



Using Inquiry to Develop the Curricular Competencies

Helping students turn
curiosities into questions

I WANT TO ACKNOWLEDGE
THAT WE ARE WORKING AND
LEARNING TODAY ON THE
TRADITIONAL AND
ANCESTRAL TERRITORIES OF
THE SNUNEYMUXW FIRST
NATION



Learning Intentions

1. Science Instruction vs Inquiry-based Instruction
2. Am I an Inquiry Teacher?
3. Setting the Stage for an Inquiry Mindset
4. How does Inquiry Fit into our Primary Classrooms?
5. Types of Inquiry
6. How do I Know it's Inquiry Learning?
7. Cross Curricular Integration

Success Criteria

1. I have an inquiry mindset.
2. I believe that I am a teacher researcher.
3. I believe that all kids can learn, and can use inquiry to give all kids an access point.



What is Your Inquiry

Comfort Level?

Science Instruction vs Inquiry Learning



Traditional Science

Teacher driven

- The focus is on the content
- Lessons about the content are prepared and delivered by the teacher
- One scientific method
- Materials collected by the teacher for observation and/or experiments
- Results are recorded

Inquiry-based Learning

Student driven

- Focus is on curricular competences
- Lessons begin with questions and provocations posed by both the teacher and the students; veering “off the lesson plan” is common
- Learning is student driven
- Materials are collected by students and teachers but most come from learning walks, hands on real life materials, and outdoor explorations.
- Results are reflected upon, discussed with peers, and often result in newly formed understandings and questions.



Am I an Inquiry Teacher? Inquiry Teachers...

- Are playful
- Are curious
- Are passionate
- Teach slowly
- Know their curriculum
- Know their students
- Reflect and revise as they go
- Go outside to come back inside
(learning can happen in or out of the classroom)

Trevor MacKenzie



Setting the Stage for An Inquiry Mindset

- An understanding of how children learn
- An understanding of the importance of social and emotional learning
- A classroom environment conducive to open-ended learning
- Promotion of a growth mindset
- Seeing the role of the teacher as more of a facilitator of learning with small amounts of direct teaching/mini lessons
- Seeing the core competencies as foundational in a child's learning journey.

Endless Possibilities for Inquiry

The nature of inquiry is open-ended, curiosity-based and fluid.

The teacher's role in inquiry is focused on resources, modeling curiosity, and cognitive coaching.

Terry Heick @TeachThought



How Does Inquiry Fit into our Primary Classrooms?

Ministry Documents:

Early Learning Framework

Play Today

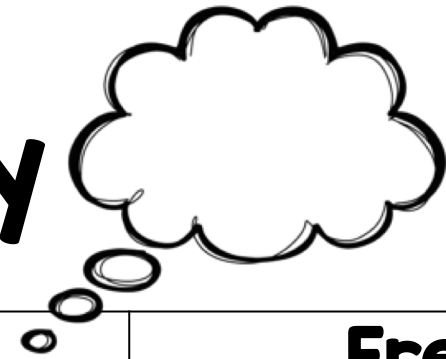
New, rich curriculum (no A/B necessary)



Types of Inquiry

- Student-centred learning
- 21st century learning
- Inquiry-based learning
- Project-based learning
- Problem-based learning
- Collaborate learning
- Active learning
- Constructivist learning
- Passion Projects
- Genius Hour

Types of Inquiry



Structured Inquiry	Controlled Inquiry	Guided Inquiry	Free Inquiry
Students follow the lead of the teacher as the entire class engages in one inquiry together.	Teacher chooses topics and identifies the resources students will use to answer questions.	Teacher chooses topics/questions and students design product or solution.	Students choose their topics without reference to any prescribed outcome.

