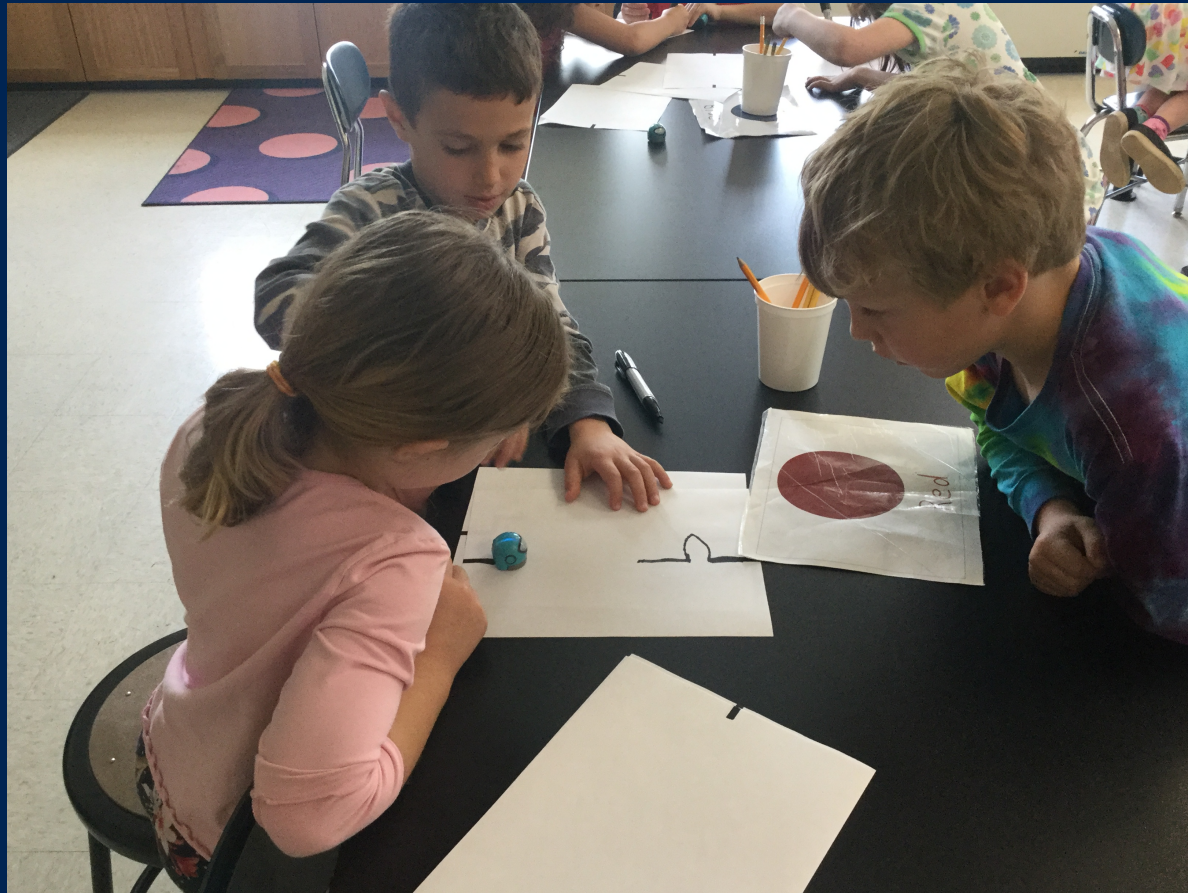


Universal Design for Learning in the Classroom



May 20, 2019

Universal Design for Learning Guidelines


“The goal of education in the 21st century is not simply the mastery of content knowledge or use of new technologies. It is the mastery of the learning process. Education should turn novice learners into expert learners, who know how to learn strategically, and who, on their own highly individual and flexible ways, are well prepared for a life-time of learning. Universal Design for Learning helps educators meet this goal by providing a framework for understanding how to create curricula that meets the needs of all learners from the start.”

