

Shelley MOORE PH.D.



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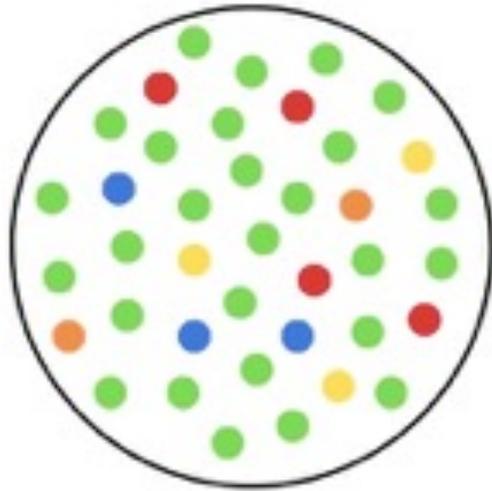
Who are you?

- Where is **home** for you?
- What is the **traditional territory** where you live?
- What are some of your **roles**?
- What are some of your **identities**?
- What are your **interests** and hobbies?
- What is **important** to you?
- What is a **life event** that shaped who you are?
- What is something that you want others to **know about you**?

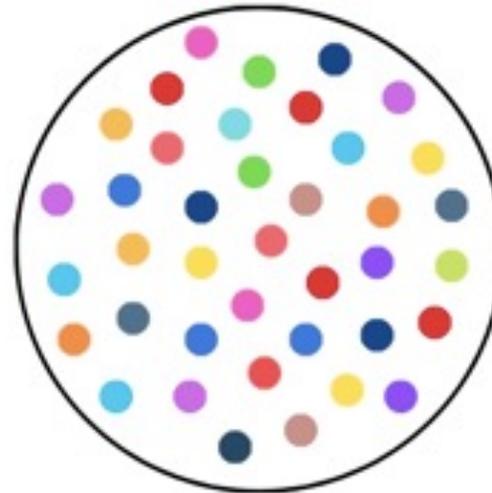
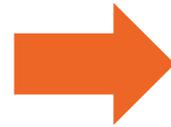


5 min

WHAT IS *inclusion* ?

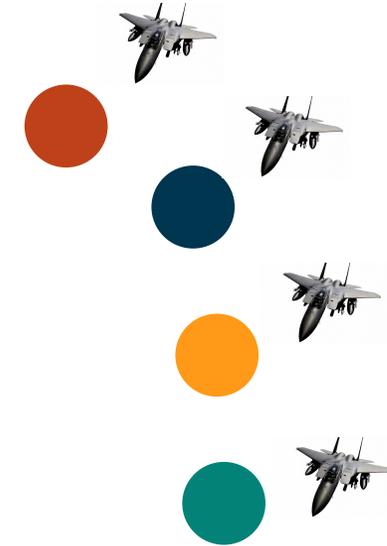
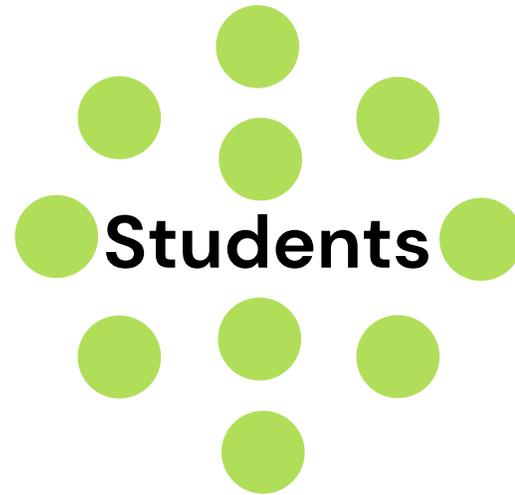
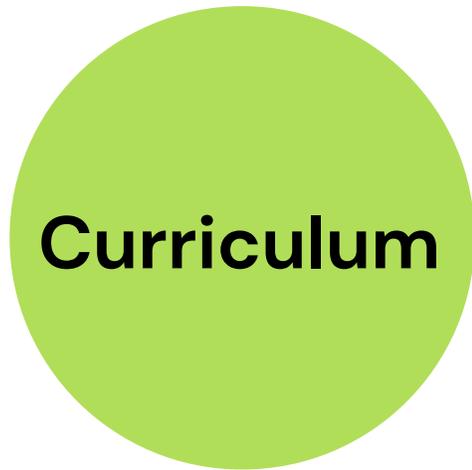


How do we
include people
with disabilities?

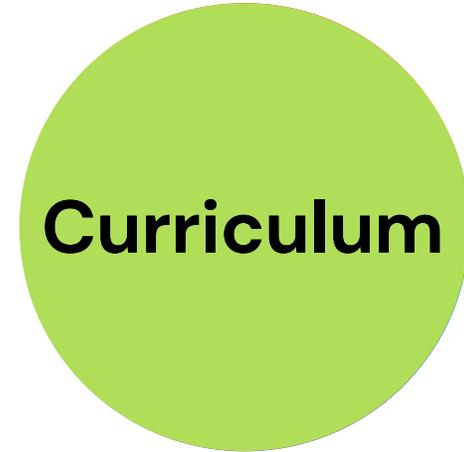
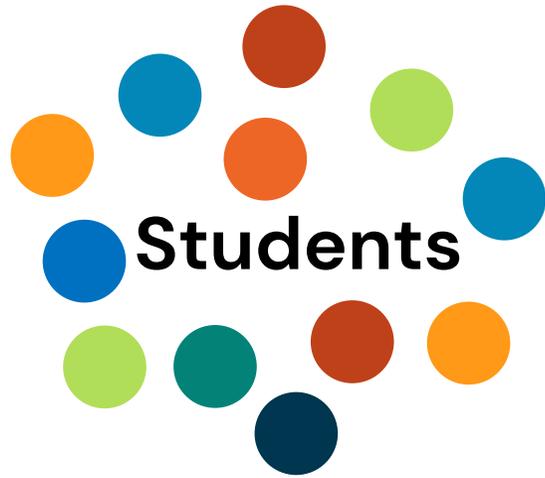


How do we teach
to *diversity*?

WHAT & HOW WE WERE TAUGHT...



WHAT IF WE ANTICIPATED *variability*



INSTEAD OF *homogeneity*?

HOW DO WE DESIGN AN ADJUSTABLE PLANE?

- Who are the **pilots**? What are their **dimensions**?
- What kind of **planes** are they flying?
- How is the plane **responsive** to the pilot's dimensions?
- How do the **pilots make the adjustments** they need to fly the plane?



HOW DO WE DESIGN AN ADJUSTABLE PLANE?

- Who are the **students**? What is the range of the **variability**?
- What is the **grade level curriculum** that students need to access?
- How is the grade level curriculum **responsive** to the range of student variability?
- How do we help **students to make the adjustments** they need to access the grade level curriculum?



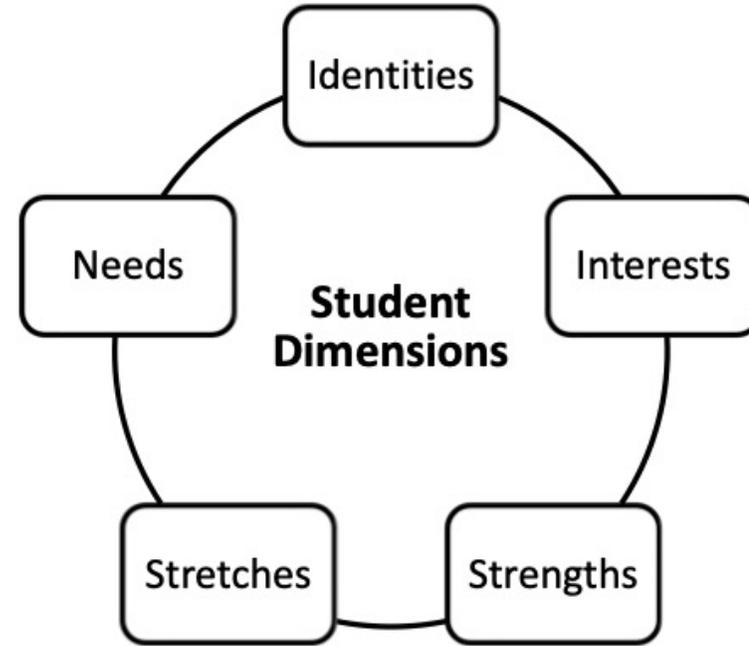
HOW DO WE DESIGN AN ADJUSTABLE PLANE?

- Who are the **students**? What is the range of the **variability**?
- What is the **grade level curriculum** that students need to access?
- How is the grade level curriculum **responsive** to the range of student variability?
- How do we help **students to make the adjustments** they need to access the grade level curriculum?



Getting to know who the students are

What **dimensions** can we capture so that we **reduce and eliminate barriers** AND **design better** for student variability?



Who are you? What are your dimensions?

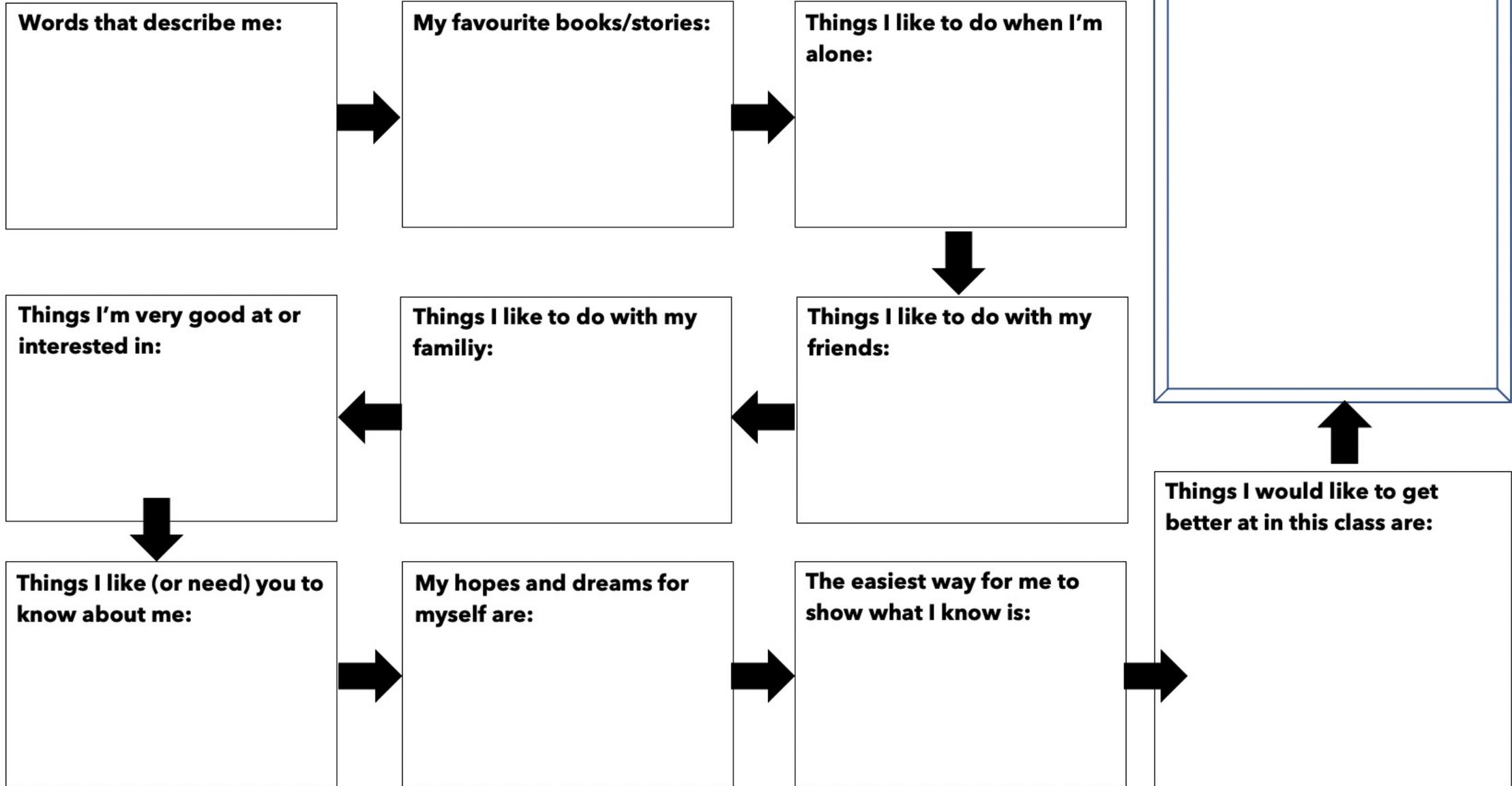
Who am I? (Identities)	What do I love? (Interests)	What am I good at? (Strengths)	How do I want to grow? (Stretches)	What makes it hard for me to grow? (Needs)
<p>How do you identify?</p> <p>What are some words that describe you?</p> <p>Complete the statement: I am _____</p> <p>What communities are you and your family a part of?</p> <p>What are your pronouns?</p> <p>What place do you call home?</p> <p>What languages do you speak?</p> <p>What cultures, races or nations do you identify with?</p> <p>Are there any disabilities that you identify with?</p>	<p>What brings you joy?</p> <p>What are some of your favourite things/ activities?</p> <p>What are some things that you do with your family and friends?</p> <p>What do you wish you could spend more time doing?</p> <p>What do you want to learn more about?</p> <p>What do you want to learn how to do?</p> <p>What would you do if you had a full day off?</p> <p>What do you like to learn/ read about?</p> <p>What kinds of shows/ movies/ books do you like?</p>	<p>What feels easy to you?</p> <p>What do you know a lot about?</p> <p>What perspective do you bring to conversations?</p> <p>What are you really good at?</p> <p>How can I help others? (Strengths)</p> <p>What could you teach to someone else?</p> <p>Why is your family/ class/group so lucky to have you?</p> <p>How do you help out at home? In other activities?</p> <p>What do you do that brings other people joy?</p>	<p>What is a goal that you have for yourself?</p> <p>What do you want to get better at?</p> <p>What is something you want to learn more about?</p> <p>What do you wish you could do more of?</p> <p>What is an area that you need some practice in?</p> <p>What could you work on now, that will help you in the future?</p> <p>What do you need support for at school?</p> <p>What do you wish you could do more of without help?</p>	<p>What makes it hard for you to learn?</p> <p>What helps you learn best?</p> <p>What makes it hard for you to pay attention/ focus?</p> <p>Do you prefer to work alone or in a group?</p> <p>What makes it hard to get to school/ go to class?</p> <p>What do you wish was different about school?</p> <p>What materials/tools do you need in a classroom?</p> <p>What is important for your teacher to know about you?</p>

Google Form:

<https://forms.gle/6CaTcpW3sSQnQnCp7>

Identities	Interests	Strengths
Choose at least 3 questions to respond to from this section.	Choose at least 3 questions to respond to from this section.	Choose at least 3 questions to respond to from this section.
How do you identify? Your answer _____	What brings you joy? Your answer _____	What feels easy to you? Your answer _____
What are some words that describe you? Your answer _____	What are some of your favourite things/activities? Your answer _____	What do you know a lot about? Your answer _____
Complete the statement: I am ... Your answer _____	What are some things that you like to do with your family? Your friends? Your answer _____	What unique perspective do you bring to conversations? Your answer _____
What communities are you and your family a part of? Your answer _____	What do you wish you could spend more time doing or learning about? Your answer _____	What are you really good at? Your answer _____
What are your pro nouns? Your answer _____	What would you do if you had a day off? Your answer _____	What could you teach to someone else? Your answer _____

Who am I? Profile



Getting to Know Children & Family Dimensions - Family Interview

Child:	Child:	Child:	Child:	Child:
What are the identities of your child and your family?	What are the identities of your child and your family?	What are the identities of your child and your family?	What are the identities of your child and your family?	What are the identities of your child and your family?
What are the interests of your child and your family?	What are the interests of your child and your family?	What are the interests of your child and your family?	What are the interests of your child and your family?	What are the interests of your child and your family?
What are the strengths of your child?				
What is hard for your child in this community? What do they need support with?	What is hard for your child in this community? What do they need support with?	What is hard for your child in this community? What do they need support with?	What is hard for your child in this community? What do they need support with?	What is hard for your child in this community? What do they need support with?
What is getting in the way for your child to feel a sense of belonging and success in this community? What is getting in the way for the family?	What is getting in the way for your child to feel a sense of belonging and success in this community? What is getting in the way for the family?	What is getting in the way for your child to feel a sense of belonging and success in this community? What is getting in the way for the family?	What is getting in the way for your child to feel a sense of belonging and success in this community? What is getting in the way for the family?	What is getting in the way for your child to feel a sense of belonging and success in this community? What is getting in the way for the family?

Help us get to know: _____

Date: _____

Person connected to _____	Identities	Interests	Strengths	Stretches	Needs
Who are you and how do you know _____?	What words would you use to describe _____? What groups is _____ connected to in their community?	What is _____ interested in? What do they like to do on their own? With their friends? Family? Community?	What is _____ good at? What can they teach others?	What is hard for _____? What do you think _____ wants to get better at?	What does _____ need support with? What is important for people to know about _____?
Person 1:					
Person 2:					
Person 3:					
Person 4:					

Help us get to know Juni?

Date: Dec 2022

	Identities	Interests	Strengths	Stretches	Needs
Who are you and how do you know Juni?	<p>What words would you use to describe Juni?</p> <p>What groups is Juni connected to in their community?</p>	<p>What is Juni interested in?</p> <p>What do they like to do on their own? With their friends? Family? Community?</p>	<p>What is Juni good at?</p> <p>What can they teach others?</p>	<p>What is hard for Juni?</p> <p>What do you think Juni wants to get better at?</p>	<p>What does Juni need support with?</p> <p>What is important for people to know about Juni?</p>
Person 1: Rita Grandmother	Kind, strong, smart	watching me sew, taking pictures, listening to music	Patience, she notices everything	Waking up! Trying new things	She needs time and patience. If she is upset or frustrated, she needs space
Person 2: Frank Dad	Athletic, joyful, Ukrainian, church	Watching the baking shows , fishing with me	A great listener, being present	Independence, changes in routine	I think she worries a lot; I need others to know that she needs reassurance sometimes
Person 3: Kiran Family Friend	funny	Football! She loves the BC lions, movies, going for walks	making you feel so important, spreads joy, makes everyone laugh	Friendships, spending more time with her peers	Sharing her thinking, communicating. She has come such a long way!
Person 4:Matty Cousin	Fun, we play a lot together	Whale sharks, camping, swimming	Playing with me	Its hard for Juni to talk sometimes, but I know when she likes something, and she likes me	using her iPad to help her talk

Help us get to know Juni?