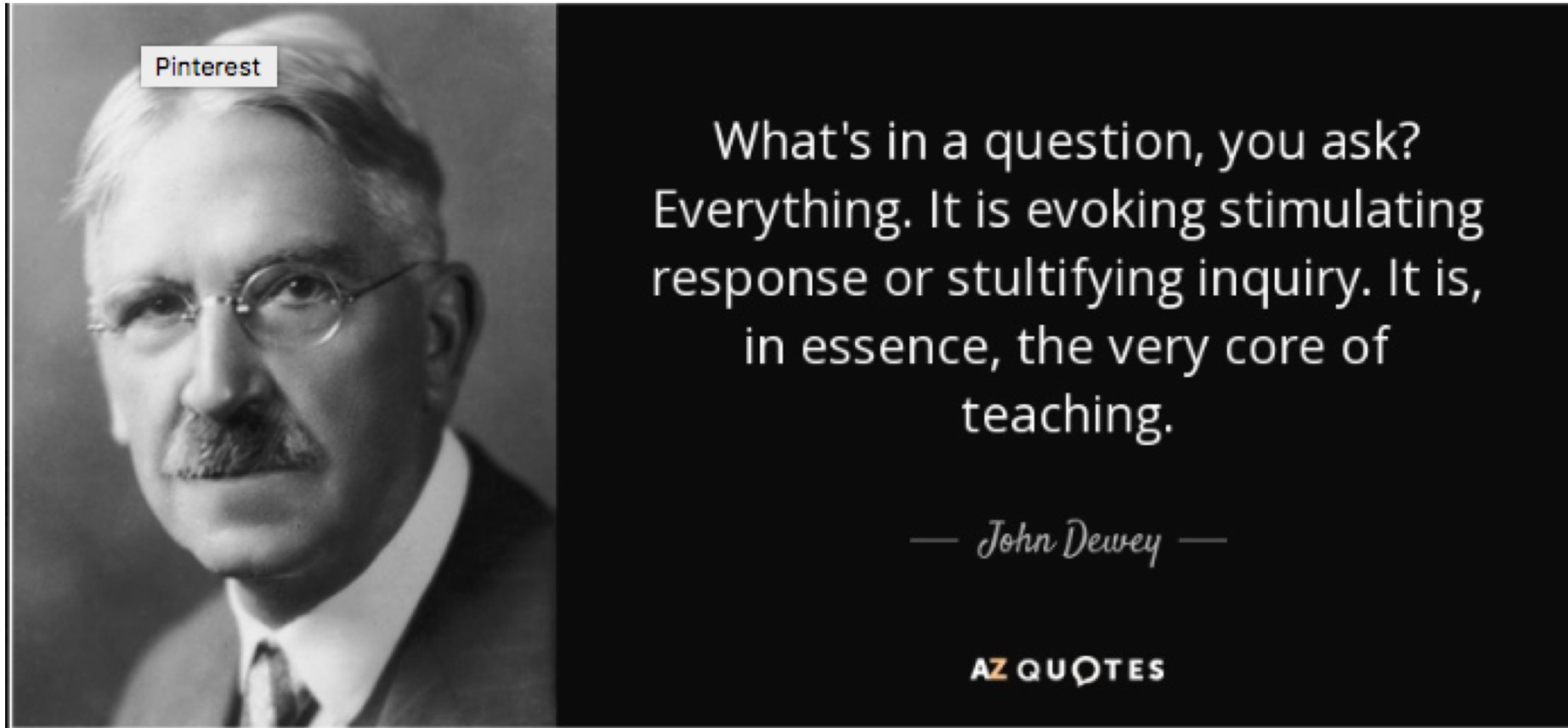
How Do I Know it's Inquiry Learning?

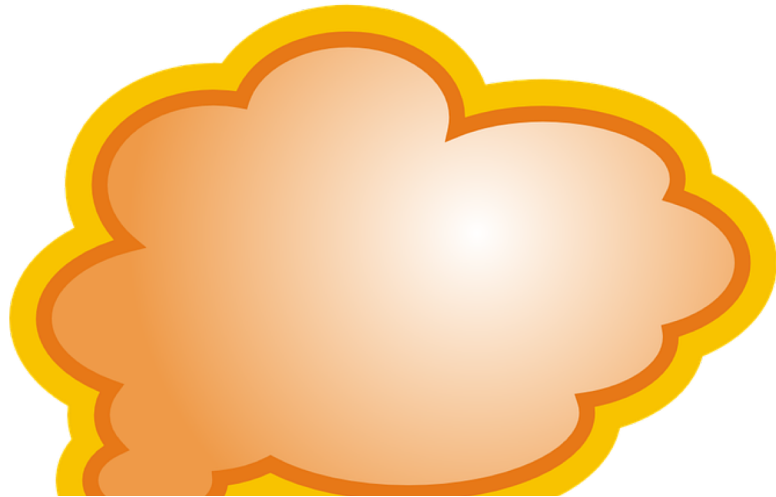
- Inquiry is any learning that is student-centred and has the following traits:
- An essential open ended question
- A methodology for thinking about and answering it
- Critical thinking, reflection and sharing, leading to new knowledge

Trevor Mackenzie



The Power of Questions





The Inquiry Process

Simplified for Primary Learners

- Ask a question
- Make a prediction
- Make observations
- Record your observations
- Compare your observations to your prediction
- Compare your observations with others
- Make connections to new ideas
- Share what you have learned

Cross Curricular
Integration
**Think of the
Possibilities!**

Sample Multi Primary Grade Inquiry Unit

Topic: Rainforests or The Living Forest

Big Ideas



Gr. 1 Living things have features and behaviours that help them survive in their environment

Gr. 2 Water is essential to all living things, and it cycles through the environment.

