

# Raincoast Field School

2019/2020 Tofino Field School Lesson Summaries



**Mr. Redican, Gr. 4/5**

**Jan. 22, 2020**

## **Stream Macroinvertebrates**

Previously, the students of Mr. Redican's class helped in the restoration project of Centennial Creek. This local creek runs right through the town of Tofino and has suffered from negative human impacts. Today the students learnt what bio-indicators are and how we can measure their presence to calculate stream health. We also had a special guest; Giselle Martin join us to teach about the importance of respecting and caring for the small organisms of the streams. Every species plays a special roll in the environment, the students learnt how important it is to observe and listen to what the bugs can tell us.

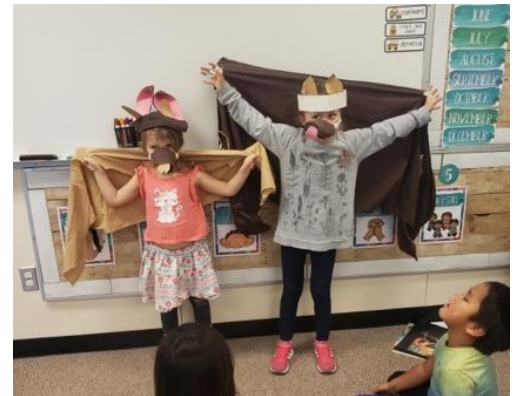


**Mrs. Bruhwiler-Kindergarten**

**January 8, 2020**

## **Bat Adaptations**

This morning Ms. Bruhwiler's kindergarten class focused their learning on bat adaptations! We learnt how bats sleep, what they eat, and how they move. The class then headed into the forest to play a game putting our new knowledge to the test. The children paired up as mother and pups and chose a special call to help locate one another. The babies hid in the forest and called out helping their mothers find them.



**February 12, 2020**

## **Traditional Community Helpers**

Today the kindergartens of Wickaninnish set out on a town tour with our cultural educator Giselle Martin. We adventured down to the beach to explore the historic location of clam gardens, a few students even got a warm welcome by the clams as they were sprayed in the face! Next, Giselle led the students up to a special lookout used historically to warn Optisat of incoming visitors. All along our walk Giselle introduced us to the Nu-chu-nulth words for the different animals, trees, and locations we visited.



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## Heartwood Buds

**Feb. 6<sup>th</sup>, 2020**

### Intro to plants

With the “Buds”, we adventured the forest looking at some of the local plant species and discussing their adaptations. After choosing a favourite plant, the students were challenged with creating a scientific drawing labeling 6 key plant parts. After properly labeling the seeds, roots, stem, leaves, flowers, and fruit; we discussed the functions of each part and how they shift through the seasons. Next up we will focus on microhabitats and soils.



**Feb. 13<sup>th</sup>, 2020**

### Soils and microhabitats

During our morning with the Buds, we adventured off course following a perennial stream. Along the journey we discovered an area with exposed soil horizons. The Buds looked at the differing layers in the soil column and identified each layer by their scientific terms- A layer, B layer, C layer, and Bedrock. The students then felt the differing textures between the layers and observed/ discussed what elements in the soil constitute the changes in colour. We chased the stream focusing on this microhabitat ecosystem looking at what constitutes a healthy stream habitat for fish. The students then got creative along the banks drawing out an ideal stream for fish. The students were able to incorporate stream complexity- large woody debris, overhanging vegetation, and undercut banks for fish hiding/ resting spots. As well they focused on substrate type, temperature, and stream flow. They even were able to brainstorm a few conservation ideas helping to reduce human impacts.



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## Feb. 20, 2020 - Soil texture

This morning with the Buds, we adventured back through the forest to our clay cave. This unique spot allowed the students to observe the differing layers of soil. We expanded on our previously gained knowledge by exploring each layers texture. Soil texture plays a large importance in water retention, root depth, soil stability, and nutrient regimes. The students used a dichotomous key to identify the proper soil texture. Textures were assigned to the A layer, B layer and C layer of the soil column. The students had a blast getting down and dirty with the heavy clay soil composition.