Source: National Center of Universal Design for Learning website

Universal Design for Learning: Key Elements


- Acknowledges that each student has his or her own unique learning profile
- Provides framework for increasing access to high quality learning goals for all students from the beginning
- Focuses on identifying and removing existing barriers to learning
- Emphasizes the development of student voice and choice
- Facilitates creativity and independence

Provide multiple means of Engagement




Affective Networks
The "WHY" of Learning

Provide multiple means of Representation



Recognition Networks
The "WHAT" of Learning

Provide multiple means of Action & Expression

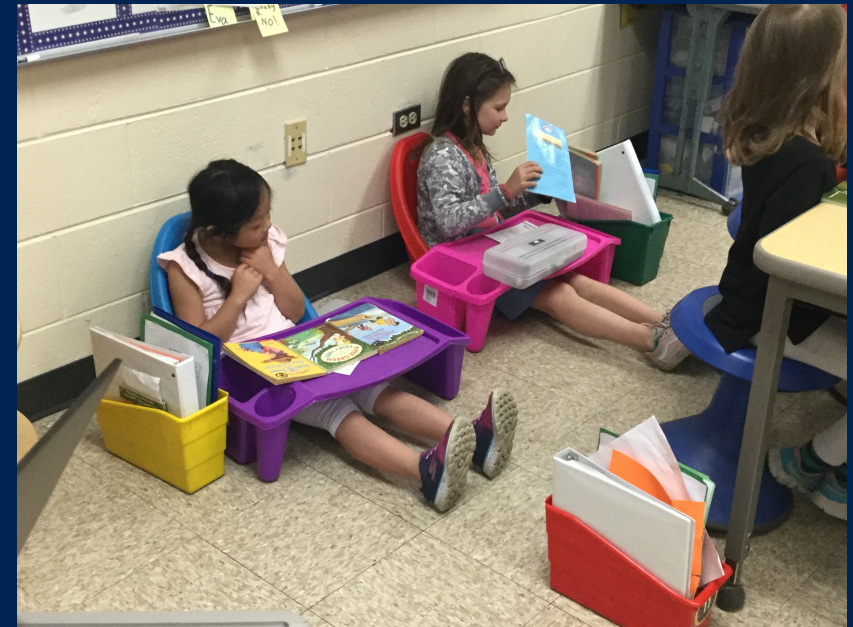


Strategic Networks
The "HOW" of Learning

Access	<p>Provide options for Recruiting Interest</p> <ul style="list-style-type: none"> Optimize individual choice and autonomy Optimize relevance, value, and authenticity Minimize threats and distractions 	<p>Provide options for Perception</p> <ul style="list-style-type: none"> Offer ways of customizing the display of information Offer alternatives for auditory information Offer alternatives for visual information 	<p>Provide options for Physical Action</p> <ul style="list-style-type: none"> Vary the methods for response and navigation Optimize access to tools and assistive technologies
	<p>Provide options for Sustaining Effort & Persistence</p> <ul style="list-style-type: none"> Heighten salience of goals and objectives Vary demands and resources to optimize challenge Foster collaboration and community Increase mastery-oriented feedback 	<p>Provide options for Language & Symbols</p> <ul style="list-style-type: none"> Clarify vocabulary and symbols Clarify syntax and structure Support decoding of text, mathematical notation, and symbols Promote understanding across languages Illustrate through multiple media 	<p>Provide options for Expression & Communication</p> <ul style="list-style-type: none"> Use multiple media for communication Use multiple tools for construction and composition Build fluencies with graduated levels of support for practice and performance
	<p>Provide options for Self Regulation</p> <ul style="list-style-type: none"> Promote expectations and beliefs that optimize motivation Facilitate personal coping skills and strategies Develop self-assessment and reflection 	<p>Provide options for Comprehension</p> <ul style="list-style-type: none"> Activate or supply background knowledge Highlight patterns, critical features, big ideas, and relationships Guide information processing and visualization Maximize transfer and generalization 	<p>Provide options for Executive Functions</p> <ul style="list-style-type: none"> Guide appropriate goal-setting Support planning and strategy development Facilitate managing information and resources Enhance capacity for monitoring progress
Goal	<p>Expert learners who are...</p> <div style="display: flex; justify-content: space-around;"> <div style="background-color: #008000; color: white; padding: 10px; border-radius: 10px;"> Purposeful & Motivated </div> <div style="background-color: #660099; color: white; padding: 10px; border-radius: 10px;"> Resourceful & Knowledgeable </div> <div style="background-color: #0070C0; color: white; padding: 10px; border-radius: 10px;"> Strategic & Goal-Directed </div> </div>		

