Inquiry-Based Learning

Today's inquiring minds don't just want to know. They want to make observations, ask questions, and seek resolutions to issues that are relevant to them. Committed to helping its learners play an active role in the construction of their own knowledge, Rocky View Schools (RVS) has embraced inquiry-based learning as a means of developing the 21st Century competencies needed to make this a reality.

Inquiry explained

Inquiry-based learning isn't just about asking questions and seeking "right" answers; it is about developing the ability to learn. Contrary to more traditional approaches that focus on the mastery of content, or "what" we know, inquiry-based learning focuses on "how" we come to know. Structured in its approach and emanating from provincial programs of study, inquiry teaches students how to convert information into new and useful knowledge. It also fosters the development of critical thinking skills and inquiring attitudes that will support students on their life-long quest for knowledge.

Inside an inquiry-based classroom

In RVS, teachers understand that inquiry-based learning is a dynamic process that builds on students' natural curiosity about the world in which they live. As suggested by the name, inquiry places student questions at the centre of the learning process by using the questions they pose to drive the learning process forward. In example, students studying children's rights might ask "Why do girls (in third world countries) not have many of the same rights boys do?" The teacher's response: "How might we find that out?". Not only does this approach enable students to deepen their understanding of the content in a manner appropriate to their developmental stages, the questions posed also inform the teacher of the students' levels of understanding. Another key component of the inquiry process is a collaborative activity in which learners come together to pose questions, posit theories, and to revisit, negotiate, and refine their ideas. With an end-goal of 'building students' knowledge base', this activity helps to identify gaps in understanding and to advance the understanding beyond the level of the most knowledgeable individual.

By fostering a culture of inquiry, teachers help students become more discerning observers and thinkers. As a result, students' critical-thinking skills deepen and their curiosity is cultivated - hopefully to last a lifetime.

Benefits of inquiry-based learning

Not only is inquiry helping to strengthen students' analytical skills, honouring their questions increases student motivation, confidence, and willingness to take more risks with their learning. Furthermore, through inquiry students develop skills that they can apply to all content areas, across all grades, and at any age.

Supporting RVS classrooms

To support the creation of effective instructional design practices that have their basis in inquiry, RVS' Learning Department has created an Instructional Design Planning Framework. This framework incorporates all three tenets of RVS' Learning Model and provides teachers with a practical, easy-to-use planning guide, aimed at providing them with a means of developing Universal Learning Environments. Currently being piloted in 12 schools, the framework helps teachers develop key understandings and essential questions, engage in authentic brainstorming, approach a student as an inquirer, and make a preliminary pitch - all hallmarks of effective inquiry practices.

inquiry-based learning

Hallmarks of inquiry-based learning

RVS' inquiry-based approach is not a rigid methodology or set of procedures. Rather, it entails an overall mindset - one that fosters a culture of collaborative learning and idea improvement. There is no single way to effectively engage student in an inquiry, as all students have diverse personalities, learning styles, talents, and interests across grade levels. Therefore, teachers must use a variety of strategies to stimulate their students' curiosity and guide the inquiry process.

Because good inquiry projects are developed with the unique needs of individual students in mind, no two will ever look exactly the same. However RVS has identified certain tenets that make up a well-designed inquiry project.
Deemed hallmarks, good inquiry practices:

Start with learner profiles
Captured through assessment, observation, inventories, and direct student contact, teachers should develop a Learner Profile for each student to ensure they have a firm understanding of each students' learning needs, preferences, and strenghts in areas such as literacy levels, language arts, and math. To be reviewed separately or rolled-up with all classmate profiles to create a "class profile", Learner Profiles provide the foundation for determining an effective inquiry approach.

Emanate from the programs of studies
Every good inquiry begins with an exploration of the general outcomes hoped to be understood/achieved through the program of study. Referred to as "key understandings", these are the big ideas or concepts that will provide the basis for, and drive the inquiry. A good inquiry will present key understandings that resonate with students, appeal to their interests, that are open to exploration and interpretation, and that allow for some interconnectivity with other disciplines.

Promote authentic learning
A good inquiry should motivate students to go beyond compliance in their learning and to look beyond the walls of the classroom to build knowledge. Always rooted in real-world connections, authentic learning encourages deep learning that asks students to define, create and draw ties between existing and new ideas to build greater understanding. Through meaningful, focused, reflective, and collaborative conversation, students are asked to access the specialists around them, seeking feedback and investigating multiple perspectives. In the completion of an authentic learning task, students will have synthesized, interpreted, evaluated and created in order to think through and represent the learning they have undertaken.

Are driven by questions
Not surprisingly, questions are at the heart of inquiry learning. Not only do they drive the inquiry, but they also help provide evidence of students' understanding. Questions that are open, provocative, arguable, reflective in nature, and have no simple right answer will utlimately result in the creation of additional questions that will help sustain the inquiry.

Amplify student choice and voice
An important step in an inquiry project requires teachers to consider how they will amplify students' choice and voice. Central to their learning, students must not only be able to raise questions and propose explanations, but also collaborate with their peers to revisit, negotiate, and refine their ideas. To ensure their work can have a real world impact, teachers also are asked to plan how and to whom students will share their learning. Effective practices would see students share their work with the public, with a knowledgeable audience, or with those whose work would be impacted by their learnings.