## Feb. 27<sup>th</sup>, 2020 - Erosion Project

To continue on our soils unit with the Buds, the students were challenged with creating an erosion project. In a bucket the students had to create the soil column and then add different substrates to act as a barrier to erosion. The students headed back into our secret forest clay cave to collect some soil layers and other materials such as rocks, vegetation, and small woody debris. From here they had to use their teamwork skills to carry their heavy buckets of materials all the way back to the classroom. A few groups struggled with communication and keeping a positive attitude but we persevered and all made it back safely in the end. We tested their bucket creations by splashing the created soil layers with water. Once the experiment was complete, we reflected on ways we could improve our bucket creations.



## March 12<sup>th</sup>, 2020, Soils project wrap up

Today with heartwood we wrapped up our unit on soil by creating one last soil profile, however this time we created each layer using candy! The students collaborated together to decide which type of candy should be used to best represent each soil layer, keeping in mind concepts such as compaction, leeching, aeration, and decomposition.



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## Heartwood Sprouts

### Feb. 6<sup>th</sup>, 2020, Intro to Plants

In the afternoon with the “Sprouts” we spent the first half on a forest walk looking for signs of spring. We spotted some new growth of Skunk Cabbage in the wet microclimates and observed some new bud growth on the shrub species. We discussed forest plant adaptations and how different species prepare themselves for the changes in season. After collecting a few native plants, we brought them back to our classroom to look in detail and draw up some scientific sketches of each plant part.



### Feb. 13, 2020, Springtime and New growth

In the Afternoon, the Sprouts and I hid from the rain as we brainstormed what spring means to us. On a white board we took turns going around the room adding images and words related to spring. We were able to create a spring time community board! Once the rain stopped we were lucky enough to enjoy some sunshine as we walked around the gardens on a scavenger hunt. The students were challenged to identify 3 different plant species. Once they were found we looked for signs of spring and new growth, drawing an image of bud development. The kids identified Skunk cabbage, Rhododendron, and Salmonberry.



### Feb. 20, 2020, Plant monitoring

During our afternoon session, the sprouts grabbed their clipboards and pencils to adventure out and view our 4 plant species. Last class we chose the specific location to monitor these species, so today we returned to record and measure their growth. We once again returned to a salmonberry shrub, skunk cabbage, Rhododendron, and our mystery plant (today we found out it was a daffodil). The students drew what they saw, measured the bud development, and recorded the colors they observed. We ended off the day exploring the mud flats and enjoying the sun.



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**Feb. 27<sup>th</sup>, 2020**

## Plant monitoring and creative development

The sprouts continued their plant monitoring project, once again returning to our 4 plant locations to record new growth and take measurements. The students observed new growth at the Salmonberry bush as its flower is getting ready to open. We hope to see some pretty pink flowers during next week's monitoring. To avoid the rain we headed back to the classroom to unwind and do some drawing exercises. In a circle we had one student start us off by drawing something that came to mind. From here the marker was passed around and each student added an image they felt could be connected. Great work today sprouts! As always it was a pleasure getting to work and learn with you.



**March 12, 2020**

## Last day of monitoring

Today the sprouts enjoyed the sunshine as we did our final data recording session for our 4 plant species. We were so excited to see the skunk cabbage come to bloom! However, our rhododendron and daffodil have still yet to flower. The kids did an amazing job practicing their measurements, units and scientific drawings.



**Ms. Hendry, Kindergarten**

**Jan. 23rd, 2020**

## Winter hibernations

A lesson suited for our crazy winter weather! These students explored how a variety of animals prepare for winter. Focusing on black bears, the students were able to get a close look at a bear's physical features using our bear hide. Next we went on a bear hunt through the forest keeping an eye out for dens! The students were delighted to find some paper bear cut outs hidden around the forest.



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## Mr. Holt- Grade 2/3

**January 7th, 2020**

### **Primary Producers with Giselle**

Today, Raincoast's cultural educator Giselle Martin joined in for some field school fun! With Mr. Holt's grade 2/3 we adventured down the Tonquin Trail to learn about the importance of primary producers in a forest ecosystem. Along the way Giselle shared many stories and helped the students understand the importance of plant species to past generations of people living in the Clayoquot region.