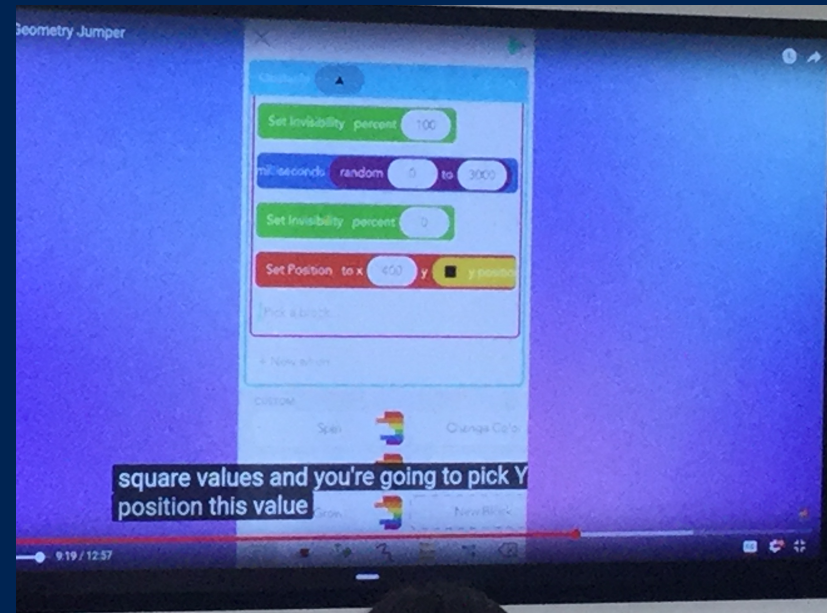
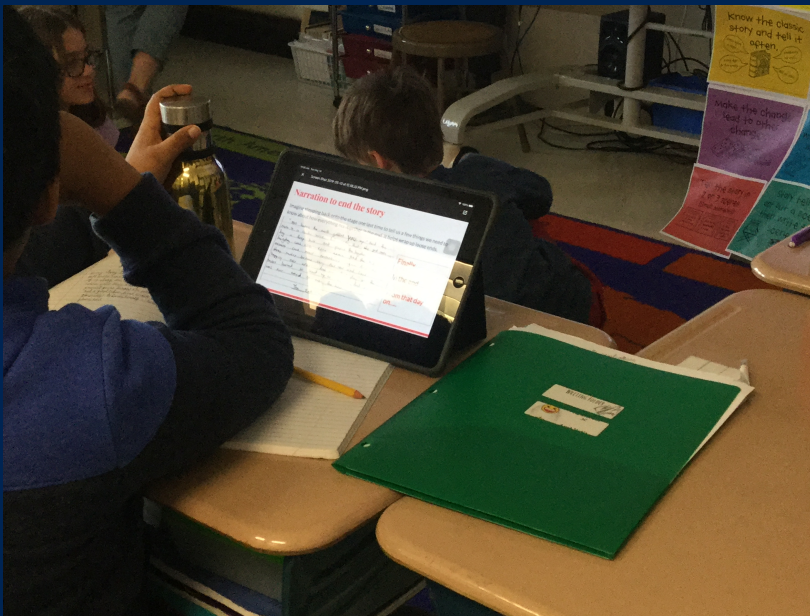
Provide Multiple Means of Engagement

- Develops self-assessment and regulation
- Varies demands and resources to optimize challenge
- Fosters collaboration and community
- Optimizes individual choice and autonomy