Date: Dec 2022

	Identities	Interests	Strengths	Stretches	Needs
Who are you and how do you know Juni?	<p>What words would you use to describe Juni?</p> <p>What groups is Juni connected to in their community?</p>	<p>What is Juni interested in?</p> <p>What do they like to do on their own? With their friends? Family? Community?</p>	<p>What is Juni good at?</p> <p>What can they teach others?</p>	<p>What is hard for Juni?</p> <p>What do you think Juni wants to get better at?</p>	<p>What does Juni need support with?</p> <p>What is important for people to know about Juni?</p>
Person 1: Mr. Lopez Classroom Teacher	Strong, smart, a learner	Getting read to, books, you tube, science	Connecting with her peers	Communicating, independence, asking to help when she needs it	She needs support with her reading (decoding) and her communication with the device
Person 2: Benny Educational Assistant	Funny, curious	Fashion, her friends, books, magazines, her iPad	She knows what she likes and doesn't like and lets us know	Making friends, communicating or using strategies before she gets too frustrated	She needs a chance to rest throughout the day and breaks
Person 3: Ms. Turner SLP	joyful	Sights and sounds around her, being social	Using her iPad to communicate	Building friendships, communicating what she needs	She needs her device available to her, she needs to be around her peers
Person 4: Jesse Classmate	Funny, sometimes she's loud	Playing games, hanging out with her friends	Being happy, making people laugh	I think talking is hard for her	she needs to be around us, her friends

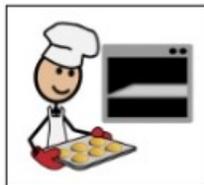
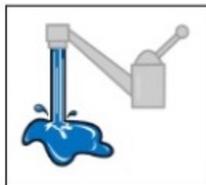
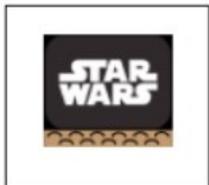
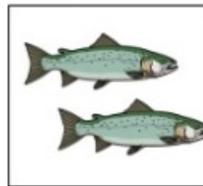
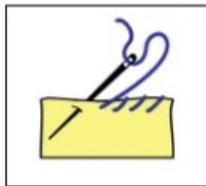
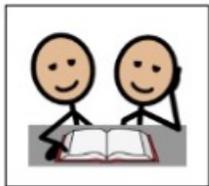
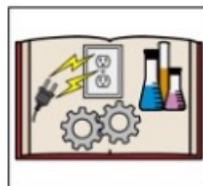
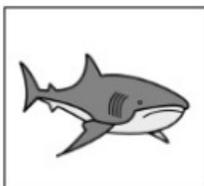
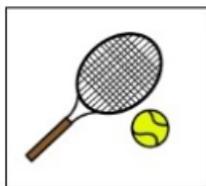
Help us get to know Juni?

Date: Dec 2022

	Identities	Interests	Strengths	Stretches	Needs
Who are you and how do you know Juni?	<p>What words would you use to describe Juni?</p> <p>What groups is Juni connected to in their community?</p>	<p>What is Juni interested in?</p> <p>What do they like to do on their own? With their friends? Family? Community?</p>	<p>What is Juni good at?</p> <p>What can they teach others?</p>	<p>What is hard for Juni?</p> <p>What do you think Juni wants to get better at?</p>	<p>What does Juni need support with?</p> <p>What is important for people to know about Juni?</p>
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Building my Student profile: What are my INTERESTS?



Growth Year: 2022

Name: Juniper

Grade: K



Identities: I am...

 kind	 a friend	 funny
 an athlete	 Ukrainian	 smart

Interests: I really like and/or what to learn more about:

 reading	 whale sharks	 Star Wars	 fashion	 Great British Baking Show
 camping	 BC lions	 taking pictures	 salmon in river	 dancing

Strengths: I am really good at and/or could teach others:

 Star Wars	 singing	 being a friend	 playing	 asking for help
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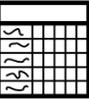
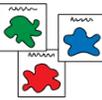
Goals: I want to grow in these areas:

 waking up	 playing football	 talking	 making friends
--	---	--	---

Needs: I need this support to grow:

 emotional regulation	 social skills	 communication	 physical
---	--	--	---

Supports: I need this in my garden to grow:

 patience	 my peers	 a plan	 visuals	 my talker
---	---	---	--	--

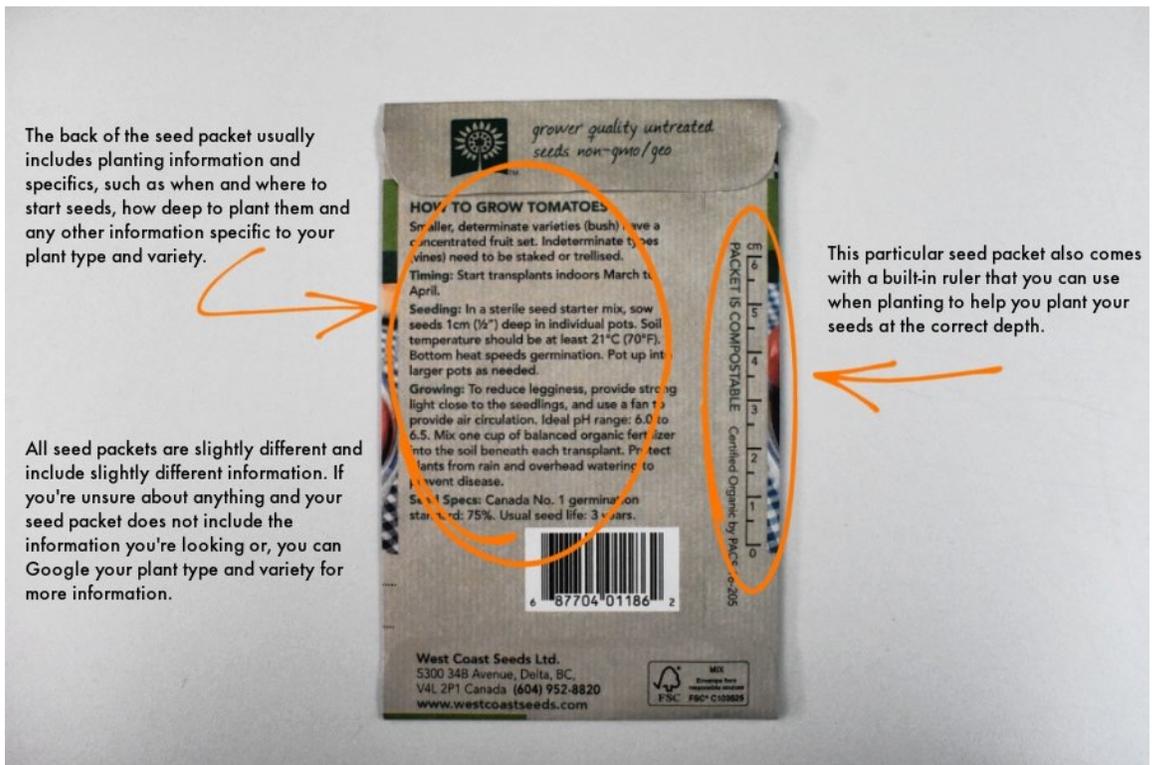
Barriers: This is what makes it hard for me to grow:

 being rushed	 no one asks me	 writing	 no visuals	 ignored
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Thank You For helping me GROW

Student Voice

The SEED PACKET



The back of the seed packet usually includes planting information and specifics, such as when and where to start seeds, how deep to plant them and any other information specific to your plant type and variety.

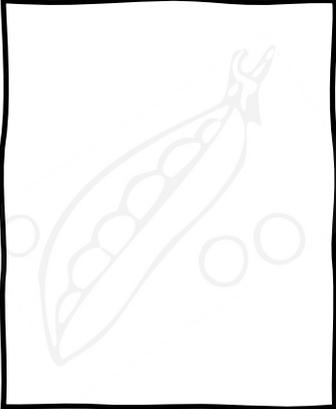
All seed packets are slightly different and include slightly different information. If you're unsure about anything and your seed packet does not include the information you're looking for, you can Google your plant type and variety for more information.

This particular seed packet also comes with a built-in ruler that you can use when planting to help you plant your seeds at the correct depth.

Strategy 1: My I.E.Pea Seed Packet

Growth Year: _____

Name: _____ Grade: _____



Identities: I am...

- _____
- _____
- _____
- _____
- _____

Interests: I really like and/or what to learn more about:

- _____
- _____

Strengths: I am really good at and/or could teach others:

- _____
- _____
- _____
- _____

Goals: I want to grow in these areas:

1. _____
2. _____
3. _____

Needs: I need this support in these areas to grow:

- _____
- _____
- _____
- _____

Supports: I need this in my garden to grow:

- _____
- _____
- _____

Barriers: This is what makes it hard for me to grow:

- _____
- _____
- _____

Thank You For helping me GROW

Growth Year:

Name: Conor G.

Grade: 1

Identities: I am...

- Joyful, funny & dramatic!
- I am so loving!
- I use English, visual and ASL languages to communicate
- I am part of the DS community and have a strong inclusive school community
- My family enjoys some Caribbean traditions and food because that is where my mom grew up!

Interests: I really like and/or what to learn more about:

- Music, dancing, books, outdoor play, Disney princesses, water and water play, jumping, long hair, fruit, popcorn, ice cream

Strengths: I am really good at and/or could teach others:

- Visual, musical, following routines
- helping the teacher, receptive language, empathetic, motivated to please, reading
- I can help my classmates to understand that with the right supports in place, you are capable of anything. Even if others (or yourself) think that you can't

Goals: I want to grow in these areas:

1. Being aware of when I am/ am not safe
2. Communicating what I need and want
3. Social connections and interactions
4. Fine motor skills
5. Being independent

Needs: I need this support in these areas to grow:

- Communication
- Social Skills
- Physical
- Hearing
- Vision

Supports: I need this in my garden to grow:

- Being respected and included in all aspects of community, "first/then" language, lots of praise, time for transition with verbal and visual cues, lots of repetition, appropriate supports and strategies, patience, getting a specific job, silly and exciting language

Barriers: This is what makes it hard for me to grow:

- Negative or forceful comments, expectations without supports or strategies in place, bring rushed, taking behaviour personally, unclear directions, too many instructions at once, when people assume that I am not capable

Thank You For helping me GROW

Student &
Family/
Community
Voice

Class Review:		School Team:		Date:	
Class Dimensions					
Class Identities Student Perspectives:		Class Interests Student Perspectives:		Classroom Strengths Student Perspectives:	
Team Perspectives:		Team Perspectives:		Team Perspectives:	
Class Needs					
Need:	Need:	Need:	Need:	Need:	Need:
Team Goals					
Some big questions and/or goals that we have for this class:					
Team Reflections & Decisions					
What works well for this class?			What else can we do to reduce barriers for this class?		

Class Review:		School Team:		Date:	
Class Dimensions					
Class Identities		Class Interests		Classroom Stretches	
		Student Dimensions			
Class Needs					
Need:	Need:	Need:	Need:	Need:	
		Prioritized Needs to Target			
Team Goals					
Some big questions and/or goals that we have for this class:					
		Collaborative Team Goals			
Team Reflections & Decisions					
What works well for this class?			What else can we do to reduce barriers for this class?		
			Collaborative Team Decisions		

Class Review:	School Team:	Date:
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Class Dimensions

Class Identities Student Perspectives: Team Perspectives:	Class Interests Student Perspectives: Team Perspectives:	Classroom Strengths Student Perspectives: Team Perspectives:	Classroom Stretches Student Perspectives: Team Perspectives:
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Class Needs

Need:	Need:	Need:	Need:	Need:
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Team Goals

Some big questions and/or goals that we have for this class:

Team Reflections & Decisions

What works well for this class?	What else can we do to reduce barriers for this class?
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Class Review for: Grade 2		School: BG Elementary		Date: Fall 2022	
We can plan for our students by getting to know their dimensions:					
Identities Culture/Race: Indo-Canadian, Mexican, Marshallese, Caucasian Disability: Autism, Intellectual Disability Language: Mixtec, Punjabi, English, Spanish SOGI: 10B /10G Family: only children, large families, adopted, immigrant families		Interests Art, hands on activities, outdoor time, listen to stories, free choice, centre time, performances, builders, Lego, crafting, drawing, want to be at school, athletes, artists, outdoorsy		Strengths Students are lively, fun, never bored, they like and support each other, are kind, creative, drawing, working together, supporting and helping each other, encourage each other, love learning, flexible, persuasive, a group that is very independent, persevere, kind, work hard, coping - showing a lot growth	
Based on student dimensions we can ask questions and set some goals:					
Some questions we have about this class: <ul style="list-style-type: none"> - How do we address a large academic spread? - How do we support a range of readers? - How do we manage challenging behaviours? 			Some goals we have for this class: <ul style="list-style-type: none"> - Improve listening skills, develop social skills, using words to solve their problems, develop reading/writing skills, teach them to regulate their behaviour 		
We can respond to student dimensions by targeting specific core competencies					
Strength areas: Social Awareness & Responsibility Creative Thinking			Stretch areas: Problem Solving Communication		
We can respond to student dimensions by reducing and eliminating barriers for everyone:					
What have we tried that is working: Having a clear schedule of the day, ready/do/done, organization strategies (book bins for the week), math manipulatives, individual, white boards, check in mornings			What do we still want to try: <ul style="list-style-type: none"> - Adjusting the classroom layout to include some calm down spaces, allow students to take breaks when needed - Create an inclusive curricular unit plan 		
We can respond to student dimensions by determining and prioritizing individual needs:					
Need: Executive Functioning (task initiation, sequencing) AM, <u>AB</u> , EB, AR, JR, PS, LT, <u>CT</u>	Need: Communication (Expressive) * <u>CT</u> , EB, AR	Need: Self Regulation (Emotional) * AA, <u>AB</u> , EB, HB, AR, PS, LT, <u>CT</u>	Need: Anxiety* PS, LT, <u>CT</u> , EW, MJ, FT, IO	Need: Social Skills (Problem Solving) * <u>AB</u> , EB, HB, AR, PS, <u>CT</u> , EW, MJ	
* Also an IEP Need Area					

Class Review for: Grade 2		School: BG Elementary		Date: Fall 2022	
We can plan for our students by getting to know their dimensions:					
Identities Culture/Race: Indo-Canadian, Mexican, Marshallese, Caucasian Disability: Autism, Intellectual Disability Language: Mixtec, Punjabi, English, Spanish SOGI: 10B /10G Family: only children, large families, adopted, immigrant families		Interests Art, hands on activities, outdoor time, listen to stories, free choice, centre time, performances, builders, Lego, crafting, drawing, want to be at school, athletes, artists, outdoorsy		Strengths Students are lively, fun, never bored, they like and support each other, are kind, creative, drawing, working together, supporting and helping each other, encourage each other, love learning, flexible, persuasive, a group that is very independent, persevere, kind, work hard, coping - showing a lot growth	
Based on student dimensions we can ask questions and set some goals:					
Some questions we have about this class: <ul style="list-style-type: none"> - How do we address a large academic spread? - How do we support a range of readers? - How do we manage challenging behaviours? 			Some goals we have for this class: <ul style="list-style-type: none"> - Improve listening skills, develop social skills, using words to solve their problems, develop reading/writing skills, teach them to regulate their behaviour 		
We can respond to student dimensions by targeting specific core competencies					
Strength areas: Social Awareness & Responsibility Creative Thinking			Stretch areas: Problem Solving Communication		
We can respond to student dimensions by reducing and eliminating barriers for everyone:					
What have we tried that is working: Having a clear schedule of the day, ready/do/done, organization strategies (book bins for the week), math manipulatives, individual, white boards, check in mornings			What do we still want to try: <ul style="list-style-type: none"> - Adjusting the classroom layout to include some calm down spaces, allow students to take breaks when needed - Create an inclusive curricular unit plan 		
We can respond to student dimensions by determining and prioritizing individual needs:					
Need: Executive Functioning (task initiation, sequencing) AM, <u>AB</u> , EB, AR, JR, PS, LT, <u>CT</u>	Need: Communication (Expressive) * <u>CT</u> , EB, AR	Need: Self Regulation (Emotional) * AA, <u>AB</u> , EB, HB, AR, PS, LT, <u>CT</u>	Need: Anxiety* PS, LT, <u>CT</u> , EW, MJ, FT, IO	Need: Social Skills (Problem Solving) * <u>AB</u> , EB, HB, AR, PS, <u>CT</u> , EW, MJ	
* Also an IEP Need Area					

Class Review for: Ms. Hinz Grade 7: CREW, Humanities & Science	School: Nechako Valley Secondary School	Date: October 17, 2023
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We can plan for our students by getting to know their dimensions:

Identities	Interests	Strengths	Stretches
<p>Culture/Race: Canadian, Indigenous, American, Philippines</p> <p>Disability: Autism, ADHD Intellectual Disability, Behavioral, Learning Disability</p> <p>Language: English, French, Filipino</p> <p>SOGI: 12 identify as F, 16 identify as M</p> <p>Family: Rural families, large families, x generation families, mixed and blended families, international families, farming and forestry families</p>	<p>Outdoors, dirt biking, hunting, horses, art, music, reading, football, hockey, volleyball, soccer, ruby, painting, cooking, computers, gaming, movies, band, agriculture, farming,</p>	<p>Kind hearted, help take care of class pet Gizmo, love hands on activities, athletic, competitive, artistic, inquiry learning, asking questions , open to learning different perspectives, love being outside, helping others</p>	<p>Listening when others are speaking, self-regulation, coming to class prepared, transitions, following directions,, writing, decision making, taking risks , dealing with anxiety, being quiet when asked .</p>

Based on student dimensions we can ask questions and set some goals:

