

Rigor & Relevance:

Project-Based Learning For Differentiation



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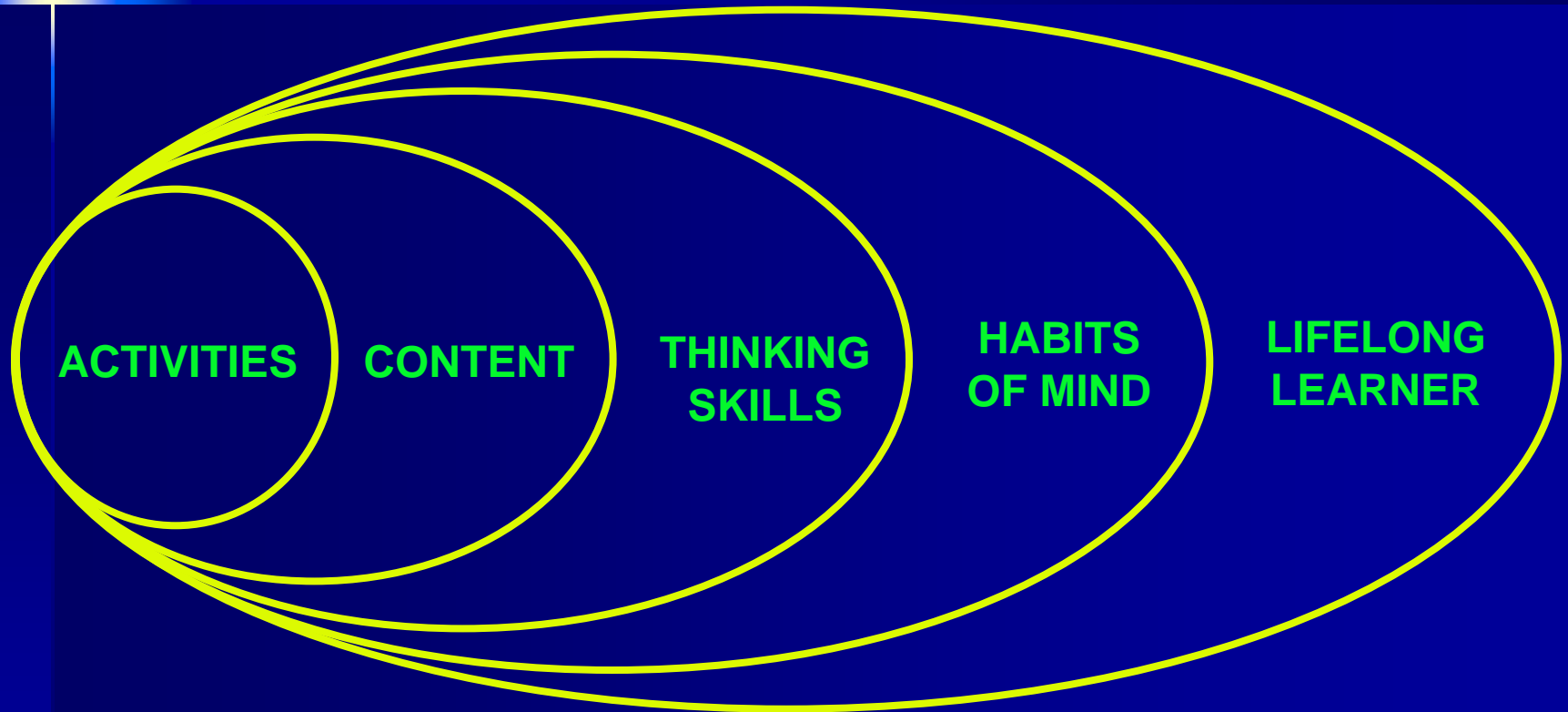
COSTA'S HABITS OF MIND

- 1) **Persisting**
- 2) **Managing Impulsivity**
- 3) **Listening With Understanding and Empathy**
- 4) **Thinking Flexibly**
- 5) **Thinking About Thinking (Metacognition)**
- 6) **Striving for Accuracy**
- 7) **Questioning and Posing Problems**
- 8) **Applying Past Knowledge to New Situations**

HABITS OF MIND, CONTINUED...

