

# SHELLEY MOORE



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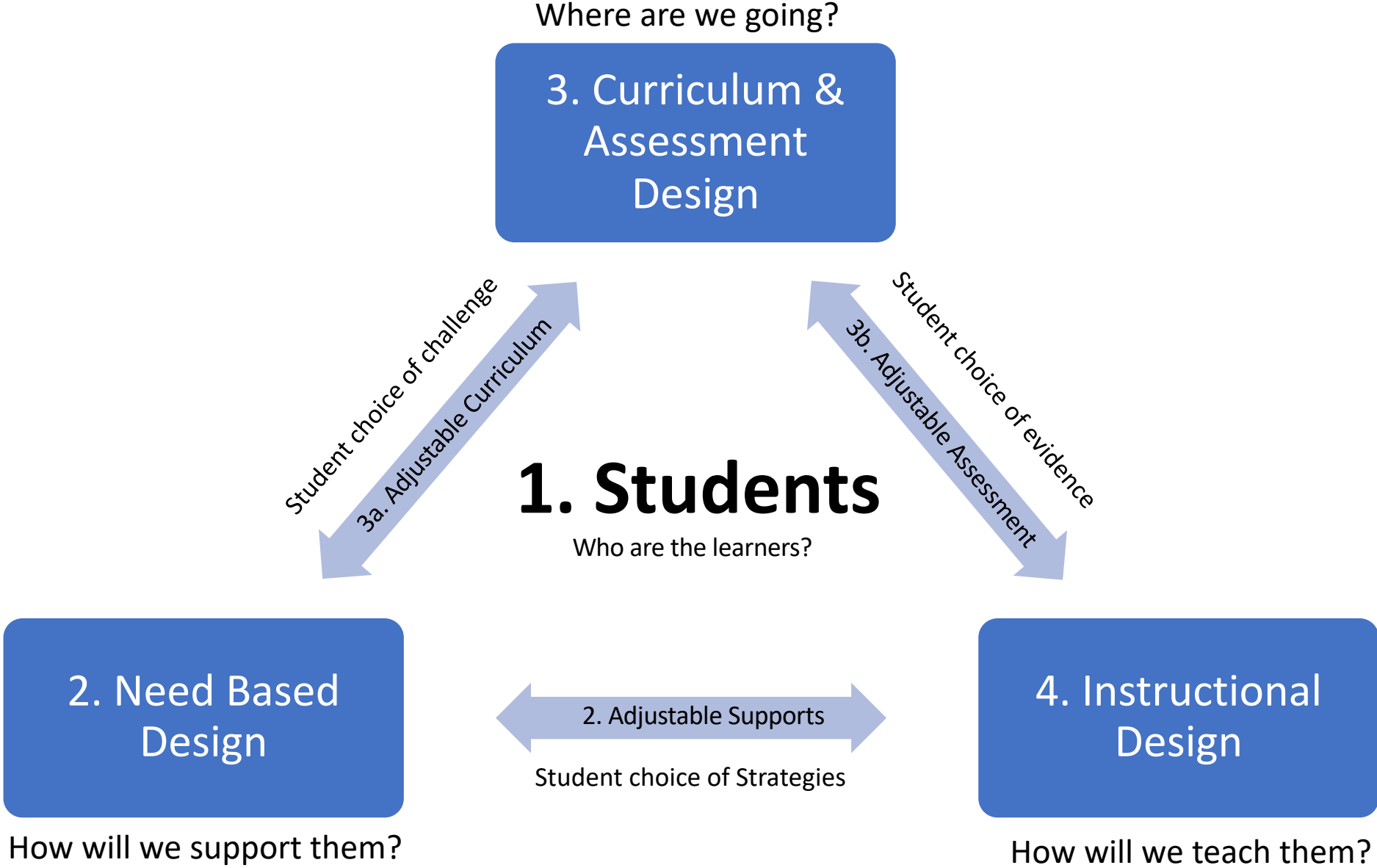
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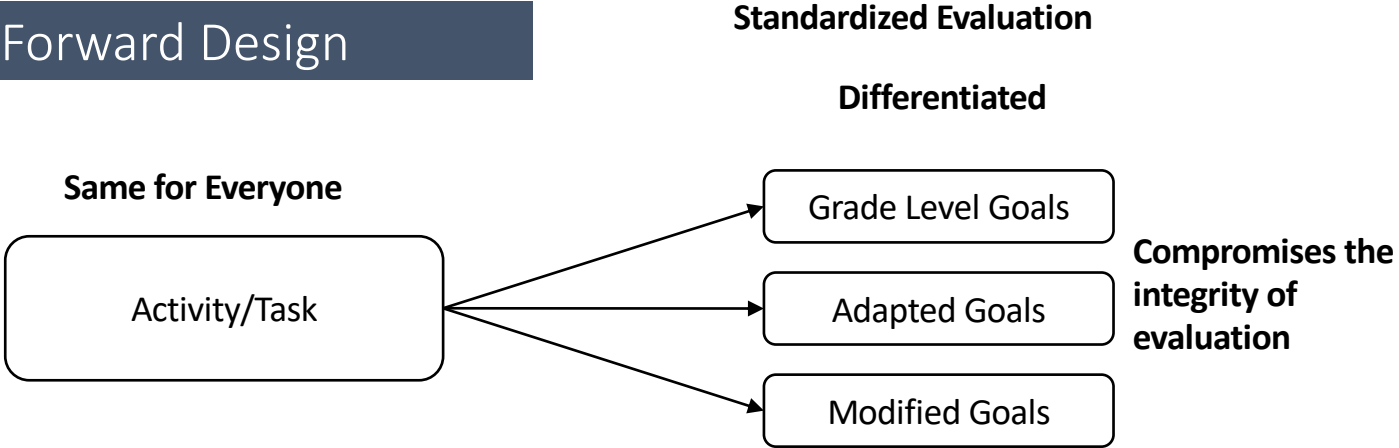
# HOW DO WE DESIGN AN ADJUSTABLE CURRICULUM?

