Challenge

Teaming &  
Knowledge Sharing

### Plan

#### Project Planning

Scope, Timelines, Resources,  
Communications, Quality, Risks

### Do

Researching &  
Documenting

Communicating  
& Sharing

Presenting

Review  
Evaluating

Reflecting



# 21<sup>st</sup> Century Project Learning



**TEACHER WHEEL**

# 21<sup>st</sup> Century Project Learning

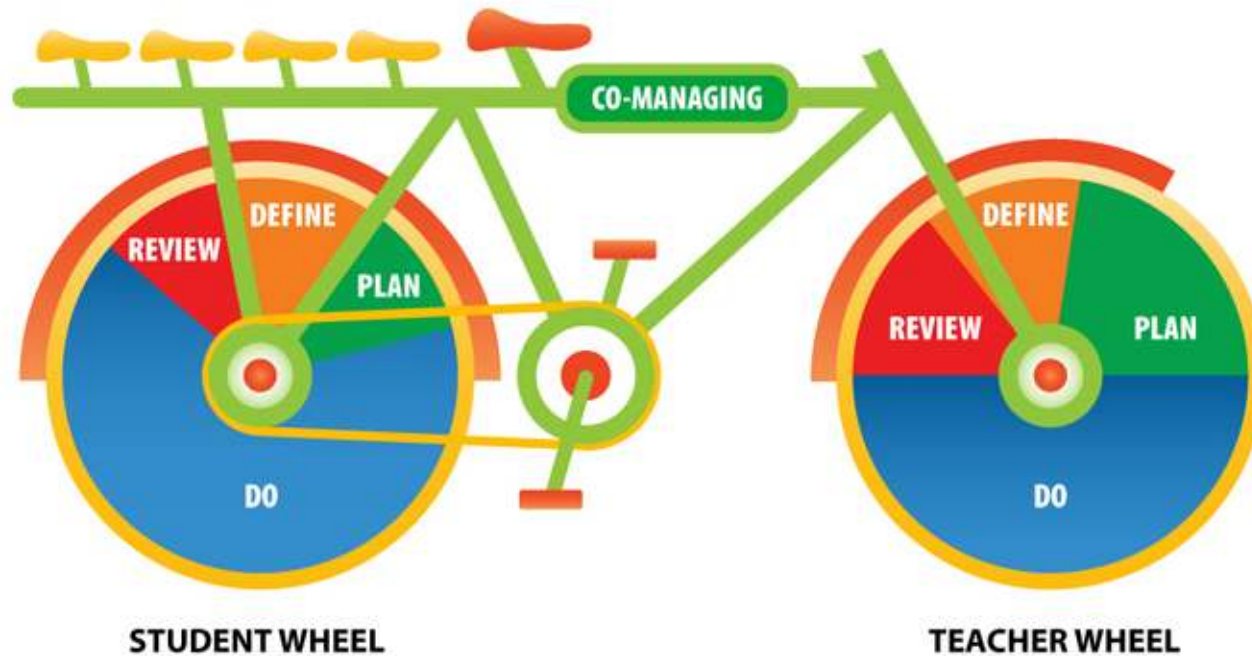