<p>Some questions we have about this class:</p> <ul style="list-style-type: none"> • How can we create a learning environment to meet everyone's needs and goals • How can we learn self regulation and ways to deal with anxiety and stress • How can we incorporate more hands on learning and inquiry based learning given time and resource restraints • How can we incorporate more of the Indigenous principals of learning 	<p>Some goals we have for this class:</p> <ul style="list-style-type: none"> • To be open to try new things • To build self confidence and self esteem • To learn that its ok to make mistakes and try again
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We can respond to student dimensions by reducing and eliminating barriers for everyone:

<p>What have we tried that is working:</p> <ul style="list-style-type: none"> • Student choice • Games and visuals to help learning • Outdoor land based learning • Reward system for positive behavior • Creating a safe and inclusive classroom environment where all learners are welcomed 	<p>What do we still want to try:</p> <ul style="list-style-type: none"> • Incorporating more SEL strategies in the classroom to help support all learners • Build a more needs based classroom to help support all learners • Teach self regulation skills and strategies • Finding ways to build self esteem and self confidence
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We can respond to student dimensions by determining and prioritizing individual needs: (This is based on Student IEPs, observations made by Ms. Hinz (Class teacher) and help from Ms. Wall (Class EA))

Need: Organization Everyone	Need: Social Skills LB, HS, WS, CA, , JM	Need: Transitions LB, HS, WS, CA,,JM, everyone	Need: Language and Reading LB, HS, WS, CA,JM	Need: SEL and Self regulation LB, HS,WS,CA,JM, Everyone
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*** Also an IEP Need Area**

We can plan for our students by getting to know their dimensions:

Identities	Interests	Strengths	Stretches
<p>Culture/Race: Canadian, Indigenous, American, Philippines</p> <p>Disability: Autism, ADHD Intellectual Disability, Behavioral, Learning Disability</p> <p>Language: English, French, Filipino</p> <p>SOGI: 12 identify as F, 16 identify as M</p> <p>Family: Rural families, large families, x generation families, mixed and blended families, international families, farming and forestry families</p>	<p>Outdoors, dirt biking, hunting, horses, art, music, reading, football, hockey, volleyball, soccer, ruby, painting, cooking, computers, gaming, movies, band, agriculture, farming,</p>	<p>Kind hearted, help take care of class pet Gizmo, love hands on activities, athletic, competitive, artistic, inquiry learning, asking questions , open to learning different perspectives, love being outside, helping others</p>	<p>Listening when others are speaking, self-regulation, coming to class prepared, transitions, following directions,, writing, decision making, taking risks , dealing with anxiety, being quiet when asked .</p>

Based on student dimensions we can ask questions and set some goals:

Some questions we have about this class:

- How can we create a learning environment to meet everyone's needs and goals
- How can we learn self regulation and ways to deal with anxiety and stress
- How can we incorporate more hands on learning and inquiry based learning given time and resource restraints
- How can we incorporate more of the Indigenous principals of learning

Some goals we have for this class:

- To be open to try new things
- To build self confidence and self esteem
- To learn that its ok to make mistakes and try again

We can respond to student dimensions by reducing and eliminating barriers for everyone:

What have we tried that is working:

- Student choice
- Games and visuals to help learning
- Outdoor land based learning
- Reward system for positive behavior
- Creating a safe and inclusive classroom environment where all learners are welcomed

What do we still want to try:

- Incorporating more SEL strategies in the classroom to help support all learners
- Build a more needs based classroom to help support all learners
- Teach self regulation skills and strategies
- Finding ways to build self esteem and self confidence

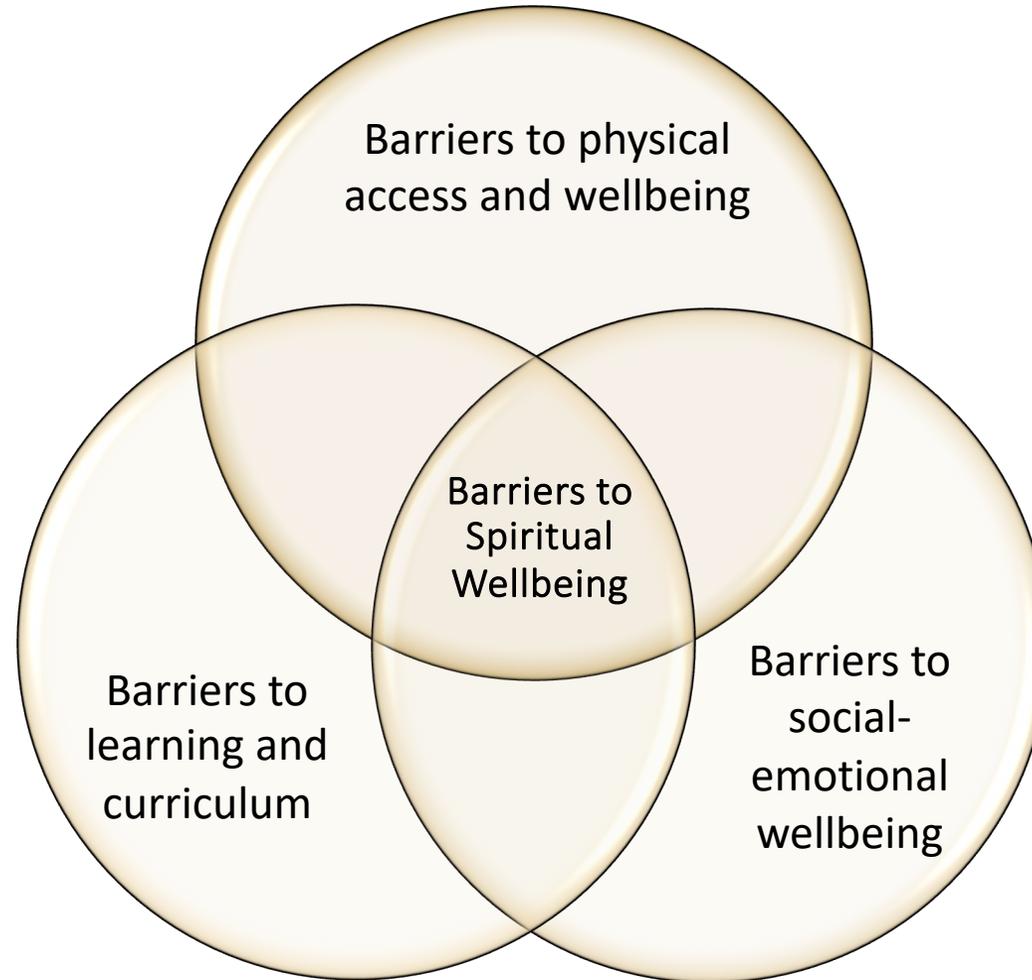
We can respond to student dimensions by determining and prioritizing individual needs: (This is based on Student IEPs, observations made by Ms. Hinz (Class teacher) and help from Ms. Wall (Class EA))

<p>Need: Organization Everyone</p>	<p>Need: Social Skills LB, HS, WS, CA, , JM</p>	<p>Need: Transitions LB, HS, WS, CA,,JM, everyone</p>	<p>Need: Language and Reading LB, HS, WS, CA,JM</p>	<p>Need: SEL and Self regulation LB, HS,WS,CA,JM, Everyone</p>
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*** Also an IEP Need Area**

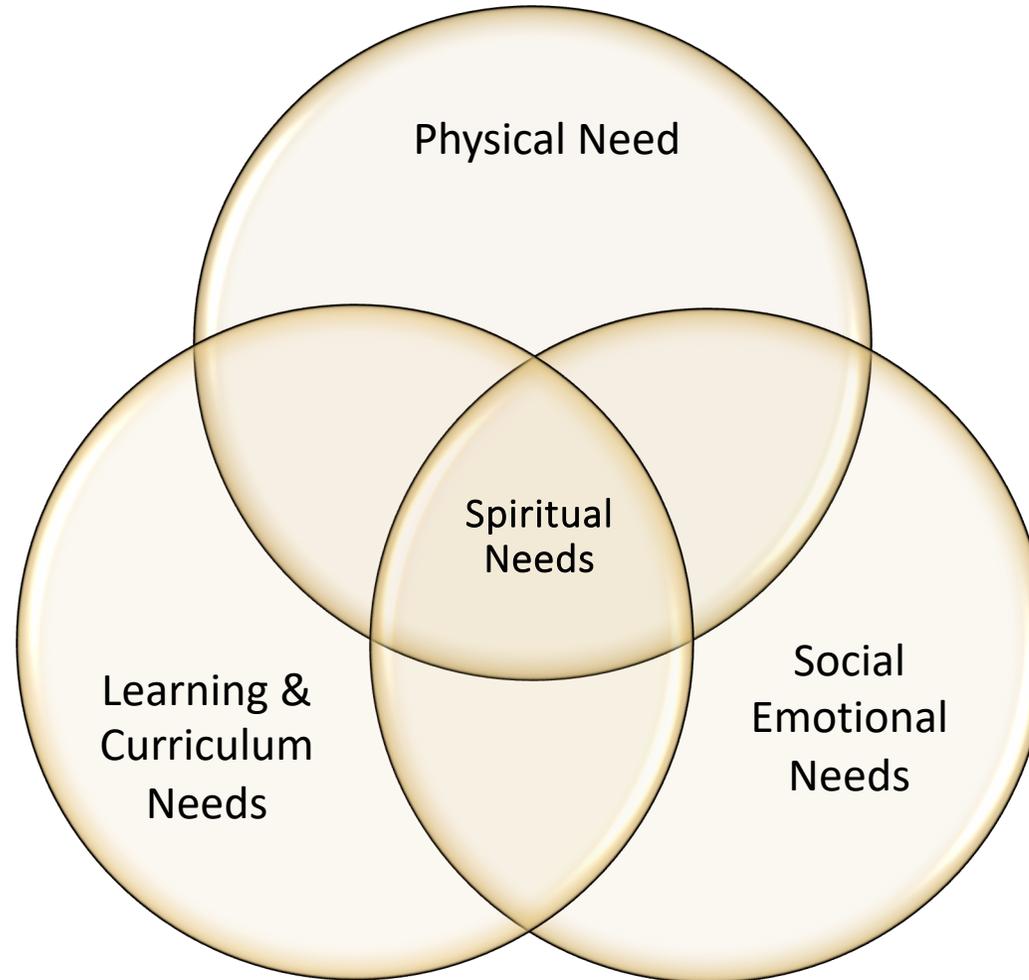
Class Review:		School Team:		Date:	
Class Dimensions					
Class Identities Student Perspectives: Team Perspectives:		Class Interests Student Perspectives: Team Perspectives:		Classroom Strengths Student Perspectives: Team Perspectives:	
Class Needs					
Need:	Need:	Need:	Need:	Need:	Need:
Team Goals					
Some big questions and/or goals that we have for this class:					
Team Reflections & Decisions					
What works well for this class?			What else can we do to reduce barriers for this class?		

Increasing Inclusive & Equitable Access by Designing for Individual Needs



Increasing Inclusive & Equitable Access by Designing for Individual Needs

- Attention
- Anxiety
- Communication (receptive)
- Communication (expressive)
- Eating/Food
- Engagement/Motivation
- Executive functioning
- Family/community and/or identity
- Frustration/ Anger
- Grief/ Trauma
- Gross and/or Fine motor
- Intellectual ability (access)
- Intellectual ability (challenge)



- Language
- Literacy (decoding)
- Literacy (understanding)
- Literacy (written output)
- Literacy (Speaking/ oral language)
- Medical
- Memory
- Numeracy
- Personal Care
- Physical/Mobility
- Self Advocacy
- Self Regulation (emotional)
- Self Regulation (behavioural)
- Self Regulation(learning)
- Self Esteem
- Self Harm
- Sensory
- Social Skills
- Spiritual
- Transitioning
- Vision and/or hearing

Classroom Support Planning: Collaborative Needs Based Reflection

Target Classroom:

Classroom Teacher(s):

Support Teachers/Staff:

Date:

1. Look at the following areas of need as a team
2. Record needs for students who have IEPs (Individual education plan) and/or LSPs (learning support plan)
3. You can refer to individual assessments and recommendations as well as specialists to determine needs if useful
4. Record needs for students in class who do not have IEP or LSP
5. Look for clusters of need and reflect on community impact
6. Determine priority classroom needs to develop Classroom Support Plan

Areas of Need	Students who have this need (underline students who have IEP/LSPs)	This need impacts the community and/or there is a cluster of students who have this need	This need can be managed over time and/or not critical	This is an individual need area and/or community does not need support in this area
Addiction				
Attendance/ Lateness				
Attention				
Anxiety/ Depression				
Bullying				
Communication (receptive)				
Communication (expressive)				
Eating/Food/Allergies				
Engagement/Motivation				
Executive Functioning				
Family/Community/Identity				
Frustration/ Anger				
Greif/ Trauma				
Gross/Fine Motor Skills				
Intellectual Ability (access)				

Intellectual Ability (extend)				
Language				
Literacy (decoding)				
Literacy (understanding)				
Literacy (written output)				
Literacy (oral language/speaking)				
Medical				
Memory				
Mental Health				
Numeracy				
Personal Care				
Personal Safety				
Physical/Mobility				
Self-Advocacy				
Self-Regulation (emotional)				
Self-Regulation (behavioural)				
Self-Regulation (learning)				
Self Esteem				
Self-Harm/ Self Injurious Behaviour				
Sensory				
Social Skills				
Transitioning				
Other:				
Other:				

Priority Community Needs	Specialists/Individuals to connect to	Priority Individual Needs	Specialists/Individuals to connect to

Classroom Support Planning: Collaborative Needs Based Reflection

Target Classroom:

Classroom Teacher(s):

Support Teachers/Staff:

Date:

1. Look at the following areas of need as a team
2. Record needs for students who have IEPs (Individual education plan) and/or LSPs (learning support plan)
3. You can refer to individual assessments and recommendations as well as specialists to determine needs if useful
4. Record needs for students in class who do not have IEP or LSP
5. Look for clusters of need and reflect on community impact
6. Determine priority classroom needs to develop Classroom Support Plan



Areas of Need Choices (EC, HN) Life Skills (KD, IN) Resource (JC)	Students who have this need (underline students who have <u>IEP/504</u>)	This need impacts the community and/or there is a cluster of students who have this need	This need can be managed over time and/or not critical	This is an individual need area and/or community does not need support in this area
Addiction				
Attendance/ Lateness	JA			x
Attention	JA, RM		x	
Anxiety/ Depression	GA, LB, JA, ES, KR, GS	x		
Bullying				
Communication (receptive)				
Communication (expressive)	GA, LB		x	
Eating/Food/Allergies	LB			x
Engagement/Motivation	LB, JA, ES, NS	x		
Executive Functioning	MA, LB, JA	x		
Family/Community/Identity	JA, ES, JK, LE	x		
Frustration/ Anger	JA, ES		x	
Greif/ Trauma	GA, LB, JA, ES, KK	x		
Gross/Fine Motor Skills	LB, BB			x
Intellectual Ability (access)	GA, MA		x	
Intellectual Ability (extend)	BW, IM, MB		x	

Language				
Literacy (decoding)	MA, KR, TP, AD		x	
Literacy (understanding)	GA, MA, KR, TP, AD		x	
Literacy (written output)	MA, LB, KR, TP, AD		x	
Literacy (oral language/speaking)	GA		x	
Medical				
Memory				
Mental Health				
Numeracy	ES, KR			
Personal Care	GA			x
Personal Safety				
Physical/Mobility				
Self-Advocacy	LB			x
Self-Regulation (emotional)	GA, JA, ES	x		
Self-Regulation (behavioural)	ES	x		
Self-Regulation (learning)				
Self Esteem	LB, JA, ES	x		
Self-Harm/ Self Injurious Behaviour				
Sensory				
Social Skills	GA, LB, JA, ES	x		
Transitioning	JA, ES	x		
Other:				
Other:				

Priority Community Needs	Specialists/Individuals to connect to	Priority Individual Needs	Specialists/Individuals to connect to
Anxiety/ emotional self- Regulation	Counsellors - Jessica		
Family support/ trauma	Counsellors - Jessica, Community Schools - Diana		
Literacy	Title - Kori, Mica, Melissa		
Engagement/ Motivation	Sarah, Shelley, Jasmine, Kim		

Needs-Based Reflection - Individual

Inclusive IEP Planning: Collaborative Needs Based Reflection

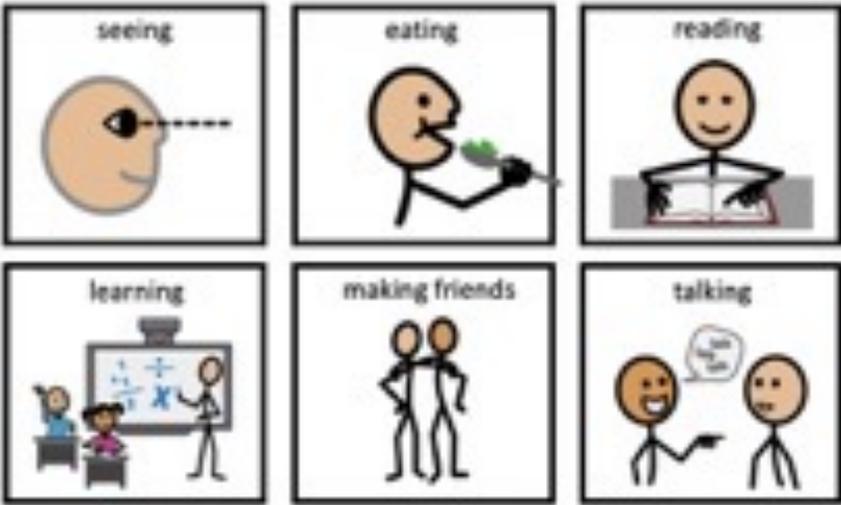
Target Student:

Support Manager:

Date:

Areas of Need	Student Perspective	Family Perspective	School Perspective	Consultant and Specialist Perspectives
Addiction				
Attendance/ Lateness				
Attention				
Anxiety/ Depression				
Bullying				
Communication (receptive)				
Communication (expressive)				
Eating/Food/Allergies				
Engagement/Motivation				
Executive Functioning				
Family/Community/Identity				
Frustration/ Anger				
Greif/ Trauma				
Gross/Fine Motor Skills				
Intellectual Ability (access)				
Intellectual Ability (extend)				
Language				
Literacy (decoding)				
Literacy (understanding)				
Literacy (written output)				
Literacy (oral language/speaking)				
Medical				
Memory				
Mental Health				
Numeracy				

 **Geeshan needs help with:**



The icons are arranged in a 2x3 grid:

- seeing:** A stick figure with a dashed line from the eye to the right.
- eating:** A stick figure holding a green leafy vegetable to its mouth.
- reading:** A stick figure sitting at a desk reading a book.
- learning:** A stick figure pointing at a whiteboard with mathematical symbols (+, -, x, /) in a classroom setting.
- making friends:** Two stick figures standing side-by-side.
- talking:** Two stick figures, one with a speech bubble above their head.