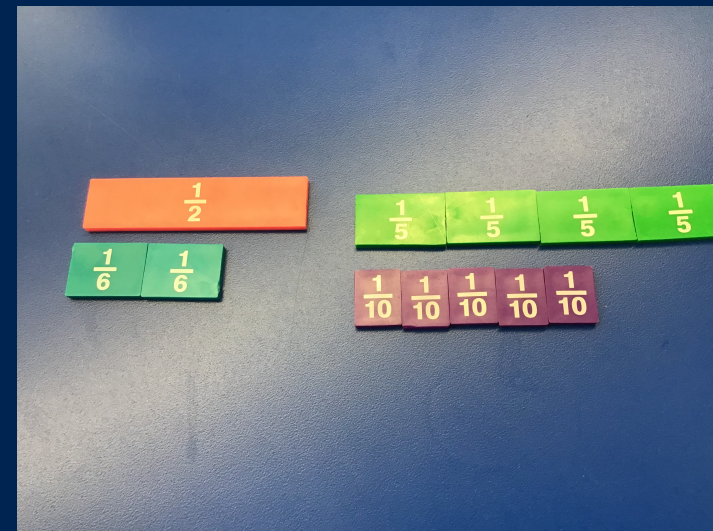
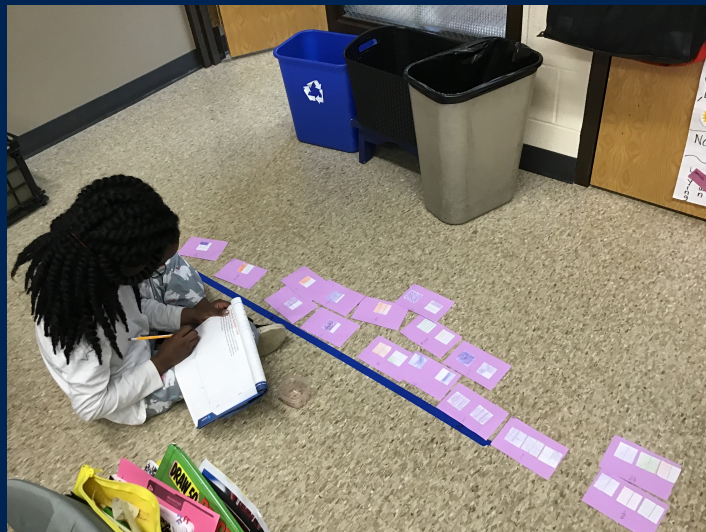
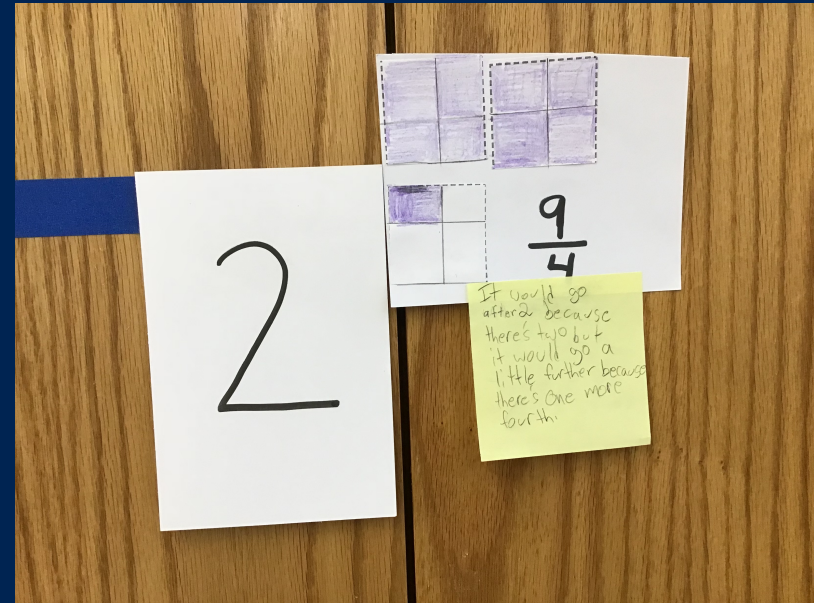
Provide Multiple Means of Representation

- Offers alternatives for visual information
- Offers alternatives for audio information
- Illustrates through multiple media



Provide Multiple Means of Action & Expression

- Optimizes access to tools and assistive technology
- Uses multiple tools for construction and composition



Provide Multiple Means of Action & Expression

- Supports planning and strategy development
- Builds fluencies with graduated levels of support for practice and performance

436-219 Subtraction Strategies

Add Up

$219 + 1 = 220$
 $220 + 80 = 300$
 $300 + 100 = 400$
 $400 + 36 = 436$

$100 + 80 + 36 + 1 =$
 $100 + 116 + 1 = 217$

Subtract back

$436 - 200 = 236$
 $236 - 10 = 226$
 $226 - 9 = 217$

Jot Lot

$2 \times 1,761 =$ [Handwritten work]	$2 \times 1,761 = 3,522$ [Handwritten work]	$2 \times 1,761 =$ [Handwritten work]	$2 \times 1,761 =$ [Handwritten work]
$2 \times 1,761 = 3,522$ [Handwritten work]	$2 \times 1,761 =$ [Handwritten work]	$2 \times 1,761 =$ [Handwritten work]	$2 \times 1,761 = 3,522$ [Handwritten work]
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How to Write a Fairy Tale Adaptation

