2.2 2		2.02 2.02
548 348		્યુસ્ટ્ર
2.4 05050	SCIENCE ACTIVITIES FOR YOUR CLASSROOM http://www.ldeo.columbia.edu/polareducation	9.4 375
0.00 0120 0130 0130 0130 0130 0130 0130 01	Margie Turrin - <u>mkt@ldeo.columbia.edu</u>	03050 040 040
02000 02000 02000	Lamont-Doherty Earth Observatory of Columbia University	02000 0000 0000
origino		or a second
	The following is a partial list of activities developed from NSF, NASA and NOAA funded	
	science and education initiatives. They are available in student and teacher versions on our	0386 0386 0386 0
00000	Polar Education page (web link above). They are NGSS mapped.	0
0100 0100 0100		030000 030000
0000 0000 0000	Bergy Bits: Short, easy to use activities that introduce science concepts through student	876 2020
	experimentation. Each involves a physics concept that is tied to real glacier behavior.	343
348	* <i>Exploring Gravity</i> – What drives glacier movement? * <i>It's Friction (basal)</i> – Why does the glacier surface move faster than the base?	સ્પર્ક
8.4 950	* <i>It's Friction (channel)</i> – Why does the center of the glacier flow faster than the	9.4 6
00 00 00	edges?	03000000000000000000000000000000000000
03000	* <i>What a Drag</i> – Drag of mountains and ice rises can redirect ice flow.	
	* <i>A Bit of Force</i> – The backpressure force of an ice shelf, or of sea ice slows ice flow.	0395 0395 0495
03.05 0000000000	Careers: Explores a series of STEM careers that includes scientists (geophysicist,	
01202 01202 01202 01202	oceanographer) engineers (electrical, aviation systems, data systems), and careers with the	0300 0300 0300 0300 0300 0300 0 0 0 0 0
స్ చిల్లేంద్ర చిల్లాలు చిల్లాల మార్టెంట్లాలు చిల్లాలు చిల్లాల	Air National Guard (navigator, pilot, flight engineer, loadmaster). Students create a matrix of	್ಯಾಕ್ಷನಂ
8770 0302 0302 0302 0302 0302 0302 0302 0	careers, necessary training and skills and then pick one career to explore in depth.	870 040 040
67.6 6.6 6.6	Sea Level: Activities that focus on what sea level is and its changes throughout history.	676 616 616
348 348	 Measuring Sea Level – Students use map based data visualizations, charts and 	348
348	graphs to examine changes in sea level through Earth's history.	348 248
848 848	 Polar Explorer: Sea Level app free from (www.polarexplorer.org) 	245 245
3.4 950 950	• "Quests" – Science 'big idea' storylines that take the user through sections of	8.4 9.4 9.49
0.0 940 032220	the app	0.00 2005 2005 2005
origino origino	 Series of Science Interactives - 	య్యార్థికుం
orgene	 Sea Level & Glacial Rebound Interactive 	0
	Rising Water Level Interactive Calving Classer	999 999 999 999
	 Calving Glacier Hands on Activities: 	
02220 02220	• The Hydrosphere – The ocean to ice connection – its all about the climate.	
032650 042650	• The Cryosphere – just how much ice is there in the polar ice sheets?	
0000	• Geologic Time – time travel and examine sea level –check the Eemian, the	0000
or of the second	Pleistocene, the Holocene	000 0000 0000 0000
0100 0100 0100	• Predicting future sea level – How much do you think sea level has changed	000 0100 030250
0202 0202 040	in the last 100 yrs? How might it change in the next 100 years? What do	846 2020
Sug.	scientists estimate will be the change?	345
348	Measuring Change in the polar-regions: Activities that explore changes in the ice using	348
949 349	data collected from satellites, radar and lidar.	03020 240 240
0.00 0.00 0.00 0.00	 Pine Island Glacier a 'climate canary' - uses IceSat data to measure ice loss 	0.00 0.00 0.00 0.00 0.00
030000 0400 0400	Antarctica. Main activity and 2 labs.	و موقعه موقعه و موقعه
of the second	• Lab 1: Developing a model to support data	ంహ్లిక్రం
	• Lab 2: Collecting measurements: compare your glacier to P.I.G.	
0356 0356 03560	Youtube from AGU GIFT workshop for teachers	03950 03950
યુંદ ગ્રેદ	https://www.youtube.com/watch?v=DWorq8f2M0A	
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	Article in The Science Teacher:	
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6 ⁴⁷⁶	Remote Sensing- Uses radar to image through the ice sheet. Build an image of the	543 242
848 848	topography under the ice using excel's 3 D model capabailities.	398 848
රසීමීසිං ර™රි ●	SL'ICE of Science – Using Radar to Uncover Ice Mysteries- Use ice penetrating	00
01000000000000000000000000000000000000	radar to locate unusual features under the ice that might be affecting glacial ice flow.	
ංසුදේසිං ● ඊ ිර	SL'ICE of Science - How much ice is in the Greenland ice sheet? Complete a	
	contouring activity to see how ice loss in Greenland equates to land loss in	
ရွိနိုင် ကြွန်းစ	Delaware.	
0""0 9:9 0::::::::::::::::::::::::::::::	SL'ICE of Science – Measuring Earth's Ice Boxes – Using math to calculate ice	000 2022 022220
Ser S	volume to sea level rise.	Sec.
545° ●	How does our warming ocean effect Alison Glacier in Greenland - Develop an	348 348
02000 6000 00	ocean water contour map to see where the warm water is around Greenland.	00
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