Gr. 3 Thermal energy can be produced and transferred.
Living things are diverse, can be grouped, and interact in their ecosystems.

The **inquiry** process involves research, observation and **hands on** exploration. The inquiry might be **project based** or **problem based**. This may determine which essential question you might pose.



Research:

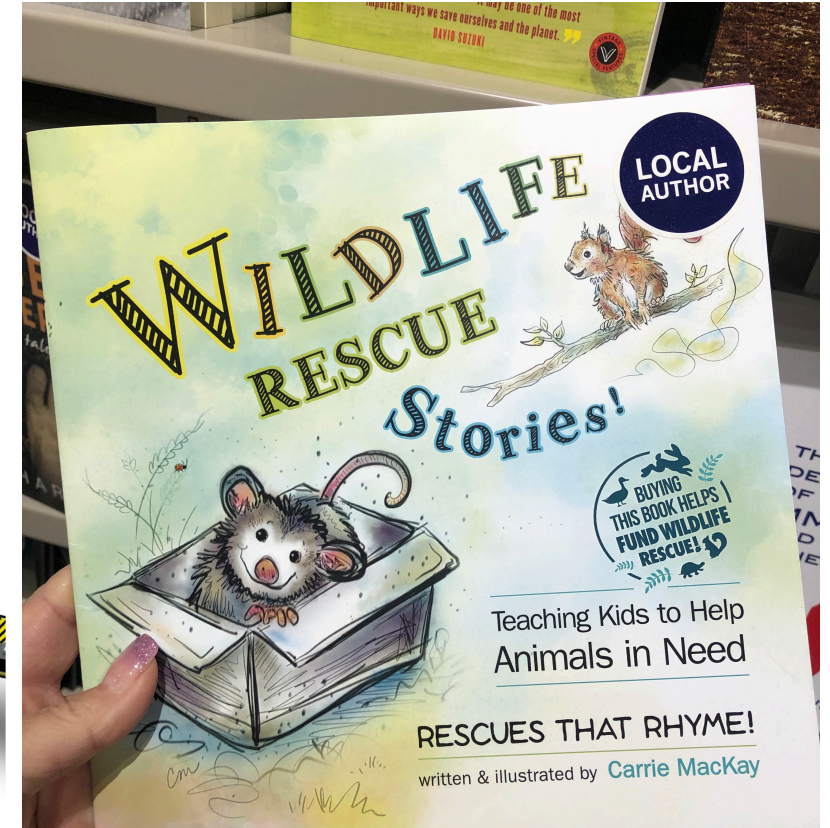
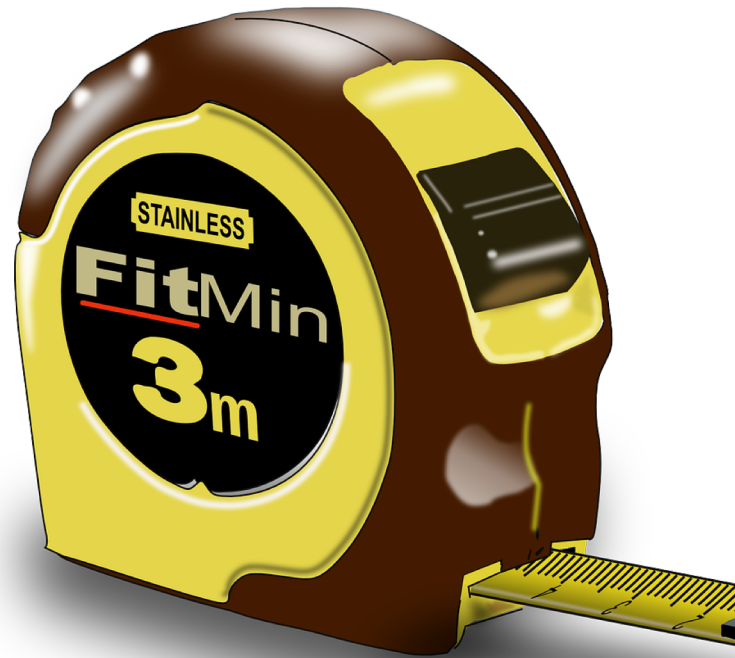
The temperate rainforests of BC
The Great Bear Rainforest
Animals that live in the rainforest
Forest/rainforest ecosystems
The Water Cycle at Work

