Universal Design for Learning

LBPSB HSRN & NET

February 12th, 2015

Facilitated by: Andrea Prupas, ALDI Initiative

Resources

Powerpoint available @

aldi.learnquebec.ca

"Professional development resources"

Learning outcomes for today

1. A background on Universal Design for Learning
- *Student diversity*
- *Origins of UDL*

2. How to design accessible learning experiences
- *Three considerations*

3. How to begin
- *Strategies for representation, expression, and engagement*

UDL
ITS WHAT'S FOR DINNER

Imagine that you are preparing dinner for a large gathering of friends and family. You decide to serve a one-dish main course to everyone.

Once your guests arrive, though, some of them are not pleased with the dinner you have prepared. The children think it looks weird; someone else has a food allergy to one of the ingredients; and the vegetarians are dismayed by all the meat in the dish.

You want to please everyone and give them what they want, so you hurriedly prepare some macaroni and cheese for the kids, a salad for the vegetarians and something dairy-free for your allergic cousin. Things are a little hectic at your dinner party and no one is really happy with how it turns out (especially you).

KITCHEN CLOSED
— DUE TO ILLNESS —
I'm Sick of Cooking

Now imagine the same scenario, only this time you have taken into account the differences among your guests' eating habits ahead of time.

You have solicited input from all of your guests long before the dinner and prepared a range of dishes that is likely to please everyone.

They all find something that they like at your table, no one feels left out and no one feels fussed over because you had to leave the party and make a special plate for them. You have designed the meal so that it will be a good fit for everyone.

What we'll discuss today…

Designing "the meal" (teaching & learning environment) so that it's a good fit for everyone.

What is Universal Design for Learning?

The ultimate goal of Universal Design for Learning is to support the creation of flexible curricula and learning environments that work for all students.

To understand UDL, we have to discuss….

Student diversity

We have a diverse student population that needs flexible approaches to teaching and learning.

OUR TYPICAL CLASSROOMS

Students who are disengaged/demotivated

Students with emotional difficulties

Students with learning disabilities

Students with Autism Spectrum Disorders

Students who require support for mental health issues

Students who have difficult home lives/ conditions

What does diversity look like?

