# SHELLEY MOORE

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# NEXWLéLEXM (BOWEN ISLAND)

- The Islands Trust council acknowledges that the lands and waters that encompass the Islands Trust Area have been home to Indigenous peoples since time immemorial and honours the rich history, stewardship, and cultural heritage that embody this place we all call home.

- The Islands Trust council is committed to establishing and maintaining mutually respectful relationships between Indigenous and non-Indigenous peoples. Islands Trust states a commitment to Reconciliation with the understanding that this commitment is a long-term relationship-building and healing process.

- The Islands Trust council will strive to create opportunities for knowledge-sharing and understanding as people come together to preserve and protect the special nature of the islands within the Salish Sea.

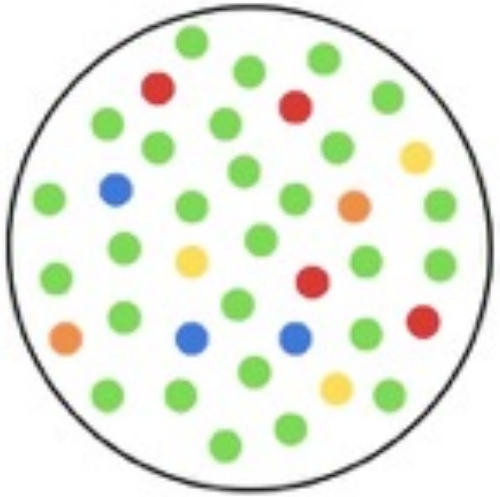
What stands out from last session?

What have you tried/ want to try?

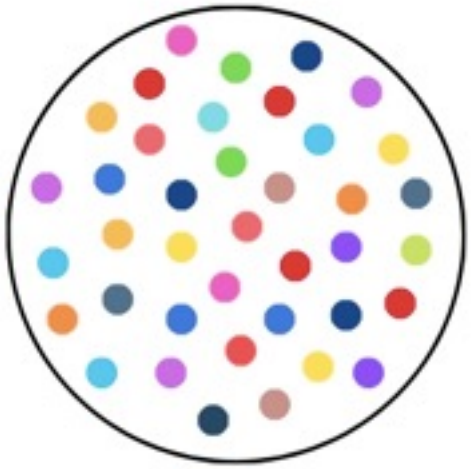
What are you noticing?

What questions are coming up?

# How do we DO inclusion?



How do we include people who are different



How do we teach to diversity?

# The cupcake model

# The layered cake model

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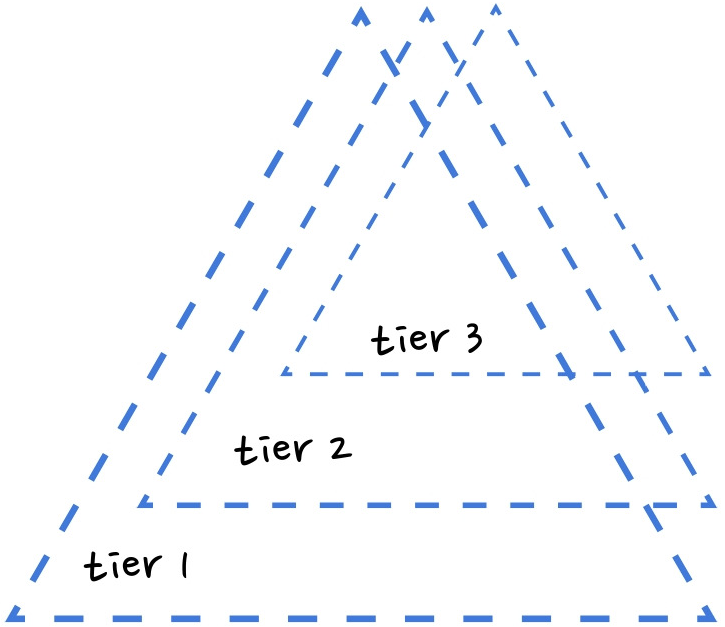
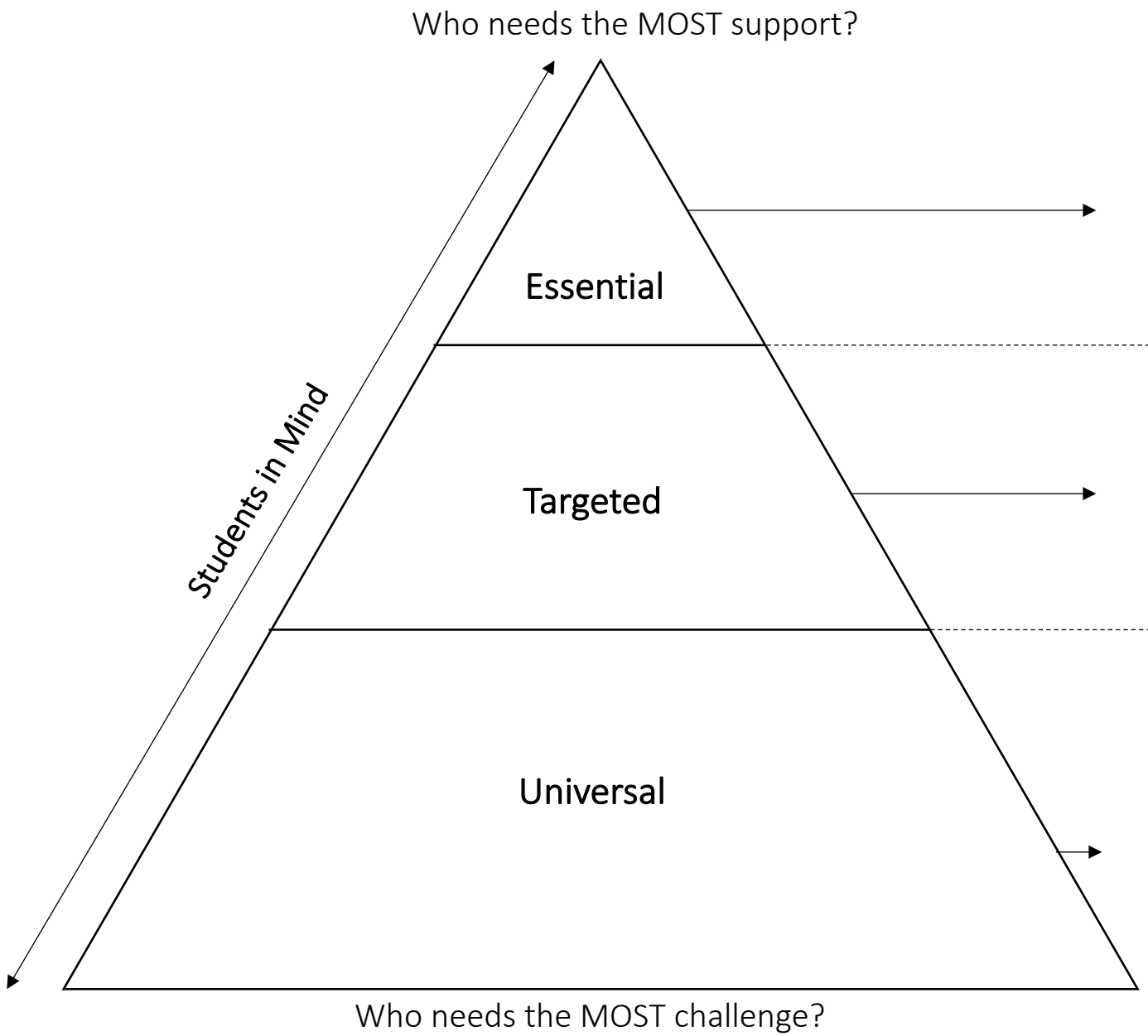
# RTI: RESPONSE TO INSTRUCTION