Needs-Based Reflection – Geeshan 6

Inclusive IEP Planning: Collaborative Needs Based Reflection

Target Student: Geeshan

Support Manager: Lynn

Date: Dec 2022

Area of Need	Student Perspective	Family Perspective	School Perspective	Consultant and Specialist Perspectives
Addiction				
Attendance/ Lateness				
Attention				
Anxiety/ Depression				
Bullying				
Communication (receptive)				SLP, Assessment
Communication (expressive)		Make choices		SLP, Assessment
Eating/Food/Allergies				
Engagement/Motivation				
Executive Functioning				
Family/Community/Identity		Know his interests		
Frustration/ Anger				
Grief/ Trauma				
Gross/Fine Motor Skills				
Intellectual Ability (access)		Access to curriculum	ST, CT	SLP, Assessment
Intellectual Ability (extend)				
Language				Assessment
Literacy (decoding)				Assessment
Literacy (understanding)			ST	SLP, Assessment
Literacy (written output)				
Literacy (oral language/speaking)				
Medical				Assessment
Memory				
Mental Health				

Numeracy				Assessment
Personal Care		Independence	ST	
Personal Safety		Safety in community, when he needs help		
Physical/Mobility				
Self-Advocacy				
Self-Regulation (emotional)				
Self-Regulation (behavioural)				
Self-Regulation (learning)				
Self Esteem				
Self-Harm/ Self Injurious Behaviour				
Sensory				
Social Skills	Friends	Friends	ST	SLP
Transitioning				
Other:				
Other:				

Priority Needs	Specialists/ Individuals to connect to	Needs to Monitor	Specialists/Individuals to connect to
Social Skills (friendship)	ST (Support teacher)	Personal Safety	ST (Support teacher)
Intellectual Ability (Curricular Access)	ST (Support teacher), CT (Classroom Teacher)	Personal Care	ST (Support teacher), EA (Educational Assistant)
Communication (Expressive)	SLP (Speech & Language Pathologist)	Language	EL (English Language Teacher)
Literacy (Understanding)	ST (Support Teacher), DT (District helping teacher)		

Class Review:		School Team:		Date:	
Class Dimensions					
Class Identities Student Perspectives:		Class Interests Student Perspectives:		Classroom Strengths Student Perspectives:	
Team Perspectives:		Team Perspectives:		Team Perspectives:	
Class Needs					
Need:	Need:	Need:	Need:	Need:	Need:
Team Goals					
Some big questions and/or goals that we have for this class:					
Team Reflections & Decisions					
What works well for this class?			What else can we do to reduce barriers for this class?		

Class Review for: Grade 2		School: BG Elementary		Date: Fall 2022	
We can plan for our students by getting to know their dimensions:					
Identities Culture/Race: Indo-Canadian, Mexican, Marshallese, Caucasian Disability: Autism, Intellectual Disability Language: Mixtec, Punjabi, English, Spanish SOGI: 10B /10G Family: only children, large families, adopted, immigrant families		Interests Art, hands on activities, outdoor time, listen to stories, free choice, centre time, performances, builders, Lego, crafting, drawing, want to be at school, athletes, artists, outdoorsy		Strengths Students are lively, fun, never bored, they like and support each other, are kind, creative, drawing, working together, supporting and helping each other, encourage each other, love learning, flexible, persuasive, a group that is very independent, persevere, kind, work hard, coping - showing a lot growth	
Based on student dimensions we can ask questions and set some goals:					
Some questions we have about this class: <ul style="list-style-type: none"> - How do we address a large academic spread? - How do we support a range of readers? - How do we manage challenging behaviours? 			Some goals we have for this class: <ul style="list-style-type: none"> - Improve listening skills, develop social skills, using words to solve their problems, develop reading/writing skills, teach them to regulate their behaviour 		
We can respond to student dimensions by targeting specific core competencies					
Strength areas: Social Awareness & Responsibility Creative Thinking			Stretch areas: Problem Solving Communication		
We can respond to student dimensions by reducing and eliminating barriers for everyone:					
What have we tried that is working: Having a clear schedule of the day, ready/do/done, organization strategies (book bins for the week), math manipulatives, individual, white boards, check in mornings			What do we still want to try: <ul style="list-style-type: none"> - Adjusting the classroom layout to include some calm down spaces, allow students to take breaks when needed - Create an inclusive curricular unit plan 		
We can respond to student dimensions by determining and prioritizing individual needs:					
Need: Executive Functioning (task initiation, sequencing) AM, <u>AB</u> , EB, AR, JR, PS, LT, <u>CT</u>	Need: Communication (Expressive) * <u>CT</u> , EB, AR	Need: Self Regulation (Emotional) * AA, <u>AB</u> , EB, HB, AR, PS, LT, <u>CT</u>	Need: Anxiety* PS, LT, <u>CT</u> , EW, MJ, FT, IO	Need: Social Skills (Problem Solving) * <u>AB</u> , EB, HB, AR, PS, <u>CT</u> , EW, MJ	
* Also an IEP Need Area					

We can plan for our students by getting to know their dimensions:

Identities	Interests	Strengths	Stretches
<p>Culture/Race: Canadian, Indigenous, American, Philippines</p> <p>Disability: Autism, ADHD Intellectual Disability, Behavioral, Learning Disability</p> <p>Language: English, French, Filipino</p> <p>SOGI: 12 identify as F, 16 identify as M</p> <p>Family: Rural families, large families, x generation families, mixed and blended families, international families, farming and forestry families</p>	<p>Outdoors, dirt biking, hunting, horses, art, music, reading, football, hockey, volleyball, soccer, ruby, painting, cooking, computers, gaming, movies, band, agriculture, farming,</p>	<p>Kind hearted, help take care of class pet Gizmo, love hands on activities, athletic, competitive, artistic, inquiry learning, asking questions , open to learning different perspectives, love being outside, helping others</p>	<p>Listening when others are speaking, self-regulation, coming to class prepared, transitions, following directions,, writing, decision making, taking risks , dealing with anxiety, being quiet when asked .</p>

Based on student dimensions we can ask questions and set some goals:

<p>Some questions we have about this class:</p> <ul style="list-style-type: none"> • How can we create a learning environment to meet everyone's needs and goals • How can we learn self regulation and ways to deal with anxiety and stress • How can we incorporate more hands on learning and inquiry based learning given time and resource restraints • How can we incorporate more of the Indigenous principals of learning 	<p>Some goals we have for this class:</p> <ul style="list-style-type: none"> • To be open to try new things • To build self confidence and self esteem • To learn that its ok to make mistakes and try again
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We can respond to student dimensions by reducing and eliminating barriers for everyone:

<p>What have we tried that is working:</p> <ul style="list-style-type: none"> • Student choice • Games and visuals to help learning • Outdoor land based learning • Reward system for positive behavior • Creating a safe and inclusive classroom environment where all learners are welcomed 	<p>What do we still want to try:</p> <ul style="list-style-type: none"> • Incorporating more SEL strategies in the classroom to help support all learners • Build a more needs based classroom to help support all learners • Teach self regulation skills and strategies • Finding ways to build self esteem and self confidence
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We can respond to student dimensions by determining and prioritizing individual needs: (This is based on Student IEPs, observations made by Ms. Hinz (Class teacher) and help from Ms. Wall (Class EA))

Need: Organization Everyone	Need: Social Skills LB, HS, WS, CA, , JM	Need: Transitions LB, HS, WS, CA,,JM, everyone	Need: Language and Reading LB, HS, WS, CA,JM	Need: SEL and Self regulation LB, HS,WS,CA,JM, Everyone
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*** Also an IEP Need Area**

HOW DO WE DESIGN AN ADJUSTABLE PLANE?

- Who are the **students**? What is the range of the **variability**?
- What is the **grade level curriculum** that students need to access?
- How is the grade level curriculum **responsive** to the range of student variability?
- How do we help **students to make the adjustments** they need to access the grade level curriculum?



Tumwater School District

Tumwater, Washington

Peter G Schmidt Elementary School - Grade 5 - Science

Coaching Sessions (4 x 90 min sessions)

	Session 1	Session 2	Session 3	Session 4	Session 5
What we did together in 90 min session	Getting to know learners <ul style="list-style-type: none">- Class Review- Target Students- Needs Based Reflection	Making decision to support learning <ul style="list-style-type: none">- Needs Based Reflection	Designing Inclusive Learning Experiences <ul style="list-style-type: none">- Backwards Design- Learning Continuums	Designing Inclusive Learning Experiences <ul style="list-style-type: none">- UDL Lesson Design	<ul style="list-style-type: none">- Assessing Student Learning- Sharing our learning
What teams did in between sessions	<ul style="list-style-type: none">- Gather information from students	<ul style="list-style-type: none">- Teach a needs-based strategy lesson	<ul style="list-style-type: none">- Gather curricular resources	<ul style="list-style-type: none">- Teach a lesson- Gather evidence	<ul style="list-style-type: none">- Share the process with others

Class Dimensions

Class Identities: Families – half are in split families 2 families navigating cancer, 1 parent in rehab Grade – 4/5 combined Cultures: Kenyan, Caucasian, Japanese, Ethiopia, Hispanic, Pacific Islander, Religion: Christian, Language: English	Class Interests: Competition, trivia, puzzles, word games, brain teasers, riddles, working with friends, choice, being creative, stories and read aloud, art, service, kindergarten buddies	Classroom Strengths: Creating, social, healthy competition, fair, protective, aware, helping others, working with others, leadership, being aware of others, allowing others to lead, socially awareness & responsible, understanding, strong academically overall (gr 4), reading, motivated intrinsically	Classroom Stretches: Waiting, their turn, not always getting your way/ what you want, being aware that what is “easy” is not easy for everyone, being aware of diverse abilities, empathy and mindful of how what we say affects others, stamina, justifying their learning, deep thinking and sharing of their learning, too comfortable sometimes
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Targeted Class Needs

Need: Anxiety/ Emotional Regulation GA, LB, JA, ES, KR, GS	Need: Engagement/ Motivation LB, JA, ES, NS	Need: Trauma/ Family Needs GA, LB, JA, ES, JK, LE	Need: Literacy GA, MA, KR, TP, AB
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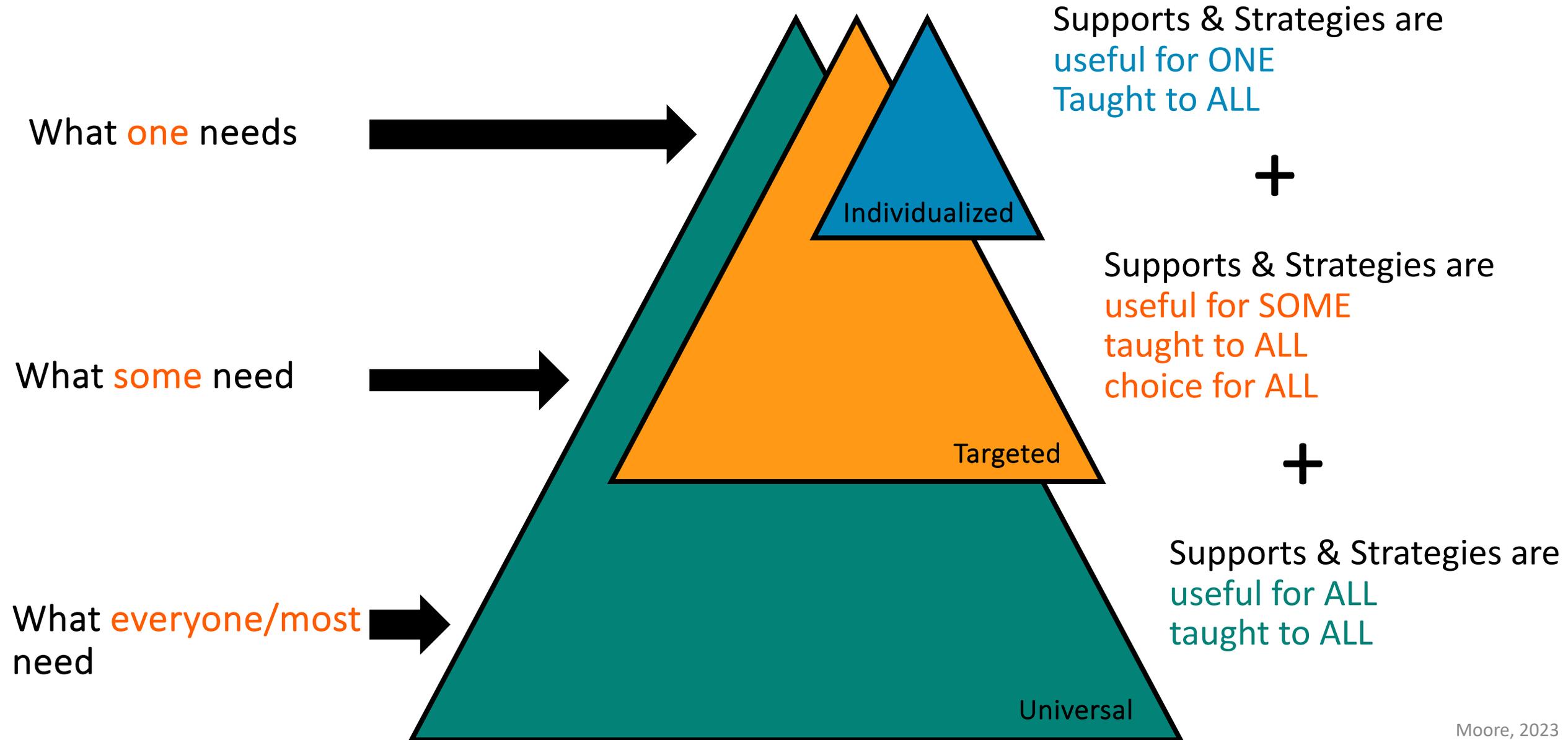
Collaborative Team Questions

E: How to support literacy needs? How do we make sure they are ready for middle school?
S: How do we teach them to manage their needs (anxiety etc.) so they are ready for middle school and have to navigate such a different context?
C: How to support students who are not participating and often not attending? How to engage and motivate without pushing too hard?

Collaborative Team Decisions:

What works well for this class? - Natural consequences, honesty & fairness, competition, roles & responsibilities as students, conversations	What do we still want to try? Strategies to increase self advocacy UDL Strategies to reduce barriers to engagement - Make learning relevant to students’ lives - Scaffolding learning (access to challenge)	UDL Strategies to reduce barriers to representation - Highlighting patterns in language systems - Using multi-media - Focus on building prior knowledge - Include processing tasks in lesson design UDL Strategies to reduce barriers to Expression - Guiding students through self assessment and goal setting - Model the use of supports and strategies
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Multiple Layers of Needs Based Support



Who needs the MOST support?

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

- Reading IEP
- 3/4 x week individual intervention with CT or parent volunteer (one on one)
- G (replacement literacy instruction - comprehension)

Essential

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

- Title reading intervention (decoding) 4 x week
- (UDL strategies to help student choose)

Targeted

What supports & strategies are useful for MOST/ALL?

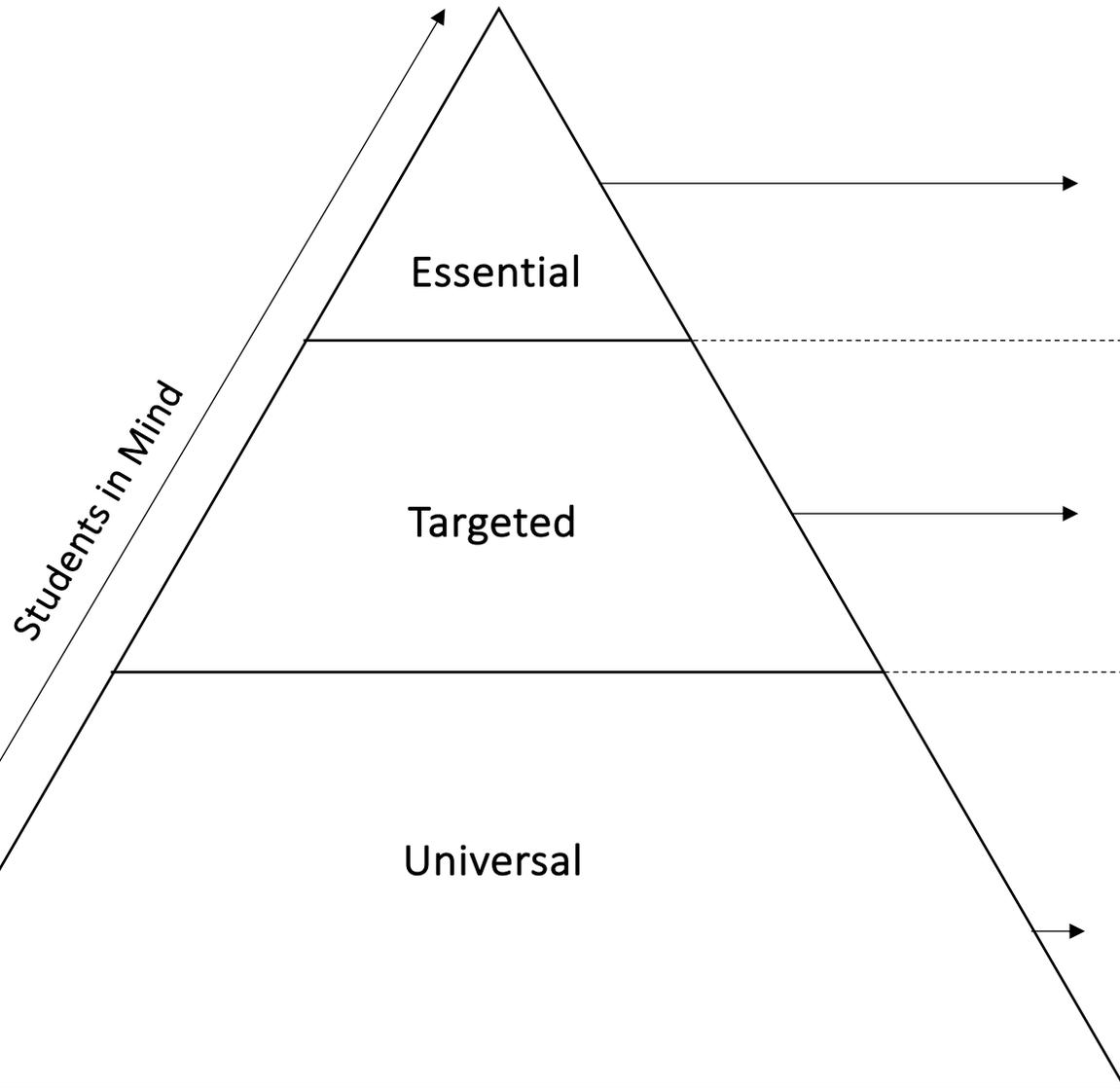
- Access to grade level curriculum
- Fluency passage (at independent level) – at home
- Weekly read with parent volunteers
- Vocabulary support & practice (word ladders/activities/plexer)
- Classroom read aloud every day
- Library
- Different levels of text level for assessment
- Strategic intervention time
- WIN time

Universal

Students in Mind

Who needs the MOST challenge?

