Concept- Based Learning

North Atlanta High School
Middle Years Programme
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Dr. Nikia Showers, facilitator
As IB learners we strive to be:

INQUIRERS
We nurture our curiosity, developing skills for inquiry and research. We know how to learn independently and with others. We learn with enthusiasm and sustain our love of learning throughout life.

KNOWLEDGEABLE
We develop and use conceptual understanding, exploring knowledge across a range of disciplines. We engage with issues and ideas that have local and global significance.

THINKERS
We use critical and creative thinking skills to analyse and take responsible action on complex problems. We exercise initiative in making reasoned, ethical decisions.

COMMUNICATORS
We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups.

PRINCIPLED
We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. We take responsibility for our actions and their consequences.

OPEN-MINDED
We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.

CARING
We show empathy, compassion and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us.

RISK-TAKERS
We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change.

BALANCED
We understand the importance of balancing different aspects of our lives—intellectual, physical, and emotional—to achieve well-being for ourselves and others. We recognize our interdependence with other people and with the world in which we live.

REFLECTIVE
We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development.
Norms

• Be Focused and Present
• Share Ideas and Be Open to Learn from Others
• Use Technology when Appropriate
• Be Willing to Continue Learning beyond Today
IB Standards and Practice/ TKES*

• **Standard C3: Teaching and learning**
  2. Teaching and learning engages students as inquirers and thinkers.
  3. Teaching and learning builds on what students know and can do.

• **TKES: Performance Standards**
  1. Professional Knowledge
  2. Instructional Planning
  3. Instructional Strategies
  8. Academically Challenging Environment
Statement of Inquiry and Inquiry Questions*

• Concepts bring purpose to the content inquiring students are exploring.
  • What are concepts?
  • How can using content/standards support the concepts that I must teach?
  • How can I use the Instructional Practices to strengthen concept-based learning in my class?
• Would my students learn more from developing skills or understanding concepts?
MYP: Concept- Based Learning*

- Concept-based is inquiry-driven and idea- centered.
- Move beyond memorization of facts and skills to the added dimension of concepts and deep conceptual understanding through synergy.
- Conceptual understanding transfer through time, across cultures and across situations, which supports the ability to see patterns and connections between similar ideas, events, and issues.
- As students search for patterns and connections, new knowledge is created.

Erickson and Lanning- Transitioning to Concept-Based Curriculum and Instruction, 2014
MYP: Concept-Based Learning*

- Jigsaw- From Principles into Practice
  - Expert Group
    - Take notes (circle, highlight, underline, and/or make comments) on the text
    - As a group determine 1 word, 1 phrase, and 1 sentence that represents your section and record in your Participant book.
  - Learner Partners
    - Find your partner
    - Discuss your section and share your word, phrase, and sentence.
    - Discuss and record the following in your Participant book:
      - What new information did you learn? What information affirmed what you already know?
MYP: Concept- Based Learning*

So why is concept- based learning needed now?

Information without Intellect is Meaningless- Erickson

- Everything is available on the internet!
- Anything can be googled!
- Need to build intellect!
- Understanding **HOW** to gather and **CRITICALLY EVALUATE** information

MYP: Conceptual Understanding Overview video
MYP: Concept-Based Learning*

- The Goal is Transferring Knowledge from Familiar to Unfamiliar.

Acquisition (Factual)  
Transfer (Debatable)  
Meaning Making (Conceptual)
What are concepts?

Key concepts - engage students in high-order thinking, helping them connect facts and topics with more complex conceptual understanding.

<table>
<thead>
<tr>
<th>Aesthetics</th>
<th>Connections</th>
<th>Communication</th>
<th>Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection</td>
<td>Creativity</td>
<td>Culture</td>
<td>Development</td>
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<tr>
<td>Form</td>
<td>Global Interaction</td>
<td>Identity</td>
<td>Logic</td>
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<tr>
<td>Perspective</td>
<td>Relationships</td>
<td>Systems</td>
<td>Time, place, and space</td>
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Related concepts - grounded in specific subjects and disciplines
What are concepts?