- 9) **Thinking & Communicating With Clarity & Precision**
- 10) **Gathering Data Through All Senses**
- 11) **Creating, Imagining, Innovating**
- 12) **Responding With Wonderment & Awe**
- 13) **Taking Responsible Risks**
- 14) **Finding Humor**
- 15) **Thinking Interdependently**
- 16) **Remaining Open to Continuous Learning**

SIMULTANEOUS OUTCOMES



PBL RESEARCH BASE

“There is now a massive amount of evidence from all realms of science that unless individuals **take a very active role** in what it is they’re studying, unless they **learn to ask questions, to do things hands-on, to essentially recreate things in their own mind and transform** them as needed, the ideas just disappear.”

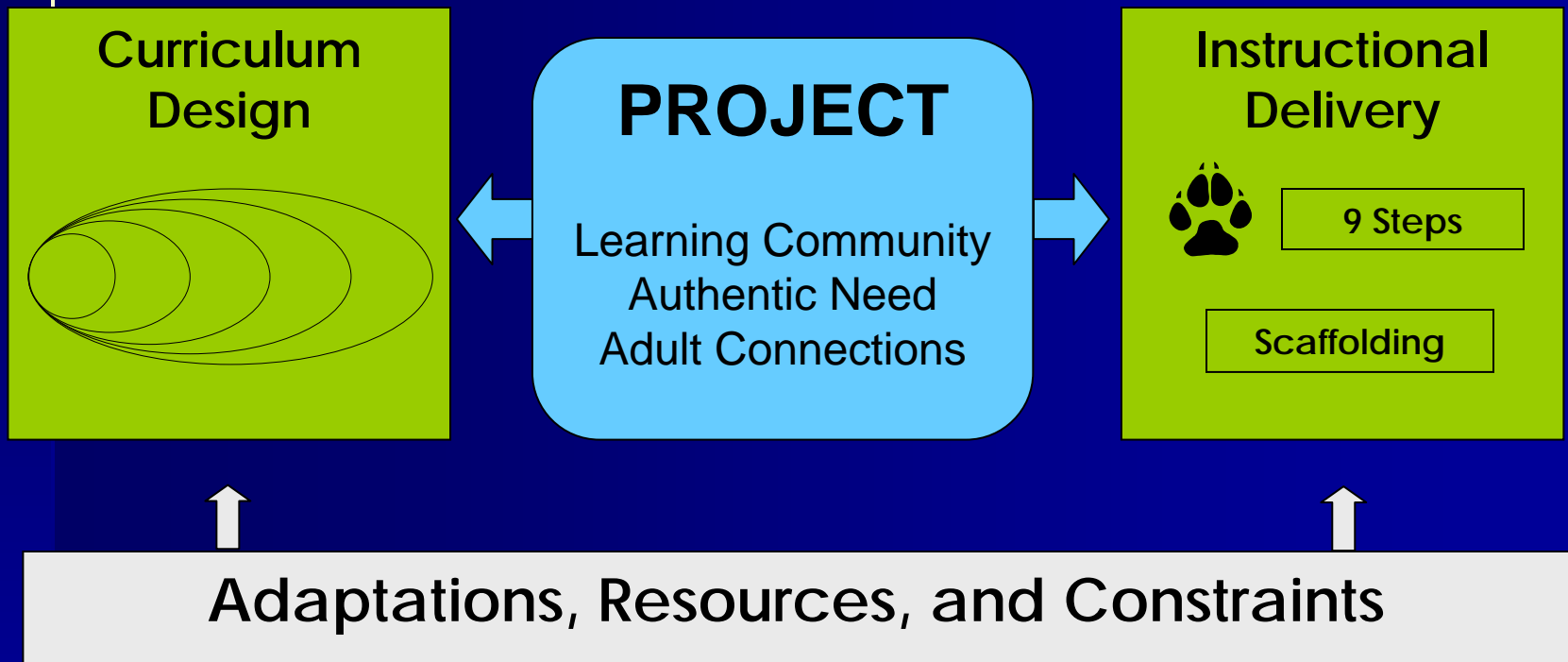
-- Howard Gardner, Harvard University

WHAT IS A PROJECT?