Rainforest Topic Big Ideas	Project Based	Problem Based
Gr 1 Living things have features and behaviours that help them survive in their environment	Research and create a habitat environment for a forest creature in a terrarium.	Create some tips for families who camp to help wildlife survive in environments where humans are.
Gr 2 Water is essential to all living things, and it cycles through the environment.	Plant seeds and see how water helps plants grow.	Investigate how conserving water at home can help living things in our environment.
Gr 3 Thermal energy can be produced and transferred. Living things are diverse, can be grouped, and interact in their ecosystems.	Create a rainforest environment in a 2 litre clear pop bottle and put it in direct sunlight. Observe the changes in heat/moisture and how things grow as a result.	Investigate the effects on an ecosystem if one member of the food chain does not get its needs met?



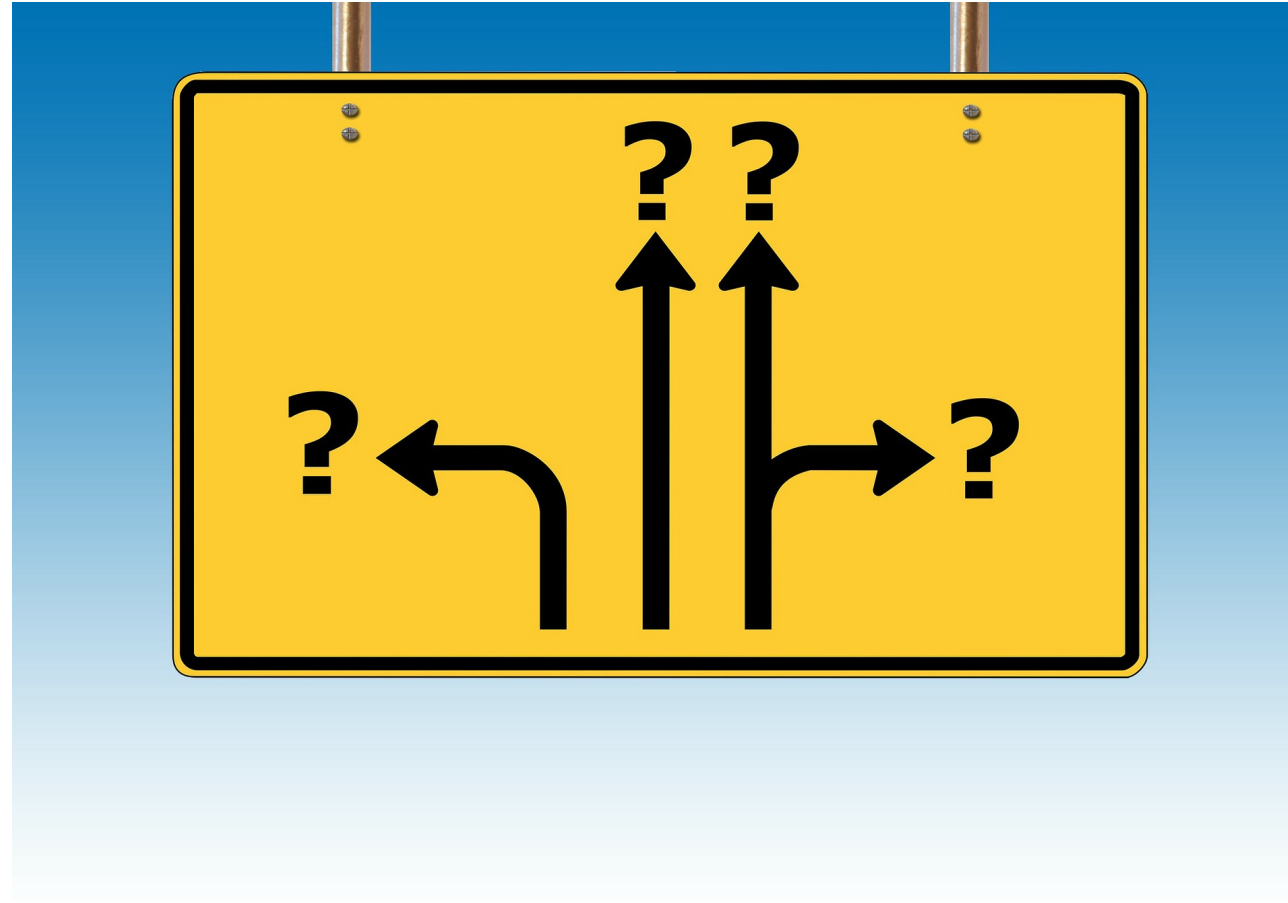
What Kind of Questions
Could be Asked?

