# WINTHROP ELEMENTARY SCHOOL

FEBRUARY 8, 2016

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Perkins Eastman | DPC

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# DESIGN TEAM

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# EXPERIENCE & EXPERTISE

**33**
Years Focused on K-12

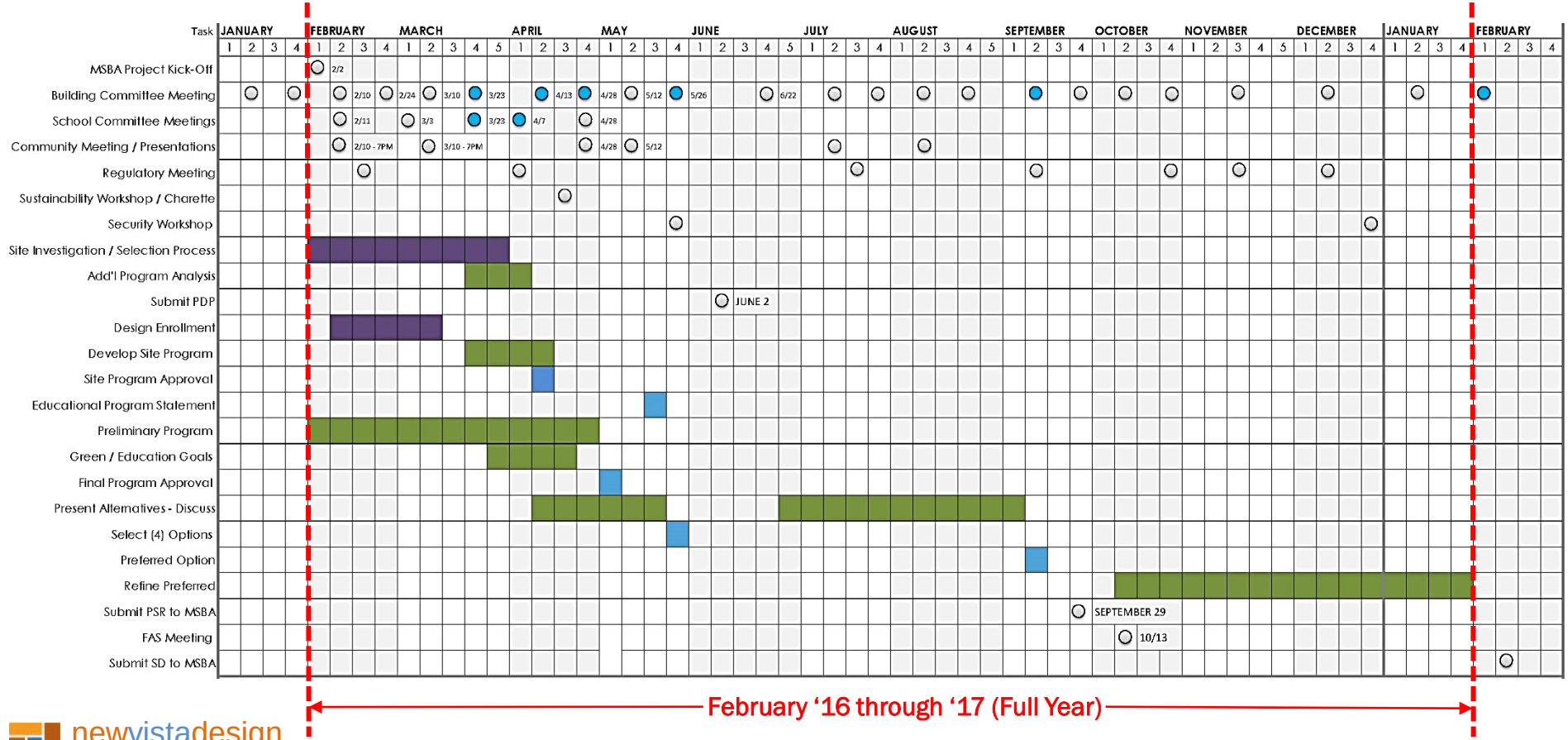
**125**
Projects

**50**
Elementary Schools

**75%**
Renovation/Additions (Most Phased/Occupied)

# MSBA/IPSWICH PROCESS

## FEASIBILITY & SCHEMATIC DESIGN



# MSBA/IPSWICH PROCESS

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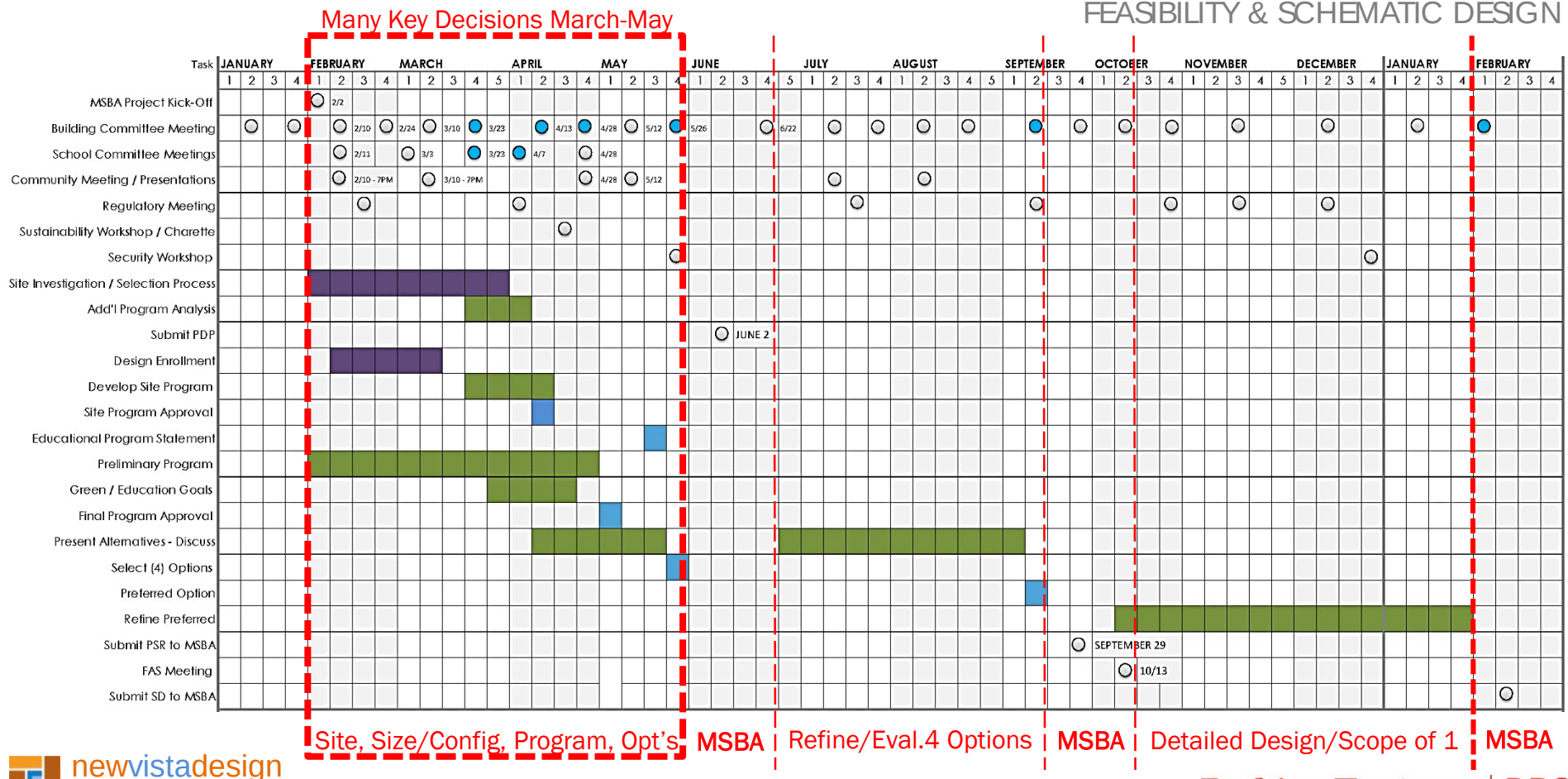