Differences in learning style

Differences in background knowledge and experience

Differences in learning preference

Differences in interests and motivation

Teaching and learning to diversity

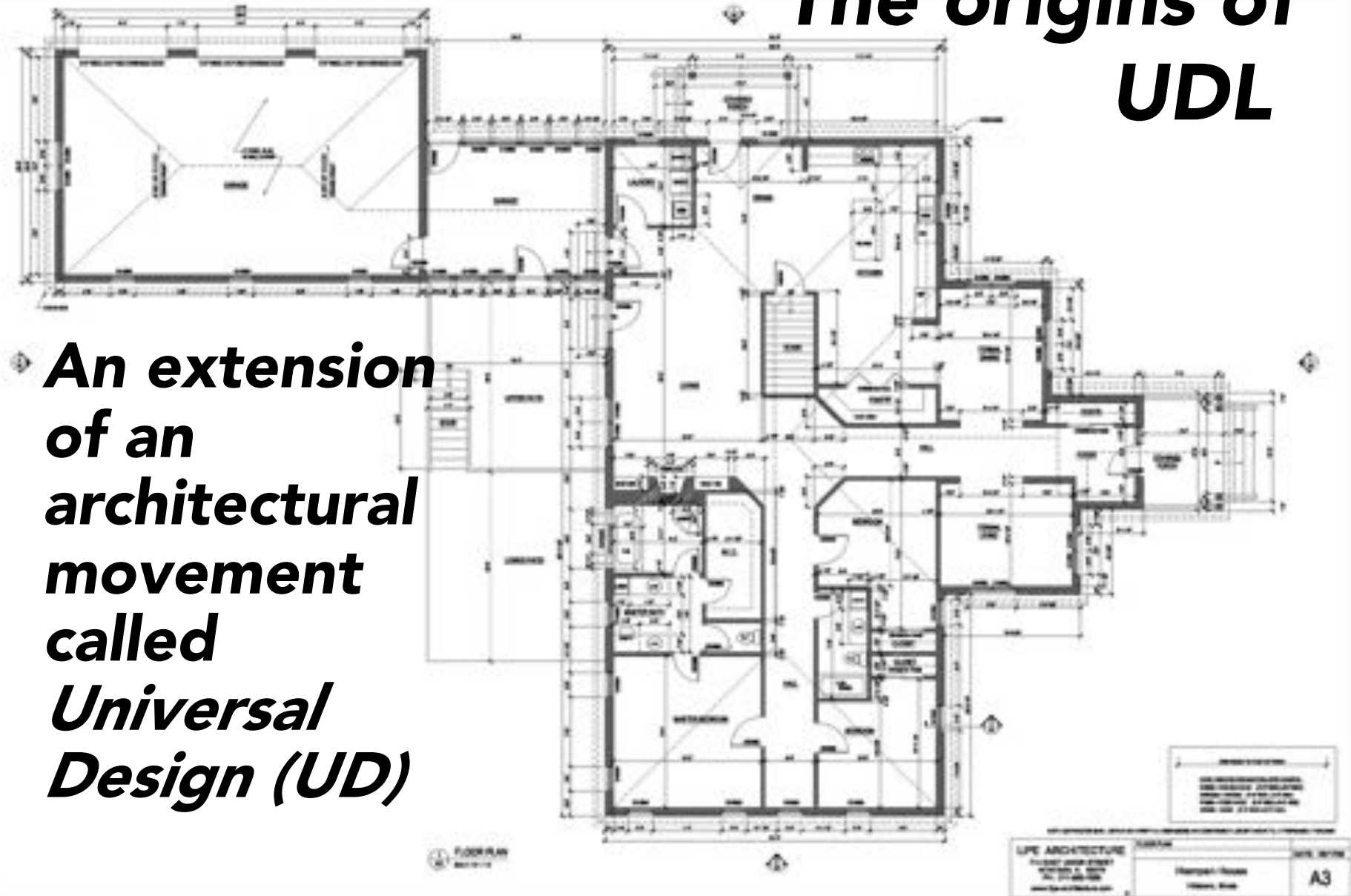Introducing…

Universal Design for Learning (UDL)
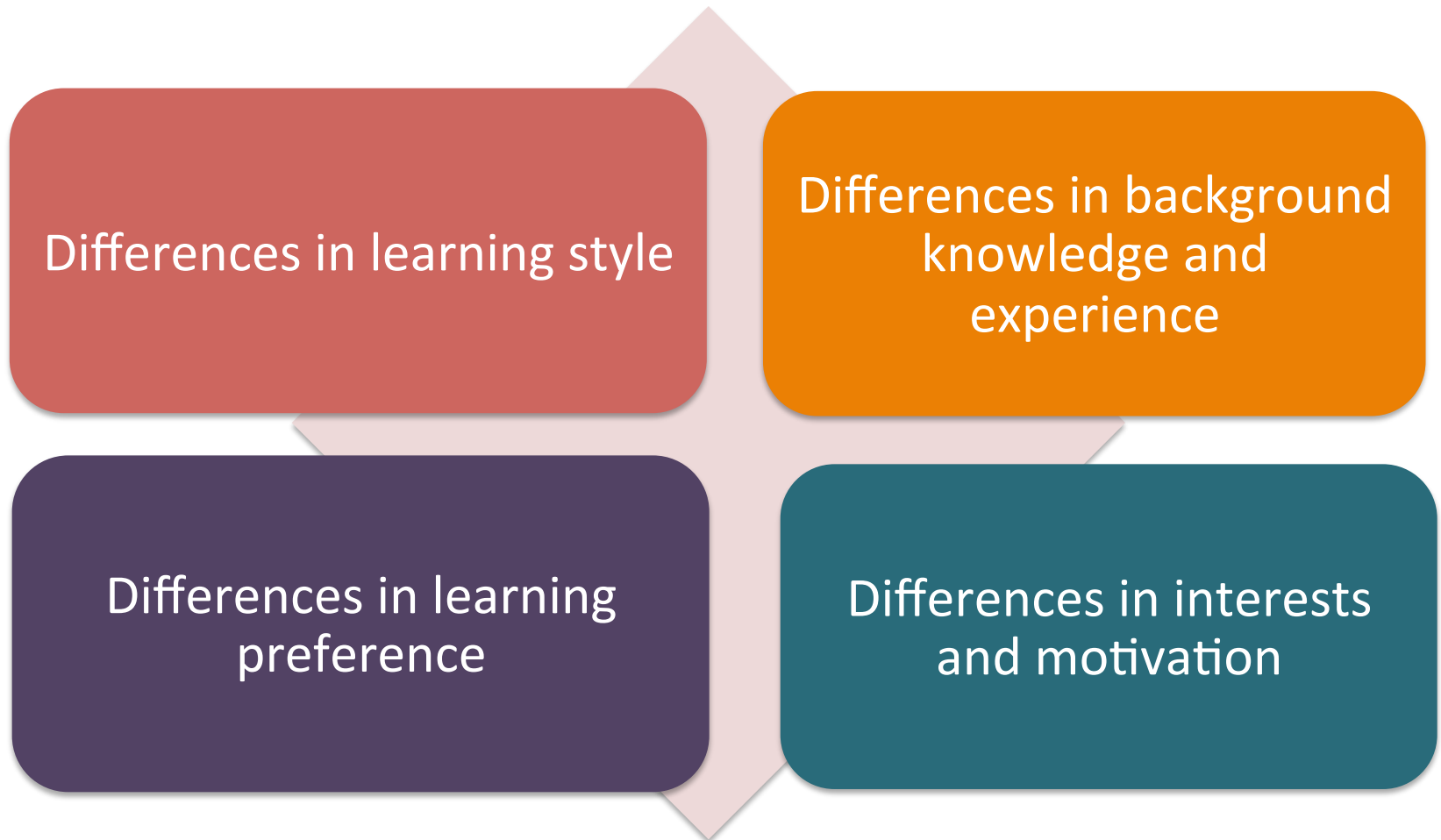
What is UDL?