**STUDENT WHEEL**

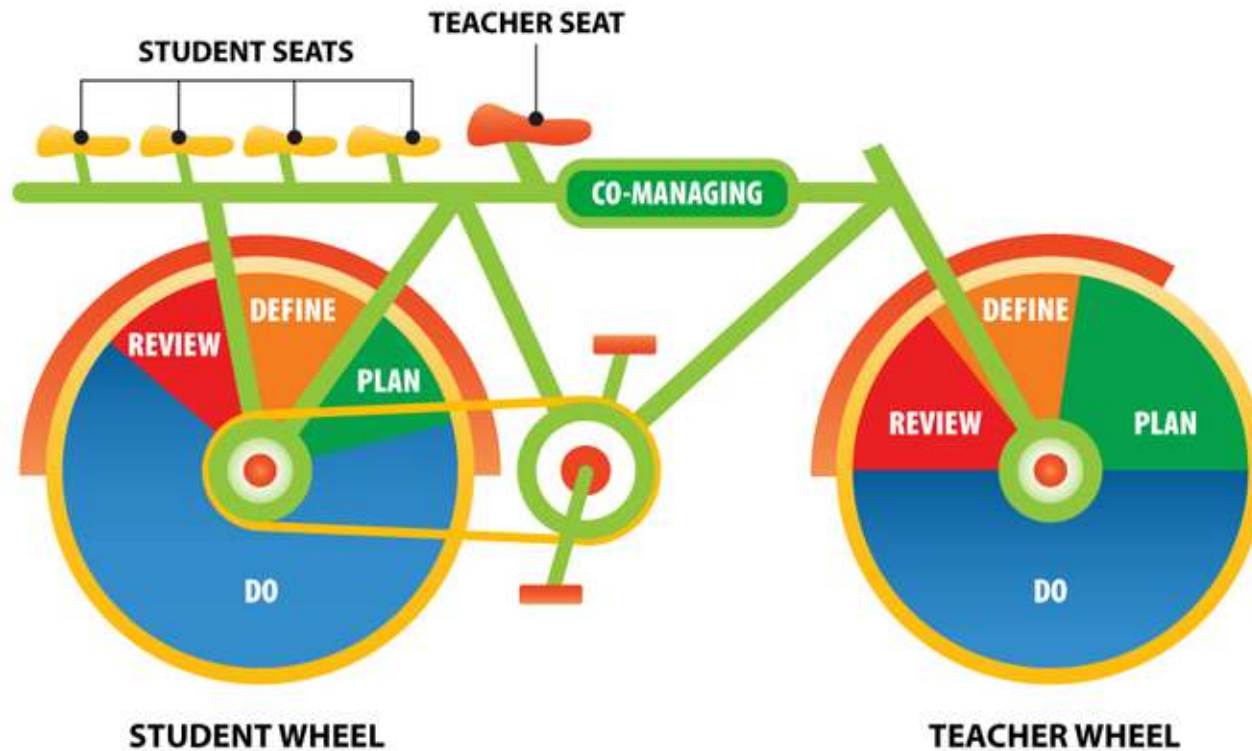


**TEACHER WHEEL**

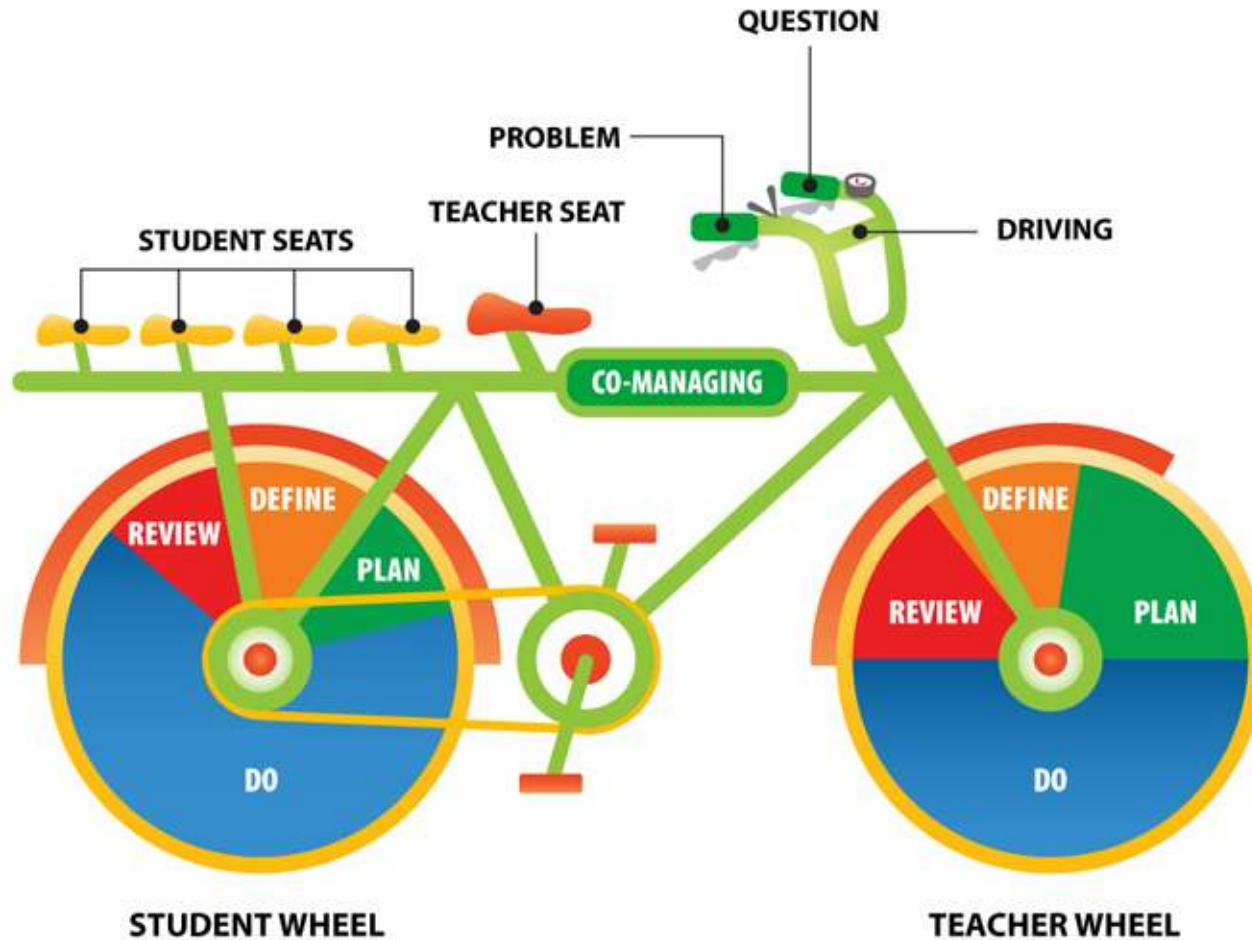
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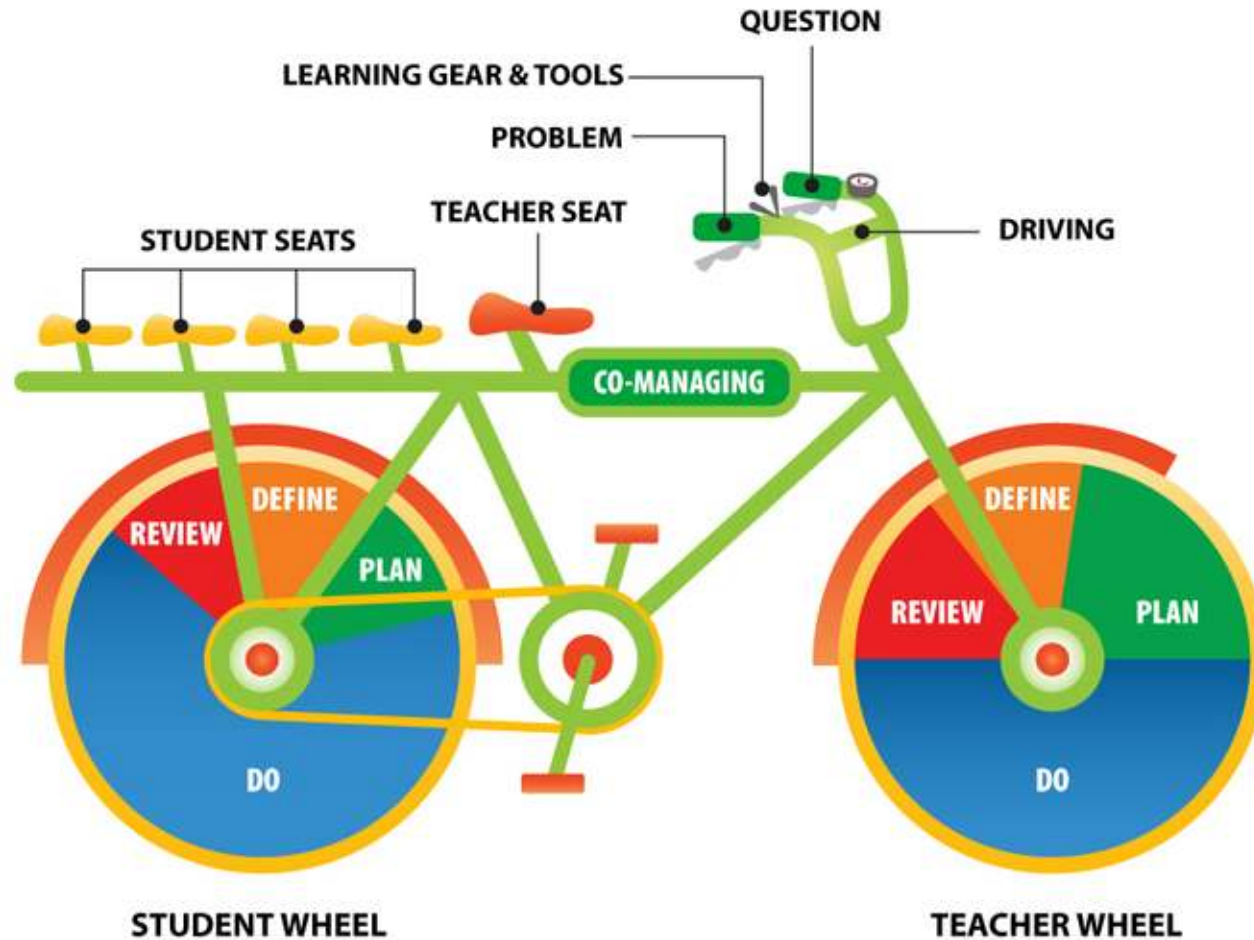


