OCEAN ACIDIFICATION

WHAT IS OCEAN ACIDIFICATION?

1. HIGH LEVELS OF CARBON DIOXIDE (CO2) EMISSIONS ARE RELEASED BY INDUSTRIES
2. THE OCEAN SERVES AS A CARBON SINK AND WILL ABSORB THE CARBON DIOXIDE (CO2)
3. WHEN THE CO2 IS ABSORBED, A SERIES OF CHEMICAL REACTIONS OCCUR THAT DECREASE PH
4. THE DECREASE IN PH RESULTS IN AN INCREASE IN ACIDITY OF THE ENTIRE OCEAN

$CO_2 + H_2O$

H_2CO_3

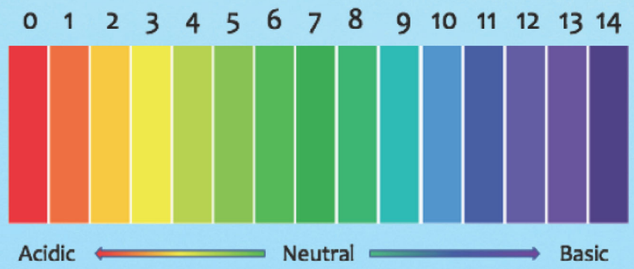
HCO_3^- + H^+

CO_3^{-2} + H^+

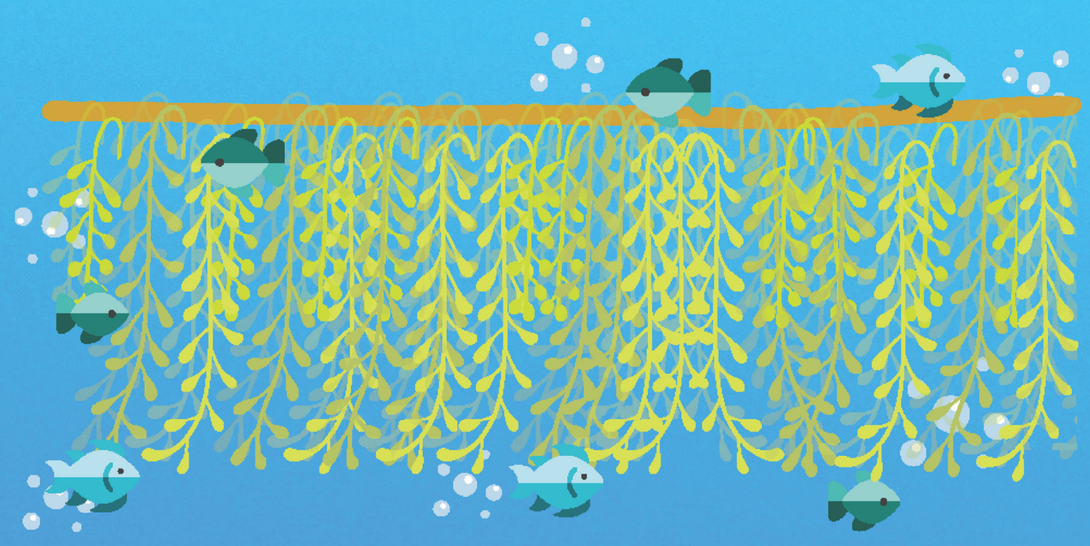
PH SCALE

HOW TO READ:
LOGARITHMIC SCALE!

1. EACH NUMBER (X) REPRESENTS 10X
2. A CHANGE FROM 6 TO 5 IS AN INCREASE OF 10 TIMES MORE ACIDIC
3. A CHANGE FROM 6 TO 4 IS 100 TIMES MORE ACIDIC



A SMALL DIFFERENCE MEANS A BIG CHANGE!



POTENTIAL SOLUTION: KELP FARMS

GROWING LARGE QUANTITIES OF SEAWEED IN THE OCEAN CONSUMES CO2 AND CONVERTS IT INTO O2,
SEAWEED IS HARVESTED AND USED FOR FEUL
COULD SLOW DOWN OCEAN ACIDIFICATION AND LOWER CARBON EMISSION ON LAND

EFFECTS OF OCEAN ACIDIFICATION

WEAKER ANIMAL SHELLS AND BONE,
CHANGE IN ANIMAL BEHAVIOR,
DECREASE IN BIODIVERSITY,
CORAL BLEACHING

ALGAE'S IMPORTANCE

ALGAE ACTS AS A PHOTOSYNTHESIZER ABSORBING THE EXCESS CO2, RELEASING OXYGEN, WHICH ULTIMATELY HELPS MITIGATE OCEAN ACIDIFICATION

WANT MORE INFO?