Scaffold to ensure success for all learners
All inquiries require support to ensure the success of all learners. This support is provided through formative assessment, Universal Design for Learning strategies, and a well developed learning plan that sequences the provision of resources, lessons and time for independent work. A common misunderstanding is that teachers never utilize direct instruction and skill-building strategies. In fact it is necessary for teachers to provide support in order for the students to successfully explore the inquiry.

Developed during the workflow process, the preliminary pitch drives the exploration in the inquiry. A one-page description used to hook students, the pitch presents the problem or issue to be explored in a real-world context and is THE key driver that defines the sustained work. Below are examples of preliminary pitches that have been used within RVS.

Grade Three: Rights of the child
In 1989, many countries came together hoping to agree that the children of the world needed to be protected from harm, exploitation, and poor living conditions. They decided that "a child is any human being below the age of 18 years, unless under the law applicable to the child, majority is attained earlier." They wanted to recognize that children have rights that cannot be taken away from them. The rights that they agreed upon focused on providing children with the basic needs and necessities of life. Since then, 192 out of 194 countries have adopted these rights for children in their country. Now only two countries have not signed the CRC, the United States and Somalia. Despite this, there are many situations in the world where children's basic needs are not being met and in many situations, children are forced to work long hours instead of going to school. Children are not provided with enough food or clean water to ensure they are healthy. They don't have access to hospitals, schools, or proper homes. They are, at times, forced to join an army or a war before the age of 15. Inequality between children also is an issue. In many countries, boys and girls are treated differently. Girls often do not have many of the same rights as boys. Children that need special help are not provided with it.

Action:
Investigate if children really do have rights around the world; what do these rights mean and why do we have them? What is our role for those whose rights are not being met? What can we do? What should we do?

Grade 5: What is my mark on the world?
If everyone in the world lived like you, we would need 3.5 planets to support global consumption. As our world continues to advance, there are more consequences on the environment as a result of our actions. Over the years, we have seen changes in the economy, and to our resources and communities. We have also seen the impacts of construction on wildlife and their habitats and noticeable changes in weather patterns. As the future generation, it is your responsibility to protect our planet, sustain natural resources and the communities in our regions. The more we learn about how our actions affect people and the environment, the more we can see why people need to take steps to reduce the impact causing damage to the environment.

Action: Choose a current environmental issue that is of great importance to you and that is having an impact on our regions. Create an action plan for steps towards a healthy future and present your issues to the environmental forum. Your action plan will be posted to the Manachaban Grade 5 Environmental Blog and shared with the world.

Source: http://www.ecologicalfootprint.com/

Sharing practices, building enduring understandings

RVS Inquiry Wiki

Rocky View Schools, committed to building teachers' capacity in effective instructional design, is developing an Inquiry Wiki that will accompany the Instructional Design Planning Framework. A dynamic, open space where knowledge can be constructed, acquired, and shared, the Wiki will house a variety of inquiry-based learning resources and will serve as a place where deep conversations about inquiry can occur. Access RVS' Inquiry Wiki at <http://wiki.rockyview.ab.ca/index.php/Inquiry>.

RVS Inquiry Blog

Rocky View Schools also has created an Inquiry Blog that provides a sneak peek at what inquiry looks like in the classroom. A celebration of exemplary work being done within the jurisidiction around the creation of Universal Learning Environments through inquiry-based studies, the blog will both inspire and guide teachers in the creation of their own inquiry studies. Visit the Inquiry Blog at <http://blogs.rockyview.ab.ca/inquiry>.

What RVS teachers have to say

"Utilizing inquiry-based learning has allowed students to explore their passions and enrich their learning through real-world experiences. Students use collaborative and critical thinking skills to question the issues that are occurring in our world; student engagement in the design of their own learning has been paramount to their success in and out of the classroom." ~ *Andrew Doyle, Glenbow Elementary School*

"Inquiry learning is fundamental to teaching students how real life operates. Teaching kids to learn through asking questions and determining the answers is what real life learning IS. Students must brainstorm ideas, problem solve, collaborate, execute ideas, understand what to do when the idea fails, rethink and try again. Using inquiry-based learning creates citizens that will be ready for life outside of school in the 21st Century. Inquiry lends itself to the seamless integration of multiple curriculums into one topic. The individual needs of students are met because of the open-ended nature of the learning. Students are more engaged and are more successful regardless of their learning styles and needs when teachers become facilitators and scaffold students only when needed. Using essential questions based in curriculum to provide a framework for inquiry, students learn how to be ACTIVE participants of their learning." ~ *Kelly Roberts and Patti Ball, Muriel Clayton Middle School*

'Inquiry-based learning lets students apply the curriculum to their strengths and interests, which can make the learning more interesting and applicable!" ~ *Lindsay Rous*

"The depth and breadth of learning for our students has expanded their ability to problem solve and think critically. Students are enthusiastically willing to take risks in their learning." ~ *Stephanie Bennett and Susan Poole*

"Learning takes place through inquiry: questioning, exploring, experimenting, and problem solving. Inquiry is not a linear process, and rarely even a cyclical one. The process moves back and forth between asking, investigating, reflecting, connecting, and constructing meaning. As inquirers we often shift between more than one 'model'. This is true inquiry. It has no map, no set pattern, and it can be messy!" ~ *Denise Weaver*

For More Information

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