Climate Change Kete

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| **Big idea** | **Activity** | **Resources** | **Source/notes** |
|  | Connecting to our dynamic atmosphere |  |  |
| Weather is the day to day conditions of the atmosphere. Climate is the long term trend of the atmosphere | Burning Questions about Climate Change | Post itsposters |  |
|  | I feel confident teaching about climate change. Continuum |  | For students the statement could be “I feel like l know what climate change is” |
| Air is made up of many different gases | What’s air made up of? | Glass jar with lidA4 laminated poster of composition of air | Composition of Air - Chemical Composition of Air, Properties of Air, Video  and FAQs |
|  | UV beads – making the invisible visible | Link to air composition |  |
| The atmospheric concentrations of carbon dioxide, methane and nitrous oxide have increased significantly from humankind’s industrial and agricultural activities. In Aotearoa 48% of our greenhouse gas emissions come from agriculture and 52% from the energy sector (including transport)Farming creates methane and nitrous oxide gases | Meet the gases |  | <https://climatekids.nasa.gov/greenhouse-cards/> Super villains. Print both sides |
| Carbon is in fossil fuels | What happens when we burn fossil fuels | White plateLightercandle |  |
|  | Edible models of the greenhouse gases | Toothpicks, lollies | <https://www.science-sparks.com/know-your-greenhouse-gases/> |
|  | Climate change game | Chalk | <https://padlet.com/EnviroschoolsMarlborough/climate-change-p5jwxmh4srto/wish/1606807026>  |
| Greenhouse gases let heat in from the sun but stop some heat from escaping out into space | How does the greenhouse effect work? | 2 thermometersClear jar | <https://kidminds.org/how-to-explain-the-greenhouse-effect-to-kids-with-printables/> |
| Upsetting the balance of Earth’s climate system will have an impact on our planet’s long term climate | What are the effects of climate change? | Evidence for rapid climate change is our global temperature rise, warming oceans, shrinking ice sheets, glacial retreat, decreased snow cover, sea level rise, declining Arctic sea ice, extreme events and ocean acidification |  |
| The ocean can absorb 1000 times the heat the atmosphere can absorb | Why isn’t it way warmer? Balloon experiment | BalloonsWaterlighter |  |
|  | Melting glacial ice | IceContainerwater | https://www.sciencelearn.org.nz/resources/2279-melting-glacial-ice |
|  | Ocean acidification | ShellsVinegarHCl |  |
| Everything you do has an effect. We can all make change! | Carbon footprint | Make your own poster about how to reduce your Carbon footprint. Show Kauri the top ones and we will find some prizes!  | https://www.kitchencounterchronicle.com/what-is-carbon-footprint-stem-kids/ |
|  | What climate actions can we do? | Use big picture in groups | <https://enviroschools.org.nz/creating-change/featured-stories/sustainable-communities/>  |
|  | I feel confident teaching about climate change. Continuum |  | For students this could be “I feel like l can make a difference to reduce climate change” |

Loads of great resources <https://padlet.com/EnviroschoolsMarlborough/climate-change-p5jwxmh4srto>