What Can Seabird Barf Tell Us?
Worksheet: Seabird Ecology

Midway Atoll is located in the north south (circle one) ________________ Ocean in the ________________ _________________ Islands.

Midway Atoll is famous for its ________________ history, beautiful ________________, and millions of ________________, particularly the ________________, or goonies.

Fledging = ____________________________________________

Albatrosses are currently most threatened by

• ____________________________________________
• ____________________________________________
• ____________________________________________

Adult albatrosses feed their chicks by _________________. They usually eat ________________, ________________, and more.

Bolus = ____________________________________________

Items found in a bolus:

• ________________
• ________________
• ________________
• ________________
• ________________

Research Question:
__________________________________________
__________________________________________

Hypothesis:
__________________________________________
__________________________________________
What Can Seabird Barf Tell Us?  
Worksheet: Seabird Ecology

Midway is located in the ___north___ south ___Pacific___ Ocean in the ___Northwestern___ ___Hawaiian___ Islands.

Midway is famous for its ___Navy/military___ history, beautiful ___coral reefs___, and millions of ___(sea)birds___, particularly the ___albatrosses___, or goonies.

Fledge = ___bird chicks leave the nest to fly on their own and become independent___

[In order to see where animals go when we can’t see them, scientists use ___satellite___ ___tags___. They show that albatrosses feed ___all over the North Pacific ocean___. (exclude if time is short)]

Albatrosses are currently most threatened by
- longline fishing (longline)
- lead poisoning → droop-wing syndrome
- introduced mammal predators

Adult albatrosses feed their chicks by ___throwing up___. They usually eat ___squid___, ___fish eggs___, and more.

Bolus = ___compact mass of indigestible material regurgitated (thrown up) by seabird chicks just before fledging___

Items found in a bolus:
- Plastic
- Squid beaks
- Fishing nets & lines
- Rocks (often pumice)
- (also sometimes glass, other things)

Research question:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
What Can Seabird Barf Tell Us?
Worksheet: Impacts of Marine Debris

Marine debris = ____________________________________________________________
________________________________________________________

Most marine debris is plastic because it is ________________ and
______________________

Major impacts of marine debris:
• Ingestion = ____________________________________________________________
• Entanglement = _______________________________________________________
• _________________ = fishing nets continue to catch fish long after being abandoned
• Transport of _________________ species
• Human health risks
• Economic impacts

“Garbage Patches” = _______________________________________________________

What are three ways you can help reduce plastics and marine debris?
• ____________________________________________________________
• ____________________________________________________________
• ____________________________________________________________
• ____________________________________________________________

What are two things you learned from this activity?
• ____________________________________________________________
  ____________________________________________________________
• ____________________________________________________________
  ____________________________________________________________
What Can Seabird Barf Tell Us?
Worksheet: Impacts of Marine Debris

Marine debris = ___any solid material made by humans that is disposed of in the ocean___

Most marine debris is plastic because it is ___strong, flexible, lightweight (floats), and durable – doesn’t biodegrade___.

Major impacts of marine debris:
• ingestion = ___organisms eating marine debris, which can cause internal injury, starvation, and even death___
• entanglement = ___organisms getting tangled in fishing nets or other marine debris, which can cause injury, suffocation, and death___
• ___ghostfishing___ = fishing nets continue to catch fish long after being abandoned
• transport of ___exotic___ species
• human health risks
• economic impacts

“Garbage Patches” = ___areas in the ocean where trash and debris accumulate due to ocean currents___ (consider excluding if time is short)

What are three ways you can help reduce plastics and marine debris?
• Reduce, reuse, recycle
• Put your cash in trash cans
• Pick up trash
• Conduct a clean-up
• Support legislation about marine debris
• Encourage your family and friends to help keep beaches & oceans clean!
What Can Seabird Barf Tell Us?
Datasheet: Bolus Dissection

Team members: ________________________________________________________________

Date of dissection: ______________________

Bolus #: _____ Species (if known): ________ Location: ___________ Date of collection: ________

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
<th>Mass (g)</th>
</tr>
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<tbody>
<tr>
<td>Natural Items</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Squid beaks</td>
<td></td>
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<tr>
<td>Unidentified plant fragments</td>
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<tr>
<td>Rocks</td>
<td></td>
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<tr>
<td>Other:</td>
<td></td>
<td></td>
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<tr>
<td>Unnatural Items</td>
<td></td>
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<tr>
<td>Plastic fragments</td>
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<tr>
<td>Fishing line</td>
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<tr>
<td>Other:</td>
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<tr>
<td>Other:</td>
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</tbody>
</table>

Most interesting item in your bolus: ________________________________

Class Graphs:

Mass of Items in Albatross Boluses  Count of Items in Albatross Boluses

Conclusion:

________________________________________________________________________

________________________________________________________________________