- An educational approach that aims to increase **access to learning** by reducing physical, cognitive, organizational and other **barriers**.

- A **flexible** approach that provides students of all abilities equal opportunities to learn.

The origins of UDL

An extension of an architectural movement called *Universal Design (UD)*

"Consider the needs of the broadest possible range of users from the beginning."

-Ron Mace, pioneer and visionary of Universal Design

"*What is designed for one purpose, or to assist one group of people may, in fact, have a more universal or broader application for more than its initial intent.*"

(OISE and Ministry of Education of Ontario: Success for All)

How is UDL different from our current frameworks?

- A universally designed curriculum is ***shaped from the outset*** to meet the needs of the greatest number of users, reducing ***after-the-fact changes*** to the curriculum.

© Andrea Prupas, ALDI Initiative

No retrofitting=designing accessible learning from the beginning.

© Andrea Prupas, ALDI Initiative

Flexible teaching and learning practices

1. **Multiple means of presentation** to allow various ways of acquiring information and knowledge (INPUT or representation)

2. **Multiple means of expression** to allow alternatives for demonstrating knowledge (OUTPUT or expression)

3. **Multiple means of engagement** to challenge appropriately, to motivate, and to allow learners to express and participate in their interests.

(OCALI, 2015)

Universal Design for Learning

Recognition Networks
The "what" of learning

Strategic Networks
The "how" of learning

Affective Networks
The "why" of learning

How we gather facts and categorize what we see, hear, and read. Identifying letters, words, or an author's style are recognition tasks.

Planning and performing tasks. How we organize and express our ideas. Writing an essay or solving a math problem are strategic tasks.

How learners get engaged and stay motivated. How they are challenged, excited, or interested. These are affective dimensions.

Designing accessible, flexible learning experiences

Three considerations to create accessible learning environments

1. Instructional design

2. Active learning

3. Reducing barriers

instructional design

The "deep work" of teaching

"What will students be learning today and how will they learn it?"

Deep learning questions

What will students learn? What are they ready to learn?

How will they acquire this learning? How can I design this lesson to be an effective, useful and meaningful learning experience for them?

How will they demonstrate what they have learned?

What will engage them?
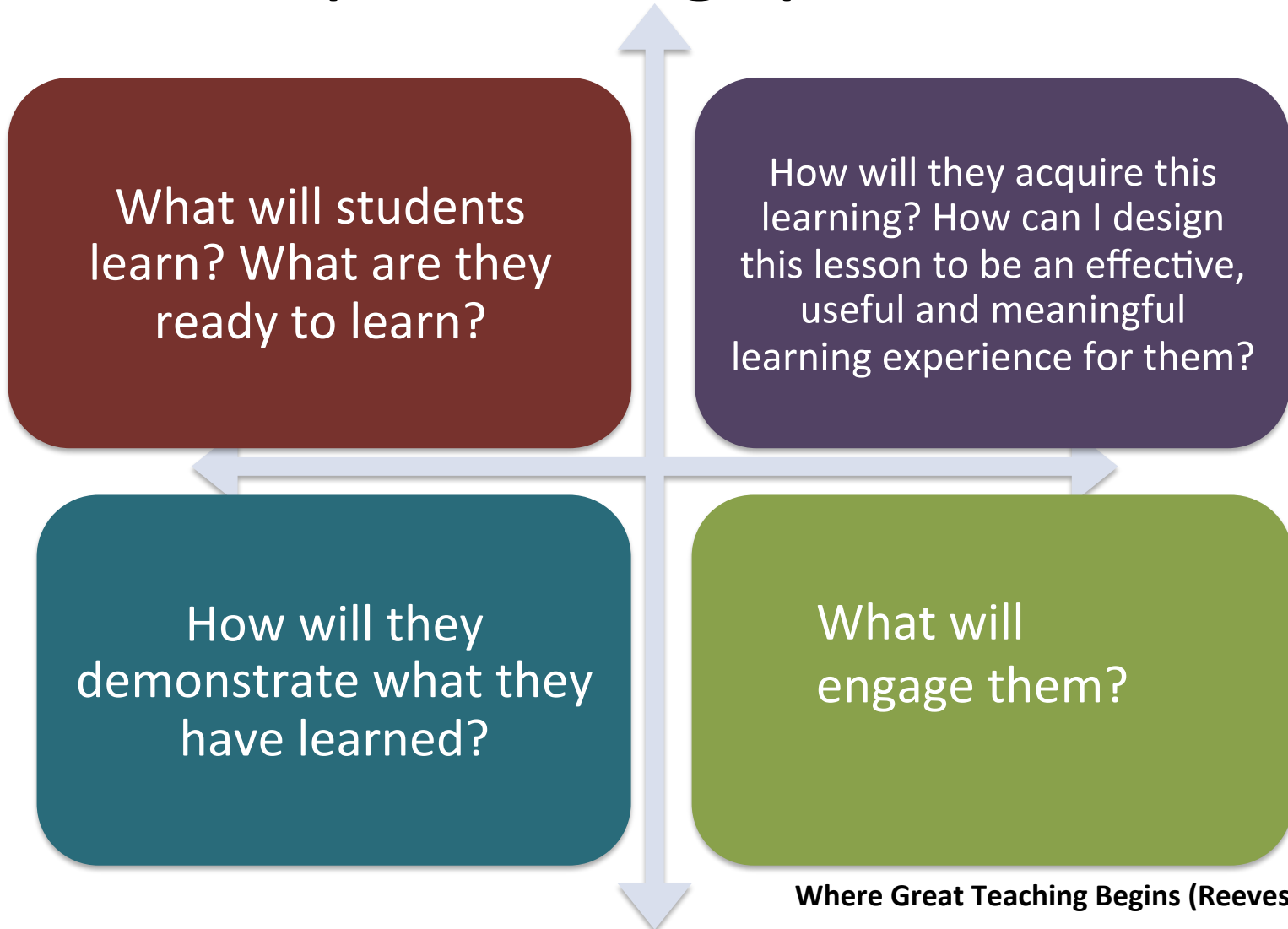
Where Great Teaching Begins (Reeves, A.) 2011

