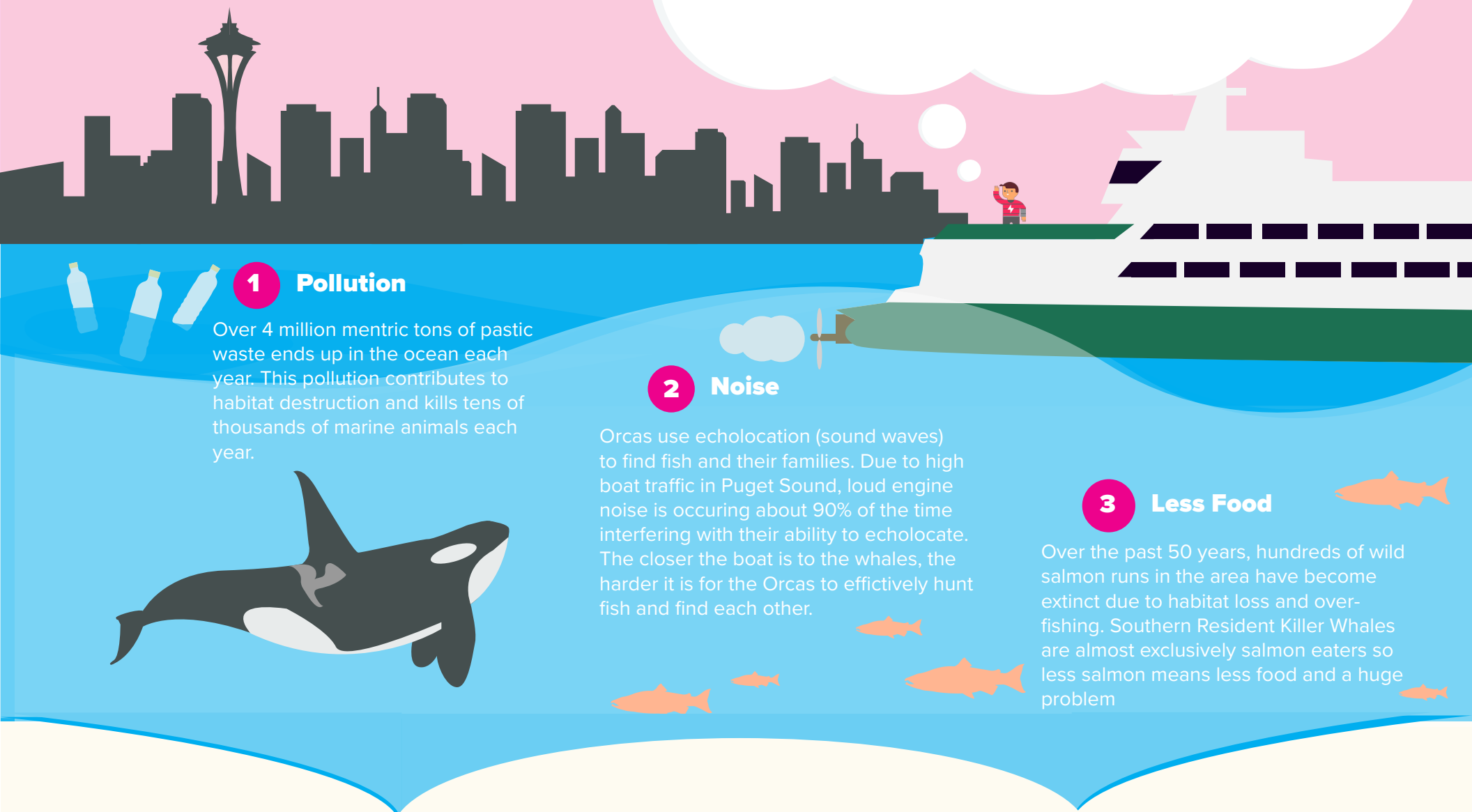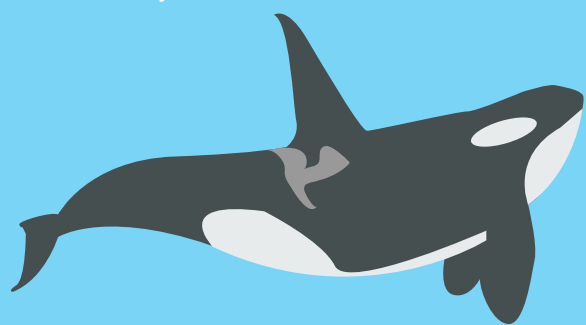# Why are there fewer orcas in the Puget Sound?