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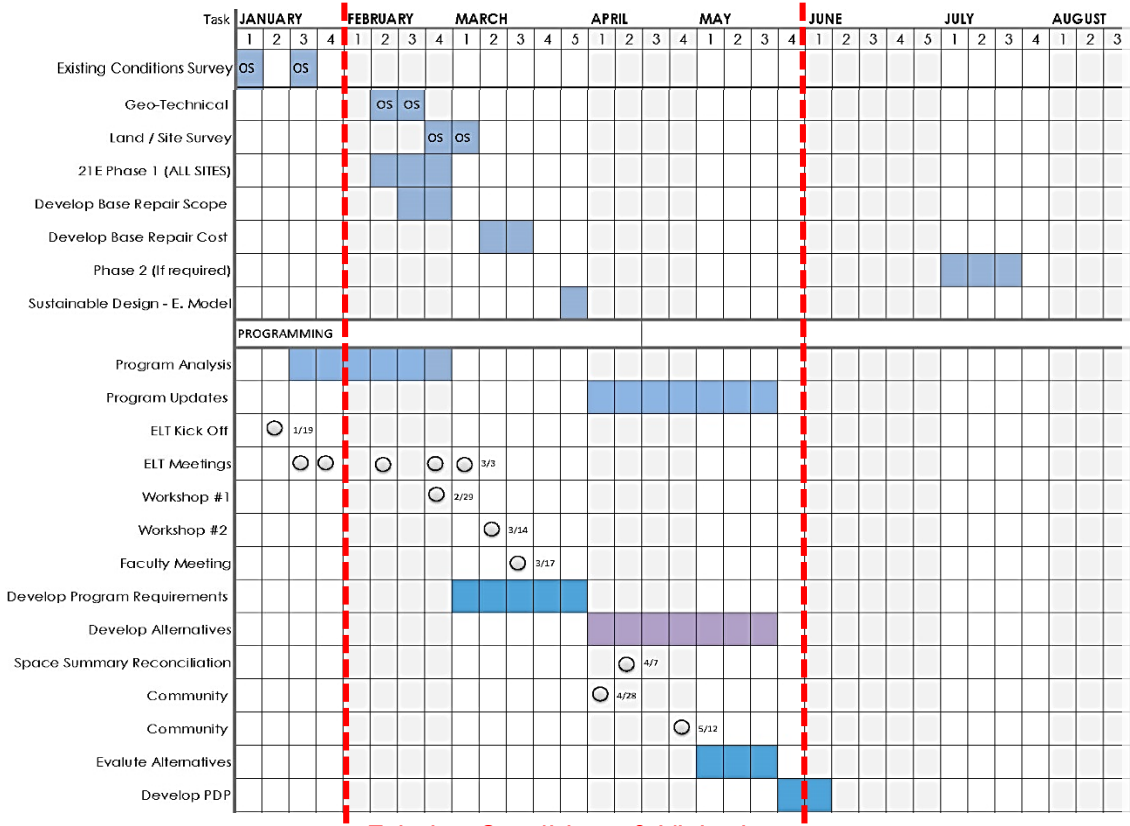
# MSBA/IPSWICH PROCESS

## FEASIBILITY & SCHEMATIC DESIGN

Dual Tracks & Many Specialists




Existing Conditions & Visioning

## January - February

- Info Gathering (Existing Cond's & Program)

## February-March

- Educ. Visioning (Work Shops & Forums)
- Establish Goals & Objectives

## March

- Develop Educ./Site Programs
- Select Grade Configuration

## April

- Approve Program & Site
- Develop Planning Options

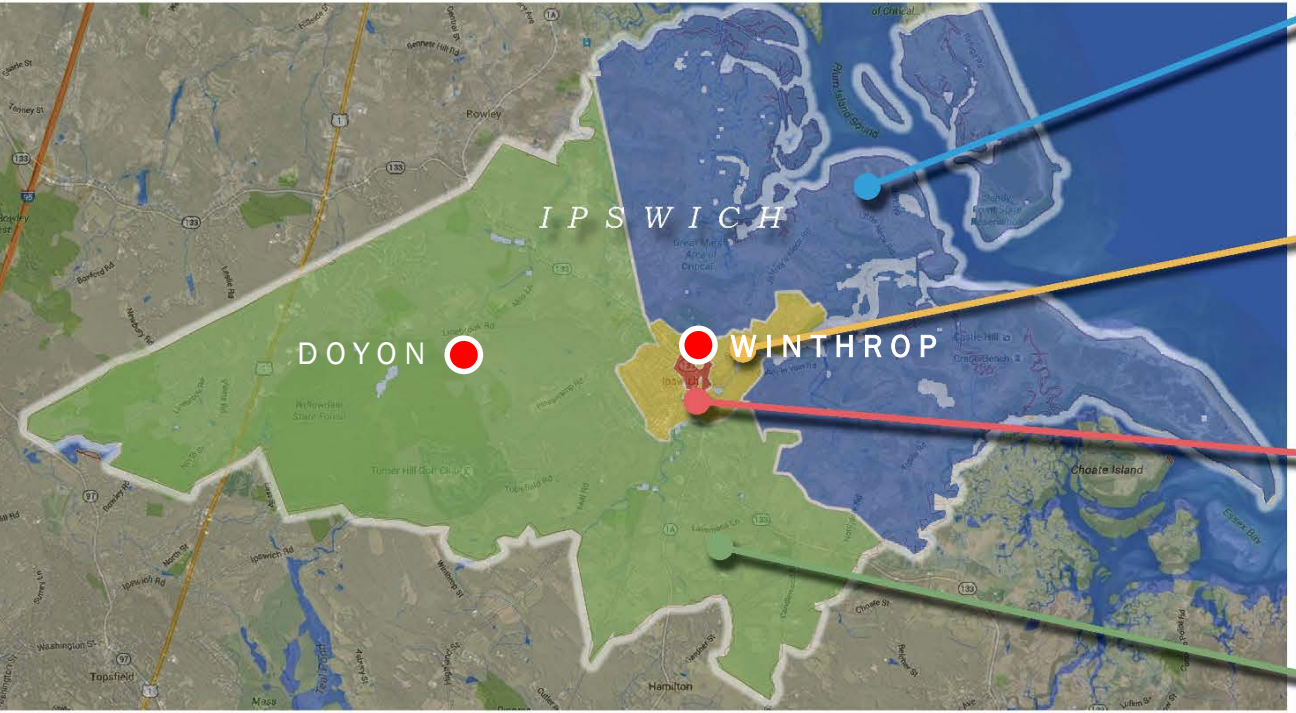
## May

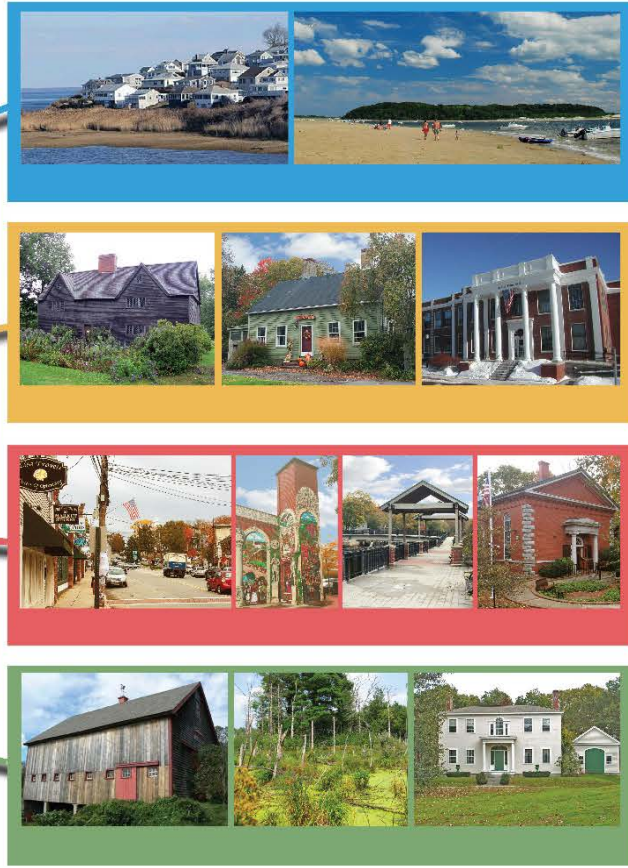
- Refine Planning Options
- Select (4) Preferred Options

