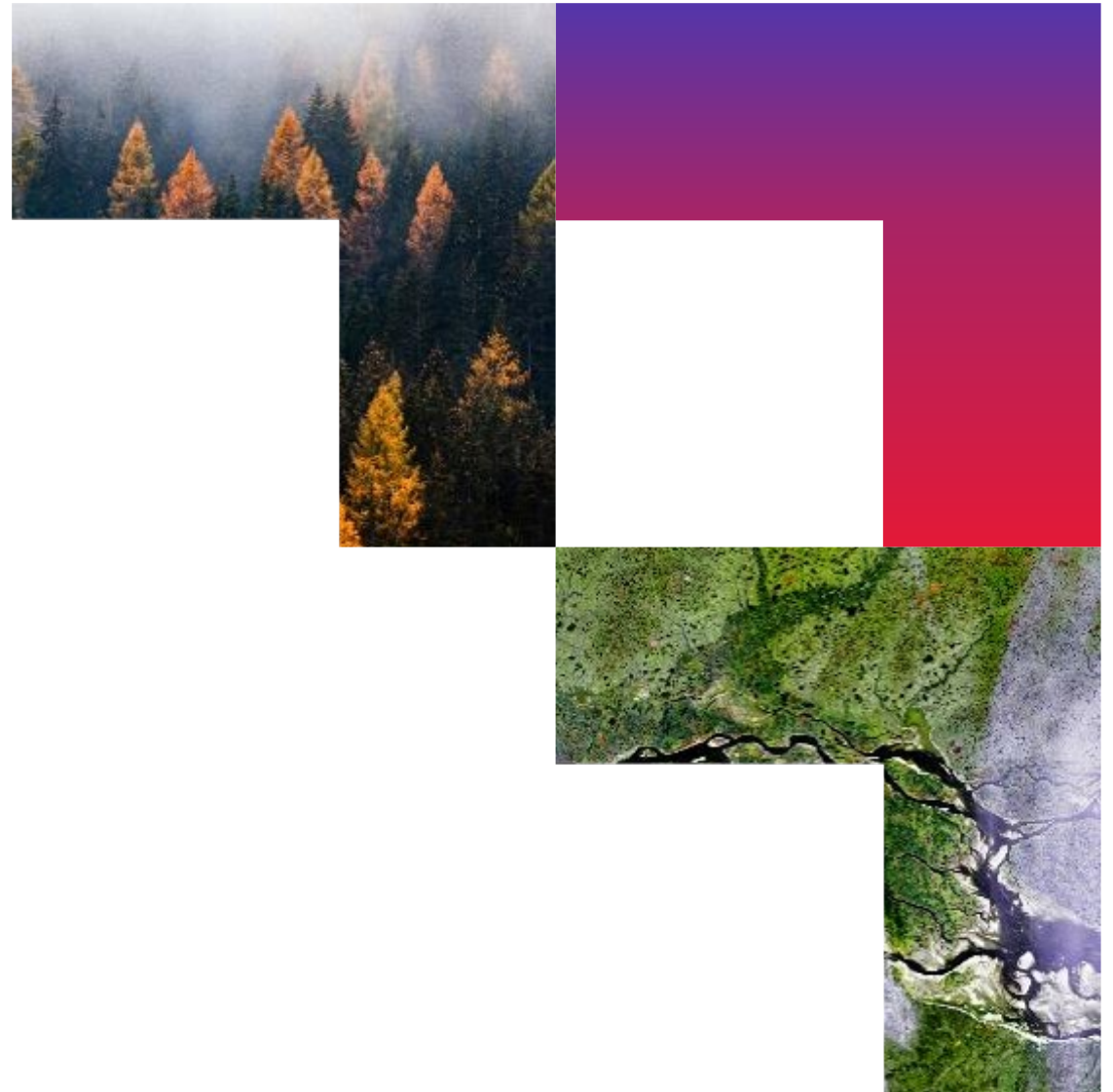


# Climate Change Pt 2

Ages 11 to 18

**CGI**



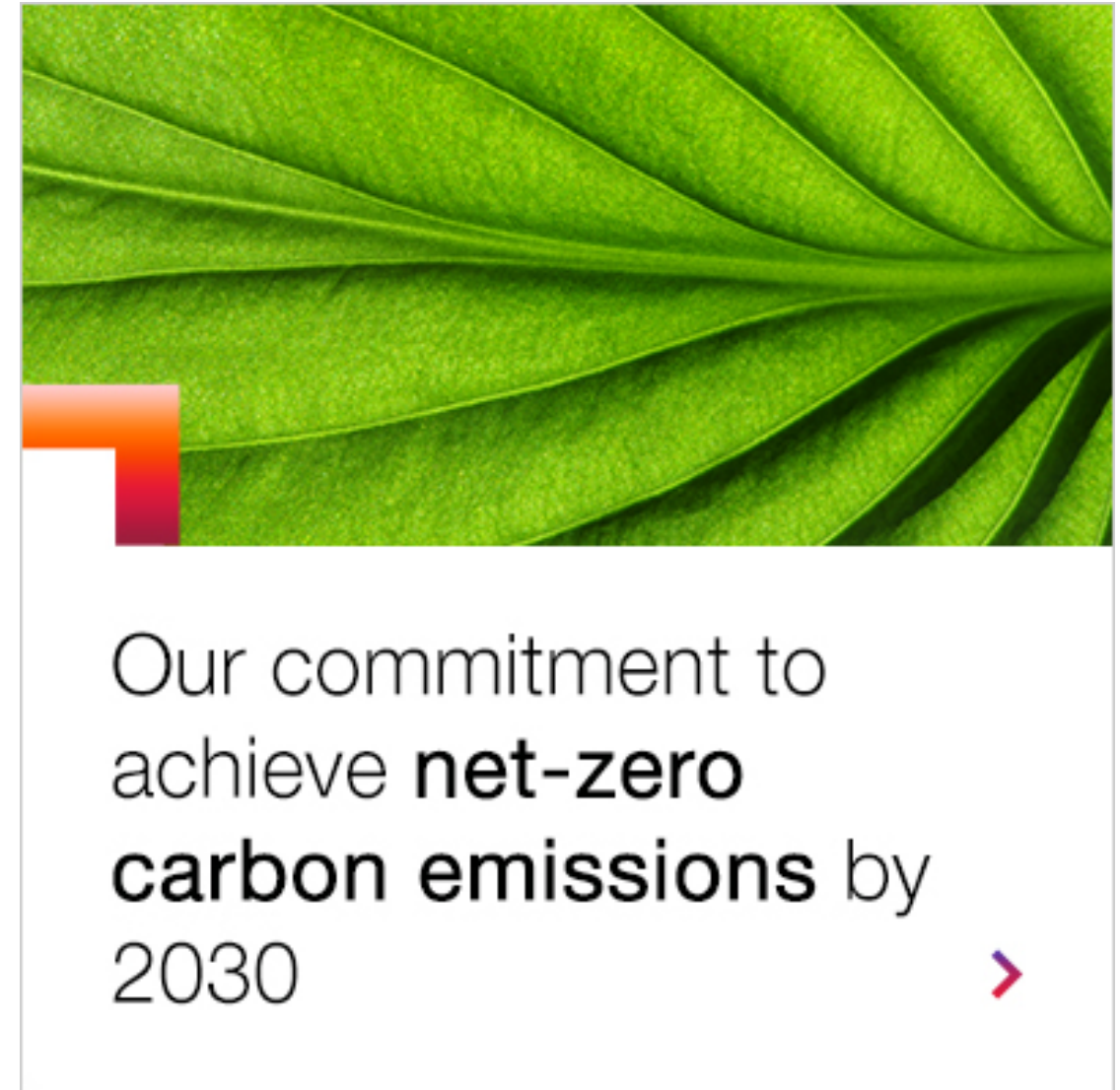
# What's happening NOW?

Check out these links on how CGI is working on Climate Change around the world!

[CGI commits to net-zero carbon emissions by 2030 | CGI.com](#)

[Four keys for environmental regulatory collaboration | CGI United States](#)

[Combining technology and community engagement to improve air quality | CGI.com](#)



# Part 2

# Be the explorer!

# Be the explorer!—core drilling

According to the National Oceanic and Atmospheric Administration (NOAA), ice cores provide a unique contribution to our view of past climate because the bubbles within the ice capture the gas concentration of our well-mixed atmosphere while the ice itself records other properties.