# Planning for ALL

**Need:**

**Students in Mind:**




What supports & strategies are useful for ONE? (Individualized)

- 
- 
- 

What supports & strategies are useful for SOME? (Choice for ALL)

- 
- 
- 
- 

What supports & strategies are useful for ALL?

- 
- 
- 
- 
- 

# Strategy: Designing a Needs Based Classroom Support Plan

**Classroom Support Plan**
Teacher(s): _____ Support Staff: _____ Lens: _____

**Range of Support (MTLS)**

**Range of Students (RTI)**

| **Students…** | | **Strategies & Supports** | | |
|---|---|---|---|---|
| **who needs the most support** | | **Universal Support** (Good for ALL) | **Targeted Support** (CHOICE for ALL) | **Essential Support** (Good for ONE) |
| **Need** | | | | |
| **Need** | | | | |
| **Need** | | | | |
| **Need** | | | | |
| **Need** | | | | |
| **who needs the most challenge** | | | | |

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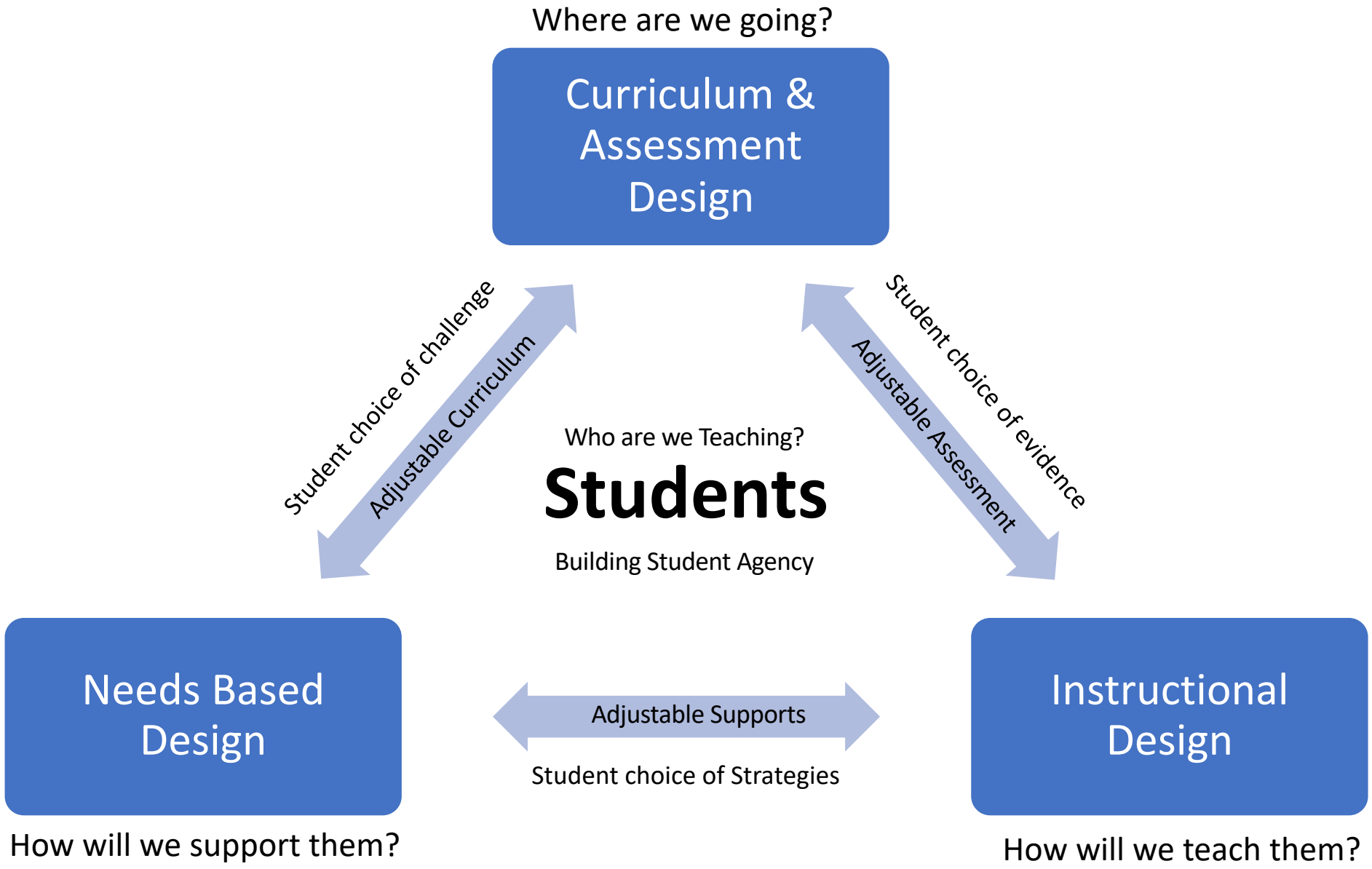
Shelley Moore, 2019