## June (Submit PDP Report)

# INFORMATION GATHERING

## GETTING TO KNOW IPSWICH



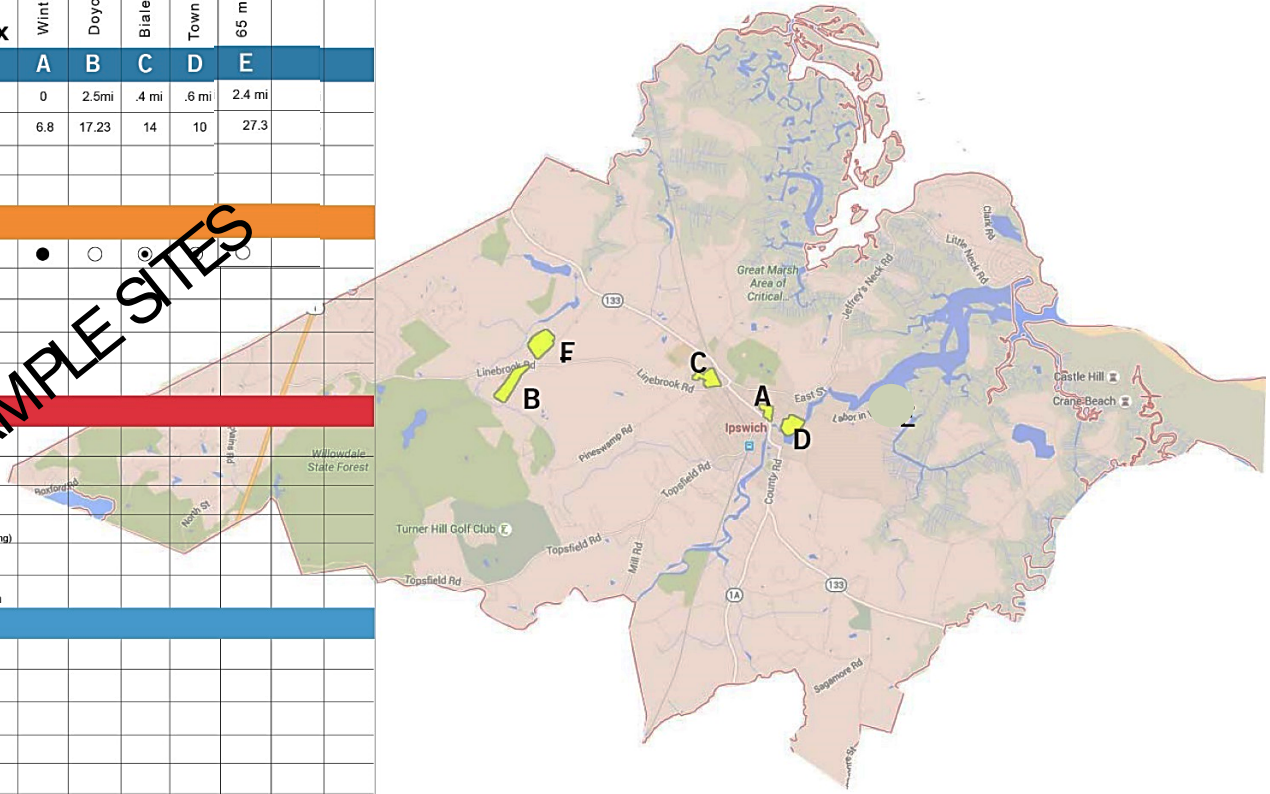



# SITE ASSESSMENTS

## EVALUATIONS & TEST FITS

| Feasibility - Comparison Matrix | Winthrop School | Doyon School | Bialek Park | Town Hall Site | 65 mile Lane Park | | |
|---|---|---|---|---|---|---|---|
| **Site Considerations** | **A** | **B** | **C** | **D** | **E** | | |
| 1. Distance from existing school | 0 | 2.5mi | .4 mi | .6 mi | 2.4 mi | | |
| 2. Overall Size of Site (acres) | 6.8 | 17.23 | 14 | 10 | 27.3 | | |
| 3. Site aquistion / legal issues | | | | | | | |
| 4. Regulatory restrictions | | | | | | | |
| **Community Values** | | | | | | | |
| 1. Location | ● | ○ | ◉ | ○ | ○ | | |
| 2. Traffic | | | | | | | |
| 3. Recreational Field Space | | | | | | | |
| 4. Re-use of Facilities/Playgrounds | | | | | | | |
| 5. Abuttor Impact | | | | | | | |
| **Educational Criteria** | | | | | | | |
| 1. Proximity To Students Served | | | | | | | |
| 2. Outdoor Learning Opportunities | | | | | | | |
| 3. Municipal Learning Opportunities | | | | | | | |
| 4. Optimal Plan(orientation, # of floors, zoning) | | | | | | | |
| 5. Ed. Impact During Construction | | | | | | | |
| 6. Include ECE and/or Central Admin | | | | | | | |
| **Capital & Operational Cost** | | | | | | | |
| 1. Site / Utility Infrastructure | | | | | | | |
| 2. Site Acquisition | | | | | | | |
| 3. Busing / Transporation | | | | | | | |
| 4. Phasing / Swing Space Cost | | | | | | | |
| 5. Maintenance / Operation | | | | | | | |
| 6. Energy | | | | | | | |
| 7. Staffing | | | | | | | |

EXAMPLE SITES



# GRADE CONFIGURATION ASSESSMENT

## LOOKING AT THE IMPLICATIONS (FOR IPSWICH)

### Implications of Enrollment Options | WWSBP

| | K-6, 360 Students | K-6 Configuration with Two K-6 Wings, 670 Students | Unified District, Two Grade 2-6 Wings, 750 Students | Unified District, Grade 2-6 with Grade 2-4 & Grade 5-6 wings, 750 Students |
|---|---|---|---|---|
| **High Quality Classrooms with Acoustic Privacy** | 62% of students | 100% of students | 100% of students | 100% of students |
| **ADA Compliant Classrooms** | 62% of students | 100% of students | 100% of students | 100% of students |
| **SE-Specialized Programs** | BB & AIMS would likely move to either CF or WW | BB, AIMS, & ILC all in same K-6 building | BB, AIMS, & ILC all in new building; early childhood programs will need to be developed at CF | BB, AIMS, & ILC in new building; early childhood programs will need to be developed at CF |
| **Zoning (Socio-economic balance)** | Can address via required redistricting | Can address if districting occurs (optional in this model) | Can address via required redistricting | Will be addressed by default |
| **Zoning (Equity in Specialized Programs)** | Unaddressed | Partially addressed | Fully Addressed | Fully Addressed |
| **Zoning (resolving the "islands" in the zoning of apartment complexes)** | Unaddressed | Unaddressed | Addressed | Addressed |
| **# of Enrollment Zones** | 3 | 2 | 2 | 1 |
| **Redistricting** | Some students currently in WW & CF would attend BB | Redistricting makes geographic & financial sense but is not required | All students are redistricted into 2 town-wide schools | All students are redistricted into 2 town-wide schools |
| **ELL Newcomer Program** | Not feasible | Feasible at new building, not at CF | Feasible in all schools | Feasible in all schools |
| **Transportation** | No additional | Additional $0-$110,000/year based on whether redistricting occurs | Additional $220,000/year | Additional $220,000/year |
| **Operational Savings (including transportation)** | $0 (and additional costs to maintain Fort River) | $400,000-$500,000/year (depending on redistricting/transportation) | $475,000/year | $475,000/year |
| **Peer Mentoring** | Possible across 7 grade levels | Possible across 7 grade levels | Possible across 5 grade levels | Possible across 5 grade levels |
| **Teacher Collaboration** | Same as current model | Additional job-alike collaboration opportunities for staff at new school; not at CF | Additional job-alike collaboration opportunities for all staff | Highest levels of job-alike collaboration for all staff |
| **Crocker Farm Implications** | Remains a PreK-6 with redistricting | Remains a PreK-6 with possible redistricting | Becomes PreK-1 Early Childhood Center | Becomes PreK-1 Early Childhood Center |

EXAMPLE ASSESSMENT

## Factors to Consider

- Travel (Cost and Time)
- Parent Involvement Increase/Decrease
- Size of Each Grade Level
- Number of School Transitions
- Interaction Opportunities Among Grades
- Ipswich Specific Goals/Concerns

## Research on Configuration

- No Definitive Answer on Most Effective
- Studies Focus on Quality of Environment, Teaching, Transitions & Parent Involvement

## Advantages of K-2 and 3-5

- Consolidates Grade Level Resources
- Students Feel Safe With Similar Age Group
- More Opportunities Among Grade Levels

## Advantages of K-5

- More Convenient for Families/Involvement
- Builds Familiarity & Communication Spans
- Less Transition Between Schools
- More Opportunities Between Grade Levels