Understanding by Design (UbD)

1. Identifying desired results – What are the big ideas we want students to understand and use?

2. Determine assessment evidence – How will we know students have understood the big ideas?

3. Plan learning experiences and instruction – What learning activities will facilitate understanding of the big ideas?

<div align="right">(McTighe & Wiggins, 2005)</div>

Active learning

"Learning is not a spectator sport" -Chickering & Gamson

©Andrea Prupas, ALDI Initiative

Active learning

Active learning means that *the mind* is actively engaged. Its defining characteristic is that students are dynamic participants in their learning and that they are reflecting on and monitoring both the processes and the results of their learning.

(Barkley, 2010)

Learning takes different kinds of exposure.

Each way of presenting a concept shapes student understanding.

I learn best when…

Why auditory-based learning doesn't work for all....

- Our brain is not a recorder.

This is our brain on learning…

Have I heard this information before?

Where does this information fit? What can I do with it?

Constant processing and questioning of information!

Can I assume this is the same idea I had yesterday or last month or last year?

This compares to…

Our brains do a better job of learning if we are allowed to discuss with others and if we are invited to ask questions.

Research tells us…

Learning should be largely a social, collaborative experience. Articulating and sharing ideas and responding to others' reactions improves thinking and deepens understanding.

This applies to all ages, all settings!
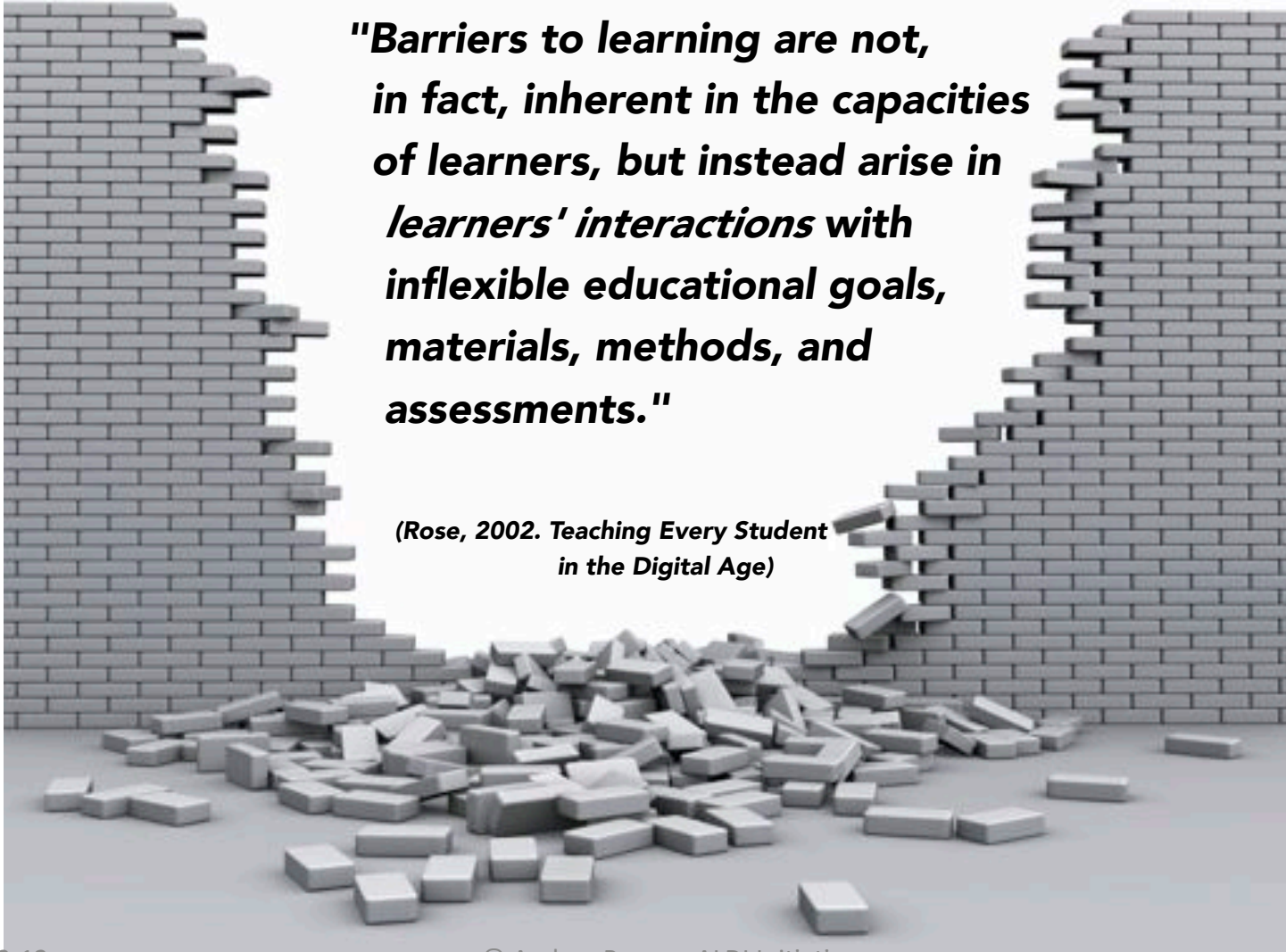
"Learning can't be swallowed whole.
To retain what has been taught, students must chew on it."
(Silberman, 1996)

Reducing barriers

Delivery of the curriculum can be a barrier to learning.

"Barriers to learning are not, in fact, inherent in the capacities of learners, but instead arise in learners' interactions with inflexible educational goals, materials, methods, and assessments."

(Rose, 2002. Teaching Every Student in the Digital Age)

Encourage your school team to find the barriers

What are barriers that your students have encountered?

Representation of content

"Learners differ in the ways that they perceive and comprehend information that is presented to them."

CAST, 2012

How do you represent content in different ways? How can we encourage classroom teachers to represent content in different ways?

Representation

Summarizing

Activating and building background knowledge

Learning partnerships

Questioning

Active learning strategies provide options for comprehension

Activating and building background knowledge

Background knowledge is a repository of memories, experiences, and facts.

Why is activating background information important?

- When information is provided in isolation and not connected to existing knowledge, it is forgotten and deemed unimportant.

- When students are actively building their background knowledge, learning becomes more accessible and they are more likely to experience success.

(Marzano, 2004).