Who needs the MOST support?



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

- Communication with school team (set up other places to go if needed)
- Individual debriefing
- Check in/ check out system (with resource)
- Built in time at The Nest in schedule
- G: Level of problem (1-5 and how to respond, reinforcement system)

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

- Calming kit
- Take a break (check in)
- Sensory tools (e.g. fidgets, items from home)
- Choice to go The Nest

What supports & strategies are useful for MOST/ALL?

- Morning meeting, classroom conversations
- Mindful minutes – teaching a strategy
- Routines & structures
- Technology – all practice a strategy (e.g. 5 finger breathing)
- Lessons with counsellor (tools in toolbox)
- Classroom conversations (power of yet, Factor of fear)
- Trust when they need something
- Open communication with families (e.g. Dojo)
- Access to The Nest (SEL space)

HOW DO WE DESIGN AN ADJUSTABLE PLANE?

- Who are the **students**? What is the range of the **variability**?
- What is the **grade level curriculum** that students need to access?
- How is the grade level curriculum **responsive** to the range of student variability?
- How do we help **students to make the adjustments** they need to access the grade level curriculum?



BACKWARDS DESIGN



UBD: Determining the Learning Standard

Forward Design

Same for Everyone



Standardized

Differentiated

Grade Level Goals

Adapted Goals

Modified Goals

Compromises the integrity of evaluation

Backward Design

Same for Everyone



Differentiated

Activity 1

Activity 2

Activity 3

Does not compromise the integrity of evaluation

Standards Based

Backwards Design

What do we need to **UNDERSTAND**?

What do we need to **KNOW**?

What do we need to **DO**?

Backwards Design

What do we need to **UNDERSTAND**?

Big Ideas

What do we need to **KNOW**?

Knowledge

What do we need to **DO**?

Skills

Common Core Math – Curricular BD Framework

Grade 1 » Number & Operations in Base Ten

 PRINT THIS PAGE

Standards in this domain:

CCSS.MATH.CONTENT.1.NBT.A.1	CCSS.MATH.CONTENT.1.NBT.B.2	CCSS.MATH.CONTENT.1.NBT.B.3
CCSS.MATH.CONTENT.1.NBT.C.4	CCSS.MATH.CONTENT.1.NBT.C.5	CCSS.MATH.CONTENT.1.NBT.C.6

Extend the counting sequence.

CCSS.MATH.CONTENT.1.NBT.A.1

Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

Understand place value.

CCSS.MATH.CONTENT.1.NBT.B.2

Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:

CCSS.MATH.CONTENT.1.NBT.B.2.A

10 can be thought of as a bundle of ten ones — called a "ten."

CCSS.MATH.CONTENT.1.NBT.B.2.B

The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.

CCSS.MATH.CONTENT.1.NBT.B.2.C

The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).

Introduction (Learning Context)

Critical areas (guiding questions)

Domain (Big Ideas)

Standard (Skills/Knowledge)

Cluster (by...)

Mathematical Practices (mathematical competencies)

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Grade:		Domain:
Critical Area(s):		Unit Guiding Question(s):
Content Vocabulary:		
Unit Goals	Curricular Language What do Students need to Know and Do?	Mathematical Practices
Standard	Student can	1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.
Cluster		
Standard	Student can	
Cluster		
Cluster		
Standard	Student can	
Cluster		
Cluster		
Cluster		

Grade: 1		Domain: Number & Operations in Base Ten
Critical Area(s): students will develop understanding of whole number relationships and place value, including grouping in tens and ones		Unit Guiding Question(s): What are numbers ? What do numbers mean? How do I use numbers to help me understand “How many?”
Content Vocabulary: number, How many? Counting, less than, read, write, build, draw, objects, digit, tens, ones, place value, compare, symbol, <, >, =, mind math, explain, thinking, groups of, strategy,		
Unit Goals	Curricular Language What do Students need to Know and Do?	Mathematical Practices
Standard	Student can extend the counting sequence by...	1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.
Cluster	counting to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral	
Standard	Student can understand place value by...	
Cluster	understanding that the two digits of a two- digit number <u>represent</u> amounts of tens and ones	
Cluster	comparing two two- digit numbers based on meanings of the tens and ones digits , <u>recording</u> the results of comparisons with the symbols >, =, and <	
Standard	Student can use place value understanding and properties of operations to add and subtract by...	
Cluster	Adding within 100. including adding a two- digit number and a one- digit number , and adding a two- digit number and a multiple of 10 , using concrete models or drawings and strategies based on place value , properties of operations, and/or the relationship between addition and subtraction ; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers , one adds tens and tens, ones and ones ; and sometimes it is necessary to <u>compose</u> a ten .	
Cluster	When given a two- digit number , <u>mentally</u> find 10 more or 10 less than the number , without having to count ; explain the <u>reasoning</u> used.	
Cluster	subtracting multiples of 10 in the range 10-90 from <u>multiples</u> of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value , properties of operations, and/or the relationship between addition and subtraction ; relate the strategy to a written method and explain the <u>reasoning</u> used.	

Grade: 1		Domain: Number & Operations in Base Ten
Critical Area(s): students will develop understanding of whole number relationships and place value, including grouping in tens and ones		Unit Guiding Question(s): What are numbers ? What do numbers mean? How do I use numbers to help me understand “How many?”
Content Vocabulary: number, How many? Counting, less than, read, write, build, draw, objects, digit, tens, ones, place value, compare, symbol, <, >, =, mind math, explain, thinking, groups of, strategy,		
Unit Goals	Student Friendly Language What do Students need to Know and Do?	Mathematical Practices
Standard	I can show that I can count by:	I can understand a problem and know what I need to keep going when learning gets hard
Cluster	counting up to 120 showing numbers up to 120 in different ways (reading, speaking, writing, building)	
Standard	I can show that I understand place value by:	I can show my learning in many ways
Cluster	showing which digits in a number are connected to the place value of ones and tens	
Cluster	comparing two numbers by using their place value using words and symbols <, > and = in my descriptions	I can look for patterns in my thinking and learning
Standard	I can use place value to help me to add and subtract numbers by:	
Cluster	adding one-digit and 2 digit numbers showing my thinking in different ways (reading, speaking, writing, building) using strategies to describe my thinking and learning	
Cluster	figuring out what is 10 more or 10 less of a number in my mind explaining my thinking and how I figures it out	
Cluster	subtracting groups of 10 using models, drawings, and other strategies to explain my thinking and learning	

Tumwater School District

Tumwater, Washington

Peter G Schmidt Elementary School - Grade 5 - Science

Coaching Sessions (4 x 90 min sessions)

	Session 1	Session 2	Session 3	Session 4	Session 5
What we did together in 90 min session	Getting to know learners <ul style="list-style-type: none">- Class Review- Target Students- Needs Based Reflection	Making decision to support learning <ul style="list-style-type: none">- Needs Based Reflection	Designing Inclusive Learning Experiences <ul style="list-style-type: none">- Backwards Design- Learning Continuums	Designing Inclusive Learning Experiences <ul style="list-style-type: none">- UDL Lesson Design	<ul style="list-style-type: none">- Assessing Student Learning- Sharing our learning
What teams did in between sessions	<ul style="list-style-type: none">- Gather information from students	<ul style="list-style-type: none">- Teach a needs-based strategy lesson	<ul style="list-style-type: none">- Gather curricular resources	<ul style="list-style-type: none">- Teach a lesson- Gather evidence	<ul style="list-style-type: none">- Share the process with others

Backwards Design Planning

Grade:	Subject Area: Science	Strand/Topic:
Learning Standard:	Unit Guiding Question(s):	
Key Vocabulary:		
Learning Goals	Curricular Language What do Students need to Know and Do?	Student Friendly Language
Science and Engineering Practices		
Disciplinary Core Ideas		
Crosscutting Concepts		

Backwards Design Planning

Grade: 5	Subject Area: Science	Strand/Topic: Structure and Properties of Matter
Learning Standard: 5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen		Unit Guiding Question(s): How can I use a model to help me understand that some matter is made up of particles that are too small to see ?
Content Vocabulary: model, matter, particles, idea, bulk matter		Skills Vocabulary: create, build, change, solve a problem, observe
Learning Goals	Curricular Language What do Students need to Know and Do?	Student Friendly Language
Science and Engineering Practices (skills)	Developing and Using Models building and revising simple models and using models to represent events and design solutions. Use models to describe phenomena.	<ul style="list-style-type: none"> I can create and improve a model I can use a model to show an idea I can use a model to solve a problem
Disciplinary Core Ideas (knowledge)	PS1.A: Structure and Properties of Matter Matter of any type can be subdivided into particles that are too small to see matter still exists and can be detected by other means. A model showing that gases are made from matter particles that are too small to see and are moving freely around in space can explain many observations including the inflation and shape of a balloon and the effects of air on larger particles or objects.	<ul style="list-style-type: none"> I know that matter can be broken apart into tiny particles that are too small to see I know that even if tiny particles are too small for my eyes to see, there are other ways to observe them I know that a model is a way to observe tiny particles too small to see I know some examples of models that can help me observe tiny particles that are too small to see
Crosscutting Concepts (understanding)	Scale, Proportion, and Quantity Natural objects exist from the very small to the immensely large.	I understand that there are things that are very tiny and very large

1. Choose a Learning Standard and translate it into student friendly language

Name:	Date:
Performance Expectation: 5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen	
Unit Guiding Questions: How do we know that something exists if we cannot see it?	
Important words to know and use: model, matter, particles, idea, bulk matter, create, build, change, solve a problem, observe	
Learning Goals	Evidence of Learning
<ul style="list-style-type: none">• I can create and improve a model• I can use a model to show an idea• I can use a model to solve a problem	
<ul style="list-style-type: none">• I know that matter can be broken apart into tiny particles that are too small to see• I know that even if tiny particles are too small for my eyes to see, there are other ways to observe them• I know that a model is a way to observe tiny particles too small to see• I know some examples of models that can help me observe tiny particles that are too small to see	
<ul style="list-style-type: none">• I understand that there are things that are very tiny and very large	

Grade: 9	Subject Area: Science	Strand/Topic:
Learning Standard: HS-LS1-1. Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells		Unit Guiding Question(s): What is the structure of DNA? What is DNA? What does DNA look like? What does DNA do? How are the structures of DNA and the structures of proteins related? How can I use evidence to explain how the structure of DNA impacts that structure of proteins? How are the structure of proteins and related to the essential functions of life? What is the role the systems of specialized cells?
Key Vocabulary: theories and laws, evidence, natural world, structure of DNA, DNA, proteins, essential functions of life, life, systems of specialized cells, organisms		
Learning Goals	Curricular Language What do Students need to Know and Do?	Student Friendly Language
Science and Engineering Practices (skills)	Construct an explanation based on valid and reliable evidence obtained from a variety of sources (including students' own investigations, models, theories, simulations, peer review) and the assumption that theories and laws that describe the natural world operate today as they did in the past, present, future .	I can explain using evidence that there are theories and laws that describe the natural world <ul style="list-style-type: none"> - I know what evidence is - I know what science and theories and laws* are - I know what the natural world is
Disciplinary Core Ideas (knowledge)	Disciplinary Core Ideas LS1.A: Structure and Function ☐ Systems of specialized cells within organisms help them perform the essential functions of life . ☐ All cells contain genetic information in the form of DNA molecules . Genes are regions in the DNA that contain the instructions that code for the formation of proteins , which carry out most of the work of cells .	I know that the systems of specialized cells inside organisms perform essential functions of life <ul style="list-style-type: none"> • I know what systems of specialized cells are • I know what organisms are • I know what the essential* functions of life are I know that cells have genetic information in DNA molecules I know that genes are parts of DNA that are instructions for how proteins are formed I know how cells work
Crosscutting Concepts (Big Idea)	Structure and Function ☐ Investigating or designing new systems or structures requires a detailed examination of the properties of different materials , the structures of different components , and connections of components to reveal its function and/or solve a problem .	I understand that structures are made of many different components that are connected and have specific functions.



Backwards Design Planning (FCS)

Grade: 9-12	Subject Area: FCS	Area of Study: Food Science, Dietetics, and Nutrition	
Comprehensive Standard: Integrate knowledge, skills, practices required for careers in food science, food technology, dietetics, and nutrition.		Unit Guiding Question(s): Teacher provocations: What does it mean to be food safe and why is it important now and in the future?	Student generated:
Vocabulary to know and use: risk, manage risk, food safety, food testing, sanitation, food borne illness, industry standards, documenting, investigating, reporting, HACCP, personal health and hygiene, workplace health and hygiene, receive, store, prepare, raw food, prepared food.			
Unit Goals	Curricular Language What do Students need to Know and Do?	Student Friendly Language	
Content Standard	9.2 Apply risk management procedures to food safety, food testing, and sanitation.	I know how to manage risk in food safety, food testing and sanitation	
Competencies	9.2.1 Analyze factors that contribute to food borne illness. Analyze food service management safety and sanitation programs.	I can find out what factors lead to food borne illness and what food safety and sanitation could be done to prevent it	
Competencies	9.2.2 Implement industry standards for documenting, investigating, and reporting foodborne illnesses.	I can follow the industry standards for keeping track of (documenting), problem solving (investigating) and communicating (reporting) about foodborne illness	
Competencies	9.2.3 Use the Hazard Analysis Critical Control Point (HACCP) during all food handling processes (the flow of food) to minimize the risks of food borne illness.	I can use the HACCP when handling food to decrease the risks of food borne illness	
Competencies	9.2.4 Demonstrate practices and procedures that assure personal and workplace health and hygiene.	I can show personal and workplace health and hygiene	
Competencies	9.2.5 Demonstrate standard procedures for receiving, storage, and preparation of raw and prepared foods.	I can show how to receive, store and prepare raw and prepared food	

Grade:		Planning Team:	
Context for Learning: 7.2, 8.3, 3.2		Unit Guiding Question(s): Teacher provocations: 7.2, 8.3, 3.2, 3.4	Student generated: 7.1, 7.2, 8.3, 9.1, 3.4
Key Vocabulary: 2.1			
	Learning Goals Curricular Language	Learning Goals Student Friendly Language 8.1, 9.1, 9.3, 6.4	
What do students need to understand?			
What do students need to know?			
What do students need to do?			
Who do student need to be?			

HOW DO WE DESIGN AN ADJUSTABLE PLANE?

- Who are the **students**? What is the range of the **variability**?
- What is the **grade level curriculum** that students need to access?
- How is the grade level curriculum **responsive** to the range of student variability?
- How do we help **students to make the adjustments** they need to access the grade level curriculum?



HOW DO WE DESIGN AN ADJUSTABLE PLANE?

- Who are the **students**? What is the range of the **variability**?
- What is the **grade level curriculum** that students need to access?
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- How do we help **students to make the adjustments** they need to access the grade level curriculum?



Additive and Asset-Based Learning Continuums

- Differentiated curriculum
- Shifts from “benchmark” to “window” of proficiency
- Task Neutral
- Same entry point for all/ multiple exit points
- Start from access, add on challenge
- Different from a rubric

Rubrics vs. Learning Continuum

	deficit	deficit	Most complex description
Grade Level Learning Standard			



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.

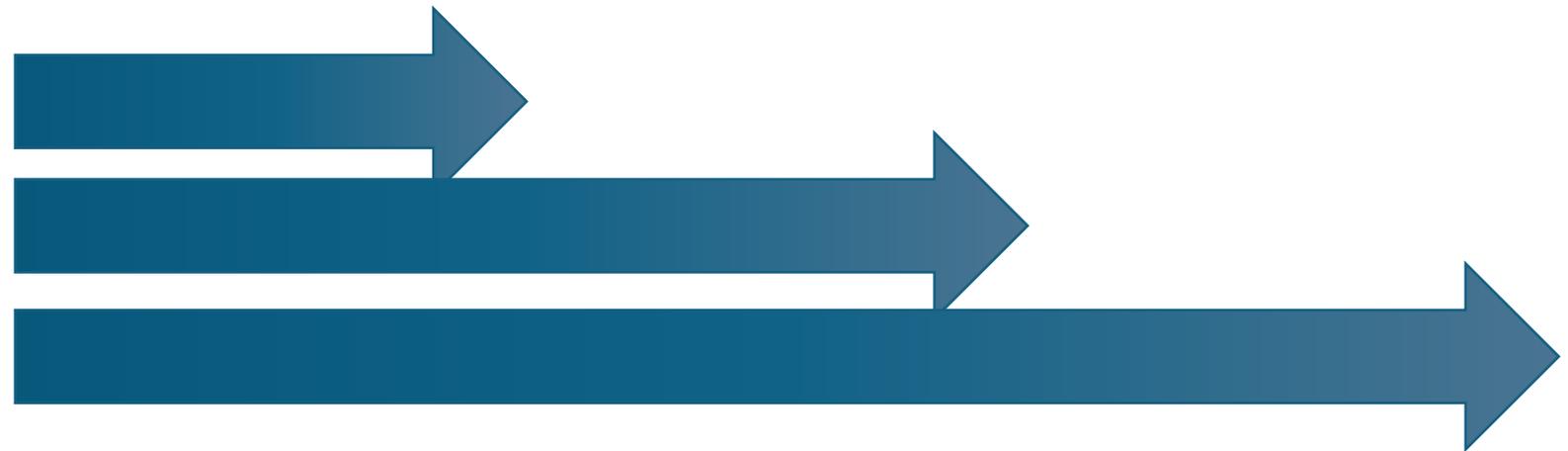
Translation: Your artwork exceeds all expectations; you used creativity, went beyond the basic requirements and showed obvious understanding.