IPSWICH'S CORE EDUCATIONAL LEADERSHIP TEAM

DESIGN WORKING GROUP

IPSWICH COMMUNITY GROUPS

# VISIONING PROCESS FOR THE WINTHROP SCHOOL

STEAM LEARNING GOALS AND BEST PRACTICES

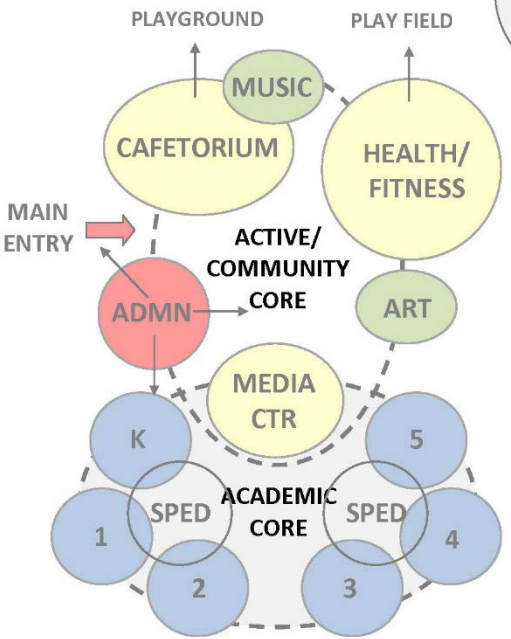
DESIGN PATTERNS AND GUIDING PRINCIPLES

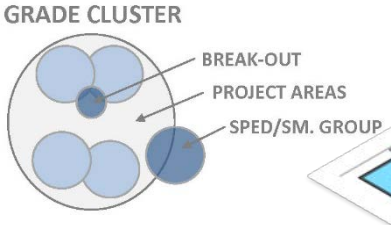
KEY SPACES, ADJACENCIES AND CONCEPTUAL DESIGN DIRECTIONS

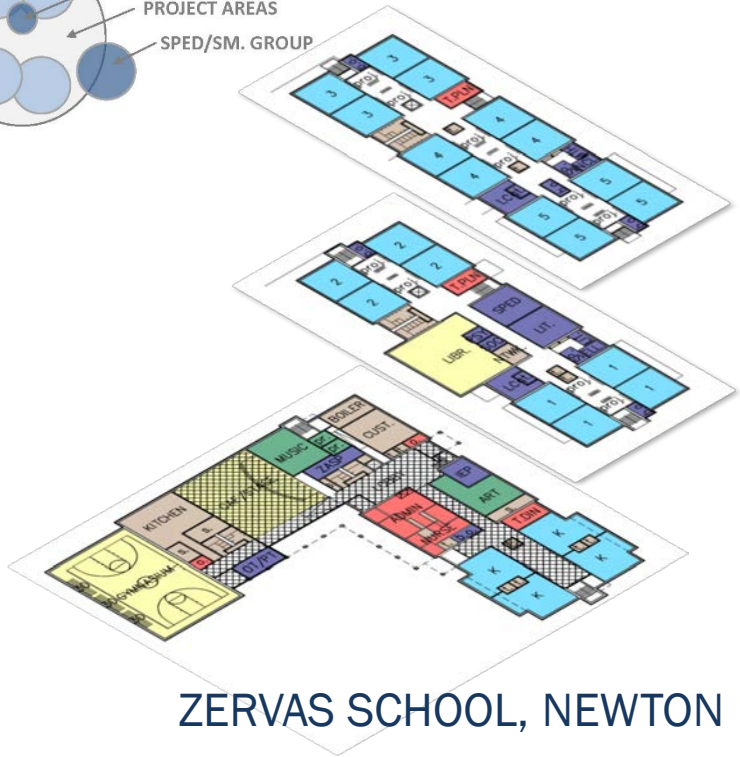
# PROGRAMMING & DESIGN

## TRANSLATION OF NEEDS & OBJECTIVES

| | | |
|---|---|---|
| **CORE CLASSROOMS** | **23,300 sf** | |
| ▪ Kindergarten | 4 per Grade | |
| ▪ 1st-2nd Grade | 4 per Grade | |
| ▪ 3rd-5th Grade | 4 per Grade | |
| **SPECIAL EDUCATION** | **5,825 sf** | |
| ▪ Full Size Room | 1 (SPED) | 1 (LITERACY) |
| ▪ Half Size Room | 1 (OT/PT) | 2 (IEP/ELL) |
| ▪ Learning Center | 1 (at K-2) | 1 (at 3-5) |
| ▪ Office/Conference | 2(ADMN) | 4 (at 3-5) |
| ▪ Quiet Rooms | 1 (at K-2) | 1 (at 3-5) |
| ▪ Breakout | 1 per Grade | |
| **ART/STORAGE** | **1,150 sf** | |
| **MUSIC/ENSEMBLE** | **1,575 sf** | |
| **MEDIA CENTER** | **2,875 sf** | |
| **GYMNASIUM** | **6,000 sf** | |
| ▪ Office/Storage | **300 sf** | |
| **CAFETERIA/STAGE** | **4,675 sf** | |
| ▪ Kitchen/Storage | **2,153 sf** | |
| ▪ Staff Lunch | **500 sf** | |
| **ADMIN/GUIDANCE** | **2,790 sf** | |
| ▪ Nurse's Suite | **510 sf** | |
| **CUSTODIAL/STORAGE** | **1,865 sf** | |
| | **53,518 NSF** | |
| **x 1.5** | **80,277 GSF** | |



ZERVAS SCHOOL, NEWTON

Winthrop and Doyon Elementary School
February 10 , 2016

# Educational Visioning

IPSWICH
PUBLIC SCHOOLS

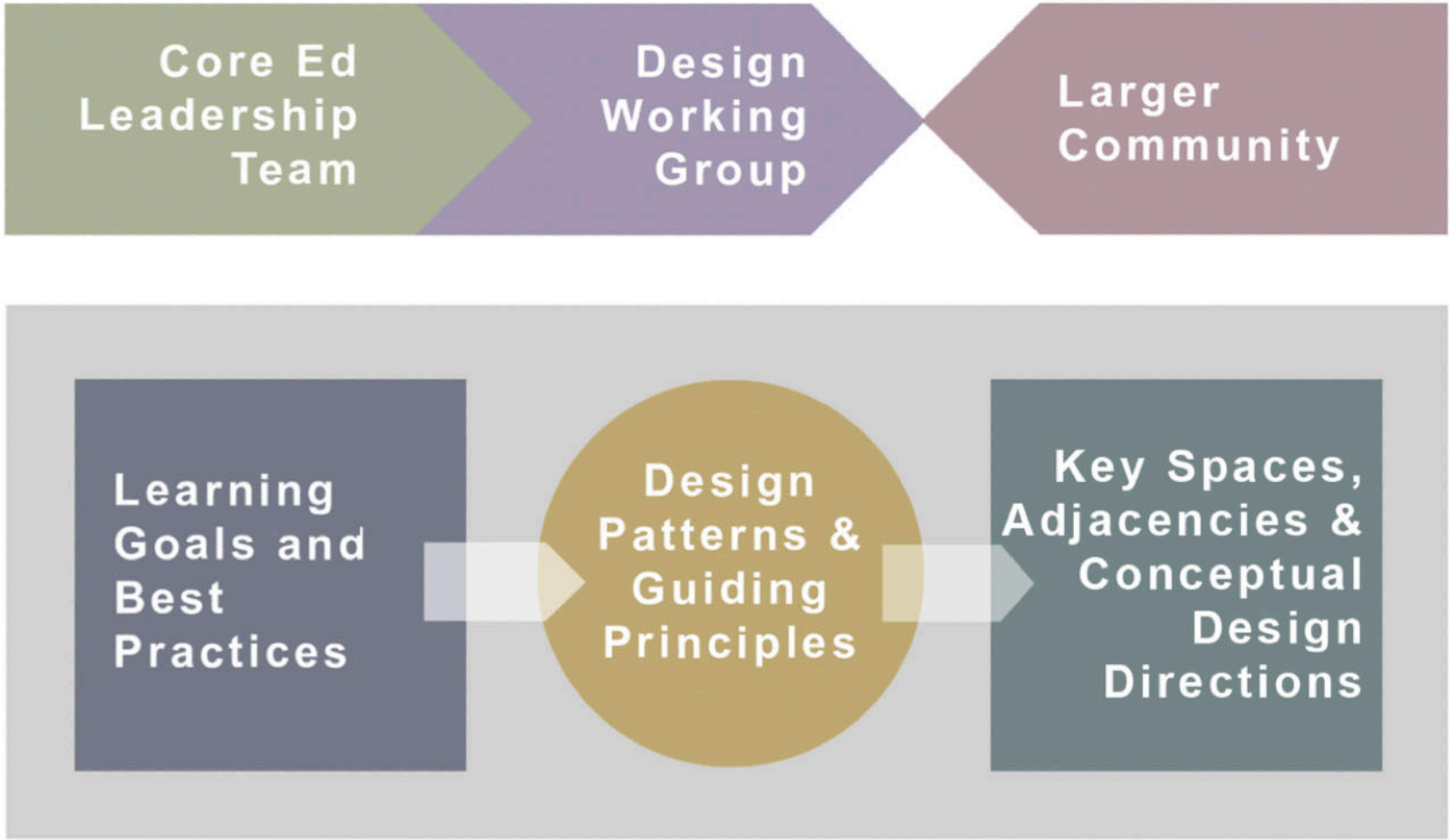
newvistadesign
Envisioning 21st Century Schools