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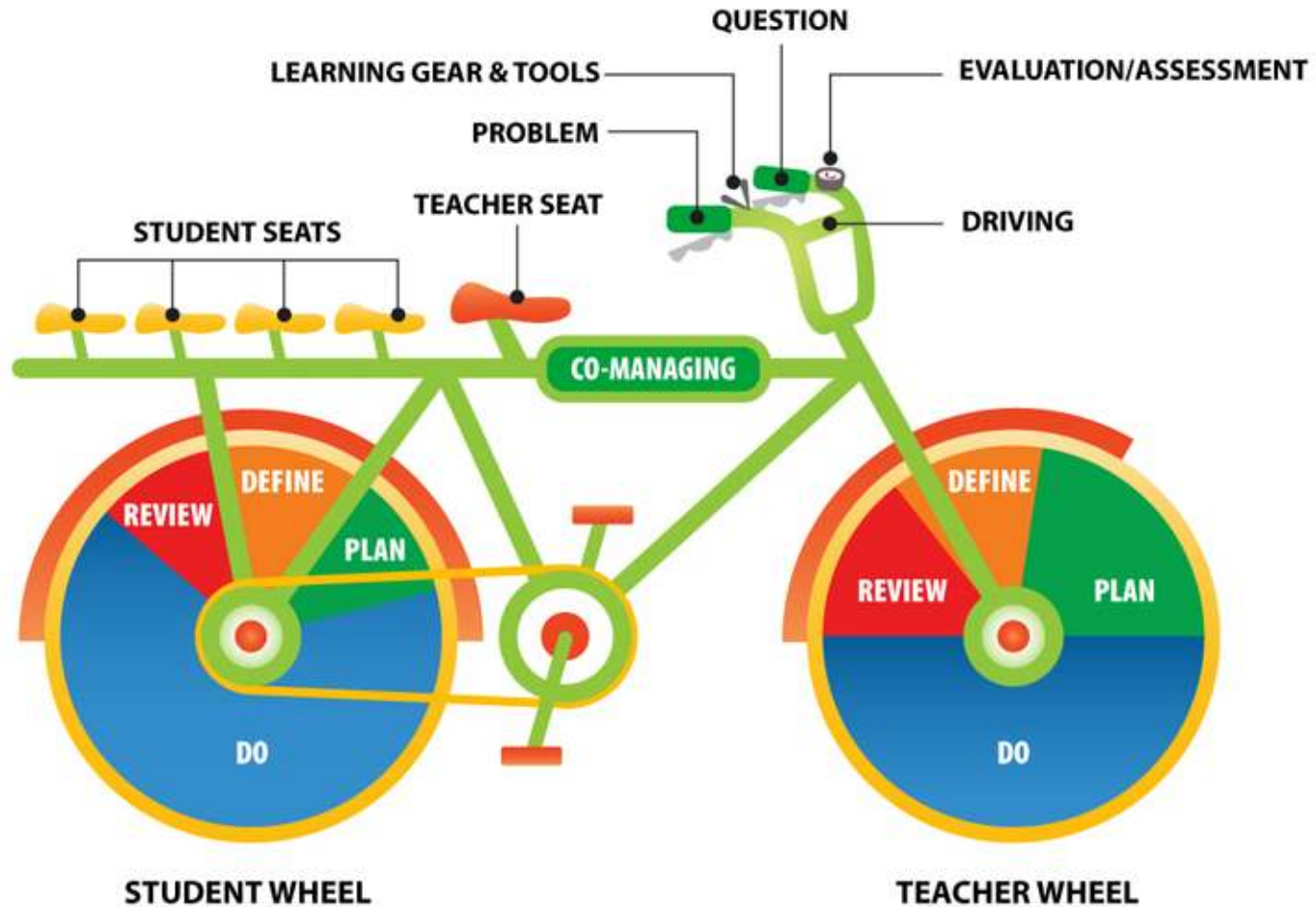