Turn and Talk

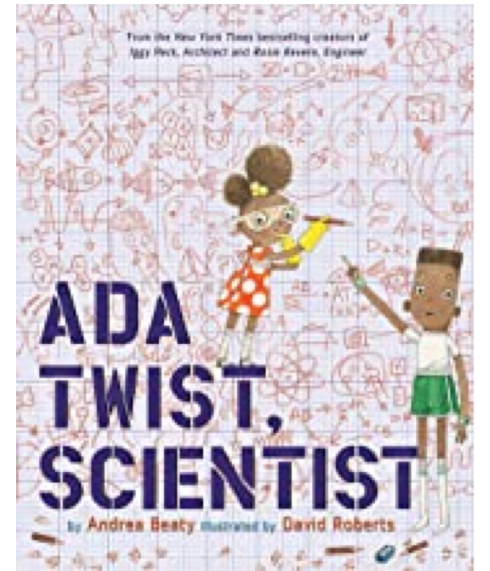
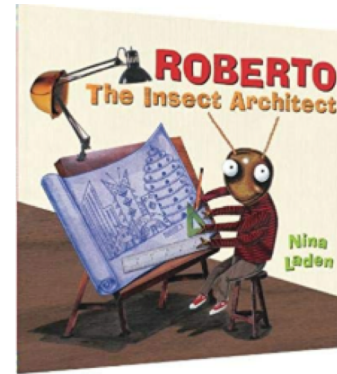
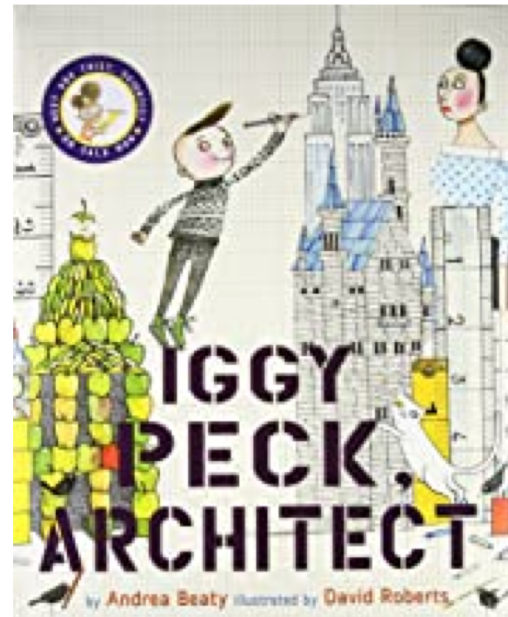
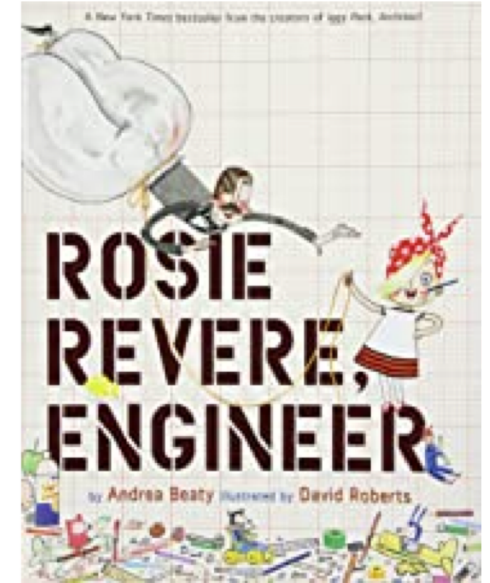
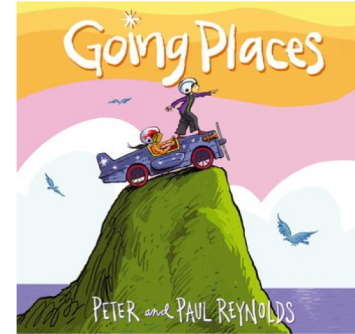


Indigenous learning –math - literacy connections

Which Way Will the Learning Go?