How do scientists explore climate in the Antarctic?

How does core drilling work?

How does studying ice cores give clues about the Earth's climate?



Looking down into a 10-meter ice core sample hole  
Credit: National Snow and Ice Data Center (NSIDC) courtesy  
Ted Scambos and Rob Bauer  
Image retrieved from: <https://www.ncdc.noaa.gov/news/picture-climate-what-can-we-learn-ice>

# Core drilling like polar explorers!



Go to video retrieved from: <https://youtu.be/zSpuUSyWCSw>

# Be the explorer!

## Purpose:

To showcase core drilling and sampling

## Materials needed:

- 3 different colors of modeling clay
- A drinking straw
- Fingernail scissors.



# Be the explorer!

## Procedure:

1. Soften a small piece of each color clay in your hands by mashing it.
2. Flatten the clay pieces and stack them like a sandwich on top of one another.



# Be the explorer!

## Procedure:

3. Core drill the clay by pushing the straw through the layers of clay
4. Pull out the straw
5. Use scissors to cut open the straw to reveal the inside of the tube of clay. **\*\*Parent help alert!**
6. Remove the clay plug





# You did it!

Awesome job!

The straw cuts a cylinder-shaped sample from the layered stacks of clay.

As it cuts the clay, the clay is pushed up the tube and the captured clay is called the “core sample”

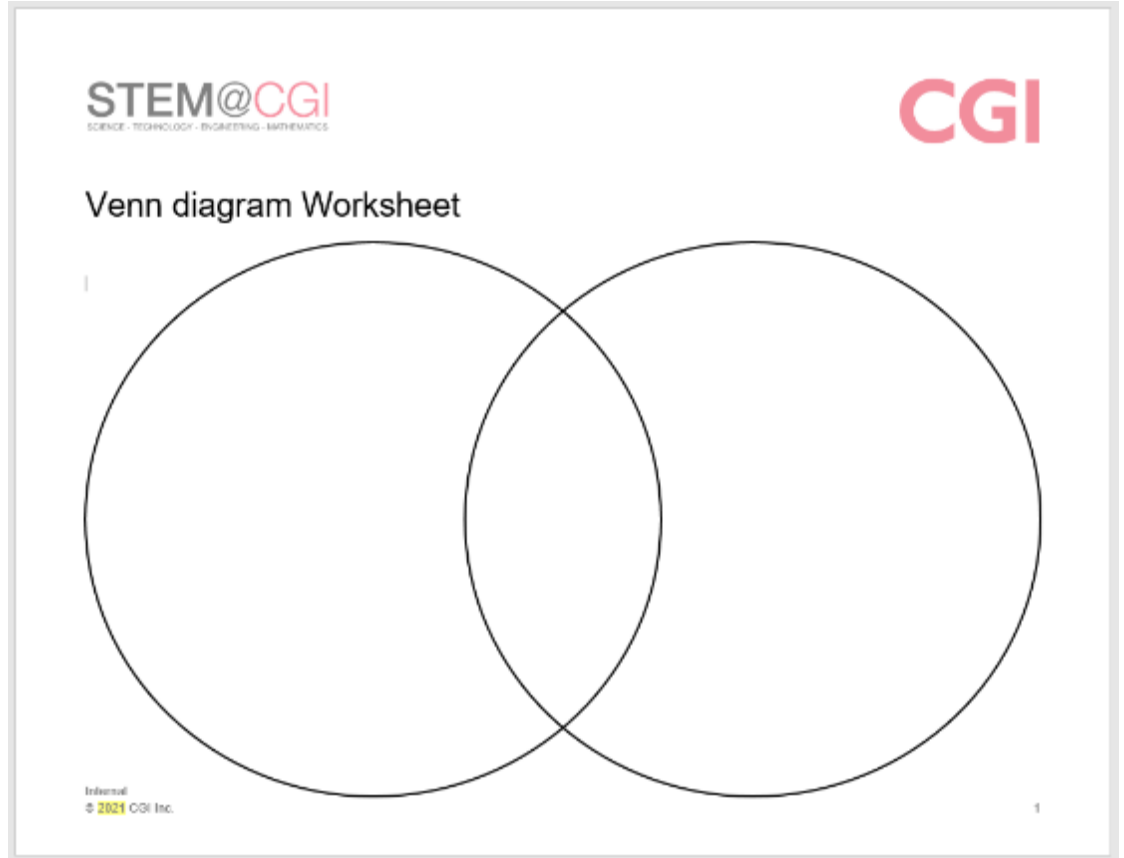


# Venn diagram template

Scientists always analyze what they have collected from their experiments! This is data. You can collect data too!

