



GLOBAL FORECAST

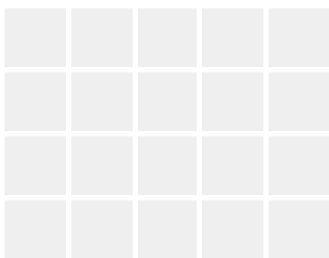
How can we use mathematics to make predictions about climate change?

ESSENTIAL CONCEPTS and PRACTICES

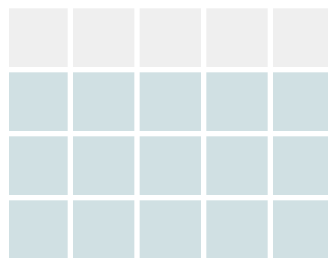
5.1	Building Rules for Exponential Functions	a. Can I explain why exponential functions can be written in the form $y = a \cdot b^x$? b. Can I build rules for exponential functions when given the starting value and growth factor? c. Can I explain what happens (and why) when the growth factor is between 0 and 1?
5.2	Multiple Representations of Exponential Functions	a. Can I explain the connections between multiple representations of exponential functions? b. Can I build the other representations when only given one of them? c. Can I reason about zero and negative exponents using rules, tables, and graphs?
5.3	Equations and Inequalities	a. Can I build an (exponential) equation to represent a real-world situation? b. Can I find solutions to (exponential) equations using guess-and-check and/or graphs?
	Look for PATTERNS and REGULARITY	• Do I have a habit of looking for patterns? • Do I organize my investigation and work in ways that will help me see patterns? • Can I describe patterns and repeated reasoning in words and symbols?

PACING (~18 days, including assessment)

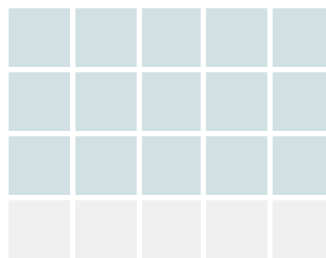
January



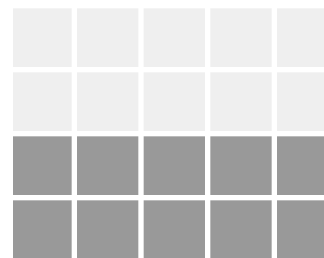
February



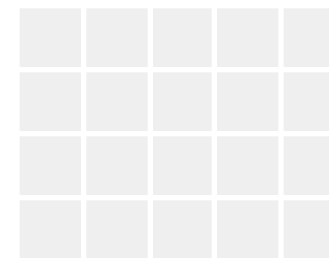
March



April



May



UNIT GUIDE	TASK and O.Y.O.	SLIDES
SECTION 0 - Unit Problem		
1 Global Forecast	 Global Forecast	 Global Forecast
2 Are They Related? <i>(Review of EC 3.2)</i>	 Are They Related?	 Are They Related?
SECTION 1 - Growing Quickly <i>(Building Rules for Exponential Functions)</i>		
3 Growth Patterns <i>(Review of EC 1.2)</i>	 Growth Patterns	 Growth Patterns
4 ROUGH DRAFT and P.O.W. <i>(Jump Step)</i>	 RD and POW 5.1	 RD and POW 5.1
5 Rumor Has It <i>(EC 5.1a and 5.1b)</i>	 Rumor Has It	 Rumor Has It
6 Leftover Pizza <i>(EC 5.1a and 5.1b)</i>	 Leftover Pizza	 Leftover Pizza
7 The Emissions Equation <i>(EC 5.1b, percent change)</i>	 The Emissions Equati...	 The Emissions Equati...
8 Hang Time <i>(EC 5.1c)</i>	 Hang Time	 Hang Time
SECTION 2 - Here Goes Nothing <i>(Connecting Representations of Exponential Functions)</i>		
10 Exponential Equivalence <i>(Review of EC 1.1)</i>	 Exponential Equivale...	 Exponential Equivale...
11 Here Goes Nothing <i>(EC 5.2a and 5.2c)</i>	 Here Goes Nothing	 Here Goes Nothing
12 Showing Appreciation <i>(EC 5.2a and 5.2b)</i>	 Showing Appreciation	 Showing Appreciation
13 Modified Machines <i>(EC 5.2a and 5.2b)</i>	 Modified Machines	 Modified Machines
SECTION 3 - Global Forecasting <i>(Exponential Equations and Solutions)</i>		
15 D		
16 Degrees of Impact	 Degrees of Impact	 Degrees of Impact