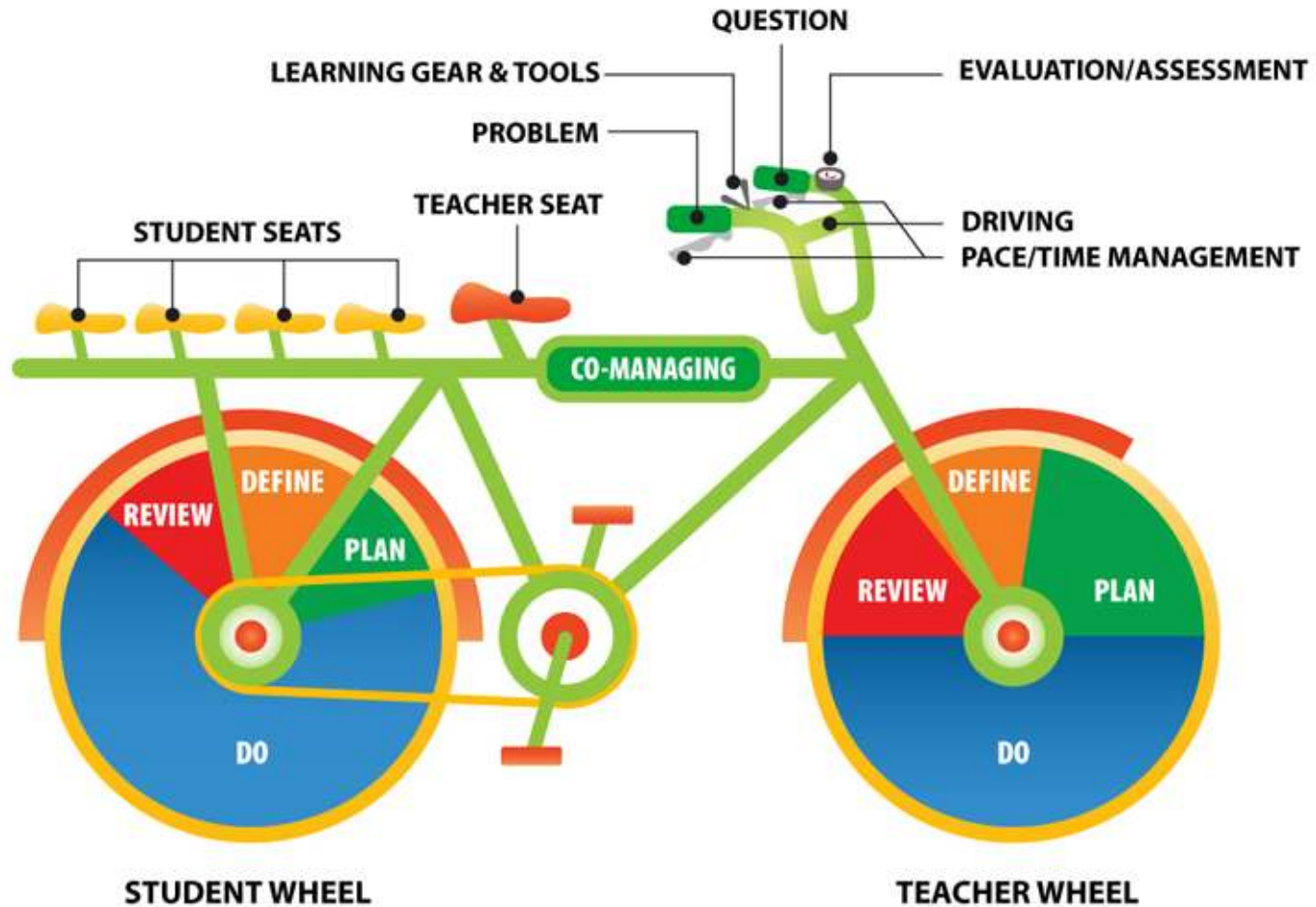
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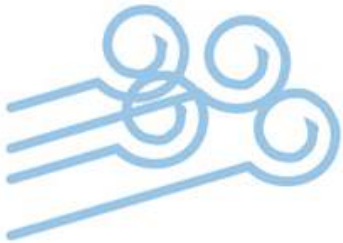