# How can we change the system?
# Designing with Equity in Mind



Shelley Moore, 2019

# How can we change the system?
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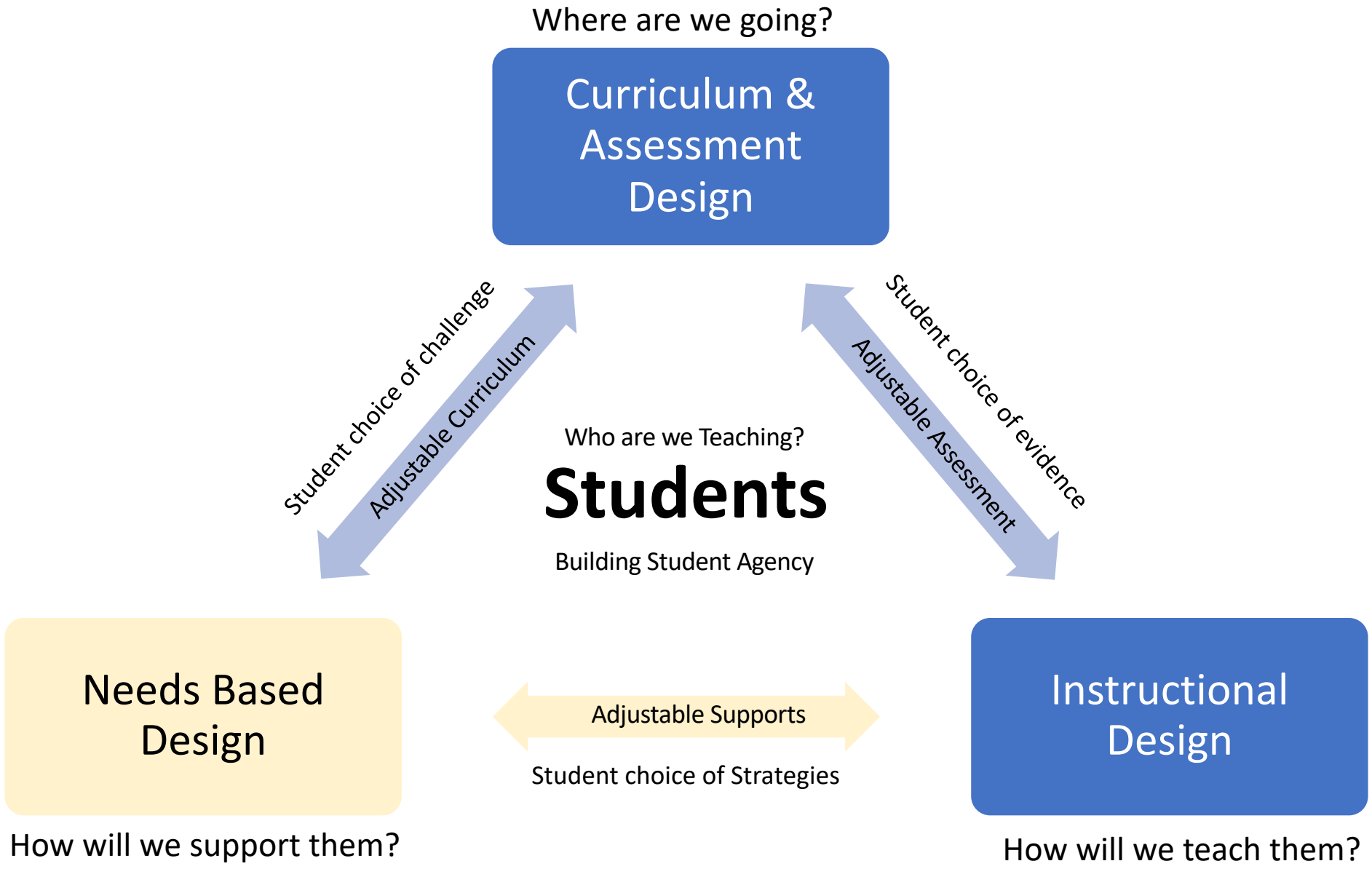
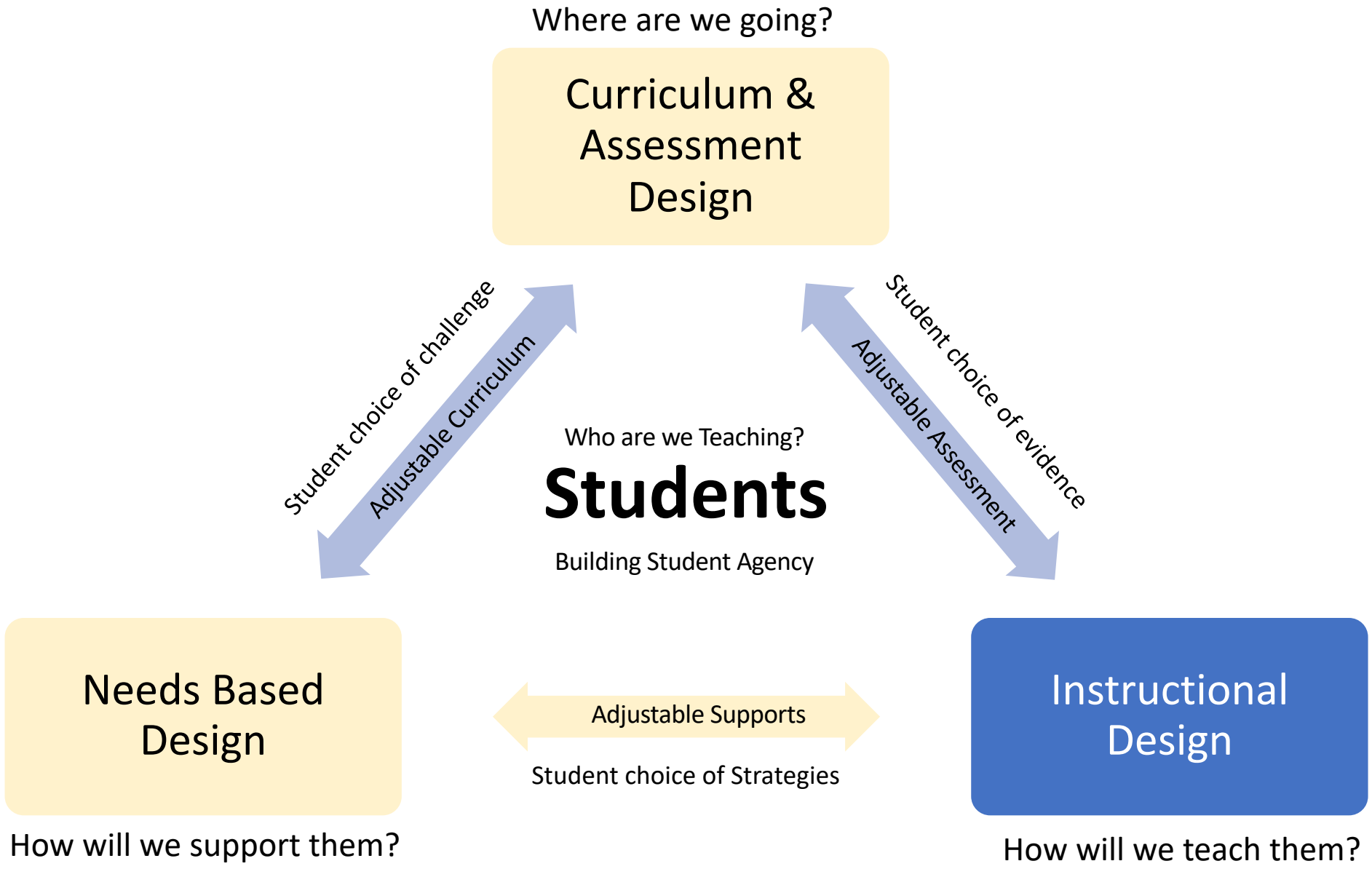