- who are the *students*? what is the range of *diversity*?
- what kind of *curricula* are the students learning?
- How is the curriculum *responsive* to the students dimensions?
- How do the students make the *adjustments* they need to use the curriculum?

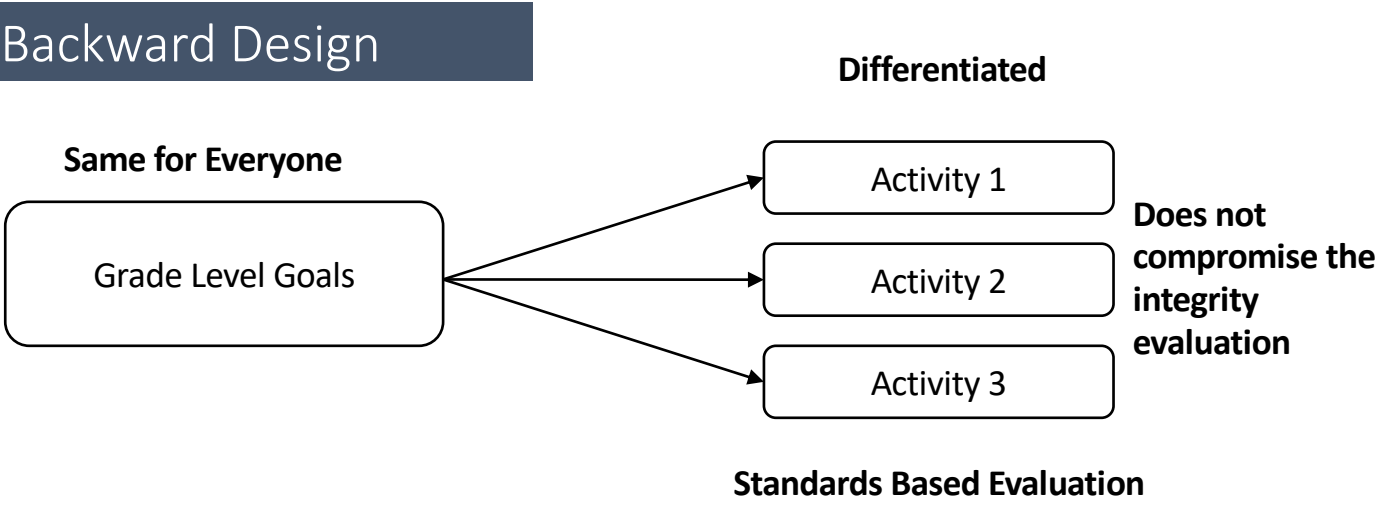
# How do we change the system? Design with Equity in Mind