# 21<sup>st</sup> Century Project Learning



# 21<sup>st</sup> Century Project Learning

**TAIL WIND:  
SUPPORT FROM SCHOOL  
& COMMUNITY**



**BALANCE POINT LEFT:  
GUIDED INSTRUCTION**



**DEGREE OF CHALLENGE**

**BALANCE POINT RIGHT:  
COLLABORATIVE CONSTRUCTION**

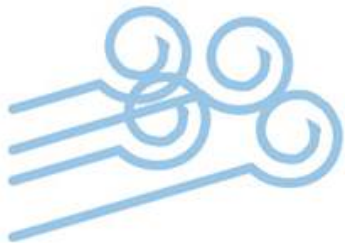


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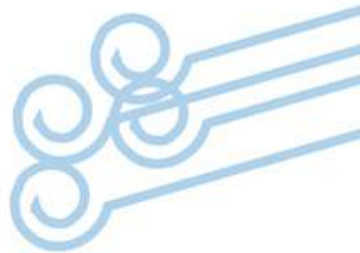


# 21<sup>st</sup> Century Project Learning

**TAIL WIND:  
SUPPORT FROM SCHOOL  
& COMMUNITY**



**HEAD WIND:  
LACK OF SUPPORT FROM SCHOOL  
& COMMUNITY**



**DESTINATION**



**21<sup>st</sup> CENTURY SKILLS**

**BALANCE POINT LEFT:  
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**DEGREE OF CHALLENGE**

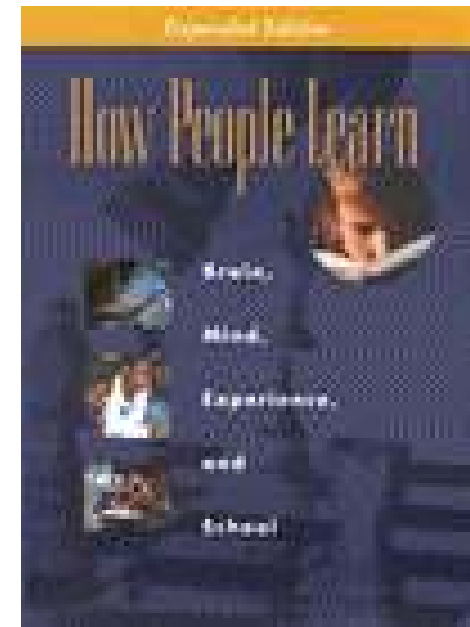
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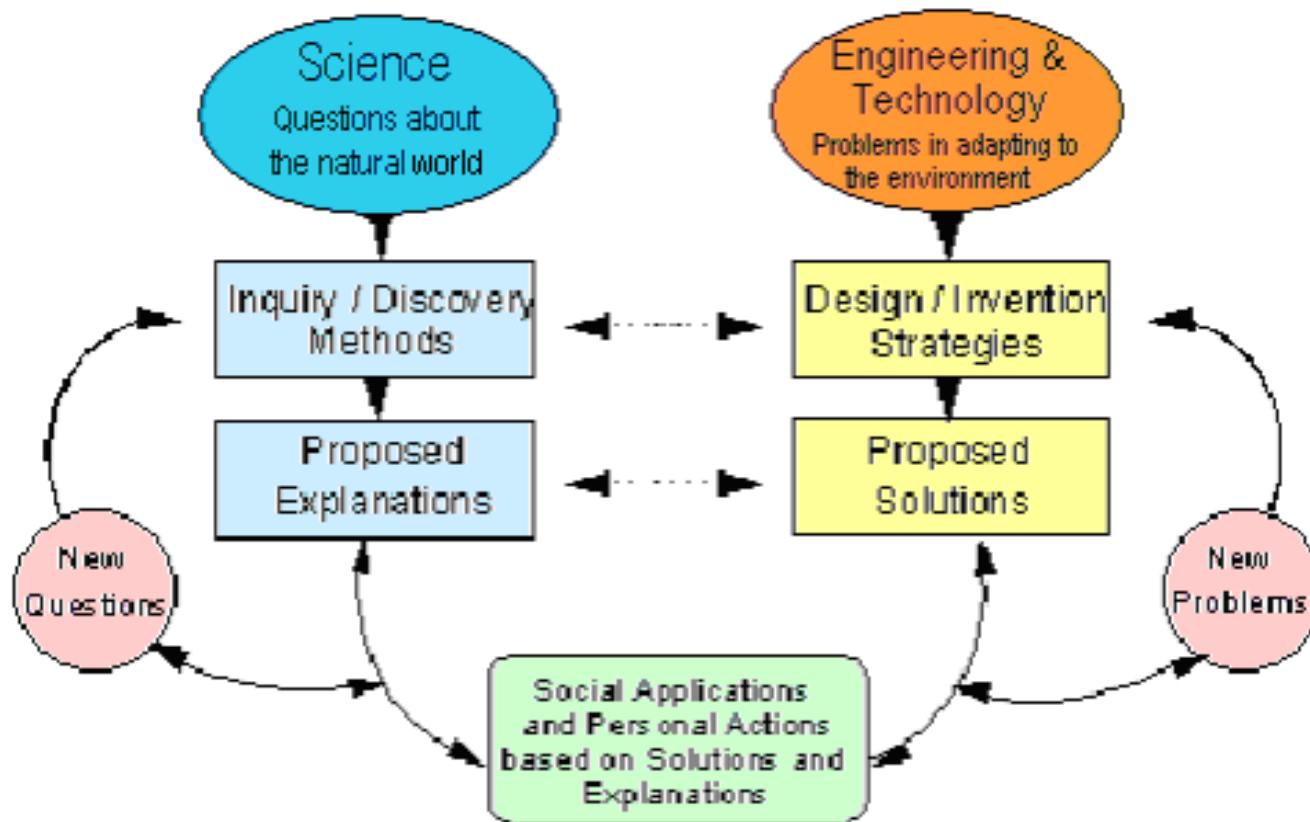
## New Learning about Learning