Perkins Eastman \ DPC

# Today's Agenda

- Visioning Overview and Introductions (15 min)
- Priority Goal Setting for the new/renovated elementary school (25 min)
- 21st Century Schools Presentation (25 min)
- 21st Century Learning Goals Activity (20 min)
- Grade Configuration Considerations (30 min)
- Closing and Next Steps (5 min)

# The Visioning Process



- EWG Workshop ONE – February 29, 2016
- Community Forum TWO – March 10, 2016
- EWG Workshop TWO – March 14, 2016
- Faculty Workshop – March 17, 2016

# Best Practices

## 21st Century Learning and PBL

# 21st Century Teaching and Learning

## The Three Rs

- Reading
- Writing
- Arithmetic

## The Four Cs

- Critical Thinking
- Communication
- Collaboration
- Creativity

*plus Citizenship*

## Head & Hand

## Growth Mindset

- Student-Centered
- Interdisciplinary
- Technology-Infused
- Community Connected
- Problem- and Project-Based
- Process and Product Oriented

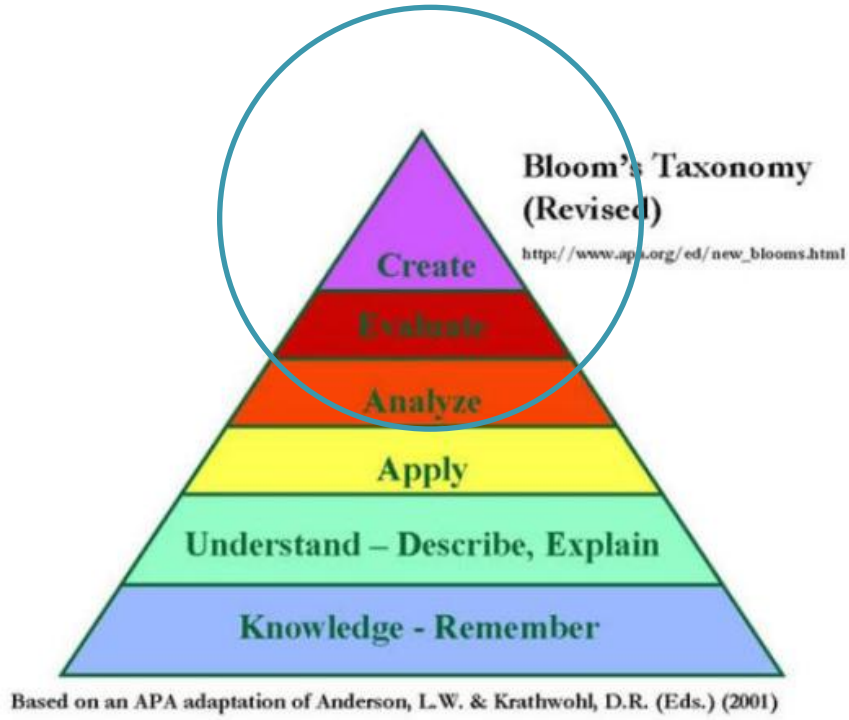
# The 6 Rs and Bloom's

## The Old 3 R's

- Reading
- wRiting
- aRithmetic

## The New 3 R's

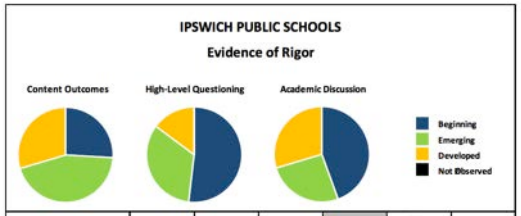
- Rigor
- Relevance
- Relationship



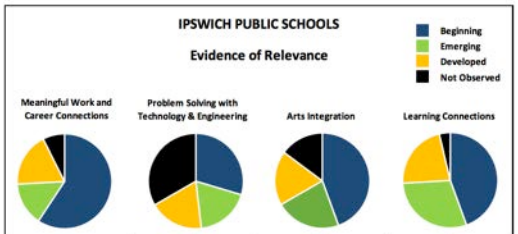
# Ipswich Successful HOMs

# Ipswich Indicators

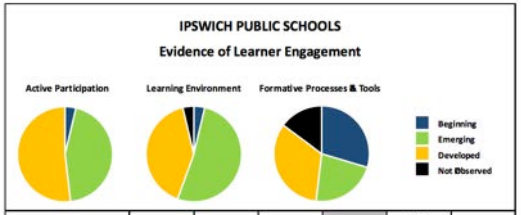
- Rigor
- Relevance
- Engagement




| Component | Beginning | Emerging | Developed | | Not Observed | Total |
|---|---|---|---|---|---|---|
| Content Outcomes | 7 | 12 | 8 | | 0 | 27 |
| High-Level Questioning | 14 | 9 | 4 | | 0 | 27 |
| Academic Discussion | 12 | 7 | 8 | | 0 | 27 |




| Component | Beginning | Emerging | Developed | | Not Observed | Total |
|---|---|---|---|---|---|---|
| Meaningful Work and Career Connections | 16 | 4 | 5 | | 2 | 27 |
| Problem Solving with Technology & Engineering | 8 | 5 | 5 | | 9 | 27 |
| Arts Integration | 12 | 6 | 5 | | 4 | 27 |
| Learning Connections | 12 | 8 | 6 | | 1 | 27 |




| Component | Beginning | Emerging | Developed | | Not Observed | Total |
|---|---|---|---|---|---|---|
| Active Participation | 1 | 12 | 14 | | 0 | 27 |
| Learning Environment | 1 | 14 | 11 | | 1 | 27 |
| Formative Processes & Tools | 8 | 6 | 9 | | 4 | 27 |

