# Drip Drop! Small Group Table

## Student Sheet

**DIRECTIONS**  Work in your small group to explore the lyrics and the science in each of the boxes below. Make sure to record your thoughts and questions and be ready to share with the whole class.

<table>
<thead>
<tr>
<th>Lyrics:</th>
<th>What’s the science:</th>
</tr>
</thead>
<tbody>
<tr>
<td>So hot in the atmosphere</td>
<td>Climate is warming. The global average temperature of Earth’s atmosphere warmed 1.1 degrees Fahrenheit in the 20th Century. The rise in temperature is a global average. That means that all the temperatures from locations worldwide and through all seasons are averaged together. Scientists project more than double that amount of warming during the 21st Century.</td>
</tr>
<tr>
<td>Melting H₂O</td>
<td></td>
</tr>
<tr>
<td>I’m hot</td>
<td></td>
</tr>
<tr>
<td>He’s hot</td>
<td></td>
</tr>
<tr>
<td>Too hot</td>
<td></td>
</tr>
<tr>
<td>Drip Drop (Drop)</td>
<td></td>
</tr>
<tr>
<td>Climbing out of control</td>
<td></td>
</tr>
</tbody>
</table>

**What questions do you have now?**

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<table>
<thead>
<tr>
<th>Lyrics:</th>
<th>What’s the science:</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was like “Good gracious! What’s up with the glaciers?”</td>
<td>In general, glaciers are disappearing due to warming temperatures. Almost all mountain glaciers around the world are shrinking. In the northern hemisphere, the ice sheet on Greenland is melting. In the southern hemisphere, the West Antarctic ice sheet is melting too. On the other side of Antarctica, the East Antarctic Ice Sheet is increasing in size because of more snowfall.</td>
</tr>
<tr>
<td>When I went away</td>
<td></td>
</tr>
<tr>
<td>On my summer vacay</td>
<td></td>
</tr>
<tr>
<td>See my Aunt Arctica</td>
<td></td>
</tr>
<tr>
<td>Same time each year</td>
<td></td>
</tr>
<tr>
<td>But I kind of freaked out</td>
<td></td>
</tr>
<tr>
<td>When some snow disappeared</td>
<td></td>
</tr>
<tr>
<td>Ice rivers flowing</td>
<td></td>
</tr>
<tr>
<td>Permafrost un-frozen</td>
<td></td>
</tr>
<tr>
<td>Glacial erosion</td>
<td></td>
</tr>
<tr>
<td>Miles are going</td>
<td></td>
</tr>
<tr>
<td>Dumping and sinking</td>
<td></td>
</tr>
<tr>
<td>Right into the sea</td>
<td></td>
</tr>
<tr>
<td>Calving off in huge chunks</td>
<td></td>
</tr>
<tr>
<td>The size of NYC</td>
<td></td>
</tr>
<tr>
<td>Ice-scrapers break off</td>
<td></td>
</tr>
<tr>
<td>And turn into bergs</td>
<td></td>
</tr>
<tr>
<td>Tons of freshwater run off</td>
<td></td>
</tr>
<tr>
<td>Only making it worse</td>
<td></td>
</tr>
</tbody>
</table>

**What questions do you have now?**
**Drip Drop! Small Group Table**

**Student Sheet**

**Lyrics:**

Sea levels go up  
Salt water slows up  
High tides’ll show up  
Coral don’t hold up  
When the water’s brackish  
It’s bad for the fish  
The ocean’s feverish  
I’m not cool with this  
The seven seas are rising twice as fast  
As ever been recorded in decades past  
Forecast soaked shores all along the coast  
Who knows what’s in store when the waves encroach?

**What’s the science:**

There are two reasons that sea level is rising and both are because climate is warming. First, there is more water in the ocean as glacial melt water makes its way to the ocean. Second, warming ocean water takes up more space because the water molecules move further apart, which also makes sea level rise.

Rising sea level is a problem for coastal communities, especially when the sea level rises temporarily during storms (called storm surge) and during unusually high tide events (like king tides).

Warmer ocean water is harmful to corals and other marine life that require very specific environmental conditions.

During the 20th Century sea level rose 8 inches. The rate of sea level rise is speeding up and scientists predict sea level will rise between 1 and 7 feet during this century, depending on how much climate change occurs.

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**Lyrics:**

And on another subject, Arctic ice  
Is Earth’s home-grown natural cooling device  
It’s melting too, which ain’t good news  
When all that chillin’ white’s got the blues  
Sea ice is nice for reflectivity  
Bouncing back the sun’s blazing energy  
The albedo is perfect  
A frozen flat surface  
Rocket ricochet  
Bye bye solar rays  
X ray, gamma ray  
Infrared, ultra violet  
Caliente CO2  
Traps and amplifies it  
This positive feedback  
Ain’t so positive  
Melted ice turns dark  
No longer reflective  
It heats up hotter  
Melting even more  
Beware!  
There’s a polar bear  
Knocking on your door

**What’s the science:**

The ice that covers much of the Arctic Ocean around the North Pole is called sea ice and is made of frozen seawater. Every winter the amount of ice increases as cold temperatures allow more seawater to freeze. Then, during summer, some of the sea ice melts. Over the past several decades, more ice has melted during the summer than has formed during the winter. This means that there is less ice in the Arctic Ocean than there used to be.

Because ice is white, it reflects most of the incoming solar energy out to space. The dark ocean surface that is exposed when the ice melts absorbs solar energy, which causes more warming in the Arctic, which melts more ice. This vicious cycle (called a “positive feedback”) is responsible for speeding up warming.

Polar bears and other Arctic life are affected by the loss of sea ice. The bears use sea ice platforms when they are hunting for fish and seals in the ocean.

**What questions do you have now?**
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Lyrics:
Evaporate Precipitate Circulate Vapor
Can’t escape the atmos
Where does it go?
Heads back into the hydro
Stop, drop & roll
The higher the temp
The more the steam
Buckets dump from the clouds
Torrential stream
Stormy weather
It’s like a bad dream
Get it together
Climate on caffeine
When it rains it pours
And floods the floors
The deluge don’t seep
Or absorb too deep
Cause the ground’s dried out
Subterranean drought
Plants can’t go without
I wanna scream and shout

What questions do you have now?

Lyrics:
True, the climate’s changed naturally throughout time
But it’s human fingerprints at the scene of this crime
We’re breaking records.
We’re getting hotter.
Gotta act now.
Gotta save our water.

What’s the science:
While saving water is a good idea and works with the rhyme in this song, the most important take away from the video is the importance of humans reducing CO₂ emissions.

What’s the science:
The water cycle is speeding up due to climate change. With warmer temperatures, there is more evaporation of water into the air (turning from a liquid to a gas). More evaporation can cause dry areas to become drier. Long term drier-than-normal conditions are called drought, which is a problem for farmers, ecosystems, and anyone who relies on water.

More evaporation of water into the air can cause more clouds to form. Those clouds cause intense storms (precipitation), which can cause flooding.

Looking into the future, scientists project that some areas will have a higher chance of drought and other areas will be subject to extreme rainstorms.

What questions do you have now?