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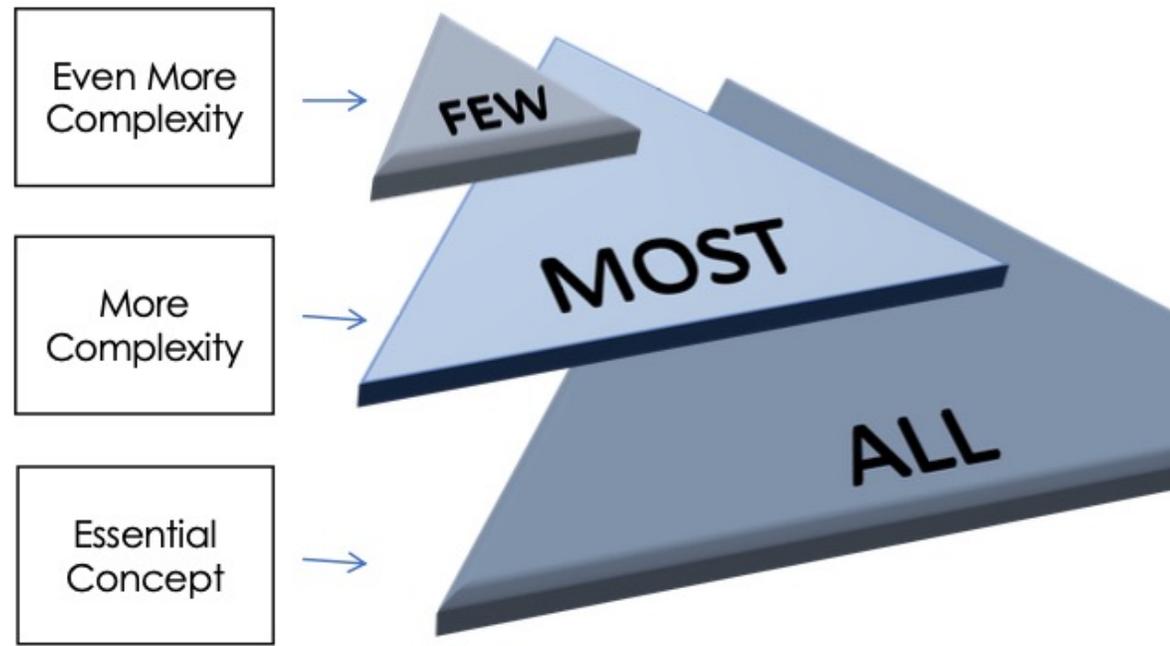
Inclusive Education: It's not more work, it's different work!

Rubrics vs. Learning Continuum

	Essential	More complex	More complex
Grade Level Learning Standard			



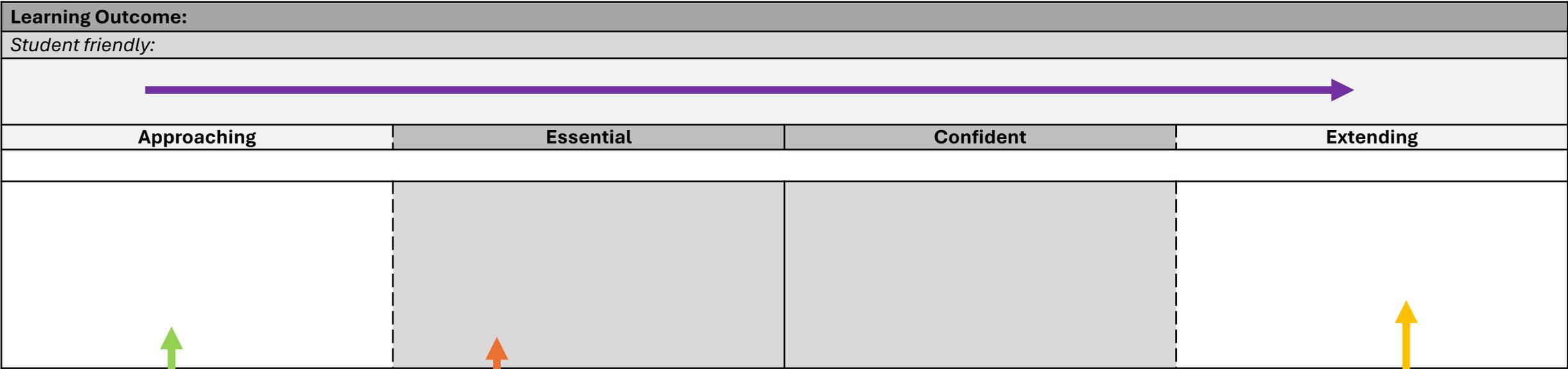
The Planning Pyramid: Differentiated Curriculum



Start from access, build on challenge

Learning Continuums

1. Choose a Learning Standard and translate it into student friendly language



2. Start with determining the **most essential concept** of the standard and then **add on complexity**

3. Extend the grade level standard to include an **access point** and **challenge point**

Backwards Design Planning

Grade: 5	Subject Area: Science	Strand/Topic: Structure and Properties of Matter
Learning Standard: 5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen		Unit Guiding Question(s): How can I use a model to help me understand that some matter is made up of particles that are too small to see ?
Content Vocabulary: model, matter, particles, idea, bulk matter		Skills Vocabulary: create, build, change, solve a problem, observe
Learning Goals	Curricular Language What do Students need to Know and Do?	Student Friendly Language
Science and Engineering Practices (skills)	Developing and Using Models building and revising simple models and using models to represent events and design solutions. Use models to describe phenomena.	<ul style="list-style-type: none"> I can create and improve a model I can use a model to show an idea I can use a model to solve a problem
Disciplinary Core Ideas (knowledge)	PS1.A: Structure and Properties of Matter Matter of any type can be subdivided into particles that are too small to see matter still exists and can be detected by other means. A model showing that gases are made from matter particles that are too small to see and are moving freely around in space can explain many observations including the inflation and shape of a balloon and the effects of air on larger particles or objects.	<ul style="list-style-type: none"> I know that matter can be broken apart into tiny particles that are too small to see I know that even if tiny particles are too small for my eyes to see, there are other ways to observe them I know that a model is a way to observe tiny particles too small to see I know some examples of models that can help me observe tiny particles that are too small to see
Crosscutting Concepts (understanding)	Scale, Proportion, and Quantity Natural objects exist from the very small to the immensely large.	I understand that there are things that are very tiny and very large

Next Generation Science Standards (NGSS)		
Subject Area: Science	Strand: Matter and Its Interactions	Grade: 5
Performance Expectation: 5-PS1-1 Students can develop a model to describe that matter is made of particles too small to be seen		Guiding Unit Question: How do we know that something exists if we cannot see it?
Unit Vocabulary (Content): properties, structures, scale, proportion, quantity, models, particles, bulk matter,		Unit Vocabulary (Skills): make, observe



Foundations	Student Friendly Language	Access Point	Essential	Confident	Extend
Science & Engineering Practices	I can make a model to help me understand an idea by:	following/ participating in creating a model	planning and creating a model	creating a model to solve a problem	Adjusting or revising a model I have created
Disciplinary Core Ideas	I know that matter is made up of particles that are too small to see by: I know that models can help us see particles that are too small to see by:	describing what matter is describing that there are different states of matter describing examples of different kinds of matter in the world	describing what bulk matter is describing that matter (that I can see) is made up of tiny particles (that are too small to see) describing examples of models that help to observe particles that are too small to see	describing how collecting many tiny particles can help us observe how matter takes up space describing which part of the model is bulk matter, and which part of the model is particles	describing the relationship between matter and particles using the model to describe the relationship between matter and how particles move when they are collected
Crosscutting Concepts	I know that objects in the world can be very large and very small by:	describing objects in the world that are very small and very large	describing what microscopic and macroscopic is and examples of each in the world	describing what is similar and what is different between microscopic and macroscopic objects in the world	describing what scale is and how it helps us understand microscopic and macroscopic objects

*Description: can include but are not limited to written, oral, pictorial, and kinesthetic

Grade: 9	Subject Area: Science	Strand/Topic:
Learning Standard: HS-LS1-1. Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells		Unit Guiding Question(s): What is the structure of DNA? What is DNA? What does DNA look like? What does DNA do? How are the structures of DNA and the structures of proteins related? How can I use evidence to explain how the structure of DNA impacts that structure of proteins? How are the structure of proteins and related to the essential functions of life? What is the role the systems of specialized cells?
Key Vocabulary: theories and laws, evidence, natural world, structure of DNA, DNA, proteins, essential functions of life, life, systems of specialized cells, organisms		
Learning Goals	Curricular Language What do Students need to Know and Do?	Student Friendly Language
Science and Engineering Practices (skills)	Construct an explanation based on valid and reliable evidence obtained from a variety of sources (including students' own investigations, models, theories, simulations, peer review) and the assumption that theories and laws that describe the natural world operate today as they did in the past, present, future .	I can explain using evidence that there are theories and laws that describe the natural world <ul style="list-style-type: none"> - I know what evidence is - I know what science and theories and laws* are - I know what the natural world is
Disciplinary Core Ideas (knowledge)	Disciplinary Core Ideas LS1.A: Structure and Function ☐ Systems of specialized cells within organisms help them perform the essential functions of life . ☐ All cells contain genetic information in the form of DNA molecules . Genes are regions in the DNA that contain the instructions that code for the formation of proteins , which carry out most of the work of cells .	I know that the systems of specialized cells inside organisms perform essential functions of life <ul style="list-style-type: none"> • I know what systems of specialized cells are • I know what organisms are • I know what the essential* functions of life are I know that cells have genetic information in DNA molecules I know that genes are parts of DNA that are instructions for how proteins are formed I know how cells work
Crosscutting Concepts (Big Idea)	Structure and Function ☐ Investigating or designing new systems or structures requires a detailed examination of the properties of different materials , the structures of different components , and connections of components to reveal its function and/or solve a problem .	I understand that structures are made of many different components that are connected and have specific functions.

Next Generation Science Standards (NGSS)		
Subject Area: Science	Strand: Structure of DNA	Grade: 9
<p>Performance Expectation: HS-LS1-1. Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells</p>	<p>Guiding Unit Question: What is the structure of DNA? What is DNA? What does DNA look like? What does DNA do? How are the structures of DNA and the structures of proteins related? How can I use evidence to explain how the structure of DNA impacts that structure of proteins? How are the structure of proteins and related to the essential functions of life? What is the role the systems of specialized cells?</p>	
<p>Unit Vocabulary: theories and laws, evidence, natural world, structure of DNA, DNA, proteins, essential functions of life, life, systems of specialized cells, organisms</p>		



Foundations	Student Friendly Language	Access Point	Essential	Confident	Extend
Science & Engineering Practices (skill)	I can explain using evidence that there are theories and laws that describe the natural world	I know what a theory is I know what a law is I know what evidence is I know what the natural world is	I know the difference between scientific theories and laws I can explain how scientific theories and laws are used to make predictions about the natural world	I know examples of scientific theories and laws I can explain the role of evidence and how it supports scientific theories and laws	I know how scientific theories and laws are developed I can explain the limitations of specific scientific theories and laws
Disciplinary Core Ideas (knowledge)	I know that the systems of specialized cells inside organisms perform essential functions of life I know that cells have genetic information in DNA molecules I know that genes are parts of DNA that are instructions for how proteins are formed I know how cells work	I know what a cell is I know the structure of a cell I know what I need to live	I know the major organ systems in the human body and the key functions they perform I know the basic structure and function of common cell types/ how cells work I know the role of DNA, genes and proteins in the structure and functions of cells	I know what cellular specialization is and how different cell types are adapted to carry out specific roles I know how the specialized structures and mechanisms of different cell types, including DNA, genes and proteins, enable them to perform their roles	I know how multicellular organisms rely on coordinated systems of specialized cells to sustain life I know how evolutionary adaptations have led to the development of specialized cell types and organ systems
Crosscutting Concepts (understanding)	I understand that structures are made of many different components that are connected and have specific functions.	I understand that there are different kinds of structures in my life and the world	I understand that structures have many components or individual parts that combine to form a larger structure	I understand that components in structures are interconnected and interdependence to support the overall function of a structure	I understand that each component in a larger structure has specific roles and functions

HOW DO WE DESIGN AN ADJUSTABLE PLANE?

- Who are the **students**? What is the range of the **variability**?
- What is the **grade level curriculum** that students need to access?
- How is the grade level curriculum **responsive** to the range of student variability?
- How do we help **students to make the adjustments** they need to access the grade level curriculum?



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Peter G Schmidt Elementary School - Grade 5 - Science

Coaching Sessions (4 x 90 min sessions)					
	Session 1	Session 2	Session 3	Session 4	Session 5
What we did together in 90 min session	Getting to know learners <ul style="list-style-type: none">- Class Review- Target Students- Needs Based Reflection	Making decision to support learning <ul style="list-style-type: none">- Needs Based Reflection	Designing Inclusive Learning Experiences <ul style="list-style-type: none">- Backwards Design- Learning Continuums	Designing Inclusive Learning Experiences <ul style="list-style-type: none">- UDL Lesson Design	<ul style="list-style-type: none">- Assessing Student Learning- Sharing our learning
What teams did in between sessions	<ul style="list-style-type: none">- Gather information from students	<ul style="list-style-type: none">- Teach a needs-based strategy lesson	<ul style="list-style-type: none">- Gather curricular resources	<ul style="list-style-type: none">- Teach a lesson- Gather evidence	<ul style="list-style-type: none">- Share the process with others

Lesson in instructional resource

MATERIALS

Student

- 1 Science notebook*
- 1 [Student Investigation Sheet 2A: What Are the States of Matter?](#)
- 1 Pair of safety goggles*

Team of four students

- 1 Clear plastic container with lid, 24-oz
- 20 Marbles

Teacher

- 1 Student Investigation Sheet 2A: *What Are the States of Matter?* (Teacher's Version)
- 1 Balloon
- 1 Glass beaker (100 mL) filled with ice
- 1 Glass beaker (100 mL) filled two-thirds with water
- 3 Clear containers of different shapes, filled with equal volumes of water*
- 3 Clear plastic containers with lids, 24 oz
- 3 Colors of food coloring*
- 1 Graduated cylinder, 1,000 mL
- 1 Hot plate*
- 1 Modeling-clay lump (shape and size to resemble the small, rigid, solid object below)
- 1 Oven mitt*
- 1 Pair of safety goggles*
- 1 Resealable plastic bag, 1 gal*
- 1 Small, rigid, solid object* (e.g., a plastic toy car)
- 1 Thermometer
- Chart paper or whiteboard*
- Marbles
- Markers*

*These materials are needed but not supplied.

1. Distribute a copy of [Student Investigation Sheet 2A: What Are the States of Matter?](#) to each student. As a brief review, instruct students to complete the first two rows of the chart individually. Ask students to share their responses.

2. Conduct Demonstration #1 where all students can observe. During the demonstration, allow students to ask questions to refine their understanding of these three states of matter.

a. Solids: Display the toy car and the lump of modeling clay. Squeeze the lump of modeling clay to change its shape. Ask:

- What did you observe when I squeezed each solid object? (*The clay changed shape, but the car did not.*)
- Did the masses of these solid objects change? Did the volumes change? (*No, the mass and volume did not change. If students do not recognize this, you may wish to form the clay back into a ball, and measure the mass and volume of both the clay and the car in front of the class. Squeeze the clay again and remeasure to demonstrate there is no change in mass or volume.*)
- Recall from the previous lesson that all matter is made of tiny building blocks called particles. If the volume or mass did not change, do you think the number of particles making up each object changed when the objects were squeezed? Explain your answer. (*No, because adding or removing particles would cause the object's volume or mass to change.*)

b. Liquids: Display the three containers of colored water you prepared, and ask students to observe the volume of liquid in each container. Pour the water from the containers of different shapes into three identical clear plastic containers to demonstrate that the quantities of liquid have equal volume. Pour the water back into the original containers to demonstrate that the volume stays the same but the liquid takes the shape of the container. Ask:

- What did you notice about the volume of each liquid? (*Students should notice that it looked like the volumes of the three liquids were different because the water levels were unequal, but when the liquids were poured into identical containers, it was obvious that they all had the same volume.*)
- What can you conclude about the volume of a liquid and the shape of its container? (*A liquid takes the shape of its container, but its volume does not change when the size of the container is changed.*)

c. Gases: Gently squeeze the balloon to demonstrate that the gas inside changes shape with the balloon. Do the same with the bag of air, and then open the seal to demonstrate that the air leaves the bag and disperses into the room. Ask:

- What did you notice when I squeezed the balloon and the bag of air? (*The gas seemed to move around inside both the balloon and the bag.*)
- How did the bag of air change when I opened it? Predict what happened to the gas inside. (*Students should predict that because the bag seemed to deflate when it was opened, the air left the bag.*)

3. Write the following statements on the board in a single column:

- A material that has definite shape and volume.
- A material that has definite volume but takes the shape of its container.
- A material that has no definite shape or volume and can expand freely to fill a container of any size or shape.

In a second column, write "solid," "liquid," and "gas." As a class, match each state of matter to one of the descriptions you wrote on the board. Instruct students to copy the descriptions into the first row of Student Investigation Sheet 2A.

Teaching Tip

Students may struggle to understand that solids like modeling clay have a definite shape. Explain that the modeling clay is malleable, or can change its shape, but that the individual particles that make up the modeling clay do not change in shape.