- Know the classic story and tell it after.
 - Read up on the story.
 - Long up on the story.
 - Substitute an ending.
 - Write a new ending.
- Decide on a change to improve the story.
 - Change the story.
 - Change the characters.
 - Change the setting.
- Make the change lead to other changes.
 - Change the story.
 - Change the characters.
 - Change the setting.
- Make a character with traits + wants who runs into trouble.
 - Change the story.
 - Change the characters.
 - Change the setting.
- Tell the story in 2 or 3 scenes (Small Moments)
 - Change the story.
 - Change the characters.
 - Change the setting.
- Story tell or act out a scene; then write the scene.
 - Change the story.
 - Change the characters.
 - Change the setting.
- Figure out an ending that solves the character's big problem.
 - Change the story.
 - Change the characters.
 - Change the setting.
- Give a backstory at the start and stitch scenes together.
 - Change the story.
 - Change the characters.
 - Change the setting.
- Make your readers remember by adding a refrain.
 - Change the story.
 - Change the characters.
 - Change the setting.
- Balance dialogue with character's actions.
 - Change the story.
 - Change the characters.
 - Change the setting.
- Paint Pictures with language.
 - Change the story.
 - Change the characters.
 - Change the setting.

Provide Multiple Means Action & Expression

- Use multiple media for communication
- Use multiple tools for construction and composition


PHONES LIMIT TEENS SLEEP

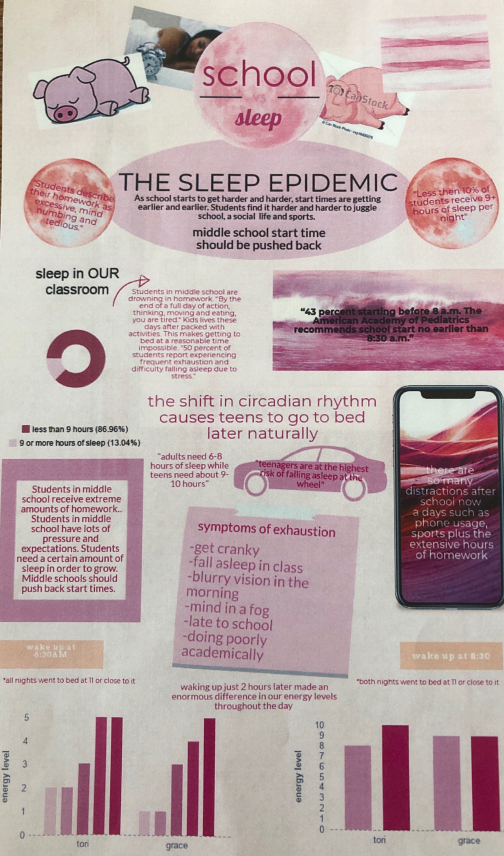
When teens use their phone before bed it can limit the amount of sleep that they get. "About 72 percent of children ages six to 17 sleep with at least one electronic device in their bedroom, which leads to getting less sleep on school nights compared with other kids, according to their parents." Sleep is so important for growing children and can really impact their performance at school and other activities. The lack of sleep caused by electronic device use before bed is caused by the blue light emitted by the device. The blue light mimics sunlight which confuses and disrupts our circadian rhythms. This messes with the sleep cycle causing the body to fall asleep and wake up later. This lack of sleep can also contribute to mental and physical illnesses. Since sleep is such a crucial necessity for children and teens to thrive, phones and electronic devices should be taken out of the bedroom.

HOW DO PHONES AFFECT SLEEP?

"Spending five or more hours a day online (vs. one hour) upped the risk of sleeping too little more than 50 percent. Spending three hours a day (vs. one hour) upped the risk nearly 20 percent"

Teens using their phones can negatively impact their mental health. Scientists believe teen depression and phone use at night is linked. "If smartphones cause teens to sleep less, and less sleep leads to depression, sleep deprivation might explain why teen depression increased sharply after 2012 – exactly when smartphones became common, and exactly when sleep deprivation began to increase among teens" (Teens are sleeping less). Depression is a serious illness, which is something that can be prevented with something as simple as putting a phone away. "A longitudinal study of 1,101 Australian high school students aged between 13 and 16 found poor-quality sleep associated with late-night texting or calling was linked to a decline in mental health, such as depressed moods and declines in self-esteem and coping ability" (Teenagers sleep quality). Self-esteem is so important for mental health. Also, being able to cope with events is a major life skill that is needed. If phones are causing this not to happen, phones should not be allowed in the bedroom.





school vs sleep

THE SLEEP EPIDEMIC

As school starts to get harder and harder, start times are getting earlier and earlier. Students find it harder and harder to juggle school, a social life and sports.

middle school start time should be pushed back

Students describe their homework as "excessive, mind numbing and tedious."