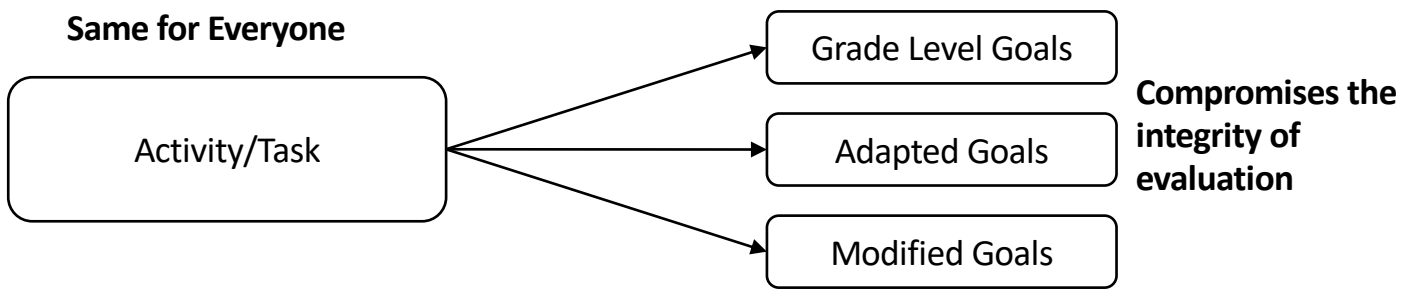
Shelley Moore, 2019

# How can we change the system?
# Designing with Equity in Mind

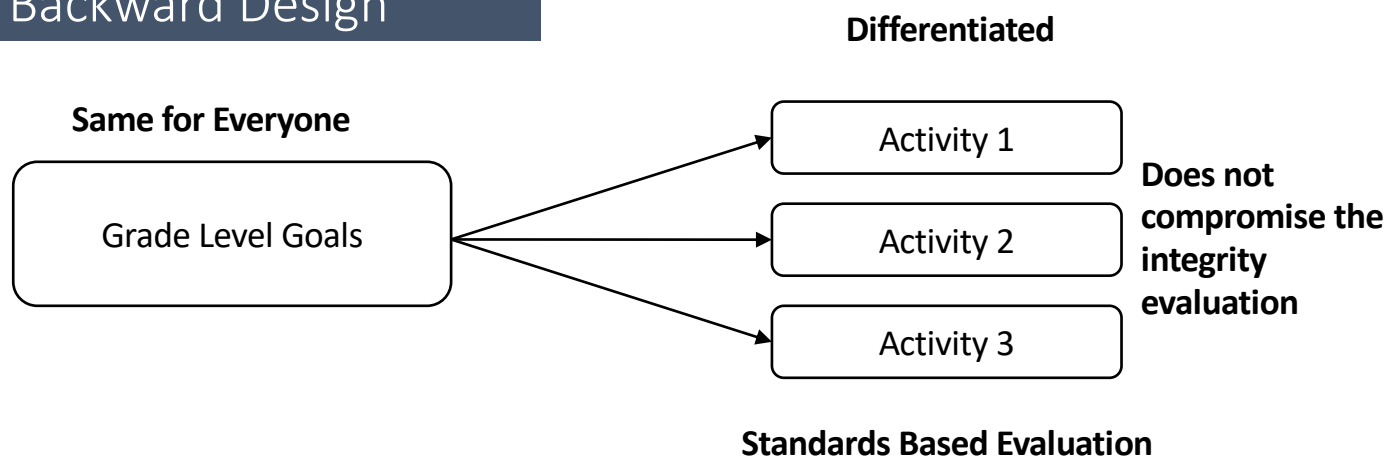


# BACKWARDS DESIGN

## Forward Design




## Backward Design



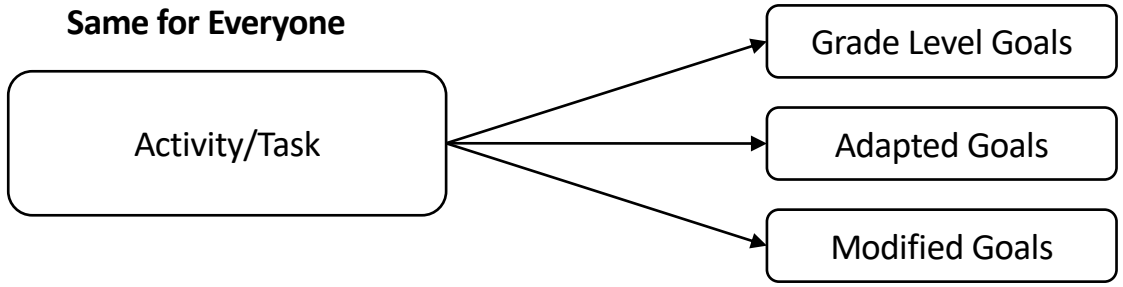

McTigue, 2010

## Forward Design

**Standardized Evaluation**

**Differentiated**

**Same for Everyone**

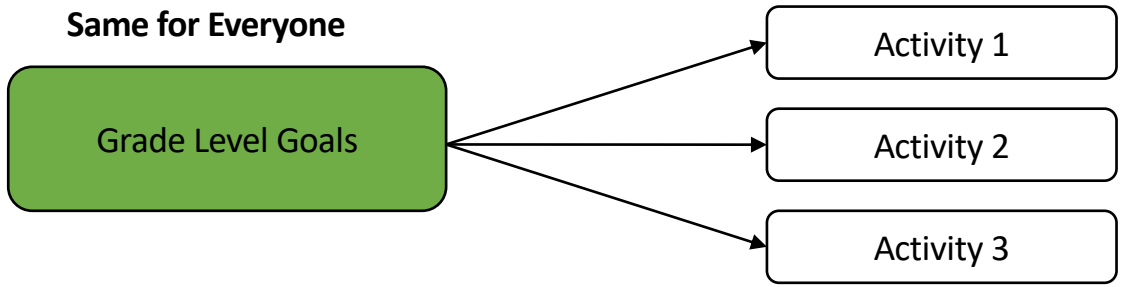



**Compromises the integrity of evaluation**

## Backward Design

**Differentiated**

**Same for Everyone**




**Does not compromise the integrity evaluation**

**Standards Based Evaluation**

McTigue, 2010

# Goals Come From The Curriculum!

# 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: 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 attitudes do they need to display?