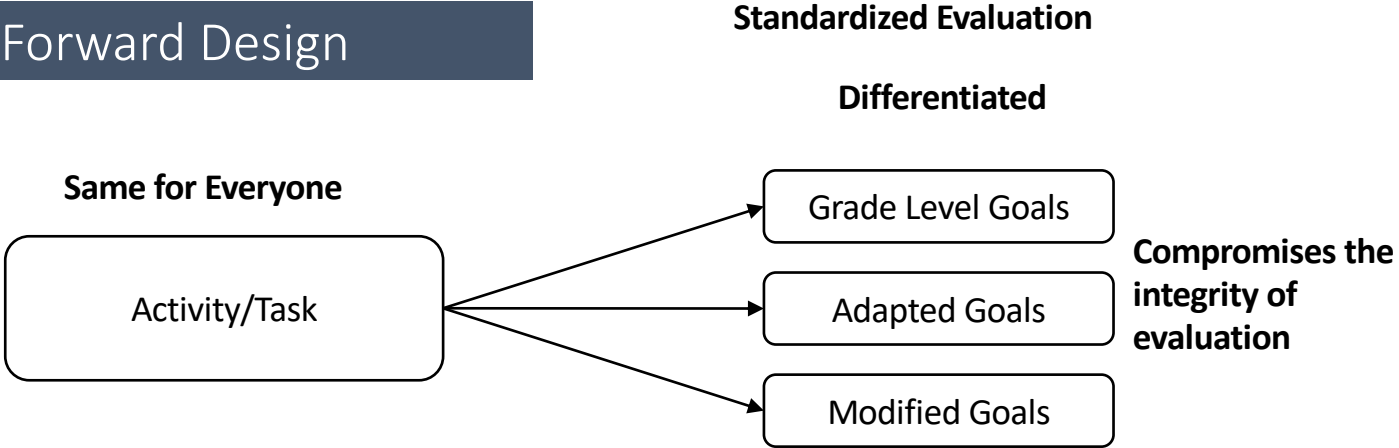
# Forward Design



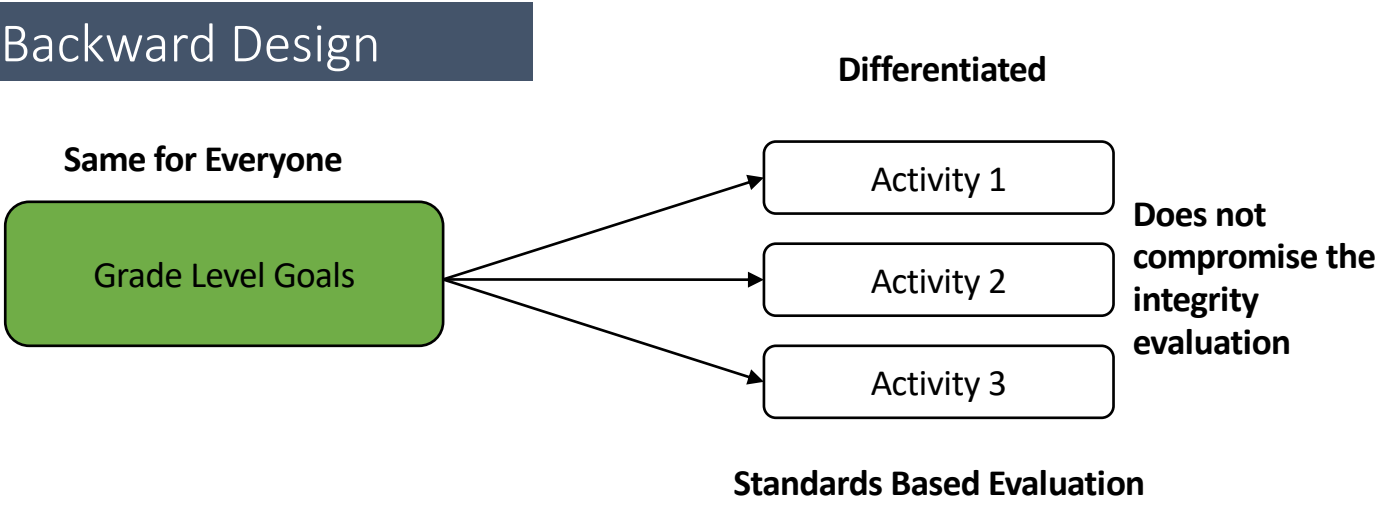
# Backward Design



# Forward Design



# Backward Design



# Backwards Design: Previous Curriculum

What types of goal are in the curriculum?

- **Content**

- What do we need to know?

- **Process**

- What do we need to do?

What do you notice?

# Backwards Design: What are the GOALS?

- **Backwards Design**
  - **Big Idea**
    - What do we need to understand?
  - **Content**
    - What do we need to know?
  - **Curricular Competencies**
    - What do we need to do?
  - **Core Competencies**
    - Who do we need to become?

|  |                              |                                  |
|--|------------------------------|----------------------------------|
| <b>Grade:</b>  | <b>Subject Area:</b>         | <b>Planning Team:</b>            |
| <b>Big Idea(s): What do I need to Understand?</b>            |                              | <b>Unit Guiding Question(s):</b> |
| <b>Key Vocabulary:</b>                                       |                              |                                  |
|  | <b>Curricular Language</b>   | <b>Student Friendly Language</b> |
| <b>What do students need to know?<br/>Knowledge Goals</b>    |                              | <b>I know</b>                    |
| <b>What do students need to do?<br/>Skills/Process Goals</b> |                              | <b>I can</b>                     |
| <b>What do students need to do?<br/>Skills/Process Goals</b> |                              | <b>I can</b>                     |
| <b>What do students need to do?<br/>Skills/Process Goals</b> |                              | <b>I can</b>                     |
| <b>Who do student need to be?<br/>Competency Goals</b>       | <b>I can become/ I am...</b> |                                  |



| Grade: 10   |  | Subject Area: Math 10  | Planning Team: Jen |
|---|--|--|--------------------|
| Big Idea: Trigonometry involves using <b>proportional reasoning</b> to solve <b>indirect measurement</b> problems |  | Unit Guiding Question:<br>1. What is Trigonometry and why is it useful?<br>2. How do I use trigonometry to find an indirect measurement? |                    |
| Content Goal  | <b>Primary trigonometric ratios</b>  | I know what <b>trigonometry</b> is and why it is useful<br>I know how to use <b>trigonometry</b> to help me solve a problem              |                    |
| Curricular Competency Goals   | <b>Respond &amp; Analyse : Model</b> with mathematics in <b>situational contexts</b>                       | I can <b>reason and analyze</b> by <b>modelling</b> (mathematics) using real life situations   |                    |
| Curricular Competency Goals   | <b>Understand &amp; Solve: Visualize</b> to explore and illustrate mathematical concepts and relationships | I can <b>understand and solve</b> by <b>visualizing</b> (mathematical concepts) and <b>relationships</b>                                 |                    |
| Curricular Competency Goals   | <b>Communicate &amp; Respond:</b> Take risks when offering ideas in classroom <b>discourse</b>             | I can <b>communicate and represent</b> by taking <b>risks</b> by sharing ideas during classroom discussion                               |                    |
| Curricular Competency Goals   | <b>Connecting &amp; Reflecting: Use mistakes as opportunities to advance learning</b>                      | I can <b>connect and reflect</b> by making mistakes and using those as <b>opportunities to learn</b>                                     |                    |
| Core Competency Goal  | I can be a creative thinker  |  |                    |