- ❖ **Context** – Real-world learning
- ❖ **Caring** – Intrinsic motivation
- ❖ **Construction** – Mental & virtual model-building
- ❖ **Competence** – Multiple intelligences
- ❖ **Community** – Learning socially in groups & teams



# 21<sup>st</sup> Century Learning

## Questions & Problems



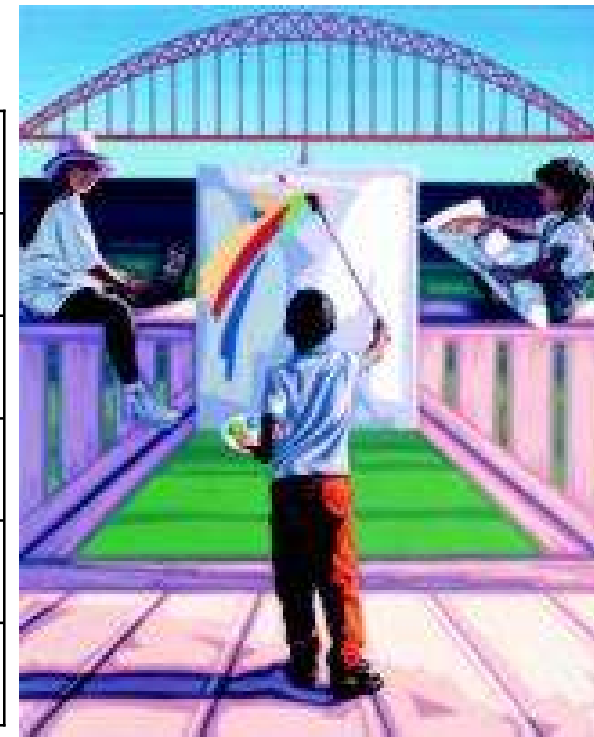
Adapted from Roger Bybee and Senta Raizen

# 21<sup>st</sup> Century Learning

## Creativity & Innovation

### Creative – Project Process

<b>Imagine</b>	<b>Define/Plan</b>
<b>Create</b>	} <b>Do</b>
<b>Play</b>	
<b>Share</b>	
<b>Reflect</b>	<b>Review</b>
<b>Imagine . .</b>	<b>Define/Plan . .</b>



# 21<sup>st</sup> Century Skills

## Creativity & Innovation

***“The principle goal of education in the schools should be creating men and women who are capable of doing new things, not simply repeating what other generations have done.”***

**Jean Piaget**

# The Project Learning Challenge

**“I had to unlearn the idea that teaching was about *my content*; I had to learn it was about *their thinking*, and *their skills*.”**

**A Project Learning Teacher**

# Project Learning Institute

❖ For **Primary & Secondary Teachers** and **Trainers** wanting to integrate:

- Learning Technology
- Learning Projects
- 21<sup>st</sup> Century Skills

❖ First international Institutes piloted in US, Singapore, South Africa, Brazil

Training	Time Commitment
Virtual Training	24 hours over 4 weeks
In-Class Training	28 hours over 4 days
Implementation & Mentoring	8 hours over 3 months

# The New Balance

- ❖ **Guided Instruction  
and Collaborative Construction**
- ❖ **Connected Content  
and Lifelong Skills**
- ❖ **Virtual 'Second Life' Screen World  
and Real-world 'First Life' Green World**
- ❖ **From the Head  
and from the Heart & Soul**



# The Past ICT Challenge

**I**nformation

**C**ommunication

**T**echnologies

# Today's ICT Challenge

**I**nnovation

**C**ollaboration

**T**ransformation

# **But will it make us happy?**

## **Chinese Proverb**

**If you want happiness for an hour –**

***take a nap.***

**If you want happiness for a day –**

***go fishing.***

**If you want happiness for a month –**

***get married.***

**If you want happiness for a year –**

***inherit a fortune.***

**But if you want happiness for a lifetime –**

***help someone else.***

# Oracle Education Foundation Contacts

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[hui.seng.boon@oracle.com](mailto:hui.seng.boon@oracle.com)