- How do "activities" and "projects" differ?
- What are the key features of projects – length, depth, scope?

PBL DESIGN & DELIVERY



THE SIX A'S OF DESIGNING PROJECTS

- ▶ **AUTHENTICITY**
- ▶ **ACADEMIC RIGOR**
- ▶ **APPLIED LEARNING**
- ▶ **ACTIVE EXPLORATION**
- ▶ **ADULT RELATIONSHIPS**
- ▶ **ASSESSMENT PRACTICES**

ACADEMIC RIGOR

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- High-order thinking skills and methods of inquiry from academic and professional fields
- Aligned with state content standards

ADULT RELATIONSHIPS

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- Adult mentors
- Experts in the field
- Guest artists
- Community panels

AUTHENTICITY

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- ▶ AUTHENTICITY
- ▶ ACTIVE EXPLORATION
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- ▶ ASSESSMENT PRACTICES

- Real world context
- Issues that matter to students
- Real and appropriate audience



ACTIVE EXPLORATION

- Experiences beyond the classroom
- Field-based investigations
- Community exploration
- Expert interviews
- Internships

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- ▶ ASSESSMENT PRACTICES



APPLIED LEARNING

- Teamwork
- Communication
- Product design
- Problem-solving
- Self-management skills
- Information collection, organization and analysis

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ASSESSMENT PRACTICES

- ▶ ACADEMIC RIGOR
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- Exhibitions of work
- Variety of assessment tools
- Professional standards of performance
- Student involvement in creating criteria for project (rubric)



TRADITIONAL VS. PBL

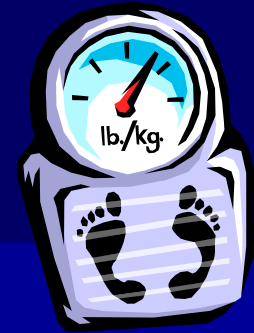
RESEARCH PAPER



Required Elements:

- ➔ Select a disease to study
- ➔ Go to library and do research
- ➔ Write ten pages
- ➔ Use proper essay form
- ➔ Include a bibliography

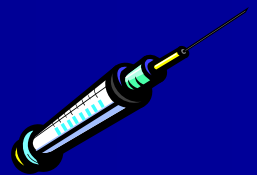
TRADITIONAL VS. PBL



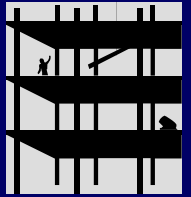
HEALTH PROJECT

Required Elements:

- ➔ **Develop family medical histories**
- ➔ **Write proposal to study health issue of personal or community interest**
- ➔ **Keep research log, including citations**
- ➔ **Produce a newsletter**
- ➔ **Develop lesson plans and materials for underserved population**
- ➔ **Present to real audience**

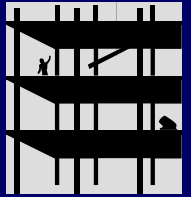


PROJECT SCAFFOLDING



- ❑ **Structure** Organizing features like groups, benchmarks, and timelines
- ❑ **Content** Academic foundation for work
- ❑ **Training** Explicit skill-building in all required production areas
- ❑ **Expertise** Professional-level training and consultation provided by experts

PROJECT SCAFFOLDING



- ❑ **Oversight** Structured times for teacher to meet, motivate, and mentor student teams
- ❑ **Documents** Handouts to help explain and organize project
- ❑ **Tools** The technological resources necessary to produce products & performances
- ❑ **Time** In-class opportunities for students to meet, research, produce, exhibit, evaluate

PROJECT DESIGN TIME



□ Work w/ colleagues on:

- Improving an existing project, or
- Developing a new project