## What do you notice?

# Backwards Design

**What do we need to UNDERSTAND?**

**What do we need to KNOW?**

**What do we need to DO?**

**Who do we need to BECOME?**

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# Backwards Design

**What do we need to UNDERSTAND?**

**I understand …**

**What do we need to KNOW?**

**I know…**

**What do we need to DO?**

**I can…**

**Who do we need to BECOME?**

**I can become…**

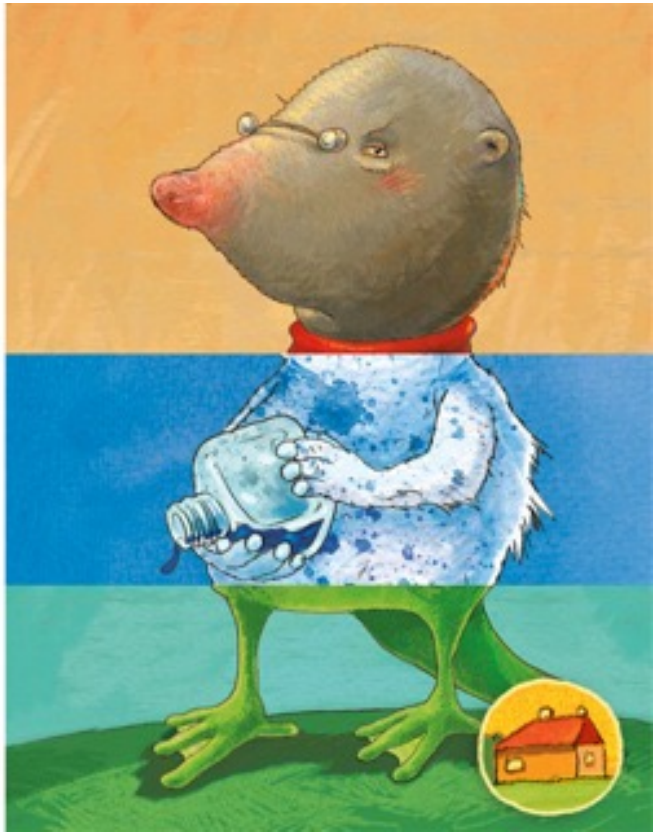
Shelley Moore, 2107

# Curriculum as a flip book

Miserable

Two-toed

Lizard



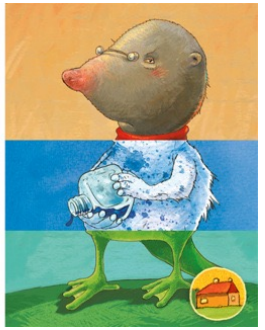
Shelley Moore, 2107

# The Backwards Design FLIPBOOK Alberta's Renewed/Renewed Curriculum

Miserable

Two-toed

Lizard



**Context**

Understandings

Guiding Questions

What do we need to **understand**?