Useful tip: 10% of students receive 9+ hours of sleep per night

sleep in OUR classroom

Students in middle school are drowning in homework. By the end of a full day of action, thinking, moving and eating, you are tired! Kids love these assignments, they packed with to do at a reasonable time. Unfortunately, students report experiencing frequent exhaustion and difficulty falling asleep due to stress.

"43 percent starting before 8 a.m. The American Academy of Pediatrics recommends school start no earlier than 8:30 a.m."

the shift in circadian rhythm causes teens to go to bed later naturally

less than 9 hours (86.96%)
9 or more hours of sleep (13.04%)

Students in middle school receive extreme amounts of homework. Students in middle school have lots of pressure and expectations. Students need a certain amount of sleep in order to grow. Middle schools should push back start times.

adults need 6-8 hours of sleep while teens need about 9-10 hours

Teenagers are at the highest risk of falling asleep at the wheel!

There are so many distractions after school now a days such as phone usage, sports plus the extensive hours of homework

symptoms of exhaustion

- get cranky in class
- fall asleep in the morning
- blurry vision in the morning
- mind in a fog
- late to school
- doing poorly academically

wake up at 2:30 a.m.

all nights went to bed at 11 or close to it

wake up at 8:30

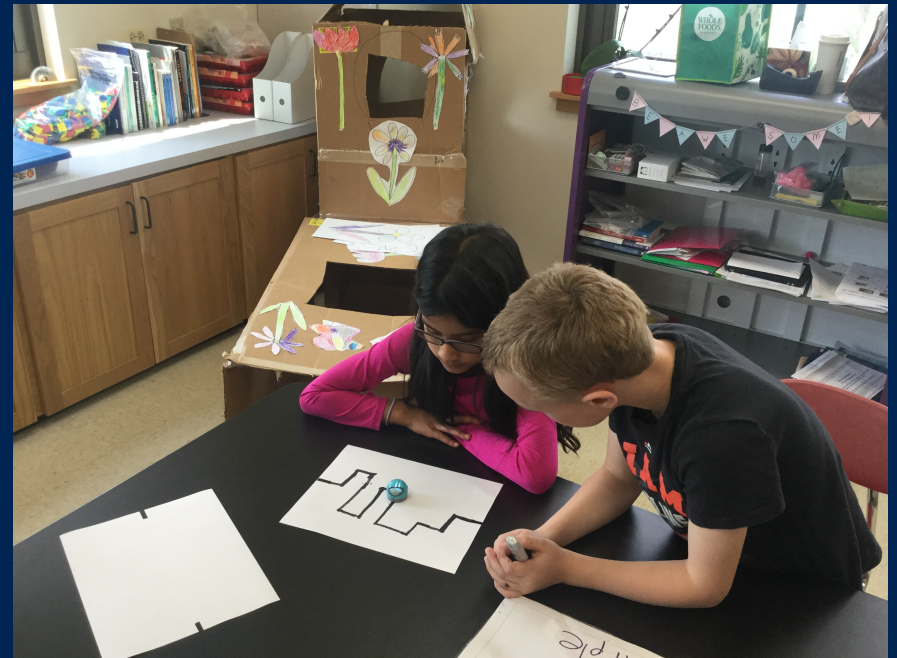
waking up just 2 hours later made an enormous difference in our energy levels throughout the day

both nights went to bed at 11 or close to it

Person	Went to bed at 11 or close to it	Woke up at 2:30 a.m.
ton	~4.5	~2.5
grace	~4.5	~2.5

Technology and Universal Design for Learning

- Optimizes access to range of learning tools
- Provides assistive technology options to overcome learning barriers
- Provides multiple platforms to communicate learning and ideas
- Facilitates managing information and resources



Next Steps

- Provide training for all D90 certified staff at June Institute Day
- Support expansion of UDL practices at the building level during 2019-2020 school year
- Continue to support students with technology integration
- Align UDL with standards-based learning
- Support continued alignment of UDL principles to instructional practices
- Examine inclusion and co-teaching within the UDL framework

Q & A