| Grade: 11   |  | Subject Area: Math  | Planning Team: Jen |
|---|--|---|--------------------|
| Big Idea: Trigonometry involves using <b>proportional reasoning</b> to solve <b>indirect measurement</b> problems |  | Unit Guiding Question:<br>1. What is Trigonometry and why is it important?<br>2. How do I use trigonometry to find an indirect measurement? |                    |
| Content Goal  | <b>trigonometry:</b> non-right triangles and angles in standard position                                   | I know how to use <b>trigonometry</b> to find <b>non right triangle angles in standard position</b>   |                    |
| Curricular Competency Goals   | <b>Respond &amp; Analyse : Model</b> with mathematics in <b>situational contexts</b>                       | I can <b>reason and analyze</b> by <b>modelling</b> (mathematics) using real life situations  |                    |
| Curricular Competency Goals   | <b>Understand &amp; Solve: Visualize</b> to explore and illustrate mathematical concepts and relationships | I can <b>understand and solve</b> by <b>visualizing</b> (mathematical concepts) and <b>relationships</b>                                    |                    |
| Curricular Competency Goals   | <b>Communicate &amp; Respond:</b> Take risks when offering ideas in classroom <b>discourse</b>             | I can <b>communicate and represent</b> by taking <b>risks</b> by sharing ideas during classroom discussion                                  |                    |
| Curricular Competency Goals   | <b>Connecting &amp; Reflecting: Use mistakes as opportunities to advance learning</b>                      | I can <b>connect and reflect</b> by making mistakes and using those as <b>opportunities to learn</b>  |                    |
| Core Competency Goal  | I can be a creative thinker  |   |                    |

| Grade: 11  | Subject Area: Life Sciences   | Planning Team: |
|--|---|----------------|
| <p>Big Idea: All living things have common characteristics.</p> <p>Living things evolve over time.</p> | <p>Unit Guiding question:<br/>           Why is our forest unique in Campbell River?<br/>           How and why have our forest ecosystems evolved over time?</p>                       |                |
| <p>Content Goal:</p>   | <p>I know speciation that occurs within our forest</p>  |                |
| <p>Curricular Competency Goals</p>   | <p>I can experience and interpret the local environment</p>   |                |
|  | <p>I can seek and analyze patterns, trends, and connections in data, including describing relationships between variables, performing calculations, and identifying inconsistencies</p> |                |
|  | <p>I can construct, analyze, and interpret graphs, models, and/or diagrams</p>  |                |
| <p>Core Competency</p>   | <p>I can become socially responsible by...</p>  |                |

# One point rubric

| Name:   |  | Date:  |  |                       |  |
|---|--|--|--|-----------------------|--|
| Unit Guiding question: Why is our forest unique?<br>- How and why have our forest ecosystems evolved over time? |  |  |  |                       |  |
| I still need support  |  | I can do this!   |  | I need some challenge |  |
|   |  | <b>I know speciation that occurs within our local ecosystems</b>   |  |                       |  |
|   |  | <b>I can process and analyze data and information by</b> experiencing and interpreting the local environment   |  |                       |  |
|   |  | <b>I can process and analyze data and information by</b> seeking evidence and analyze data   |  |                       |  |
|   |  | <b>I can process and analyze data and information by</b> constructing, analyzing, and interpreting visual representations of data (graphs, models, diagrams) |  |                       |  |

Name:

Date:

**Unit Guiding question:**

How do we use language in creative and playful ways to describe and help others understand our imaginary worlds?

| Goals   | My evidence of learning | Showing my Learning |      |        | I Need Support | I Need Challenge |
|---|-------------------------|---------------------|------|--------|----------------|------------------|
|   | Actvtivities/ tasks     | written             | oral | visual |                |                  |
| I know speciation that occurs within our local ecosystems   |                         |                     |      |        |                |                  |
|   |                         |                     |      |        |                |                  |
|   |                         |                     |      |        |                |                  |
| I can process and analyze data and information by experiencing and interpreting the local environment   |                         |                     |      |        |                |                  |
|   |                         |                     |      |        |                |                  |
|   |                         |                     |      |        |                |                  |
| I can process and analyze data and information by seeking evidence and analyze data   |                         |                     |      |        |                |                  |
|   |                         |                     |      |        |                |                  |
|   |                         |                     |      |        |                |                  |
| I can process and analyze data and information by constructing, analyzing, and interpreting visual representations of data (graphs, models, diagrams) |                         |                     |      |        |                |                  |
|   |                         |                     |      |        |                |                  |
|   |                         |                     |      |        |                |                  |

# Rubrics vs. Learning Maps

|      | deficit | deficit | Standard |
|------|---------|---------|----------|
| goal |         |         |          |



# THE SCRUMPTIOUS RUBRIC REFERENCE

## BARELY HANGING ON



The customer wants a refund. Bread alone is not a sandwich. It's like you gave the bread and pop out just to show you were listening.

**Translation:** You only did the small stuff to suffice turning it in. The artwork is missing all important details and signs of understanding or perseverance.

## NEEDS SOME UMPH



Your sandwich disappoints the customer. There's no flavor and not enough meat, if any at all. About the only thing great is the Citrus Drop.

**Translation:** You are missing important details within your artwork. Expectations are not met. Improvement is needed and lack of understanding is present.