1 Pollution

Over 4 million mentric tons of pastic waste ends up in the ocean each year. This pollution contributes to habitat destruction and kills tens of thousands of marine animals each year.

2 Noise

Orcas use echolocation (sound waves) to find fish and their families. Due to high boat traffic in Puget Sound, loud engine noise is occuring about 90% of the time interfering with their ability to echolocate. The closer the boat is to the whales, the harder it is for the Orcas to effectively hunt fish and find each other.

3 Less Food

Over the past 50 years, hundreds of wild salmon runs in the area have become extinct due to habitat loss and over-fishing. Southern Resident Killer Whales are almost exclusively salmon eaters so less salmon means less food and a huge problem

Excessive Water and Power usage also negatively affect orca habitat

With Killer Whale Tales' Kids Making a Difference Now! conservation activities,

3,851 students from 47 schools

participated in our program and made the following differences:
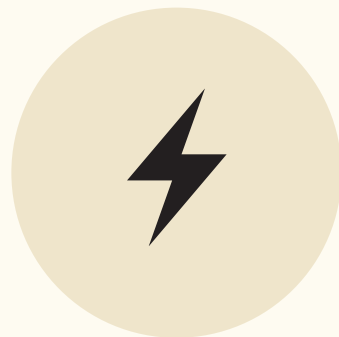
Reduced running water time while brushing their teeth by
9
seconds per participating student

Reduced bath water levels by
2.3
inches per participating student

Reduced running water time while taking a shower by
4.1
minutes per participating student

Conserving an estimated 36,211 gallons of water

*Participating students are those that reduced, increased, or made no change in their household consumption with each conservation activity (see next page)

Kindergarteners*
8%
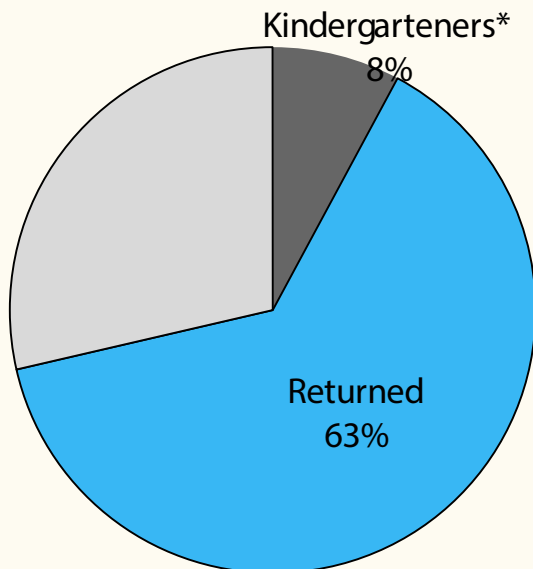
Returned
63%

2,446 of 3,548 students >Kindergarten returned their Kids Making a Difference Now! Worksheets
*Kindergarteners are not required to complete KMAD worksheets
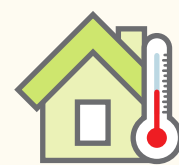
Lowered their household thermostats by
4
degrees Fahrenheit per participating student

Unplugged and turned off
17,555
unused devices and lights

Great Job!