EdLeader21

PARTNERSHIP FOR 21ST CENTURY SKILLS

# 21st Century Skills Framework

Learning & Innovation Skills

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

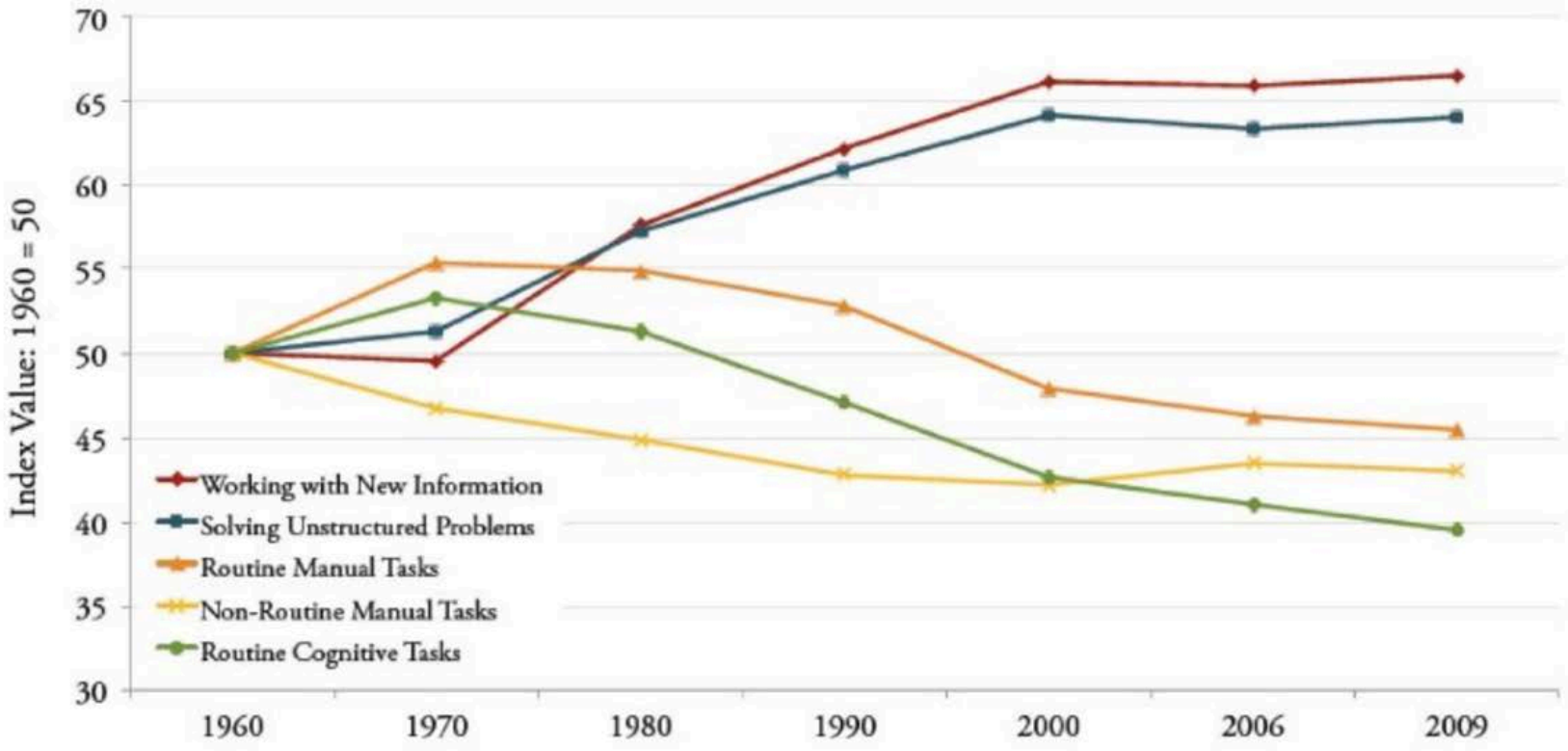
Information, Media & Technology Skills

- Information Literacy
- Media Literacy
- ICT (Information, Communications & Technology) Literacy

Life & Career Skills

- Flexibility & Adaptability
- Initiative & Self-Direction
- Social & Cross-Cultural Skills
- Productivity & Accountability
- Leadership & Responsibility

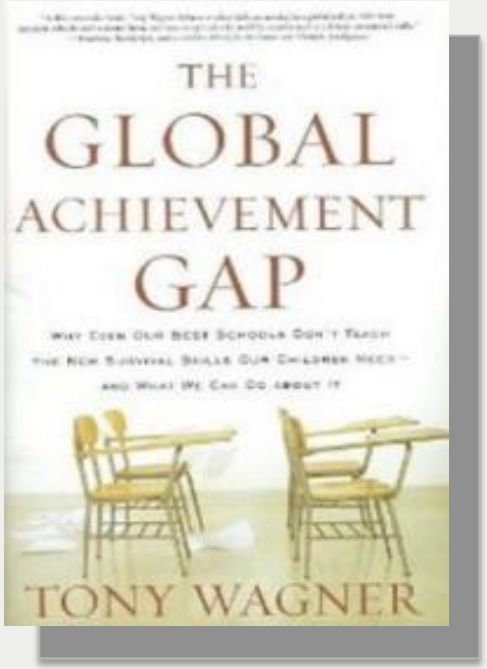
Charles Fadel




Dances with Robots: Human Skills for Computerized Work, Levy and Murnane, 2013

# Focus on Doing not Knowing

**The world no longer cares about how much you know, the world cares about what you can do with what you know – *Tony Wagner***



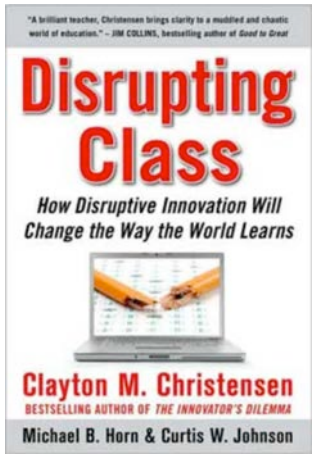

- Critical Thinking and Problem Solving
- Communication, oral and written
- Collaboration and Leadership
- Creativity, Curiosity and Imagination
- Accessing and Analyzing Information
- Initiative and Entrepreneuralism
- Agility and Adaptability

# Focus on Learning NOT Teaching

- High-performance work environments
- Varied and collaborative
- Lifelong learning

# Blended Learning

- Seamless Technology Integration
- Online and Virtual Delivery
- Production of Technology

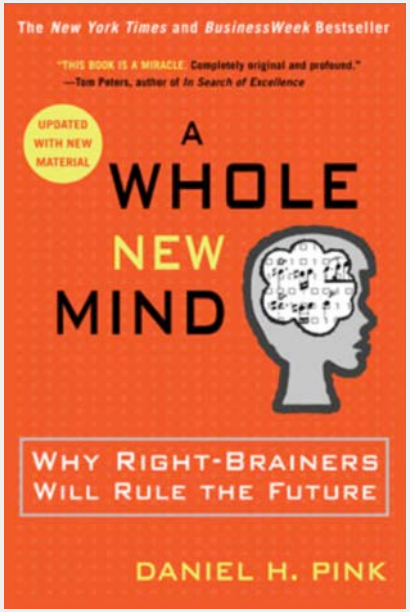


# Whole Brain Thinking

- Asia, Automation and Affluence
- Differentiated instruction
- Whole child approach

1. Design
2. Story
3. Symphony
4. Empathy
5. Play
6. Meaning

6 Senses for the Conceptual Age

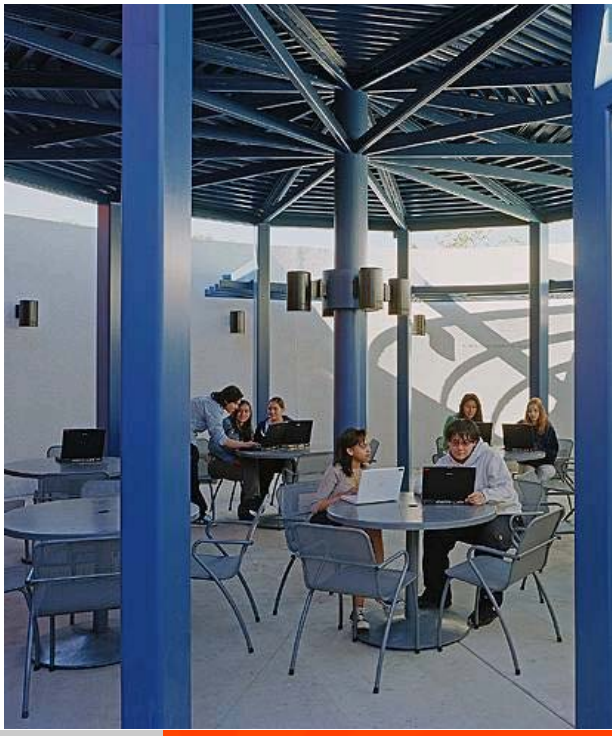


# Differentiated Instruction

- Student Choice/Personalization
- Self-Paced and Small Group
- Anywhere, anytime learning

# Anytime, Anywhere Learning

- Flip Classrooms
- Virtual Delivery
- MOOCs



# Inquiry-Based Instruction

- Problem and Project-Based
- Authentic Contexts
- Performance assessment
- Product creation

# Common Core and the 4 Cs

# Inquiry-Based Continuum

- Comprehensive Schools
- Project-Based Learning
- Expeditionary Learning
- CTE Programs
- STEM and STEAM
- Progressive & Constructivist Programs
- IB Schools
- No Excuses Schools
- Charter Schools

## STUDENT PROJECTS

- Classroom
- School-Wide
- After School
- Intersession
- Senior
- Capstone
- ELOs
- Internships
- Community Service

# Teaming and Collaboration

- Meaningful Integration of Disciplines
- Cohort Groupings / Reduced Student Load
- Teacher and Student Collaboration

# STEM and STEAM

- STEM as meta-discipline
- Art and Humanities as Glue
- Design Thinking Process

# STEM and STEAM

## Science Practices

Next Generation Science Standards

### Ask Questions

- What am I observing?
- What does this evidence mean?
- What is the relationship between these variables?
- How can I make my model more accurate?
- What evidence do I need to answer my question?
- What hypothesis can I state based on my observations?
- Is the data used correctly in the argument?