4. Explain that the next demonstration will utilize the same type of matter, water, in three different states. Students will observe phase changes, or the changes from one state of matter to another. Provide a pair of safety goggles for each student. Once you and the students have the goggles on, display the beaker of ice cubes and the beaker of water. Pour a little water from the water beaker into the beaker of ice and insert the thermometer. Measure the temperature of the ice water and record it on the board.

Teaching Tip

Dispel misconceptions that a material's temperature is increased only by extremes such as boiling or cooking. Bringing a glass of ice to room temperature is also an example of heating the material.

5. Place the beaker on a hot plate and begin to heat the ice water. Record the temperature every minute until all the ice has melted and the water is at a full boil. As the beaker heats up, ask students to observe what is happening and share their observations with the class. Students should notice that as the hot plate raises the temperature, the ice melts into water. The liquid water begins to boil, and some of the water turns into water vapor.

Teaching Tip

Exercise caution when using the hot plate. Do not touch or allow students to touch the hot plate. Also use caution when handling the beaker. Use an oven mitt or allow the beaker to cool completely before handling.

6. Turn off the hot plate and provide time for students to discuss what they observed in their groups. After some time, facilitate a class discussion using the following questions:

- How did the water change during this demonstration? How many phase changes occurred? (*Students should be able to identify two state changes: ice was heated until it became water. Water was boiled until it become water vapor.*)
- What pattern do you notice with these phase changes? (*Both of the phase changes were the result of adding heat.*)
- How can you make ice? (*Freeze water.*)

Lesson in instructional resource

Teaching Tip

Make sure students understand that heat energy was added to cause the phase changes they observed. Explain that when water is frozen, heat energy is removed from the system.

7. Discuss melting point, freezing point, and boiling point. Write the following definitions on the board. Direct students to copy each into their science notebooks.

- A material's freezing point is the temperature at which it changes from a liquid to a solid. For water, this is 0°C (32°F).
- A material's melting point is the temperature at which it changes from a solid to a liquid. For water, this is 0°C (32°F).
- A material's boiling point is the temperature at which it changes from a liquid to a gas. For water, this is 100°C (212°F).

Encourage students to provide examples of phenomena related to these terms, such as creating popsicles, melting ice cream, or steaming soup.

8. Ask students if they observed any particles during the demonstration. Make sure students understand that particles are too small to be seen with the eye and require a powerful microscope to view. Ask:

- Think about the ice, water, and vapor. Are these materials made of the same particles? *(Yes)*
- Do you think the number of particles changed as the water changed state? *(Answers will vary. Explain that the number of particles did not change.)*

9. Distribute 20 marbles and a clear plastic container to each group. Instruct students to work in groups of four to develop a model to describe the movement and attraction of the particles in each state of matter. Provide the following rules for students:

- You must demonstrate how particles become more or less attracted while changing from a solid to a liquid to a gas.
- You may use the container or the surface of your desk to demonstrate each state of matter.

Teaching Tip

Instruct students to shake their containers quietly and to make sure the floor is clear of marbles at the end of the investigation. You may want to provide a shallow box if the desks are not flat.

10. Provide time for groups to develop their models. Allow students to struggle with the challenge before intervening, but use the following question to guide students toward an understanding particle behavior:

- Think about adding energy to something, like we added heat energy to ice and water. What typically happens when something has more energy? *(Objects with more energy tend to move faster than objects with less energy. Guide students to this conclusion by asking them to describe the behavior of a person who has a lot of energy.)*

11. Allow each group to share its model. Draw attention to similarities and differences among the models, but identify models that accurately show particles becoming less attracted and moving faster. Once all groups have shared, ask:

- What happens to particles' attraction and movement as energy is added to a system of matter? *(The particles become less attracted and move faster.)*
- Relate the models to the definitions of each state of matter. *(Students' models will vary, but they should be able to describe how their model represents the following: Solids keep their shape, so their particles are strongly attracted and do not move very much. Liquids maintain the same volume but can take the shape of their container, so their particles have less attraction and more movement. Gases have no definite shape or volume and can spread out, suggesting they are less attracted and move around the most.)*

12. Draw on the board a simple diagram of these particle arrangements. Use Figure 2.1 as a reference.

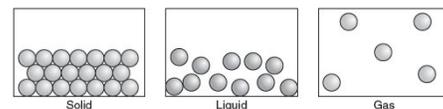


Figure 2.1: Particles are arranged differently in solids, liquids, and gases.

Universal Design for Learning: Lesson Design

Provide multiple means of
Engagement



Affective Networks
The "WHY" of Learning

This panel features a green background with a white brain outline. A green line highlights a path through the brain, representing affective networks. The text 'Provide multiple means of Engagement' is at the top, and 'Affective Networks The "WHY" of Learning' is at the bottom.

Provide multiple means of
Representation



Recognition Networks
The "WHAT" of Learning

This panel features a purple background with a white brain outline. A purple shaded area covers the top and back of the brain, representing recognition networks. The text 'Provide multiple means of Representation' is at the top, and 'Recognition Networks The "WHAT" of Learning' is at the bottom.

Provide multiple means of
Action & Expression



Strategic Networks
The "HOW" of Learning

This panel features a blue background with a white brain outline. A blue shaded area covers the front and side of the brain, representing strategic networks. The text 'Provide multiple means of Action & Expression' is at the top, and 'Strategic Networks The "HOW" of Learning' is at the bottom.

Guiding Unit Question:

Lesson Goal(s):

Date

Connecting Activity:

Additional supports & strategies to ensure students meet the "ALL"

Mini Lesson:

Processing Task:



I need to...	I must...	I can...	I could...	I can try to...
Access	All	Most	Few	Challenge

Transforming & Personalizing Activity:

This is lesson creates evidence for:

Universal Design for Learning: Lesson Design

Mini Lesson

Provide multiple means of
Engagement



Affective Networks
The "WHY" of Learning

Connecting Phase

Provide multiple means of
Representation



Recognition Networks
The "WHAT" of Learning

Processing Phase

Provide multiple means of
Action & Expression



Strategic Networks
The "HOW" of Learning

Transforming & Personalizing Phase



Guiding Unit Question: How can I use a model to help me understand that some matter is made up of particles that are too small to see?

Lesson Goal(s): I know that matter can be broken apart into tiny particles that are too small to see

Date

Connecting Activity: picture set

What do all these pictures have in common: states of matter

Additional supports & strategies to ensure all students meet the “ALL”

- Provide vocab list, sentence stems, options for verbal explanation

Mini Lesson: students watch a demonstration experiment (3 beakers)

Processing Tasks – graphic organizer connected to demonstration

I need to...	I must...	I can...	I could...	I can try to...
Watch a science demonstration	Label which beaker is solid, liquid, gas	Draw the arrangement of particles in each state of matter	Show how the particles move in each drawing	Explain how particles break down in this experiment (E.g., What did we do to the matter)
Draw what you observe and label it with vocab words				
Access	All	Most	Few	Challenge

Transforming & Personalizing Activity: Exit Slip (post it notes or partner share)

One new word you learned today?
What is one new idea you learned today?
What is an example of solid/liquid/gas?

This lesson creates evidence for: 5-PS1-1 (NGSS)

Backwards Design Planning

Grade: 5		Subject Area: Science	Strand/Topic: Structure and Properties of Matter
Learning Standard: 5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen		Unit Guiding Question(s): How can I use a model to help me understand that some matter is made up of particles that are too small to see ?	
Content Vocabulary: model, matter, particles, idea, bulk matter		Skills Vocabulary: create, build, change, solve a problem, observe	
Learning Goals	Curricular Language What do Students need to Know and Do?	Student Friendly Language	
Science and Engineering Practices (skills)	Developing and Using Models building and revising simple models and using models to represent events and design solutions. Use models to describe phenomena.	<ul style="list-style-type: none"> I can create and improve a model I can use a model to show an idea I can use a model to solve a problem 	
Disciplinary Core Ideas (knowledge)	PS1.A: Structure and Properties of Matter Matter of any type can be subdivided into particles that are too small to see matter still exists and can be detected by other means. A model showing that gases are made from matter particles that are too small to see and are moving freely around in space can explain many observations including the inflation and shape of a balloon and the effects of air on larger particles or objects.	<ul style="list-style-type: none"> I know that matter can be broken apart into tiny particles that are too small to see I know that even if tiny particles are too small for my eyes to see, there are other ways to observe them I know that a model is a way to observe tiny particles too small to see I know some examples of models that can help me observe tiny particles that are too small to see 	
Crosscutting Concepts (understanding)	Scale, Proportion, and Quantity Natural objects exist from the very small to the immensely large.	I understand that there are things that are very tiny and very large	

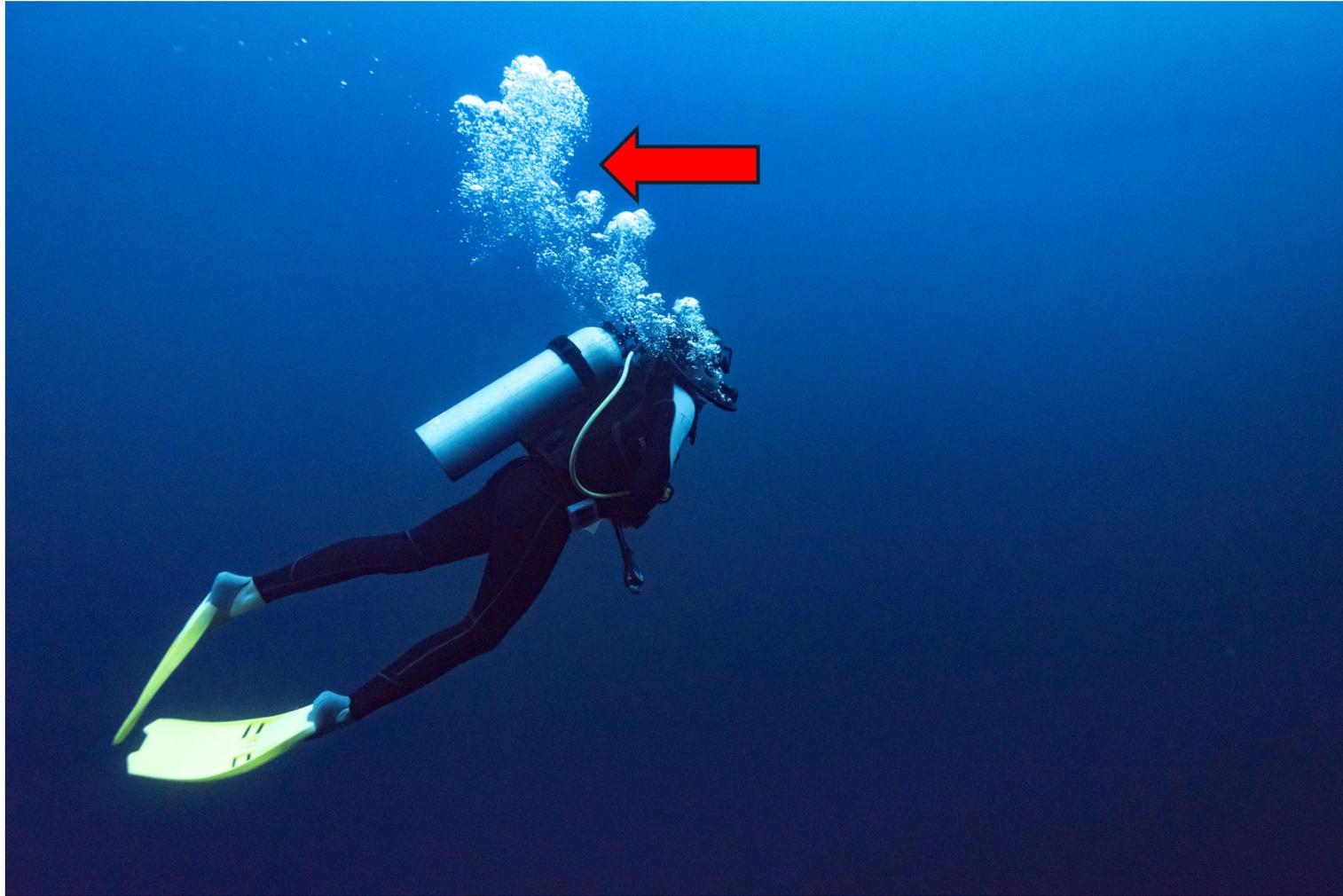
Next Generation Science Standards (NGSS)		
Subject Area: Science	Strand: Matter and Its Interactions	Grade: 5
Performance Expectation: 5-PS1-1 Students can develop a model to describe that matter is made of particles too small to be seen		Guiding Unit Question: How do we know that something exists if we cannot see it?
Unit Vocabulary (Content): properties, structures, scale, proportion, quantity, models, particles, bulk matter,		Unit Vocabulary (Skills): make, observe



Foundations	Student Friendly Language	Access Point	Essential	Confident	Extend
Science & Engineering Practices	I can make a model to help me understand an idea by:	following/ participating in creating a model	planning and creating a model	creating a model to solve a problem	Adjusting or revising a model I have created
Disciplinary Core Ideas	I know that matter is made up of particles that are too small to see by: I know that models can help us see particles that are too small to see by:	describing what matter is	describing what bulk matter is	describing how collecting many tiny particles can help us observe how matter takes up space	describing the relationship between matter and particles using the model to describe the relationship between matter and how particles move when they are collected
		describing that there are different states of matter	describing that matter (that I can see) is made up of tiny particles (that are too small to see)		
		describing examples of different kinds of matter in the world	describing examples of models that help to observe particles that are too small to see	describing which part of the model is bulk matter, and which part of the model is particles	
Crosscutting Concepts	I know that objects in the world can be very large and very small by:	describing objects in the world that are very small and very large	describing what microscopic and macroscopic is and examples of each in the world	describing what is similar and what is different between microscopic and macroscopic objects in the world	describing what scale is and how it helps us understand microscopic and macroscopic objects

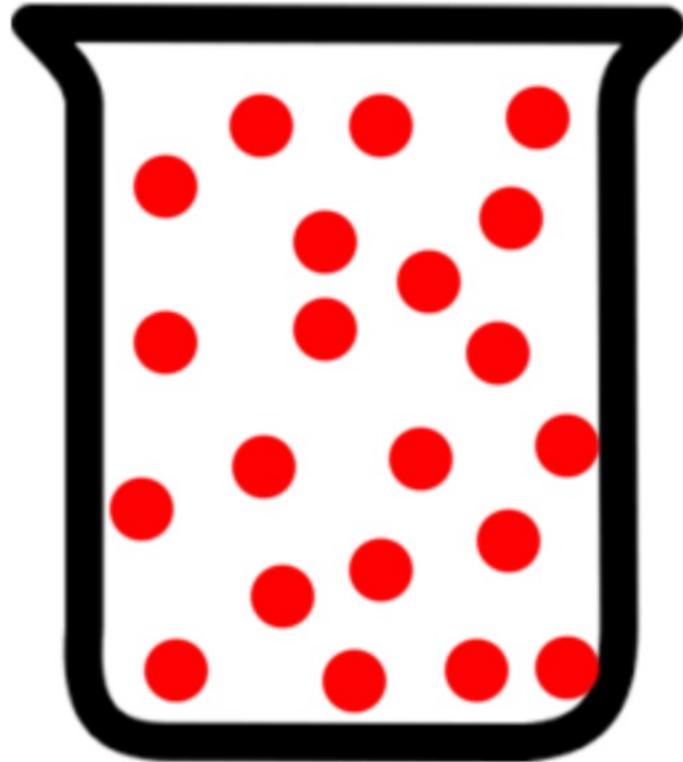
*Description: can include but are not limited to written, oral, pictorial, and kinesthetic

Describe what you see.



What do you notice?

Describe what you see.



How does this image connect to the other image?

Describe what you see.



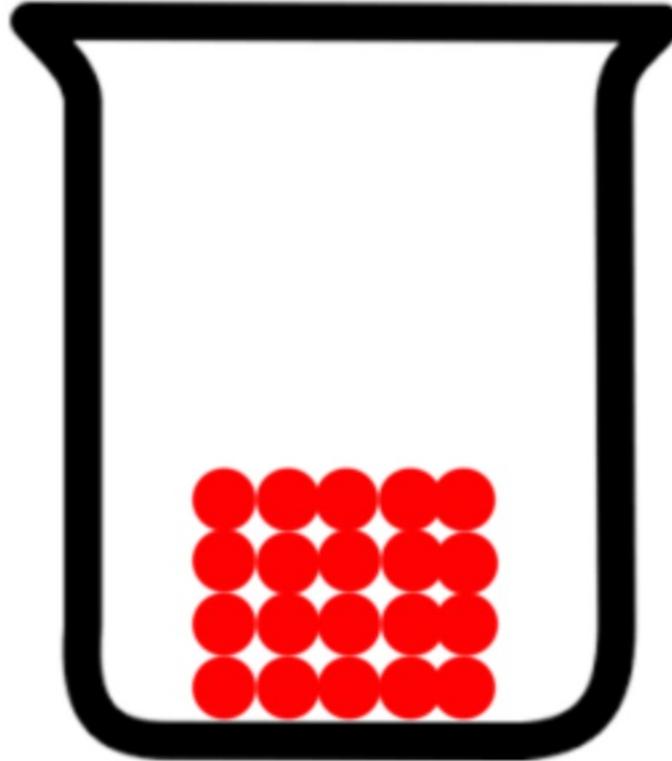
How is this image different or the same as the other images?

Describe what you see.



How is this image different or the same as the other images?

Describe what you see.