## GETS THE POINT



Your sandwich met expectations. It has flavor but nothing too exciting. You included the meat but gee, a side of chips would be nice.

**Translation:** Your artwork meets expectations, you went as far as the requirements expected and you used what knowledge you had to do so.

## RIGHT ON!



Your sandwich went beyond expectations. You threw in some extra flavor and tomatoes and surprised the customer with a side of chips.

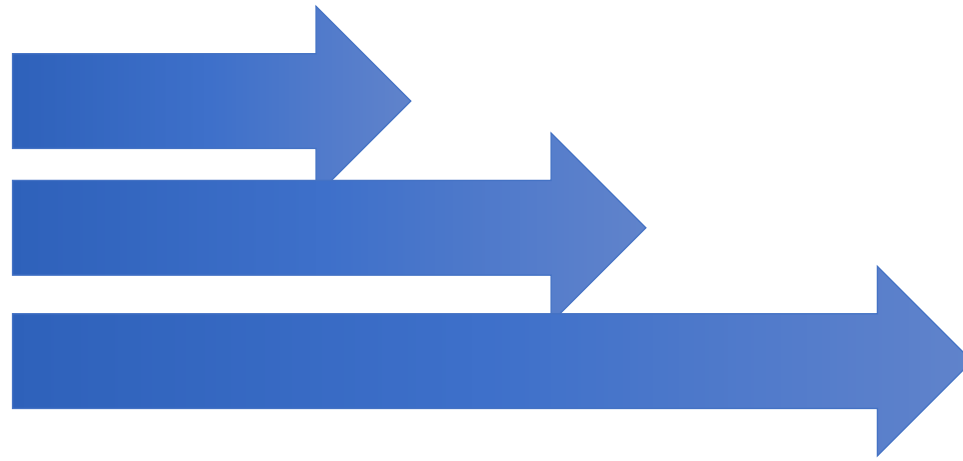
**Translation:** Your artwork exceeds all expectations; you used creativity, went beyond the basic requirements and showed obvious understanding.

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Inclusive Education: It's not more work, it's different work!

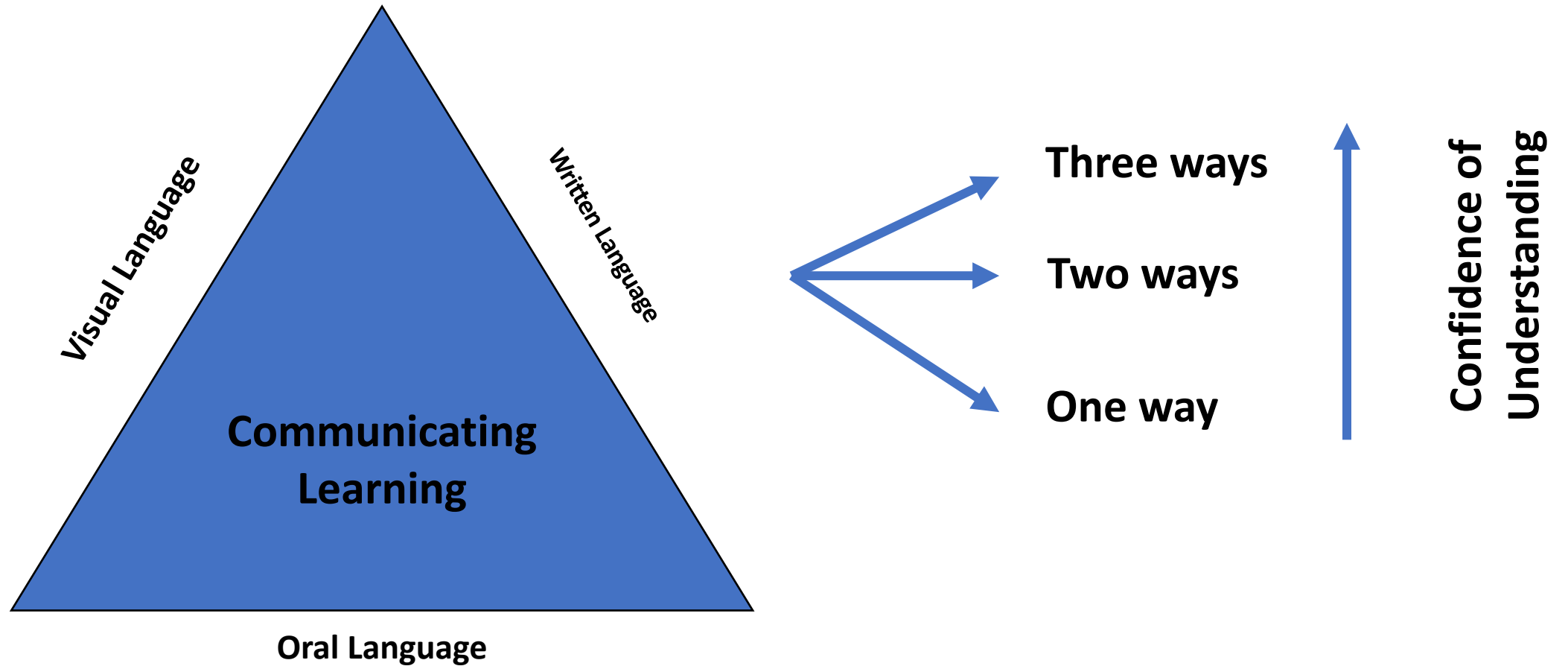
# Rubrics vs. Learning Maps

|                  | Essential | More complex | More complex |
|------------------|-----------|--------------|--------------|
| Learning Outcome |           |              |              |

