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| BEN: Scientific Inquiry (Dolphin Quest) |
| Month | March 17, 18, 19 |
| Objective: | 1. Scientific Inquiry: Expedition to Dolphin Quest to learn about early scientists and their revolutionary discoveries and how scientists today use research and evidence and continue to help us understand our world.
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| 9:151:00 | Arrival  |  Welcome, introduce teachers, bathrooms.Sign Waiver.1. Students are split up into two groups.2. Fruit can be eaten at the end of the expedition. |
| 9:20-10:201:05- 2:05 | Mystery Boxes2 Rotations | **(Group 1) Mystery Boxes (BEN Teacher)****Lesson Hook:*** Once students are seated, show the gift box and ask:  How many of you ever wanted to know what was inside a wrapped birthday (or other holiday) package?  How many of you shook the box?  How many of you guessed correctly?
* Explain to students that carefully observing things we cannot see may still be observed.
* Team Jobs- Scribe, Runner and

**Guided Practice*** Remind students they may not open them.  Shaking them is permitted.  Talk quietly to each other.  They are working as scientists.  Work cooperatively.
* As they discuss what may be in the box, remind students the importance of listening to each other.  Respect opinions of “other scientists.”
* Rotate the all 6 boxes until each group has had a chance to observe and make guesses of what is inside.
* Once complete, allow each group to share the guesses for each box.  List their guesses on the board for each box number you use.
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| 10:20- 11:452:05- 2:30 | Dolphin Quest | **(Group 2) Dolphin Identification (DQ Teachers)** **Supplies:*** Dolphin Identification Laminates
* Dolphin Hypothesis Testing Table
* Clip boards
* Stop watches/ spare watches if available

(Group 2)**Theme: Scientific Enquiry** * **Ep – Ideas and evidence**
	+ Dolphin Identification exercise (15 mins)
		- Discuss difficulty of studying animals especially in the wild
		- Using observation to test the prediction of the number of animals present

**(Whole Group- come together for investigative work)****Students will collect data on hoe fast the dolphins are able to swim.*** **Ep – Plan investigative work /Eo – Obtain and present evidence –** through a live demonstration with our dolphins (30 mins)
	+ Hypothesis 1 – “Dolphins are 8.5 feet in length”
	+ Hypothesis 2 - “ Dolphins body temperature is 98.7 degrees”
	+ Hypothesis 3 – “Dolphins are 48.5 inches in width”
	+ Hypothesis 4 – “Dolphins can swim as fast as 18 mph”
	+ Hypothesis 5 – “Dolphins can exert a force of 1084 N”
	+ Evaluate alternative explanations about scientific claims we tested
* **Eo – Consider evidence and approach**
	+ Bring the facts learned back to the classroom and analyze the data observed.
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|  | Dolphin Encounter | 1. *Encounter with the dolphin- Students will be able to walk down to learn*
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| 11:50-11:552:50- 2:55 | ClosureSocial Emotional | *Closure:**Question- How many of you were nervous or scared? Explain Why.* *Became brave… What happened?**Celebrate their growth!* |
| 12:003:00 | Dismissal and Fruit |  Mr. Degraff- Will collect and drop-off from the front of the museum. |
| Other: |  | 1. Hats
2. Water
3. Request central schools leave 10 minutes earlier. (8:45)
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