**Teacher Assessment & Evaluation**

Learning Outcome

What do we need to **know**?

What do we need to **do**?

**Teacher Assessment**

Literacy Progressions

What do we need to **do**?

Numeracy Progressions

What do we need to **do**?

**Student Assessment & Evaluation**

Competencies

Who do we need to **become**?

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| Grade: | Subject(s): | Planning Team: |
|---|---|---|
| **Curricular Language** | | **Student Friendly Language** |
| **Organizing Idea** | | |
| **Our Guiding Unit/Essential Question(s):** | | |
| **Learning Outcome:** | | I can |
| **Literacy & Numeracy Progressions** | | We can |
| **Competencies** | | We can |
| **Important vocabulary to know and use:** | | |
| | | |

| Grade: 2 | Subject(s): Science | Planning Team: Kim (CT2), Shelley, Jessica (PA), Raime (P), Kendra (DI) |
|---|---|---|
| **Our Guiding Unit Question:**<br>How does water impact living things in the environment? | | **Student Friendly:**<br>What is water? Why is water important to living things? |
| **Learning Outcome:**<br><br>Students investigate characteristics of water and the importance of water to living things in the environment. | | **Student friendly:**<br>I can investigate water<br>I know that water is important to living things and the environment |
| **Numeracy**: | | We can collect data<br>We can communicate our learning |
| **Literacy:** | | We can use strategies to help us understand text |
| **Competency:** | | We can be cultural and global citizens |

**Important vocabulary to know and use:**

| | | |
|---|---|---|
| Water<br>Environment<br>Living things | Citizens<br>Strategies<br>communicate | Investigate<br>Collect data<br>Text |

| Grade: 3 | Subject(s): LA | Planning Team: |
|---|---|---|
| **Our Guiding Unit Question:**<br>How can text organization enhance meaning? | | **Student Friendly:**<br>What is text? How is it organized? How does the organization of text help me understand it? |
| **Learning Outcome:**<br>Students relate the form and structure of texts to the communication of ideas and information. | | **Student friendly:**<br>I know how text is organized and used to share information<br>I can use the organization of text to help me understand what I am reading |
| **Numeracy**: | | We can collect data<br>We can communicate our learning |
| **Literacy:** | | We can use strategies to help us understand text |
| **Competency:** | | We can manage information |
| **Important vocabulary to know and use:** | | |
| Text, organization, form, structure, ideas, information, enjoyment, fiction, non-fiction, interests, imagination, facts, stories, beginning, problem, events, solutions, ending, digital, | | |

# Backwards Design: Previous Curriculum Gr 7-12

What types of goal are in the curriculum?

- **Content**
  - What do we need to know?

- **Process**
  - What do we need to do?
  - What attitudes do they need to display?

# Backwards Design Alberta Goals Cheat Sheet

| Backward Design Element | In Science it is called: | In Social Studies it is called: | In Math it is called: | In Language Arts/English it is called: |
|---|---|---|---|---|
| **Topic:** What is the theme/topic/context? | Unit of Study | Title | Strand | Theme of choice |
| **Big Idea:** What do we need to understand? Why are we learning this? | Overview | General Learning Outcome (GLO) | General Learning Outcome (GLO) | General Learning outcome (GLO) |
| **Guiding Question:** Turning the BIG IDEA into a questions for the students | Focus Questions | Make it out of the GLO | Make it out of the GLO | Make a question out of the theme |
| **Content Goals:** What do we need to know? | STS & Knowledge (Teacher Evaluation) | Knowledge & Understandings (Teacher Evaluation) | Specific Outcomes (Teacher Evaluation) | none |
| **Process Goals:** What do we need to do? | Skills (Teacher Evaluation) | Values & Attitudes | Skills & Processes (Teacher Assessment) | Specific learning outcomes (Teacher Evaluation) |
| | Attitudes | Dimensions of Thinking | | |

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| Grade: | Subject Area: | Planning Team: |
|---|---|---|
| Big Idea(s): What do I need to Understand? | | Unit Guiding Question(s): |
| Key Vocabulary: | | |

| | Curricular Language | Student Friendly Language |
|---|---|---|
| What do students need to know? Content Goals | | I know |
| What do students need to do? Skills/Process Goals | | I can |
| What do students need to do? Skills/Process Goals | | I can |
| What do students need to do? Skills/Process Goals | | I can |
| Who do student need to be? Attitudes | I can become/ I am… | |

**Backwards Design Plan:** Science 8 - Mechanical Systems **April 2022**
**Planning Team:** Kristina and Team Grimshaw (and FHS)

| **Big Idea:** Machines are used for many purposes in our daily lives when we need to transfer energy into motion or move materials in a controlled way. | **Our Unit Questions:** How is energy transferred in mechanical devices? How do mechanical devices provide for controlled application of energy in ways that are efficient, effective and responsible? |
|---|---|