### Investigate

- Use the Scientific Method.
- State the goal of the investigation.
- Predict outcomes.
- Plan a course of action that will provide the best evidence to support conclusions.
- Use scientific ideas to show why data can be considered evidence.
- Reduce error in procedures.

### Use Math

- Use computers to analyze very large data sets for patterns and trends.
- Use mathematical representations to support scientific conclusions.
- Create algorithms (a series of ordered steps) to solve a problem.
- Use digital laboratory tools to observe, measure, record, and process data.
- Make quantitative predictions.

### Communicate

- Be a critical consumer of information about science
- Critically read scientific texts to determine the central ideas and obtain scientific information to describe patterns in evidence.
- Use multiple sources to obtain information used to evaluate the validity of claims and methods.
- Communicate ideas by using tables, diagrams, graphs, models, interactive displays, and equations as well as orally, in writing, and discussion.

### Design a Model

- Models include diagrams, physical replicas, mathematical representations, analogies, and computer simulations.
- Models highlight some ideas and simplify others.
- Models are used to help find questions and explanations, to get data to predict, and to communicate ideas.
- Models are based upon evidence. New evidence, changes the model.

### Analyze Data

- Construct and interpret graphical displays of data.
- Use computers to tabulate, graphically represent data, visualize, and statistically analyze.
- Use math to represent relationships between variables and identify patterns.
- Take into account sources of error.
- Is one variable the cause (causal), or do both just happen at the same time (correlational)?

### Explain

- An explanation includes qualitative or quantitative relationships between variables that predict and describe phenomena.
- Design investigations that generate data to determine explanations to questions.
- Apply scientific reasoning to show why the data or evidence is adequate for the explanation or claim.
- Construct an explanation using models or representations.

### Argue

- Argue when investigating a phenomenon, resolving questions about measurements, building data models, and using evidence to evaluate claims.
- Arguing happens when listening, comparing, and evaluating competing ideas and methods.
- Respectfully provide and receive critiques about one's explanations, procedures, models, and questions by citing relevant evidence and posing and responding to questions.

Stacey Reed 2013

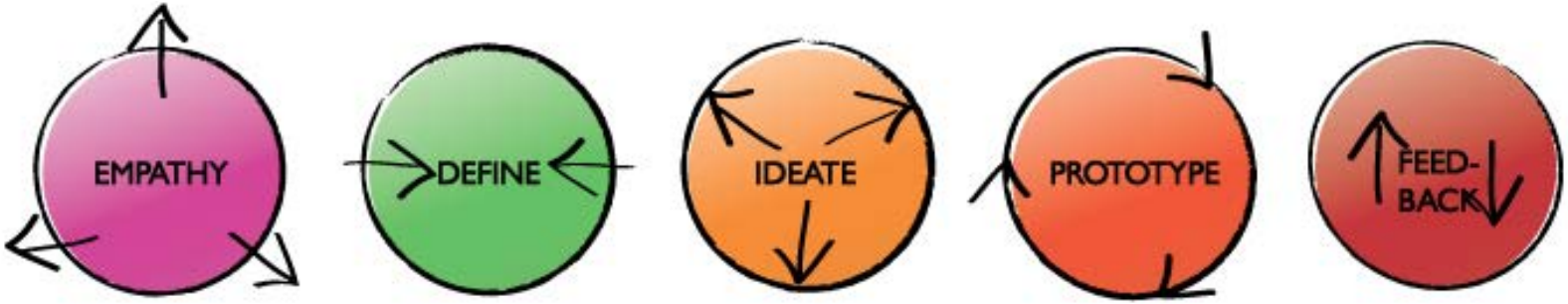
# Ipswich STEAM Integration

| Teaching | |
|---|---|
| **Strengths** | **Needs** |
| • Many teachers recognize that it is necessary to explore new, more engaging, and more rigorous instructional practices to help students become successful on the test and in learning beyond the test.<br>• Some staff recognizes that the present strategies often were not meeting the ways that students learned.<br>• There are examples of excellent teaching practices throughout IPS that could be shared and brought to scale.<br>• Teachers utilize their local habitats for accessible and meaningful hands-on learning opportunities.<br>• There is a healthy collaborative work environment in the schools.<br>• IPS teachers are motivated to learn and grow and have a history of strong curriculum development.<br>• There is a desire for increased professional collaboration.<br>• Teachers have good relationships with students. | • Incorporate STEAM learning strategies and projects that are more rigorous, relevant, and aligned to the NGSS.<br>• Increase the rigor associated with high-level questioning techniques and academic discussions around STEAM.<br>• Increase relevance in student learning through authentic resources from STEAM careers and learning connections between tasks and real-world scenarios.<br>• Increase professional learning to support the inclusion of engineering design practices, formative assessment processes, content integration, and project-based learning methods.<br>• Leverage team-planning time to discuss and share innovative STEAM teaching strategies, projects, and authentic assessments. |

# Design/Engineering Thinking

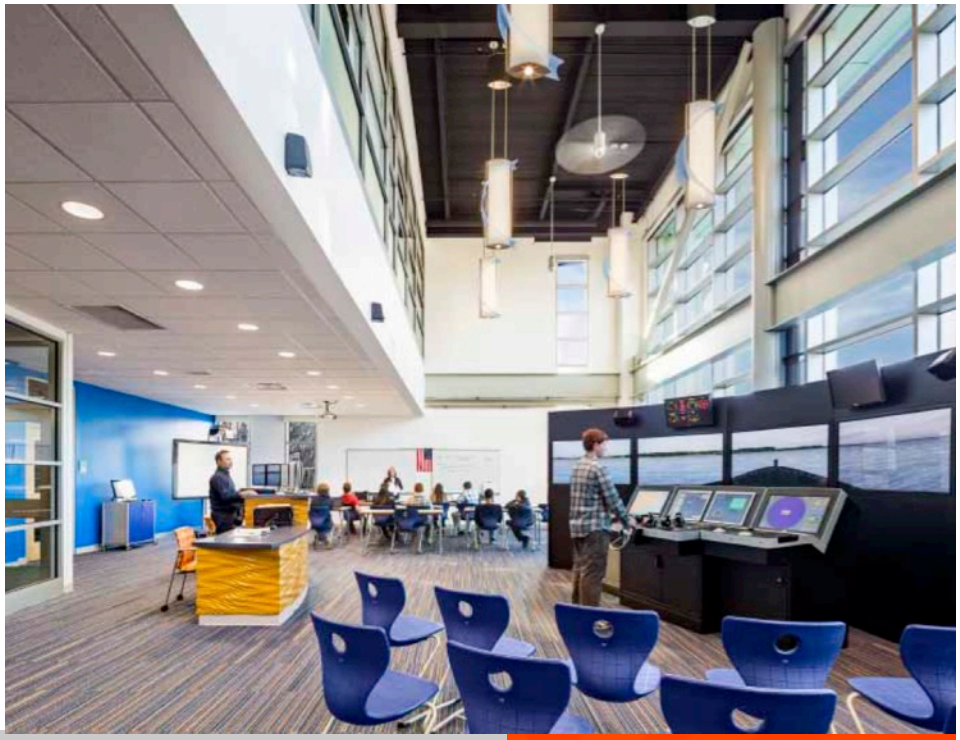
- Dewey / Head and Hand Integration
- Academic / CTE Integration
- Maker Movement

# Design Thinking



# Career Tech Education

- Vocational/Academic Integration
- Broad based transferable skills building
- Career Pathways