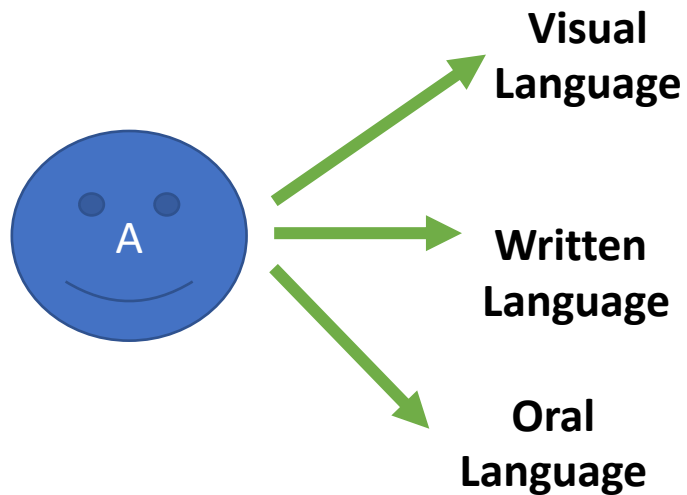




# How do students show what they know?



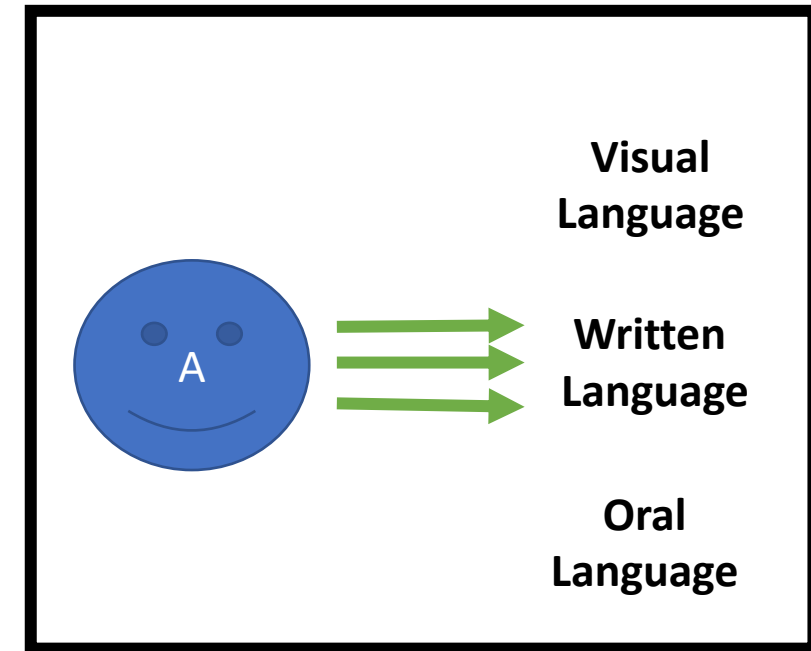
# All Languages (in literacy) are Treated Equal!



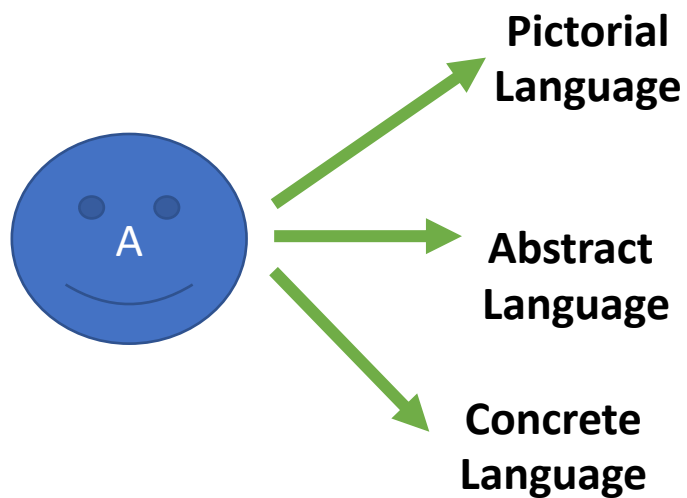
The **MORE WAYS** students can demonstrate learning, the more confident we are of meeting a goal

**Instead of**

The **NUMBER OF TIMES**, a student can show their learning in one way, the more confident we are of meeting a goal



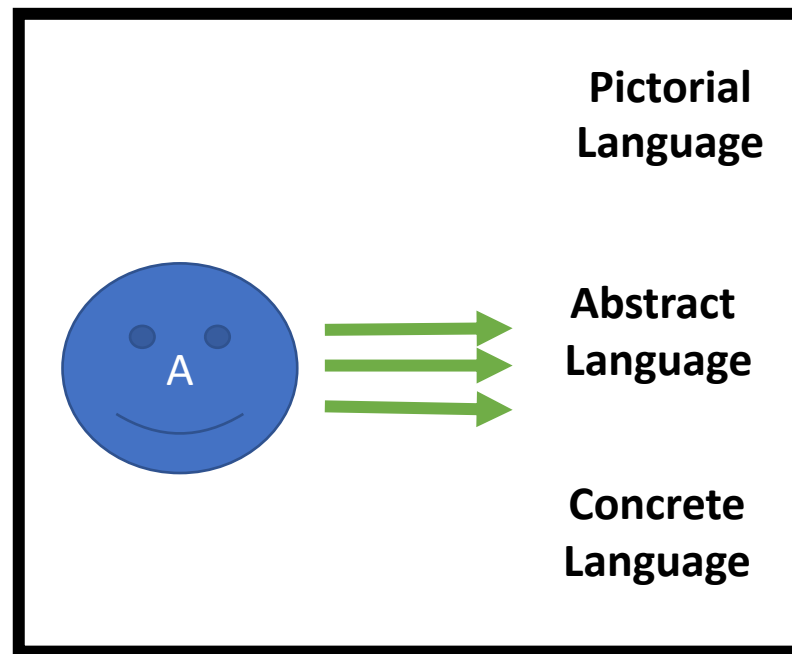
# All Languages (in numeracy) are Treated Equal!