| **Content vocabulary to know and use:** mechanical devices, structures, functions, machines, subsystems, component parts, system, force, energy, transmission, mechanical system, social contexts, environmental contexts | | **Skill vocabulary to know and use:** initiate, plan, variables, investigating, researching, data, qualitative, quantitative | |
|---|---|---|---|
| **Unit Goals: Curricular Language** | | **Student Friendly Language** | |
| **STS Outcomes** | Illustrate the **development of science and technology** by describing, comparing, and interpreting **mechanical devices** that have been **improved over time** | **STS Outcomes** | I know how science and technology has impacted the development of **mechanical devices**<br>I know how **mechanical devices** have improved over time |
| | Analyze **machines** by describing the **structures and functions** of the **overall system, the subsystems** and the **component parts** | | I know the **structures** and **functions** of different **machines**<br>I know how **subsystems** and **component parts** work together in an overall **system** |
| | Investigate and describe the **transmission of force** and **energy** between parts of a **mechanical system** | | I know how the **force** and **energy** moves (**transmission**) between the different parts of a **mechanical system** |
| | Analyze the **social and environmental contexts** of **science and technology**, as they apply to the development of **mechanical devices** | | I know how the development of **mechanical devices** impacts **social** and **environmental contexts** |
| **Targeted Skill Outcomes** | **Initiating and Planning**: **Ask questions** about the relationships between and among observable variables, and **plan investigations** to address those questions | **Targeted Skill Outcomes** | I can **initiate** and **plan** by:<br>• asking questions about how things (**variables**) are related to each other<br>• **investigating** and **researching** into questions I ask |
| | **Analyzing and Interpreting**: Analyze **qualitative and quantitative data,** and develop and assess possible explanation | | I can **analyze** and **interpret** by:<br>• using my senses to understand and explain **data** (**qualitative**)<br>• using amounts, numbers and values to understand and explain **data** (**quantitative**) |
| **Targeted Attitudes** | Interest in Science: **Show interest** in science-related questions and issues, and **pursue personal interests** and **career possibilities** within science-related fields | **Targeted Attitudes** | I can be interested in science by: participating, engaging in discussion, willing to complete assignments and tasks, asking questions, learning about science for fun, finding ways to connect to science topics, getting creative in science, knowing why science could be useful to life in the future/ possible careers in science) |

**Backwards Design Plan: Science 9 – Space Exploration** **Planning Team: CASH**

| | |
|---|---|
| **Focus Questions:** How have **humans** attained a presence in **space**? What technologies have been developed and on what scientific ideas are they based? How has the development of these **technologies** contributed to the **exploration, use and understanding** of space and to **benefits** on **Earth**? | **Student Friendly Language:**<br>How do humans go to and interact with space?<br>How has technology been used to understand and explore space?<br>How does understand space help to understand the Earth? |

| **Vocabulary to know and use:** | | | |
|---|---|---|---|
| **Unit Goals: Curricular Language** | | **Student Friendly Language** | |
| STS | Investigate and describe ways that human understanding of Earth and space has depended on technological development by: | STS | I can explore and describe how humans use and need technology to understand the Earth the space |
| | Identify problems in developing technologies for space exploration, describe technologies developed for life in space, and explain the scientific principles involved | | I can understand and describe technologies that have been developed for exploring space and for life in space<br>I can find problems in the technologies that have been and are being developed |
| | Describe and interpret the science of optical and radio telescopes, space probes and remote sensing technologies | | I can explain the science of some specific technologies |
| | Identify issues and opportunities arising from the application of space technology, identify alternatives involved, and analyze implications | | I can find problems and see potential in studying space and space technology |
| Skills Outcomes | Initiating and Planning: Ask questions about the relationships between and among observable variables, and plan investigations to address those questions | Skills Outcomes | I can **initiate** and **plan** by<br>o asking questions<br>o investigating and researching to find answers to those questions |
| | Communication and Teamwork: Work collaboratively on problems; and use appropriate language and formats to communicate ideas, procedures, and results | | I can communicate and work as a team by:<br>o solving problems and communicating ideas |
| Attitude Outcomes | Scientific Inquiry: Seek and apply evidence when evaluating alternative approaches to investigations, problems, and issues *(e.g., seek accurate data that is based on appropriate methods of investigation; consider observations and ideas from a number of sources before drawing conclusions)* | Attitude Outcomes | I can be a scientific researcher by:<br>o finding evidence to answer questions and solving problems |
| | Stewardship: Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment *(e.g., consider immediate and long-term consequences of personal and group actions; objectively identify potential conflicts between responding to human wants and needs and protecting the environment)* | | I can show stewardship by:<br>o Finding out about and understanding ideas from different perspectives, including stakeholders, that is connected to a problem or event |
| | Collaboration: Work collaboratively in carrying out investigations and in generating and evaluating ideas *(e.g., work with others to identify problems and explore possible solutions; share observations and ideas with other members of the group, and consider alternative ideas suggested by other group members; share the responsibility for carrying out decisions)* | | I can collaborate by:<br>o working together to build ideas and solve problems |
| Competencies | **Critical Thinking**<br>- questioning and analyzing evidence, assertions, or assumptions<br>- demonstrating intellectual integrity, fairness, and open-mindedness | Competencies | I can be a critical thinker by:<br>o questioning what I know by understanding evidence from multiple perspectives<br>o being open minded to learn new things and to change my thinking and my ideas based on what I am learning (growth mindset) |

**Backwards Design Plan: Socials 20-4**
**Planning Team:**

| | |
|---|---|
| **Big Idea:** Students will examine the effects of nationalism, ultranationalism and the pursuit of the national interest. | **Our Unit Questions:** What is nationalism? Why is it important? What are the effects of nationalism? |

| **Vocabulary to know and use:** | | | |
|---|---|---|---|
| **Unit Goals: Curricular Language** | | **Student Friendly Language** | |
| Values & | 20-4.2a appreciate that **nations** and states pursue the **national interest** | Values & | I understand why **nations** try and build **national interest** |
| | 20-4.2b appreciate multiple **perspectives** related to the pursuit of the **national interest** | | I understand why it is important to include different **perspectives** when building **national interest** |
| Knowledge & Understanding | 20-4.2c explore a range of **expressions** of **national interest** | Knowledge & Understanding | I learn about different ways that **national interest** is shown or expressed |
| | 20-4.2d explore the **relationship** between **nationalism** and the pursuit of the **national interest** | | I can learn about how **nationalism** and building **national interest** connects to each other |
| | 20-4.2e examine **similarities and differences** between **nationalism** and **ultranationalism** | | I can look at how **nationalism** and ultranationalism are the same and different |
| | 20-4.2f identify the effects of **nationalism** and **ultranationalism** during times of **conflict** | | I can tell the **effects** of **nationalism** and **ultranationalism** during **conflict** |
| | 20-4.2g examine **ultranationalism** as a cause of **genocide** | | I can look at how ultranationalism can lead to **genocide** |
| | 20-4.2h examine the **relationship** between **nationalism** and **national self-determination** | | I can look at how **nationalism** and **national self-determination** connect to each other |