# Internships and Field Studies

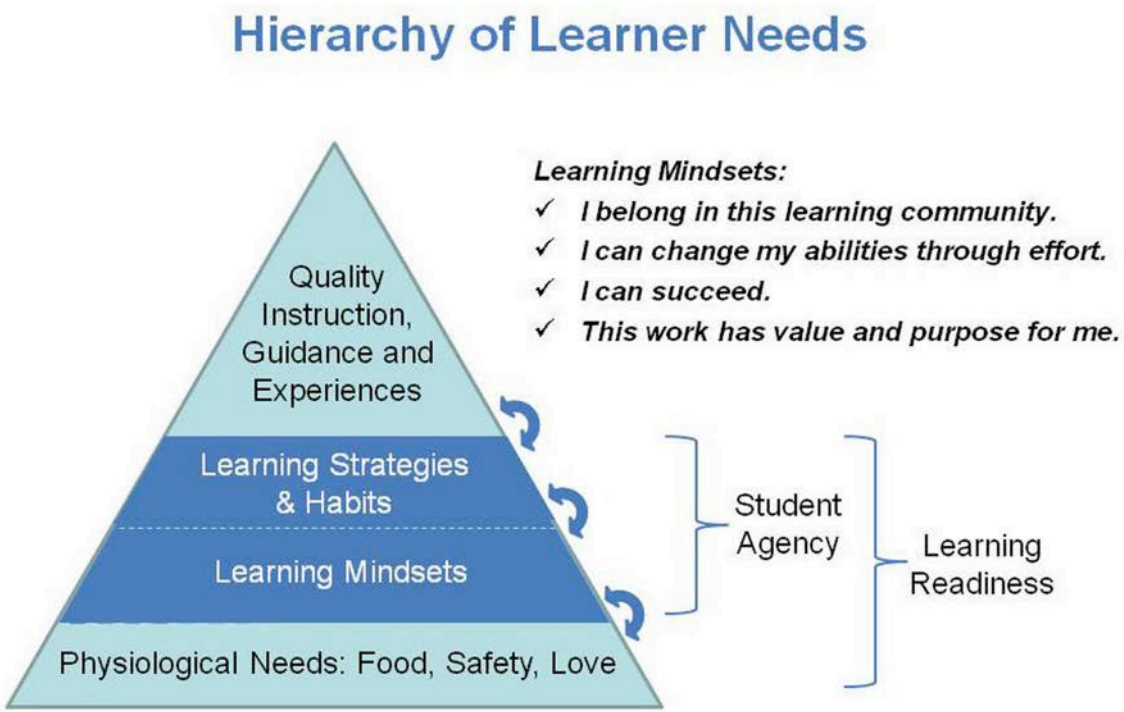
- Adult world connections and mentoring
- Authentic projects and contexts for learning
- Writing and reflection

# Deeper Learning

- **Mastery of Core Academic Content**
- **Critical Thinking and Problem Solving**
- **Collaboration**
- **Effective Communication**
- **Self-Directed Learning**
- **An "Academic/Growth Mindset"**

THE WILLIAM AND FLORA HEWLETT FOUNDATION

# Academic/Growth Mindset




... Grit, perseverance and a passion for long term goals...

# Community Partnerships

- Permeable School Walls
- Adult-World Connections / Internships
- Leveraged Resources

# Global Learning

- International Collaborations
- Sister Classrooms
- Travel Studies

# Learning from Best Practices

- Forward-thinking programs and facilities
- Key spaces and important adjacencies
- Lessons learned

EXPEDITIONARY LEARNING

edutopia

# Project-
# Based Learning

... the ONLY way to teach 21st century and independent learning skills

# The 6 A's of Powerful Projects

- Academic Rigor
- Authenticity
- Applied Learning
- Active Exploration
- Adult Connections
- Assessment Practices

# Media Saves the Beach

Media Saves the Beach

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# 21st Century Skills

## Activity

# What 21st Century Skills Are Most Important to Your School and District?

## Bloom's Taxonomy

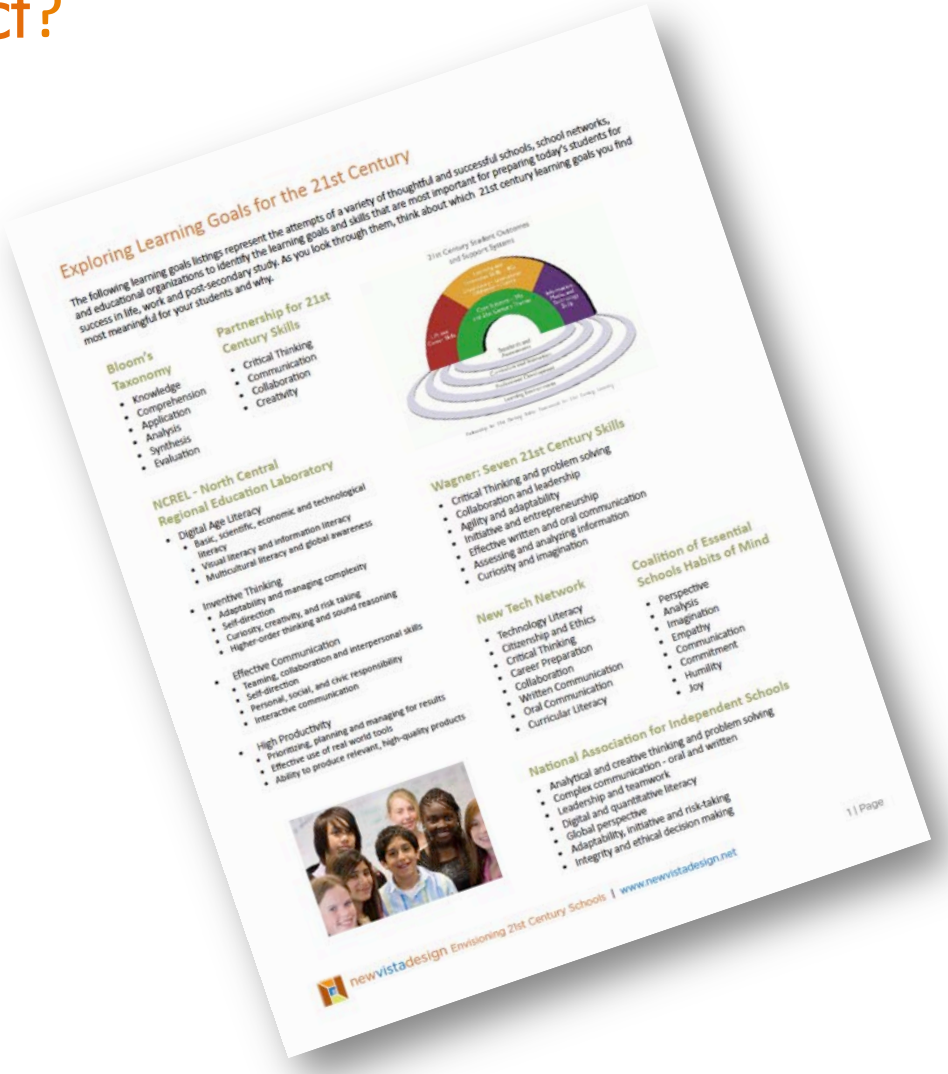
- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation

## Partnership for 21st Century Skills

- Critical Thinking
- Communication
- Collaboration
- Creativity

## NCREL - North Central Regional Education Laboratory

- Digital Age Literacy
  - Basic, scientific, economic and technological literacy
  - Visual literacy and information literacy
  - Multicultural literacy and global awareness


Exploring Learning Goals for the 21st Century

The following learning goals listings represent the attempts of a variety of thoughtful and successful schools, school networks, and educational organizations to identify the learning goals and skills that are most important for preparing today's students for success in life, work and post-secondary study. As you look through them, think about which 21st century learning goals you find most meaningful for your students and why.

Bloom's Taxonomy
- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation

Partnership for 21st Century Skills
- Critical Thinking
- Communication
- Collaboration
- Creativity

NCREL - North Central Regional Education Laboratory
- Digital Age Literacy
  - Basic, scientific, economic and technological literacy
  - Visual literacy and information literacy
  - Multicultural literacy and global awareness
- Inventive Thinking
  - Adaptability and managing complexity
  - Self-direction
  - Curiosity, creativity, and risk taking
  - Higher-order thinking and sound reasoning
- Effective Communication
  - Teaming, collaboration and interpersonal skills
  - Self-direction
  - Personal, social, and civic responsibility
  - Interactive communication
- High Productivity
  - Prioritizing, planning and managing for results
  - Effective use of real world tools
  - Ability to produce relevant, high-quality products

Wagner: Seven 21st Century Skills
- Critical Thinking and problem solving
- Collaboration and leadership
- Agility and adaptability
- Initiative and entrepreneurship
- Effective written and oral communication
- Assessing and analyzing information
- Curiosity and imagination

New Tech Network
- Technology Literacy
- Citizenship and Ethics
- Critical Thinking
- Career Preparation
- Collaboration
- Written Communication
- Oral Communication
- Curricular Literacy

Coalition of Essential Schools Habits of Mind
- Perspective
- Analysis
- Imagination
- Empathy
- Communication
- Commitment
- Humility
- Joy

National Association for Independent Schools
- Analytical and creative thinking and problem solving
- Complex communication - oral and written
- Leadership and teamwork
- Digital and quantitative literacy
- Global perspective
- Adaptability, initiative and risk-taking
- Integrity and ethical decision making

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# Which 21st Century Skills and Habits of Mind do you see as most important?