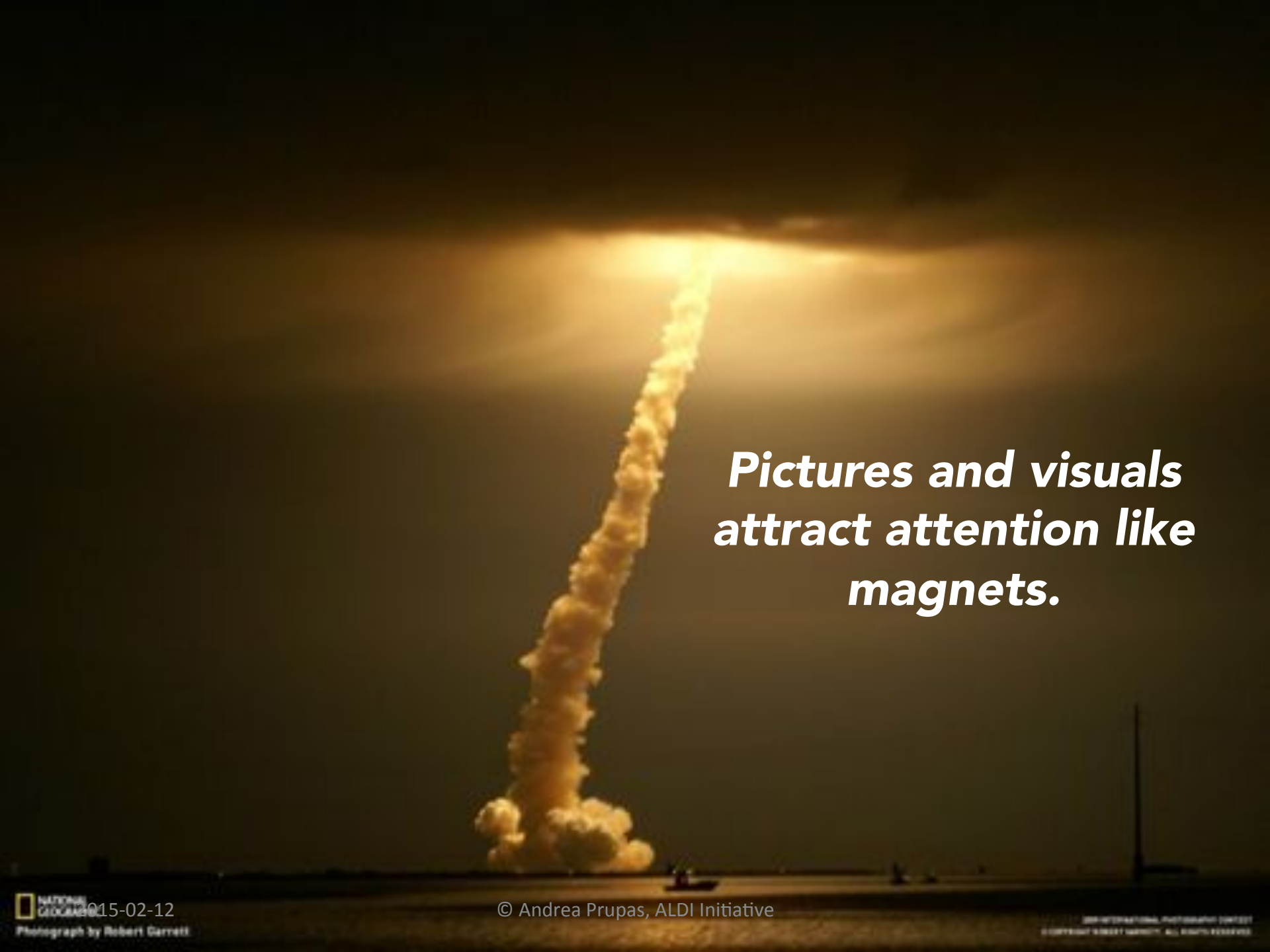**Think-Pair-Share**
Think-Tweet-Share (TodaysMeet)
todaysmeet.com/thinktweetshare

Think about what you know about Universal Design for Learning. How can technology support the implementation of UDL?