Use the printable Venn diagram template found in the supplemental materials for this pack to compare and contrast high sediments to low sediments in your clay core samples!

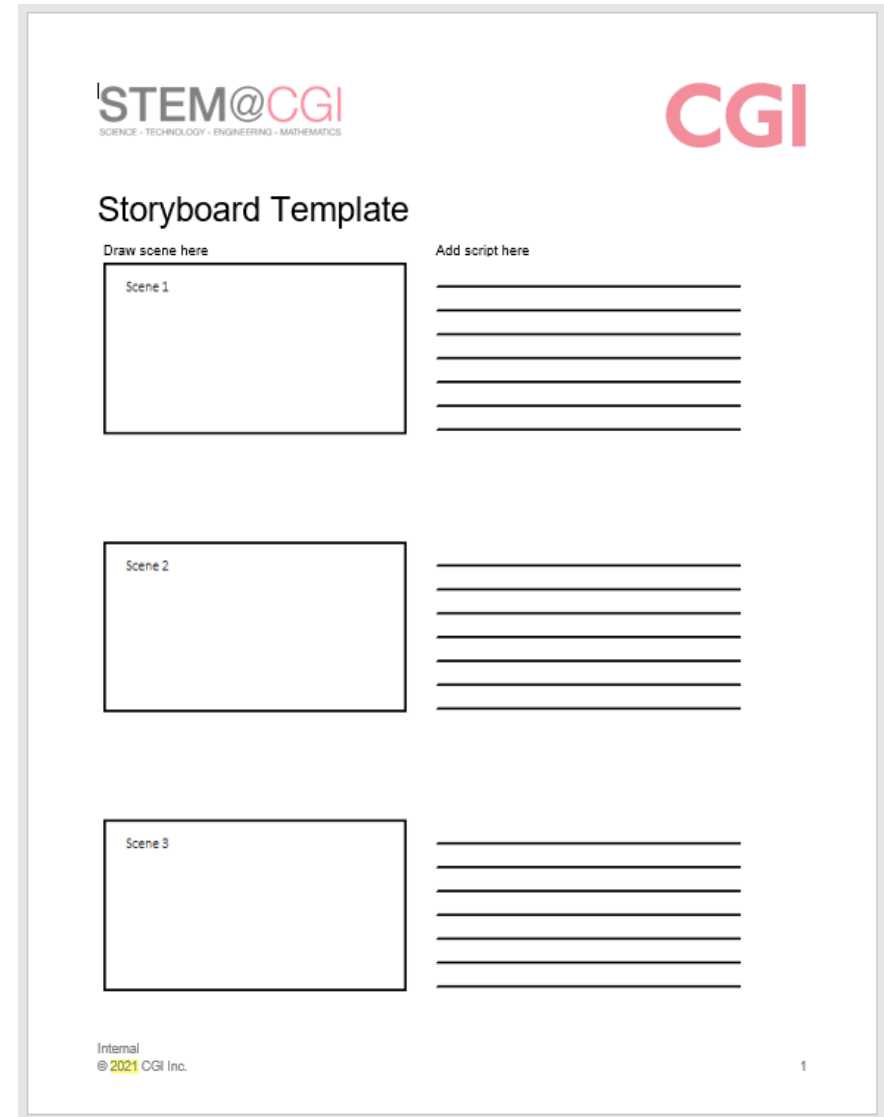
[STEM@CGI at Home Activity Pack](#)