Estimates vary, but according to the USGS **each person in the US uses about 80-100 gallons of water per day.**

The largest use of household water is the toilet (flushing 9-19 gallons/person/day) followed by showers and baths. Other uses include washing clothes and dishes, brushing teeth, and drinking water.

The U.S. Government Accountability Office estimates that **U.S. drivers waste 1.2 Billion gallons of gasoline per year because of under-inflated tires.**
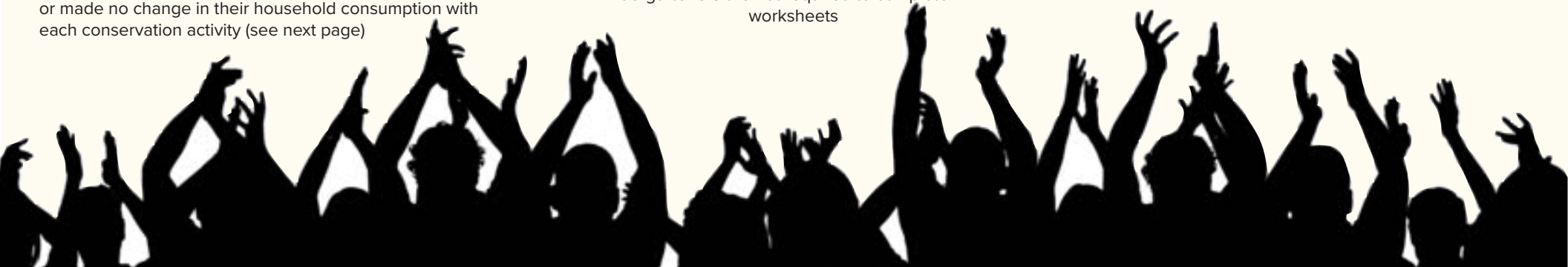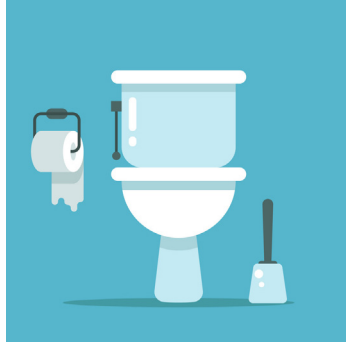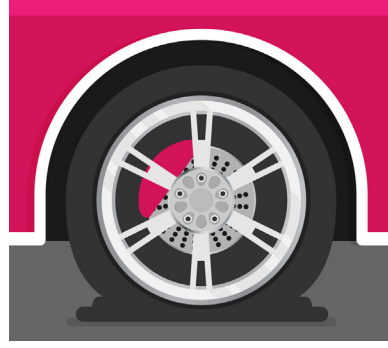
This increases harmful greenhouse gases in the air and pollutes our waters.