© Andrea Prupas, ALDI Initiative

Representation

Visual and auditory input
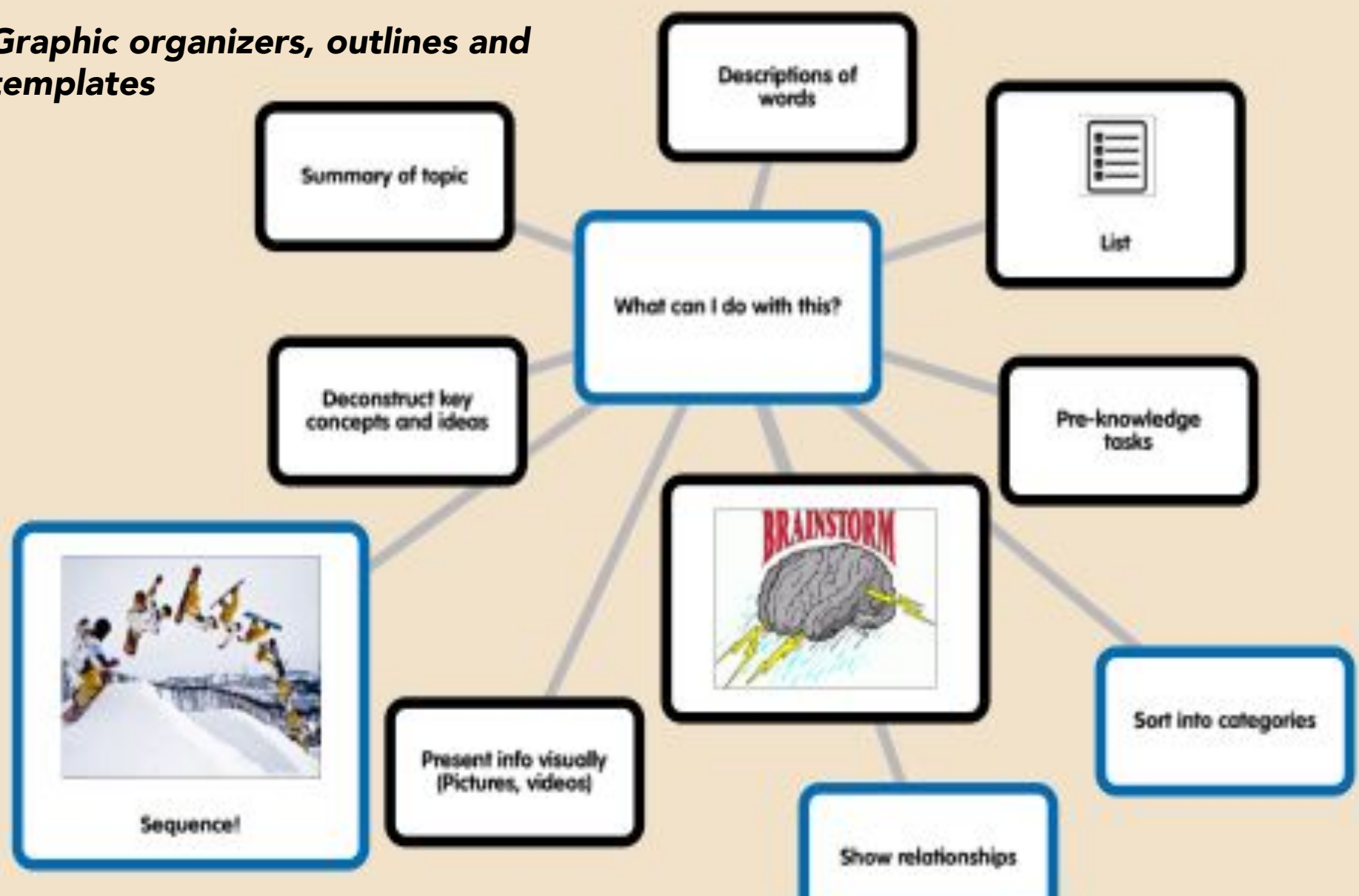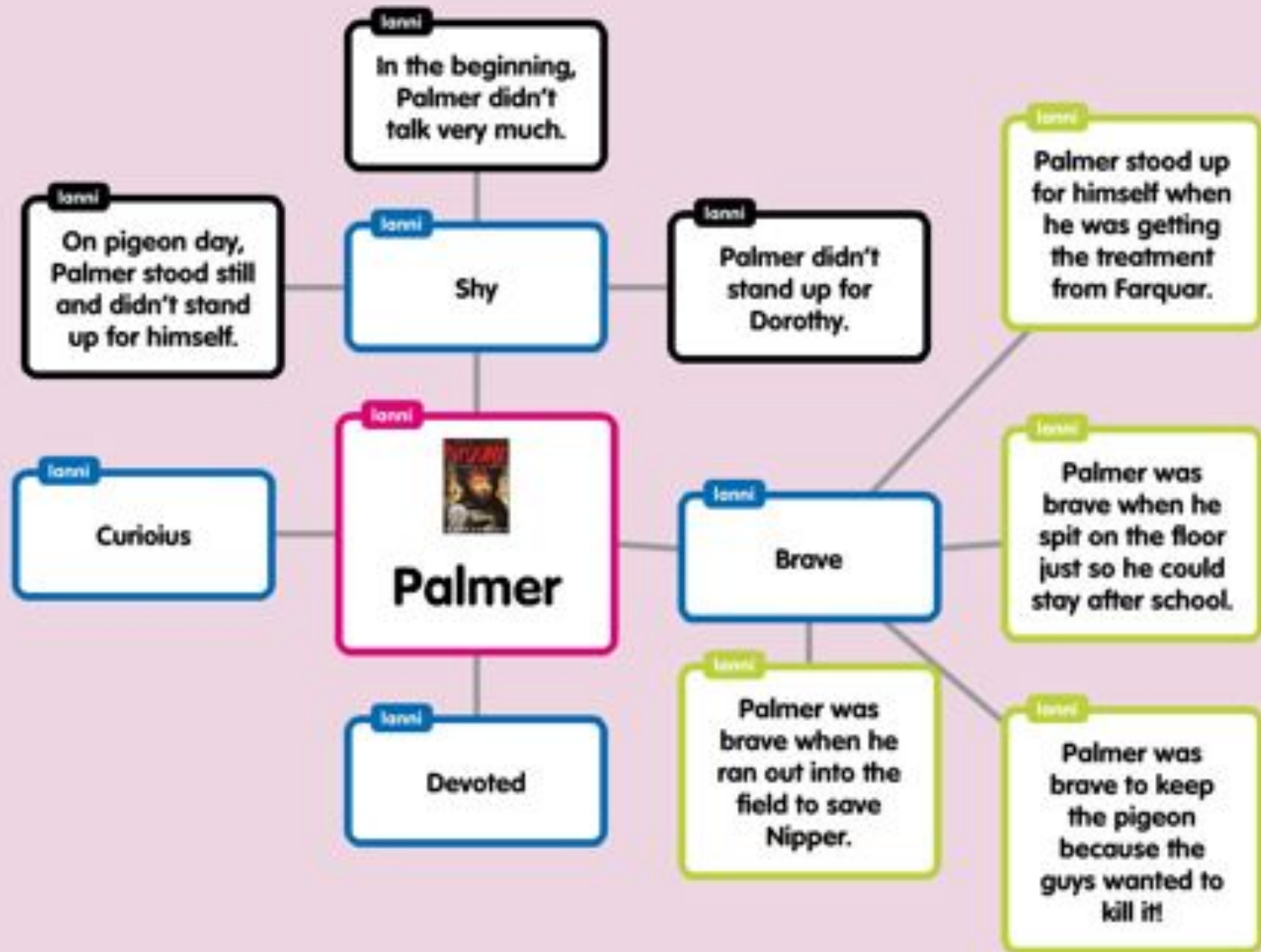

Provide options for perception

© Andrea Prupas, ALDI Initiative

Pictures and visuals attract attention like magnets.