Literacy Connections to Science and Inquiry





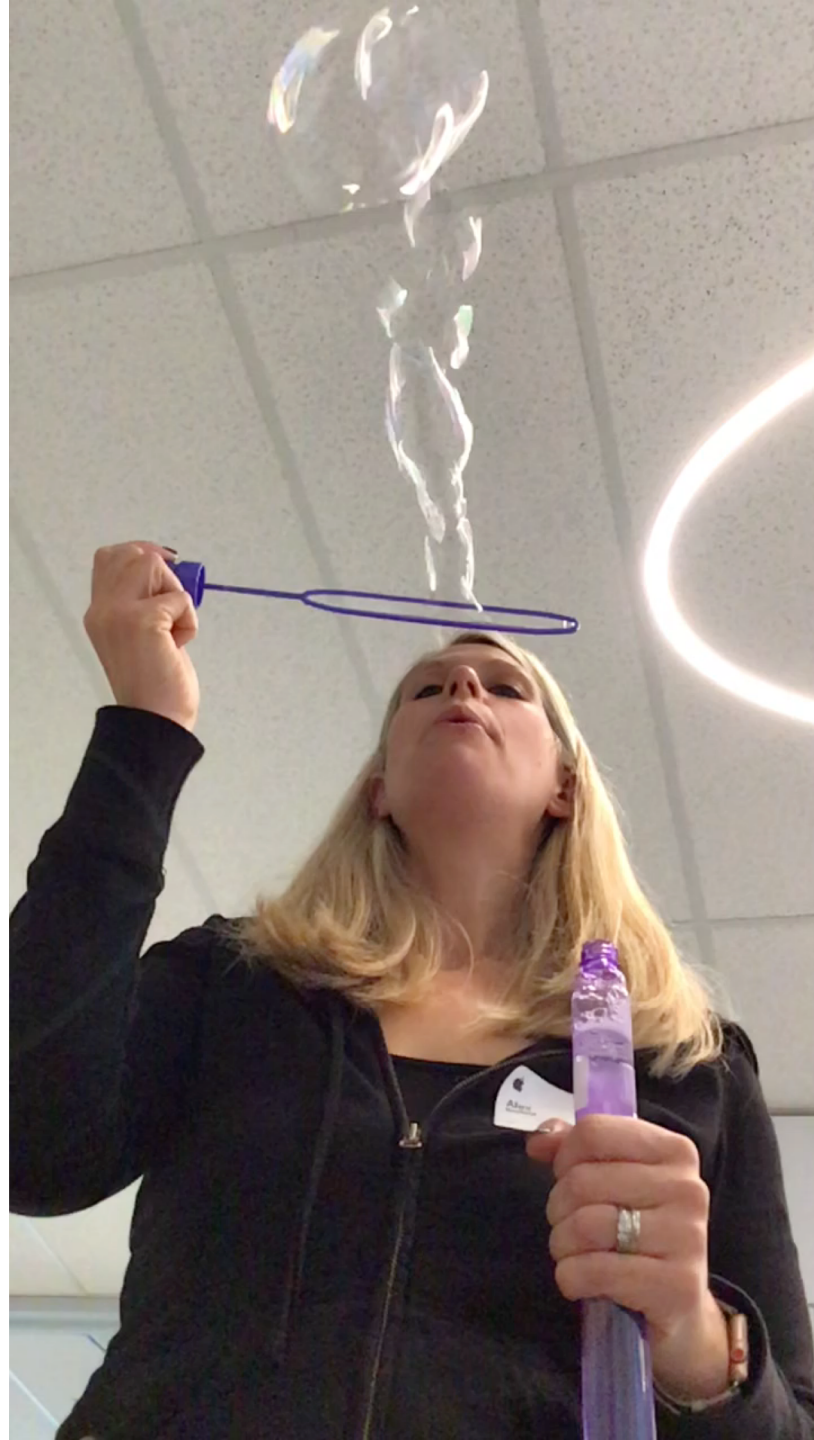
Let's Look at What Can Be Done With Bubbles

What Kind of Questions Might be Asked
of Bubbles?









Learn with your
students and from
your students.

**One day inquiry
learning will just be
called...**

School.