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

**Our Unit Questions**

- How are carbon, oxygen, nitrogen and phosphorus cycled in the biosphere?
- How is the flow of energy balanced in the biosphere?
- How have human activities and technological advances affected the balance of energy and matter in the biosphere?

| **General Learning Outcome: Students will understand the constant flow of energy through the biosphere and ecosystems.** | | | |
|---|---|---|---|
| **Unit Goals: Curricular Language** | | **Student Friendly Language** | |
| Knowledge | **20–A1.1k** Students will: explain, in general terms, the one-way flow of energy through the biosphere and how stored energy in the **biosphere**, as a system, is eventually "lost" as heat | Knowledge | I know how energy is used in a biosphere (stored, transferred, lost) |
| | **20–A1.2k** Students will: explain how energy in the biosphere can be perceived as a balance between both photosynthetic and chemosynthetic activities and cellular respiratory activities | | I know that energy in different biospheres is balanced and cycles<br>I know how biospheres are interconnected |
| | **20–A1.3k** Students will explain the structure of ecosystem trophic levels, using models such as food chains and food webs | | I know what an ecosystem is and how it is organized |
| | **20–A1.4k** 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, biomass and energy | | I know how energy moves in an ecosystem<br>I know how to represent the movement of energy in ecosystems using a model |
| STS | **20–A1.1sts** Students will: explain that the process of scientific investigation includes analyzing evidence and providing explanations based upon scientific theories and concepts | STS | I can connect what I am learning about biospheres to real life examples and events |
| Specific Outcomes for Skills | **Initiating and Planning**<br>**20–A1.1s** Students will: formulate questions about observed relationships and plan investigations of questions, ideas, problems, and issues | Specific Outcomes for Skills | I can **initiate** and **plan** by:<br>• by asking questions about what I observe in my environment<br>• by making predicting based on what I observe |
| | **Performing and Recording**<br>**20–A1.2s** 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<br>perform an experiment | | I can **investigate** and **record my observations** by:<br>• using different tools and techniques to gather data<br>• complete an experiment |
| | **Analyzing and Interpreting**<br>**20–A1.3s** Students will: analyze data and apply mathematical and conceptual models to develop and assess possible solutions | | I can **analyze** and **interpret** by:<br>• looking for patterns in my data to help me understand what is happening<br>• connecting my data to other scenarios and contexts<br>• coming up with some possible solutions or explanations for what is happening<br>• organizing and displaying my data in ways that make sense to me |
| | **Communication**<br>**20–A1.4s** Students will: work collaboratively in addressing problems and apply the skills and conventions of science in communicating information and ideas and in assessing results | | I can **communicate** my findings by:<br>• using SI units and Sig Digs<br>• presenting my findings so it makes sense to others (modes representation) |

| Grade: 20-2 | Subject Area: Math | Planning Team: Kim and team |
|---|---|---|
| **Big Idea(s): What do I need to understand? I understand algebraic and graphical reasoning through the study of relations** | | **Unit Guiding Question(s):**<br>What is algebra and why is it useful?<br>How can we see and understand the relationships between given algebraic scenarios?<br>How are algebraic equations and graphs connected?<br>How can I use graphing to show algebraic equations?<br>How can I understand an algebraic scenario by looking at information in a graph? |
| **Key Vocabulary:** algebra, relationships, algebraic scenarios, algebraic equations, graph, quadratic function, vertex, intercepts, axis of symmetry, domain, range, factors, factoring, ordered pairs, coordinates, x, y, polynomials, roots, quadratic equation, substitution, verify | | |

| | Curricular Language | Student Friendly Language |
|---|---|---|
| **What do students need to know?**<br>**Specific Outcome 1.** | Demonstrate an understanding of the characteristics of quadratic functions, including:<br>• vertex<br>• intercepts<br>domain and range<br>axis of symmetry. | I know what quadratic functions are<br>I know that quadratic functions have a vertex, intercepts, and an axis of symmetry<br>I know that quadratic functions are defined by their domain and range |
| **What do students need to do?**<br>**Specific Outcome 2.** | Solve problems that involve quadratic equations. | I can solve problems that use quadratic equations |
| **Who do student need to be?**<br>**Mathematical Processes** | CN, PS, T, V, C, R | I can make connections to help me understand<br>I can problem solve in math<br>I can use technology as a tool<br>I can visualize as a strategy to help me understand<br>I can communicate my thinking<br>I can reason by justifying my thinking |

| Name: | Date: |
|---|---|

**Unit Guiding questions:**
What is algebra and why is it useful? How can we see and understand the relationships between given algebraic scenarios? How are algebraic equations and graphs connected? How can I use graphing to show algebraic equations? How can I understand an algebraic scenario by looking at information in a graph?

| **Learning Outcomes** | **My evidence of learning** | Showing my Learning | | | **I Need Support** | **I Need Challenge** |
|---|---|---|---|---|---|---|
| | **Actvtivities/ tasks** | concrete | pictorial | abstract | | |
| • **I know what quadratic functions are**<br>• **I know that quadratic functions have a vertex, intercepts, and an axis of symmetry**<br>• **I know that quadratic functions are defined by their domain and range** | | | | | | |
| | | | | | | |
| | | | | | | |
| • **I can solve problems that use quadratic equations** | | | | | | |
| | | | | | | |
| | | | | | | |

# Backwards Design Big Ideas:

- Every curriculum has curricular goals
- We need to choose goals to teach for every unit
- We organize goals around a big idea/question
- We need to translate those goals into student friendly language
- Students need to know the goals
- Learning activities are EVIDENCE of learning
- We evaluate goals NOT activities
- Student choose their best examples of evidence (triangulation)

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