What is terminal velocity?

Graphic organizers, outlines and templates

Descriptions of words

Summary of topic

List

What can I do with this?

Deconstruct key concepts and ideas

Pre-knowledge tasks

BRAINSTORM

Sequence!

Present info visually (Pictures, videos)

Sort into categories

Show relationships

© Andrea Prupas, ALDI Initiative

Palmer

Shy
- In the beginning, Palmer didn't talk very much.
- On pigeon day, Palmer stood still and didn't stand up for himself.
- Palmer didn't stand up for Dorothy.
- Palmer stood up for himself when he was getting the treatment from Farquar.

Curioius

Devoted

Brave
- Palmer was brave when he spit on the floor just so he could stay after school.
- Palmer was brave when he ran out into the field to save Nipper.
- Palmer was brave to keep the pigeon because the guys wanted to kill it!

© Andrea Prupas, ALDI Initiative

Generating ideas

Using audio

Before writing, I:

Say everything I know about the topic here in about 5 minutes:

Summarize my 3 main points here:

1.

2.

© Andrea Prupas, ALDI Initiative

© Andrea Prupas, ALDI Initiative

Expression

"Students differ in the ways that they can navigate a learning environment and express what they know."

(CAST, 2012)

What opportunities do your students have for accessing and expressing their knowledge in alternative ways?

Expression

Text to speech

Annotation

Speech recognition

Support tools provide options for construction, composition, communication and strategy development.

Annotation

A visible record of the thoughts that emerge while making sense of the text.

© Andrea Prupas, ALDI Initiative

Make personal connections

Increase comprehension

Why use annotation?

Deeper level of engagement

"Enter into a conversation" with the text

What do good readers do?

Make predictions

Ask questions

State opinions

Reflect on the content

Reflect on their own reading process

CLOUD around tricky words

UNDERLINE important ideas

? What questions do you have?

things that surprised you !

connects to important idea

CLOUD around tricky words

UNDERLINE important ideas

? What questions do you have?

things that surprised you !

connects to important idea

CLOUD around tricky words

UNDERLINE important ideas

? What questions do you have?

things that surprised you !

connects to important idea

CLOUD around tricky words

UNDERLINE important ideas

? What questions do you have?

things that surprised you !

connects to important idea

Jason Brill came in late and almost sat to my

right, but luckily I stopped that from happening

at the last second.

I can add a note right here! This is called annotation.

Next period, I should just sit in the middle of a

Life was going along okay when my mother and father dropped the news. Boom! Just like that. •

"We have something wonderful to tell you, Peter," Mom said before dinner. She was slicing carrots into the salad bowl. I grabbed one.

"What is it?" I asked. I figured maybe my father's been made president of the company. Or maybe my teacher phoned, saying that even though I don't get the best grades in the fifth grade, I am definitely the smartest kid in the class.

"We're going to have a baby," Mom said. •

"We're going to what?" I asked, starting to choke. Dad had to whack me on the back. Tiny pieces of chewed up carrot flew out of my mouth and hit the counter. Mom wiped them up with a sponge.

"Have a baby," Dad said.

"You mean you're pregnant?" I asked Mom.

"That's right," she told me, patting her middle, "Almost four months."

"Four months! You've known for four months and you didn't tell me?"

"We wanted to be sure," Dad said.

"It took you four months to be sure?" •

"I saw the doctor for [...] due in February." She reached ove I think that... [...] ut of the way before she could touch me.

Engagement

"Affect represents a crucial element to learning, and learners differ markedly in the ways in which they can be engaged or motivated to learn." *(CAST, 2012)*

Engagement

Design of your learning space provides options for collaboration and communication

What's different about this classroom from most classrooms today?

Niles Center Public School Classroom, 1901

What message does this room communicate about learning?

Space creates expectations of behaviour

What if we designed a classroom that was based on what we know about learning?

Summarize…

What strategy would you like to try in your classroom and why?

Write down one thought or resource on the Padlet.

http://goo.gl/i1WcSN

Three great resources to get started

http://www.udlresource.ca

SET-BC, Ministry of Education, British Columbia

http://www.ocali.org/project/learn_about_udl

(Ohio Center for Autism and Low Incidence)

http://www.cast.org

(Center for Applied Special Technology)

Thank you!

Andrea Prupas

ALDI coordinator

aprupas@swlauriersb.qc.ca

aldi.learnquebec.ca