**March 10<sup>th</sup>, 2020**

### **Intertidal Food Webs**

Today the students of Mr. Holt's grade 2/3 class prepared for an outdoor adventure to Frank Island. We made sure to bundle up ready to face the rainy windy weather. Once reaching the beach we explored the rocks looking at the horizontal bands of different color and form. The plants and animals of the intertidal zone with similar tolerances to stress tend to form these communities of bio-bands. From here we searched the island for tide pools to observe the wide variety of species present. Back in the classroom we made connections between the species and did a mini discussion on producers, consumers, and top predators.



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**Mrs. Baas, Gr. 1/2**

**Feb. 5<sup>th</sup>, 2020, Water with Giselle**

Today's lesson was lead by our cultural educator Giselle Martin. We loaded onto the Raincoast bus to check out two nearby locations. Having just begun a water unit in class, we took the students to observe the differences in our ocean waters when in Tofino's inlet versus on our exposed coastline. At Grice bay, the students were challenged with the task to determine whether the water we were observing was the ocean or lake. Successfully the students were able to justify their answer due to the tide line, salt water, and ocean aquatic species such as crabs. Down at Long Beach we observed the intensity of the waves and discussed topics such as erosion, hunting, and transportation. A big thank you to Giselle for sharing so much with us!



**March 11, 2020, Healthy ecosystems**

Ms. Baas' class has been learning about the human body, how it functions and how to keep it healthy! Today we adventured to Long Beach to enjoy the sun and move our healthy bodies. We warmed up with a creative yoga session which led to a few beach games, where we ran, crawled, and skipped through the sand. To sum up the day we used gathered materials on the beach to create sea stars. We then explored some body systems of sea stars and compared them to humans.



**Mrs. Thompson, Grade 1/2**

**Feb 11, 2020, Cultural stories with Giselle**

During the afternoon we set out as a class down Tonquin trail. By our side was Giselle Martin our cultural educator to share stories and lessons along the way. We spend the afternoon playing games and sharing stories in the sun! Thank you Giselle for sharing how the eagle got his eyes, and why the crows always beg for food.



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**Ms. Morris, Gr. 6/7**

## **Feb. 11th 2020, History of Tofino**

Today Ms. Morris's class was led on a historic walk through the town of Tofino by our cultural educator Giselle Martin. While on our tour we ran into Joe Martin (Giselle's father) who volunteered to jump along! Joe took us up to his wood working shop to show the students a hand carved cedar canoe being made. The amount of artistic detail was amazing! Even the tools themselves had beautifully carved handles to remind the workers of different themes and stories of the Nu-chu-nulth nations. A big thank you to the Martin family for sharing!



**Ms. Hill Kindergarten 2019/2020**

## **Feb. 4<sup>th</sup>, 2020, Cultural Community Helpers**

Today the students of ms. Hill's kindergarten class bundled up for a walking town tour of Tofino. Accompanied by our cultural educator Giselle Martin, the students were introduced to some significant areas around town, learning about the history and cultural importance. During snack break Giselle shared with us her families song to celebrate a meal. After a pit stop in the canoe workshop, Giselle lead us to the town's lookout point where we learnt to see out over the water for visitors or invaders. Thanks so much Giselle for all your teachings.





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## Mr. Reynolds Grade 3 and 4

### Feb. 7<sup>th</sup>, 2020, Landfill and Waste Management

Mr. Reynolds Grade 3/4 has just started a public services unit with RES. To kick things off, the students took a trip to our local landfill to learn about waste management. Here the students observed how our garbage is sorted, deposited and covered over. We became aware of leachate and how this secreted substance follows a ditch line into a lagoon. The leachate is then naturally filtered before heading back into the surrounding water sources. Back in the classroom we discussed some alternative household items to use to help reduce our impact. We finished off the day with a guessing game to estimate the time line it takes for certain items to decompose.