The **MORE WAYS** students can demonstrate learning, the more confident we are of meeting a goal

**Instead of**

The **NUMBER OF TIMES**, a student can show their learning in one way, the more confident we are of meeting a goal



**Unit Guiding Question: What is spatial sense? What is proportional reasoning? How are they connected?**

| Goals  | My evidence of learning | Showing my Learning |           |          | I Need Support | I Need Challenge |
|--|-------------------------|---------------------|-----------|----------|----------------|------------------|
|  | Actvtivities/ tasks     | concrete            | pictorial | abstract |                |                  |
| <b>1. I can solve problems by:</b> <ul style="list-style-type: none"> <li>• Using different units of measure</li> <li>• Estimating</li> <li>• Using measurement strategies</li> </ul>  |                         |                     |           |          |                |                  |
| <b>2. I can find the surface area and volume of 3D objects including:</b> <ul style="list-style-type: none"> <li>• Right cones</li> <li>• Right cylinders</li> <li>• Right prism</li> <li>• Right pyramids</li> <li>• Spheres</li> </ul> |                         |                     |           |          |                |                  |
| <b>3. I can convert between SI and Imperial units of measure</b>   |                         |                     |           |          |                |                  |
| <b>4. I can use trigonomic ratios to solve problems that have a right triangle</b>   |                         |                     |           |          |                |                  |

Biology 20-1: Energy and Matter Exchange in the Biosphere

|  |
|--|
| <p><b>Our Unit Questions</b></p> <ul style="list-style-type: none"> <li>How are carbon, oxygen, <u>nitrogen</u> and phosphorus cycled in the biosphere?</li> <li>How is the flow of energy balanced in the biosphere?</li> <li>How have human activities and technological advances affected the balance of energy and matter in the biosphere?</li> </ul> |
|--|

| General Learning Outcome: Students will understand the constant flow of energy through the biosphere and ecosystems.   |   |   |
|--|---|---|
| Unit Goals: Curricular Language  | Student Friendly Language   |   |
| <p><b>Knowledge</b></p> <p><b>20–A1.1k</b> Students will: explain, in general terms, the one-way flow of energy through the biosphere and how stored energy in the <b>biosphere</b>, as a system, is eventually “lost” as heat</p> <p><b>20–A1.2k</b> Students will: explain how energy in the biosphere can be perceived as a balance between both photosynthetic and chemosynthetic activities and cellular respiratory activities</p> <p><b>20–A1.3k</b> Students will explain the structure of ecosystem trophic levels, using models such as food chains and food webs</p> <p><b>20–A1.4k</b> Students will explain, quantitatively, the flow of energy and the exchange of matter in aquatic and terrestrial ecosystems, using models such as pyramids of numbers, <u>biomass</u> and energy</p> | <p><b>Knowledge</b></p> <p>I know how energy is used in a biosphere (stored, transferred, lost)</p> <p>I know that energy in different biospheres is balanced and cycles</p> <p>I know how biospheres are interconnected</p> <p>I know what an ecosystem is and how it is organized</p> <p>I know how energy moves in an ecosystem</p> <p>I know how to represent the movement of energy in ecosystems using a model</p>  |   |
|  | <p><b>STS</b></p> <p><b>20–A1.1sts</b> Students will: explain that the process of scientific investigation includes analyzing evidence and providing explanations based upon scientific theories and concepts</p>   | <p><b>STS</b></p> <p>I can connect what I am learning about biospheres to real life examples and events</p>   |
|  | <p><b>Specific Outcomes for Skills</b></p> <p><b>Initiating and Planning</b></p> <p><b>20–A1.1s</b> Students will: formulate questions about observed relationships and plan investigations of questions, ideas, problems, and issues</p> <p><b>Performing and Recording</b></p> <p><b>20–A1.2s</b> Students will: conduct investigations into relationships among observable variables and use a broad range of tools and techniques to gather and record data and information perform an experiment</p> <p><b>Analyzing and Interpreting</b></p> <p><b>20–A1.3s</b> Students will: analyze data and apply mathematical and conceptual models to develop and assess possible solutions</p> <p><b>Communication</b></p> <p><b>20–A1.4s</b> Students will: work collaboratively in addressing problems and apply the skills and conventions of science in communicating information and ideas and in assessing results</p> | <p><b>Specific Outcomes for Skills</b></p> <p>I can <b>initiate</b> and <b>plan</b> by:</p> <ul style="list-style-type: none"> <li>by asking questions about what I observe in my environment</li> <li>by making predicting based on what I observe</li> </ul> <p>I can <b>investigate</b> and <b>record my observations</b> by:</p> <ul style="list-style-type: none"> <li>using different tools and techniques to gather data</li> <li>complete an experiment</li> </ul> <p>I can <b>analyze</b> and <b>interpret</b> by:</p> <ul style="list-style-type: none"> <li>looking for patterns in my data to help me understand what is happening</li> <li>connecting my data to other scenarios and contexts</li> <li>coming up with some possible solutions or explanations for what is happening</li> <li>organizing and displaying my data in ways that make sense to me</li> </ul> <p>I can <b>communicate</b> my findings by:</p> <ul style="list-style-type: none"> <li>using SI units and Sig Digs</li> <li>presenting my findings so it makes sense to others (modes representation)</li> </ul> |