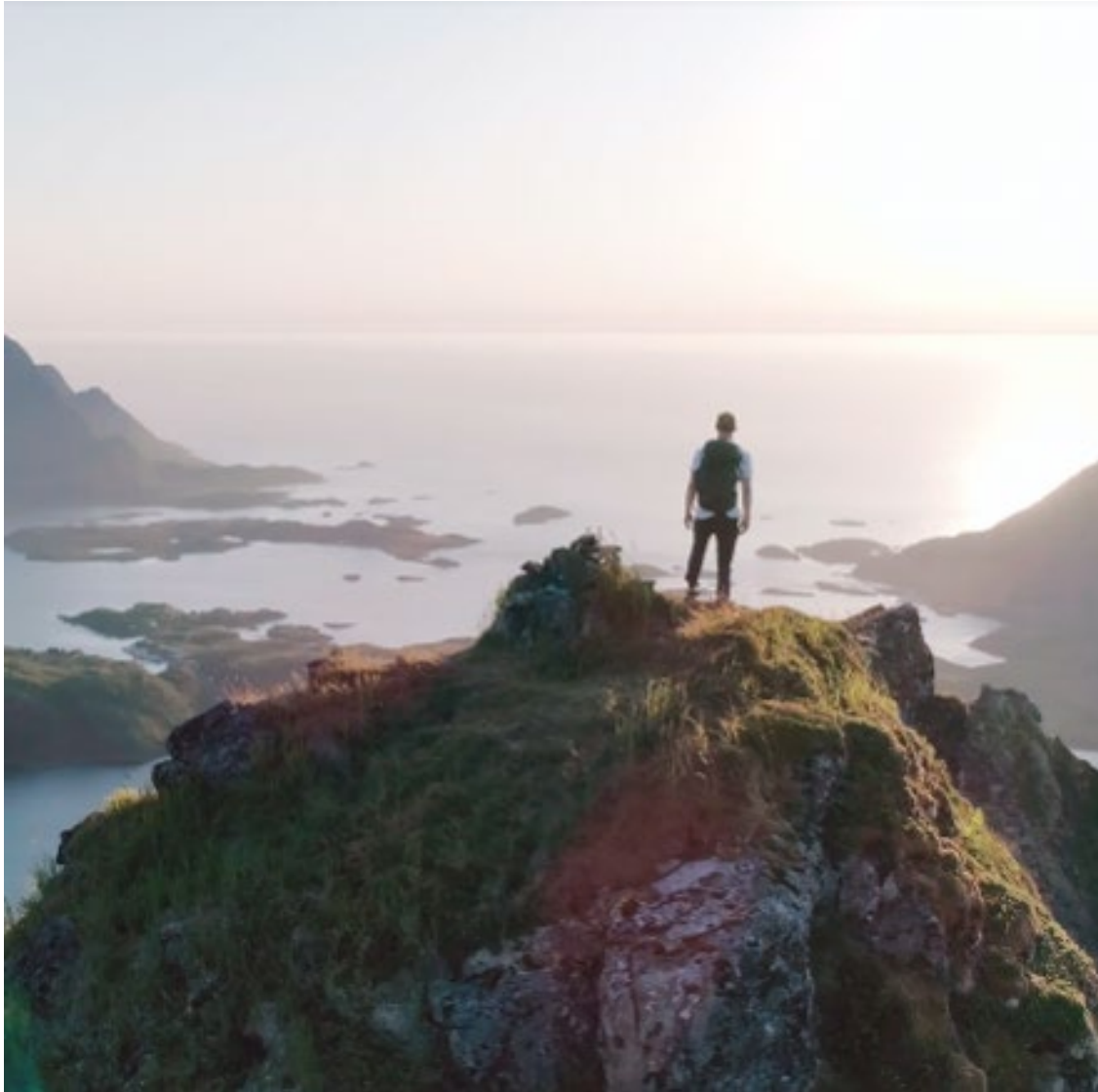
# Storyboard template

Scientists always document what they have learned from their experiments! You can too! Use the storyboard template found in the supplemental materials for this pack to present what you have learned!

[STEM@CGI at Home Activity Pack](#)



# Credits



## Our commitment

We are passionate about helping students in our communities become the next generation of information technology professionals.

# Insights you can act on

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world.

We are insights-driven and outcomes-based to help accelerate returns on your investments. Across hundreds of locations worldwide, we provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

[cgi.com](http://cgi.com)



**CGI**

# Citations

- VanCleave, J. (1994). Janice VanCleave's 201 Awesome, Magical, Bizarre, and Incredible Experiments. United States of America & Canada: John Wiley & Sons, Inc.
- All images in this presentation came from CGI resources or per applicable Creative Commons or Wikimedia Commons licenses as indicated with each image.