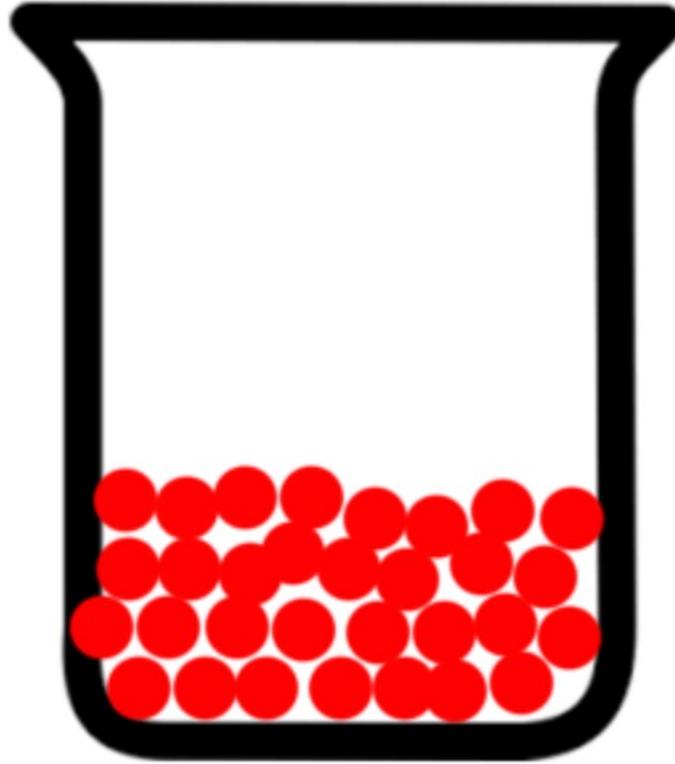
How is this image different or the same as the other images?

Describe what you see.



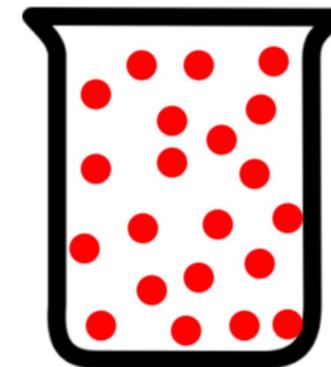
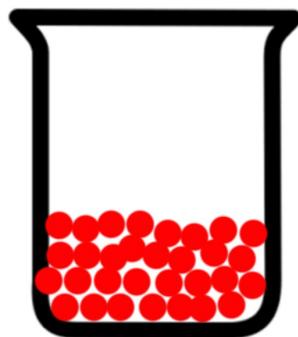
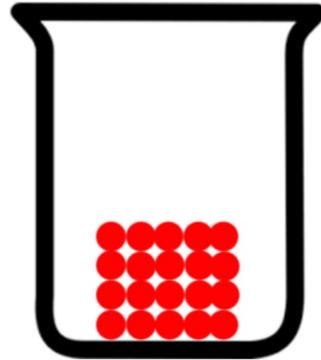
How is this image different or the same as the other images?

Describe what you see.



How is this image different or the same as the other images?

What do all these images have in common?



All the images are different
states of matter

SOLID

LIQUID

GAS

Our Learning Goal: I know that **matter** can be **broken apart** into tiny **particles** that are too small to see

SOLID

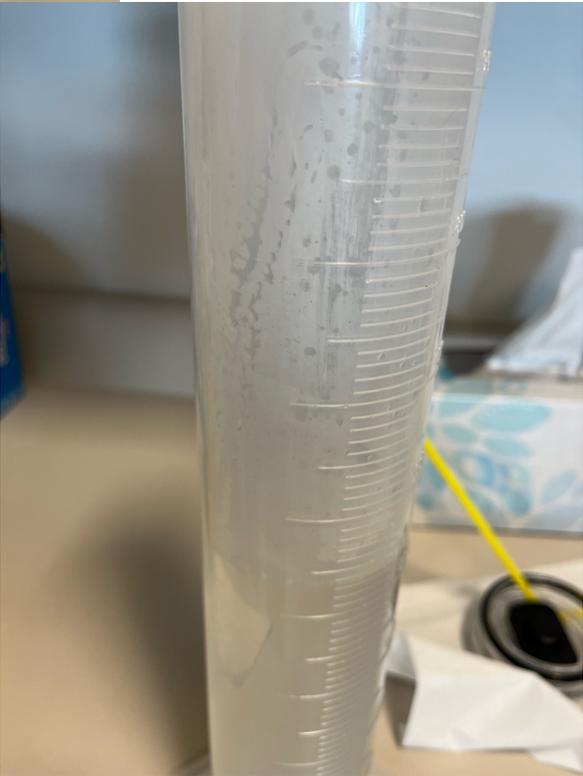
LIQUID

GAS

UDL Lesson Plan: Connect Phase

Universal Strategies	UDL Indicators Targeted	Support Needs Impacted	Students in Mind
Picture set	7.2, 8.3, 1.1, 1.2, 1.3, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 4.1, 5.1, 5.3	Attention, anxiety, communication, engagement/ motivation, executive functioning, intellectual ability, language, literacy, memory, self regulation, self esteem, social skills	GA, MA, LB, JA, ES, RM, NS, KR, TP, AD
Highlighting key words	2.1, 2.4, 3.1, 3.2, 3.4, 5.2	Communication, engagement/ motivation, executive functioning, intellectual ability, literacy, language, memory, self regulation, self esteem,	GA, LB, ES, NS
Student Friendly Learning Goal	8.1, 3.2, 3.4, 6.1, 6.4	Anxiety, communication, engagement/motivation, executive functioning, intellectual ability, literacy, memory, self regulation, self advocacy	GA, MA, LB, JA, ES, ES, KR, GS, MA

Demonstration



UDL Lesson Plan: Mini Lesson Phase

Universal Strategies	UDL Indicators Targeted	Support Needs Impacted	Students in Mind
Modelling (concrete learning)	1.1, 1.2, 1.3, 2.4, 3.1, 3.2, 3.3, 7.3	Attention, Communication, Engagement, Intellectual Ability, Literacy, Memory, Self Regulation,	JA, RM, LB, ES, NS, GA, MA, KR, TP, AD

Choose your Challenge

Inclusive Lesson Task Scaffolding Strategy

Goal: Connected to a grade level learning standard

Task: What evidence of learning is being created

Time: Allotted work time

Title

Description

Purpose

I NEED to...

- Everyone starts together, describes what students need to do to get ready for the task, this is the most accessible part of the task, no/low barriers, an interesting hook or provocation, collaborative, 5-10 min

- Builds confidence and success early, the most accessible entry point to make sure everyone can participate in some way, builds/ activates prior knowledge

I MUST...

- Ensure the “must” part of the task has been modelled and taught to all during the mini lesson stage, this is the most important part of the task, all students show evidence of learning in class/school, this is not homework, the activity can end when all students get here, if not all students get here at the end of the allotted time, another lesson is needed, draw on UDL strategies to make sure students can express their learning in many ways

- Ensures students are showing evidence of learning in class at the essential level of a grade level goal, maintains high expectations for all students, reduces gaps in knowledge, positive impact on future learning opportunities

I CAN...

- A more complex step in the same task, this step does not need to be modelled to all, but can be taught to students as they get here, this step can connect to information that will be taught in the future, can be assigned as optional homework, once students get here, this step can also be used as small group/ explicit instruction/conferencing opportunities, or additional options for students to choose (WIN time, supporting others, assigned centers/stations)

- Allows students to go beyond the essential without waiting, allows explicit teaching without students missing grade level instructional opportunities, allows flexibility for students to take breaks, receive explicit instruction and skill building opportunities, gives students agency and builds self regulation of learning skills, builds ownership and increases engagement, does not punish students for not doing or not being able to do homework

I can TRY to...

- Make this step challenging enough so that it cannot be completed in the time allowed, extended beyond the goal, an extension of the task that is completed over time

Start Here

Go as far as you can in the time allotted



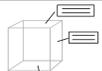
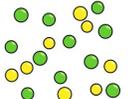
Guiding Question: How can I use a **model** to help me understand that some **matter** is made up of **particles** that are too small to see?

Learning Goal: I know that **matter** can be **broken apart** into tiny **particles** that are too small to see

Task: Observe a science demonstration

Everyone starts together

Go as far as you can!

I NEED to:	<ul style="list-style-type: none">• Watch the science demonstration• Create a diagram that shows the science demonstration that you watched	 watch
I MUST:	<ul style="list-style-type: none">• Label your diagram with vocabulary words	 label
I CAN:	<ul style="list-style-type: none">• For each state of matter, draw the tiny particles that are too small to see	 draw
I COULD:	<ul style="list-style-type: none">• Show on your drawing, how the tiny particles move	
I can TRY to:	<ul style="list-style-type: none">• Using words and drawings, show what made the break down the tiny particles	

Graphic Organizer in instructional resources

Student Investigation Sheet 2A

Name _____

What Are the States of Matter?

Date _____

	Solid	Liquid	Gas
Definition			
Examples			
Description of arrangement of particles			
Drawing of arrangement of particles			

MUST/CAN/COULD Graphic Organizer

Guiding Question: How can I use a **model** to help me understand that some **matter** is made up of **particles** that are too small to see?

Learning Goal: I know that matter can be broken apart into tiny particles that are too small to see	
Name:	Date:
Need: Watch the science demonstration. Create a diagram that shows the science demonstration that you watched.	Must: Label your diagram with vocabulary words: matter solid liquid gas beaker heat water ice steam

Guiding Question: How can I use a **model** to help me understand that some **matter** is made up of **particles** that are too small to see?

Learning Goal: I know that matter can be broken apart into tiny particles that are too small to see	
Name:	Date:
Can: For each state of matter , draw the tiny particles that are too small to see	Can Try: Using words and drawings, show what was used to make the tiny particles move _____ _____ _____
Could: Show on your drawing, how the tiny particles move	

Vocab List

Guiding Question: How can I use a **model** to help me understand that some **matter** is made up of **particles** that are too small to see?

Learning Goal: I know that **matter** can be **broken apart** into tiny **particles** that are too small to see

Name:

Date:

Need: **Watch** the **science demonstration**. **Create** a **diagram** that shows the **science demonstration** that you watched.

Must: **Label** your **diagram** with vocabulary **words**:

matter

solid

liquid

gas

beaker

heat

water

ice

steam

Guiding Question: How can I use a **model** to help me understand that some **matter** is made up of **particles** that are too small to see?

Learning Goal: I know that **matter** can be **broken apart** into tiny **particles** that are too small to see

Name:

Date:

Can: For each state of **matter**, **draw** the **tiny particles** that are **too small to see**

Can Try: Using words and drawings, show **what was used** to **make the tiny particles move**

Could: **Show** on your drawing, how the **tiny particles move**

UDL Lesson Plan: Processing Phase

Universal Strategies	UDL Indicators Targeted	Support Needs Impacted	Students in Mind
Scaffolded Processing Task	7.1, 8.1, 8.2, 8.4, 9.1, 9.3, 4.1, 5.3, 6.1, 6.4, 3.1, 2.1, 3.2,	Attention, Anxiety, Engagement, Frustration, Intellectual Ability, Literacy, Self-Regulation, Self Esteem, Executive Functioning, Memory, Transitioning	JA, RM, GA, LB, ES, KR, GS, NS, MA, BW, IM, MB
MUST/ CAN/ COULD Task checklist	2.4, 2.1, 3.1, 3.2, 3.3, 7.1, 7.3, 8.1, 8.2, 8.4, 9.1, 9.2, 9.3, 5.3, 6.1, 6.3, 6.4	Attention, Anxiety, Engagement, Frustration, Intellectual Ability, Literacy, Self-Regulation, Self Esteem, Executive Functioning, Memory, Transitioning, Self Advocacy, Literacy	JA, RM, GA, LB, ES, KR, GS, NS, MA, BW, IM, MB, TP, AD
MUST/ CAN/ COULD graphic organizer	5.1, 5.3, 6.1, 6.2, 6.3, 6.4, 7.1, 8.1, 8.2, 8.4, 9.1, 9.3, 1.1, 2.1, 2.3, 2.4, 3.1, 3.2, 3.4	Attention, Anxiety, Communication, Engagement, Frustration, Intellectual Ability, Literacy, Self-Regulation, Self Esteem, Executive Functioning, Memory, Transitioning, Self Advocacy, Literacy	JA, RM, GA, LB, ES, KR, GS, NS, MA, BW, IM, MB, TP, AD
Vocab list	1.1, 1.2, 1.3, 2.1, 2.3, 2.4, 3.2, 4.1, 4.2, 5.2, 7.3,	Attention, Anxiety, Communication, Engagement, Frustration, Intellectual Ability, Language, Literacy, Memory, Self regulation, Self Esteem	JA, RM, GA, LB, ES, KR, GS, NS, MA, BW, IM, MB, TP, AD

UDL Lesson Plan: Transforming & Personalizing Phase

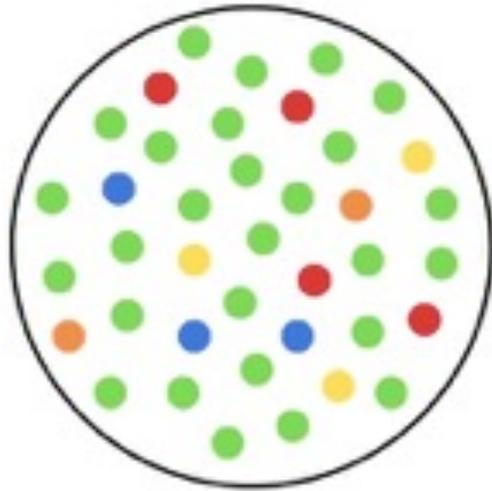
Universal Strategies	UDL Indicators Targeted	Support Needs Impacted	Students in Mind
Exit Slip Reflection	3.4, 6.4, 5.1, 9.3	Communication, Engagement, Intellectual Ability, Literacy, Self Regulation	JA, RM, GA, LB, ES, KR, GS, NS, MA, BW, IM, MB

HOW DO WE DESIGN AN ADJUSTABLE PLANE?

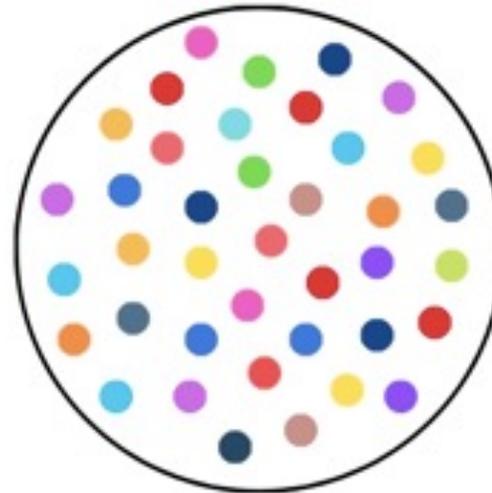
- Who are the **students**? What is the range of the **variability**?
- What is the **grade level curriculum** that students need to access?
- How is the grade level curriculum **responsive** to the range of student variability?
- How do we help **students to make the adjustments** they need to access the grade level curriculum?



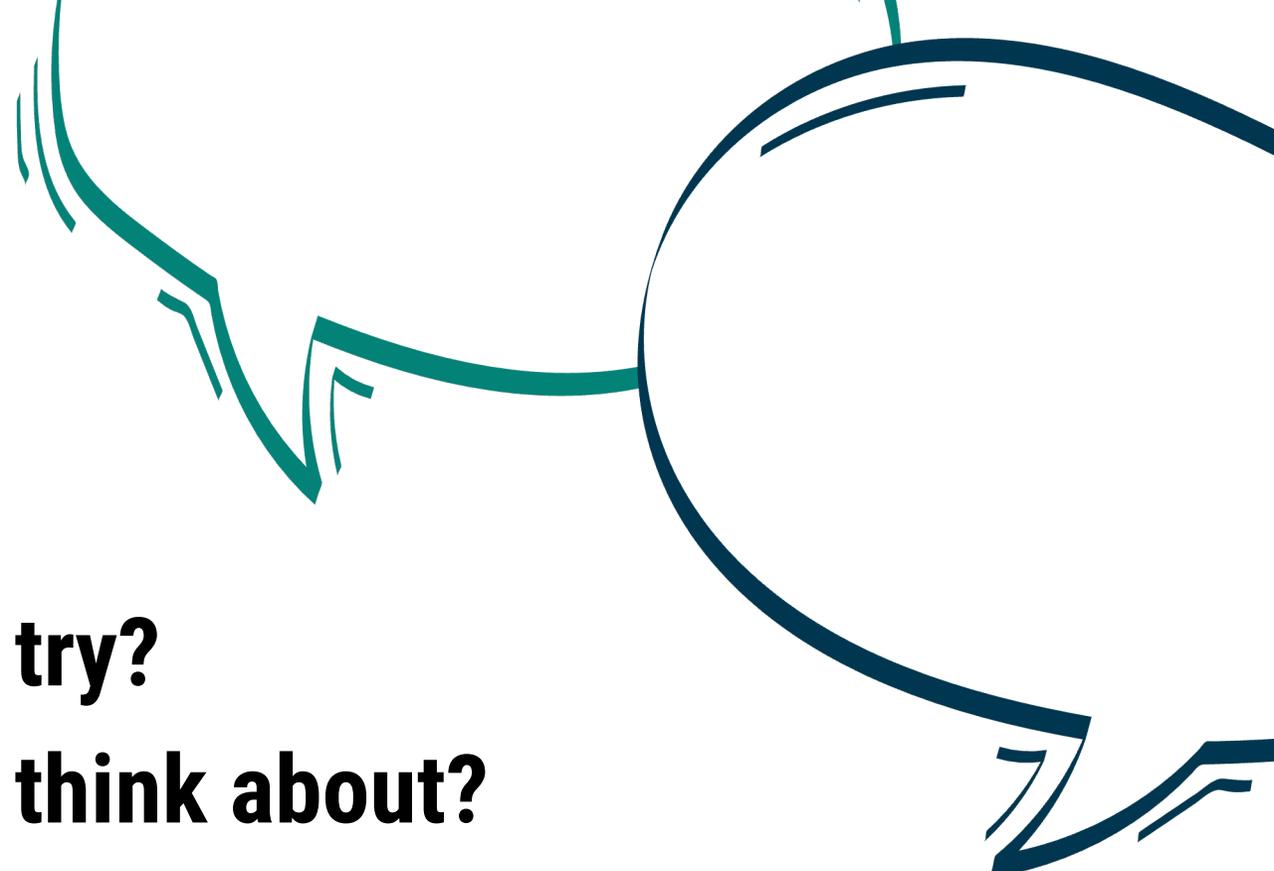
WHAT IS *inclusion* ?



How do we
include people
with disabilities?



How do we teach
to *diversity*?



What is one useful idea?

What is one thing you want to try?

What is one thing you want to think about?

What is one thing you want to learn more about?

**What is one thing you want to share with someone
who is not here today?**