According to the EPA, **Americans generated about 254 million tons of trash** in 2013 (about 4.4lbs per person per day).
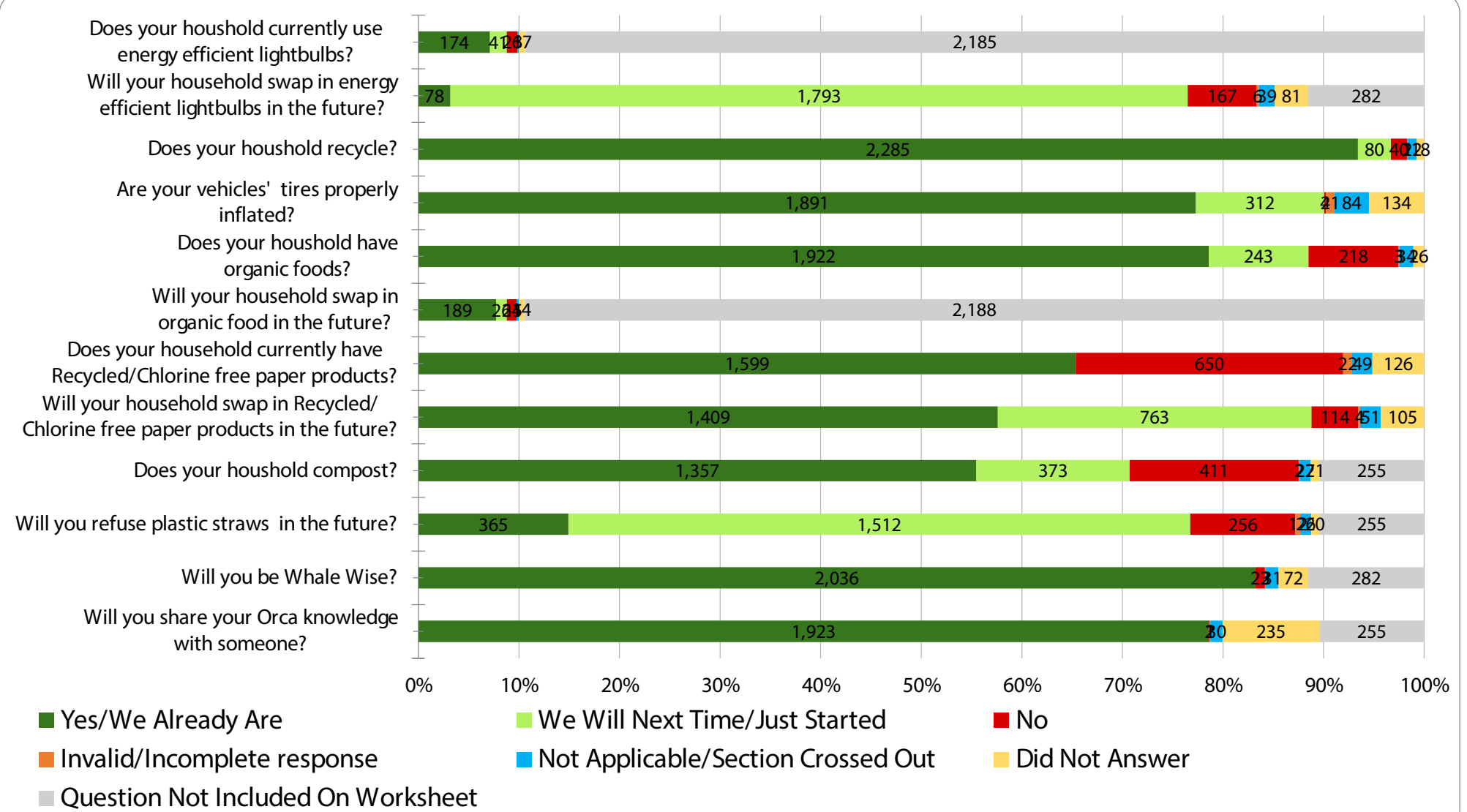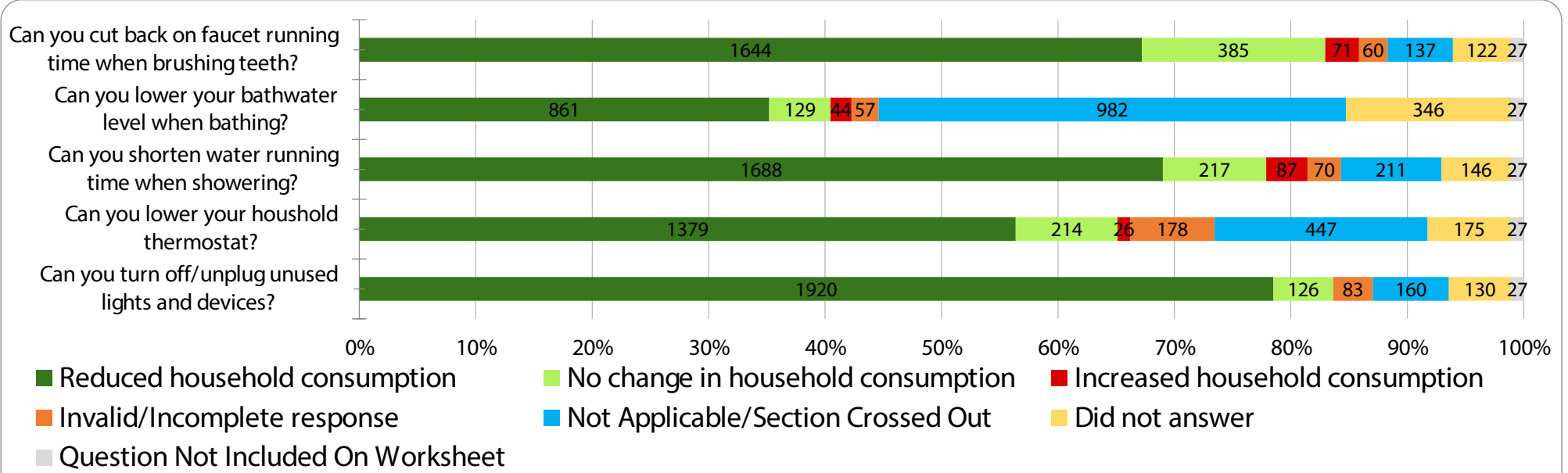
Through recycling and composting 87 million tons (34.3%) of this material was kept out of landfills, preventing the release of ~186 million metric tons of carbon dioxide into the air.