Learning Outcome Progressions: Bio 20-1

What do I need to know?

| 20–A1.1k: I know how energy is used in a biosphere (stored, transferred, lost) |  |  |   |   |
|--|--|--|---|---|
| Approaching  | Emerging   | Developing   | Confident   | Extending   |
| The sun and plants work together to form energy                                | I know what photosynthesis and chemosynthesis and cellular respiration is and examples of each | I know how photosynthesis, chemosynthesis and cellular respiration are connected | I know how energy is transferred by conduction, radiation, and convection, and examples | I know limitations and problems of how energy is used in existing and/or potential biospheres |

| 20–A1.2k I know that energy in different biospheres is balanced and cycles; I know how biospheres are interconnected |   |  |   |  |
|--|---|--|---|--|
| Approaching  | Emerging  | Developing   | Confident   | Extending  |
| I know why I need the sun and plants<br>I know why plants need me  | I know the products of photosynthesis, chemosynthesis, and cellular respiration | I know that there can be balance or imbalance between photosynthesis, chemo synthesis and cellular respiration | I know the impact of imbalance in photosynthesis and chemosynthesis and cellular respiration (global warming) | I know the pros/cons to possible solutions in imbalances of photosynthesis and chemosynthesis and cellular respiration |

| 20–A1.3k I know what an ecosystem is and how it is organized |   |   |   |  |
|--|---|---|---|--|
| Approaching  | Emerging  | Developing  | Confident   | Extending                                    |
| I know what a food chain is                                  | I know trophic levels and examples in the world | I know how to show trophic levels on different models | I know how trophic levels are connected to each other | I know the impact of deleting a tropic level |





# Standards Based Grade Book – Math 10 C: Measurement

## Essential Understanding: Students understand spatial sense and proportional reasoning

| Learning Outcomes | 1. I can solve problems by: |                              |                      |                            |           | 2. I can find the surface area and volume of 3D objects including: |                              |                      |                            |           | 3. I can convert between SI and Imperial units of measure |                              |                      |                            |           | 4. I can use trigonometric ratios to solve problems that have a right triangle |                              |                      |                            |           | Evaluation Date: |        |     |              |
|-------------------|-----------------------------|------------------------------|----------------------|----------------------------|-----------|--|------------------------------|----------------------|----------------------------|-----------|---|------------------------------|----------------------|----------------------------|-----------|--|------------------------------|----------------------|----------------------------|-----------|------------------|--------|-----|--------------|
|                   | Approaching                 | Minimally Meeting / Emerging | Meeting / Developing | Fully Meeting / Proficient | Extending | Approaching  | Minimally Meeting / Emerging | Meeting / Developing | Fully Meeting / Proficient | Extending | Approaching   | Minimally Meeting / Emerging | Meeting / Developing | Fully Meeting / Proficient | Extending | Approaching  | Minimally Meeting / Emerging | Meeting / Developing | Fully Meeting / Proficient | Extending | Total            | Out of | %   | Letter Grade |
|                   | 2.5                         |                              | 3                    | 4                          | 5         | 2.5  |                              | 3                    | 4                          | 5         | 2.5   |                              | 3                    | 4                          | 5         | 2.5  |                              | 3                    | 4                          | 5         | 20               | 20     |     |              |
|                   | ALL                         | ALL                          | MOST                 | SOME                       | FEW       | ALL  | ALL                          | MOST                 | SOME                       | FEW       | ALL   | ALL                          | MOST                 | SOME                       | FEW       | ALL  | ALL                          | MOST                 | SOME                       | FEW       | 20               | 20     |     |              |
| Student           | •                           | •                            |                      |                            |           | •  | •                            |                      |                            |           | •   | •                            |                      |                            |           | •  | •                            |                      |                            |           | 10               | 20     | 50% | Pass         |
| Student           | •                           | •                            | •                    | •                          |           | •  | •                            | •                    | •                          |           | •   | •                            | •                    | •                          |           | •  | •                            | •                    | •                          |           | 16               | 20     | 80% | A-           |
| Student           | •                           | •                            | •                    | •                          |           | •  | •                            |                      |                            |           | •   | •                            |                      |                            |           | •  | •                            | •                    |                            |           | IEA              | 20     |     | IEA          |
| Student           | •                           | •                            | •                    | •                          |           | •  | •                            | •                    | •                          | •         | •   | •                            | •                    |                            |           | •  | •                            | •                    |                            |           | 15               | 20     | 75% | B            |
| Student           | •                           | •                            | •                    | •                          |           | •  | •                            |                      |                            |           | •   | •                            | •                    |                            |           | •  | •                            | •                    | •                          |           | 13.5             | 20     | 68% | C+           |