How do the key and related concepts create depth and breadth—promoting deeper and more complex conceptual understanding—for subject areas?

Relationships (Key) BREADTH

Cause and Consequence (Related) DEPTH

ANY CHANGE IN A RELATIONSHIP HAS CONSEQUENCES.

Romeo and Juliet  Civil War  Math Equations  Reactants
Topics vs Concepts*

- **Topics**
  - Organized set of facts related to specific people, places, situations, or things
  - Do not transfer
  - Example
    - Deforestation in South America
    - Shakespeare’s plays

- **Concepts**
  - Abstract mental constructs which umbrella topics that are universal, timeless, abstract.
  - Do Transfer
  - Generalizability and Complexity
  - Examples
    - Interrelations
    - Conflict
Topics vs Concepts*

1. When students and teachers think about specific events, issues, and historical figures through a conceptual lens, they are forced to analyze, evaluate, and investigate at deeper levels.

2. Studying just topics and facts as information to be memorized fails to engage deeper intellect of students.

3. When students are encouraged to think beyond the facts and connect factual knowledge to ideas of conceptual significance, they find relevance and personal meaning.
Break!
How can using content/standards support the concepts that I need to teach?*

• Concepts are not intended to replace content.
• Content is the disciplinary knowledge and skills to be taught and learned.
• Focusing on just topics, skills, and facts (content and standards) does not create conceptual understanding.
MYP and Conceptual-Based Generalizations

Principles
  Statement of Inquiry

Concepts
  Key
  Related

Facts and Skills
  Standards
  Content
Migration leads to cultural diffusion resulting in social/economic change.

- Migration
- Change
- Cultural Diffusion

Early European Migration

Early Europeans settlers migrated west. Reading primary and secondary sources. SSUSH6 (SWBAT Know and Do) Individuals and Societies Objective A (ii)

Statement of Inquiry
- Key and Related Concepts
- US History Topic
- Standards and Content (Instructional Practice 1)
- MYP Objectives
- Approaches to Learning Skills

Adapted from Erickson and Lanning- Structure of Knowledge and Structure of Process
Discovering mathematical relationships can lead to a better understanding how environmental systems evolve.

- Relationships - System
- Change - Globalization

Exponential and Logarithms

Exponential Growth
Functions are often used to model population growth.

Reading charts and graphs.

MGSE9-12.F.IF.8b
(SWBAT Know and Do)

Mathematics Objective A (i)
Principles
Generalization

Inquiry Question: How can using content/standards support the concepts that I need to teach?

Visual Components
Label each element

- Statement of Inquiry
- Key and Related Concept (at least 1 each)
- Topic (at least 1)
- Fact (at least 2)
- Skill/ Strategies/ Process (at least 1)
- Standard and SWBAT (at least 1)
- MYP Objective (at least 1)
- ATL skill (at least 1)
How can I use the Instructional Practices to strengthen MYP in my class?*

Planning and Purpose

Unit Planner and Daily Lesson Plans

Learning Experiences and Teaching Strategies

Discuss at your table how you have incorporated the Instructional Practices in your class?

Add 1 Learning Experience and Teaching Strategy (Instructional Practices)
Break!
Would my students learn more from developing skills or understanding concepts?*

- Virtual Chalk Talk- www.todaysmeet.com/IBMYPNorthAtlanta
  - Who are my students?
  - Can my students benefit from concept-based learning?
  - What skills are the most important?
  - What concepts are the most important?
Summary

Concepts bring purpose to the content inquiring students are exploring. It’s not enough to memorize facts and develop skills; students must be given opportunities to make meaning with facts and skills for transfer. The facts, skills, content, standards, topics, and concepts are all building blocks to conceptual understanding!

Instructional Practices are the best practices that will support and create meaningful learning experiences.
Next Steps/ Reflection

• 3 Things you Learned or Affirmed Today
• 2 Things you are Willing to Try in your Class
• 1 Idea you want to Learn More About and steps to take