With Killer Whale Tales' Kids Making a Difference Now! conservation activities,

2,446 students

reported the following:

Question	Reduced household consumption	No change in household consumption	Increased household consumption	Invalid/Incomplete response	Not Applicable/Section Crossed Out	Did not answer
Can you cut back on faucet running time when brushing teeth?	1644	385	71	60	137	122 / 27
Can you lower your bathwater level when bathing?	861	129	44	57	982	346 / 27
Can you shorten water running time when showering?	1688	217	87	70	211	146 / 27
Can you lower your houshold thermostat?	1379	214	26	178	447	175 / 27
Can you turn off/unplug unused lights and devices?	1920	126	83		160	130 / 27

- ■ Reduced household consumption
- ■ No change in household consumption
- ■ Increased household consumption
- ■ Invalid/Incomplete response
- ■ Not Applicable/Section Crossed Out
- ■ Did not answer
- ■ Question Not Included On Worksheet

Question	Yes/We Already Are	We Will Next Time/Just Started	No	Invalid/Incomplete response	Not Applicable/Section Crossed Out	Did Not Answer	Question Not Included On Worksheet
Does your houshold currently use energy efficient lightbulbs?	174	41	26	37			2,185
Will your household swap in energy efficient lightbulbs in the future?	78	1,793	167	39	81		282
Does your houshold recycle?	2,285	80	40	21		28	
Are your vehicles' tires properly inflated?	1,891	312	21	84		134	
Does your houshold have organic foods?	1,922	243	218	3		46	
Will your household swap in organic food in the future?	189	26	24	14			2,188
Does your household currently have Recycled/Chlorine free paper products?	1,599	650	22	49		126	
Will your household swap in Recycled/Chlorine free paper products in the future?	1,409	763	114	51		105	
Does your houshold compost?	1,357	373	411	22		1	255
Will you refuse plastic straws in the future?	365	1,512	256	12	30		255
Will you be Whale Wise?	2,036		23	1	72		282
Will you share your Orca knowledge with someone?	1,923		30		235		255

- ■ Yes/We Already Are
- ■ We Will Next Time/Just Started
- ■ No
- ■ Invalid/Incomplete response
- ■ Not Applicable/Section Crossed Out
- ■ Did Not Answer
- ■ Question Not Included On Worksheet

* Current use of energy efficient lightbulbs and commitment to buying organic foods questions were not included in the newer version of the KMAD worksheets. Conversely future use of energy efficient lightbulbs, composting, plastic straw usage, being Whale Wise, and sharing your orca knowledge were not included in previous versions of the worksheet.

Great Job!