

## RIVER OF POWER GOES VIRTUAL

Every spring, Rocky Reach Dam in Wenatchee welcomes all the fourth graders in Chelan and Douglas counties to experience “River of Power,” an exciting field trip that integrates information on power generation, the Columbia River, and salmon migration.

This partnership between the NCESD and the PUDs of both Chelan and Douglas counties allows students from both public and private schools the opportunity to tour the hydroelectric dam, view the fish passage, learn about energy transfer, and design and build their own dams with their peers. Due to school closures because of COVID-19, this year’s fourth graders will unfortunately miss out on physically going to the dam, but through the help of the PUD’s and the NCESD, these students will now have the opportunity to experience this field trip virtually.

Using Google Classroom as their platform, the NCESD created a field trip that will be rolled out to approximately 1200 fourth grade teachers by mid-May. This “River of Power” Google Classroom integrates all the learning stations that students would have participated in at the dam (Energy Transfer, Salmon Art, and Build a Dam), as well as educational videos from the Foundation for Water and Energy Education, and a 360 degree immersive virtual reality tour of a hydroelectric dam in Canada. Teachers will have access to extension activities, such as a DIY S’mores Maker using solar energy, as well as online games focusing on energy conservation, electricity safety, and power generation.

It is very unfortunate that this year’s fourth graders will miss out on touring the power house, eating scoops of ice cream from the concession stand, and chasing their friends on the grassy lawns at the base of Rocky Reach. However, even though we can’t bring the children to the dam, we hope that through this virtual field trip we can bring the dam to them, and they can still experience the unique hydropower bounty that is the Columbia River.

**If you’d like to learn more, or your school is interested in participating, please contact:**

Heather Stringer | NCESD Science Cadre Member | [heatherst@ncesd.org](mailto:heatherst@ncesd.org) | [509-888-7034](tel:509-888-7034)





Sixty fourth grade teachers in Chelan and Douglas counties were invited to join the River of Power Google Classroom the second week of May.

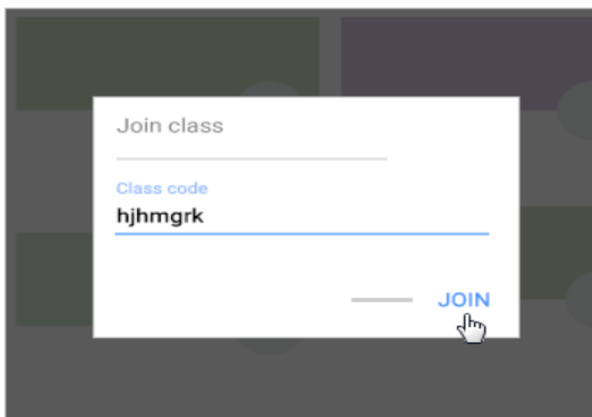
They were asked to use go into Google Classroom and join the class with code **mvqj3du**. Please feel free to use this code to join the class to see firsthand what we're offering! Use the instructions below to join the River of Power Google Classroom.

## Join a class with a class code

1. Go to [classroom.google.com](https://classroom.google.com) .
2. Make sure to sign in with the correct account. If you're already signed in and need to switch accounts, in the top-right corner, click your profile picture > select or add your account.
3. At the top, click Add + > Join class.



4. Enter the class code your teacher gave you and click Join.  
A class code consists of 6 or 7 letters or numbers. For example, **hjhmgrk** or **g5gdp1**.



The following is a print out of the River of Power Google Classroom.

Stream

Classwork

People

Grades

# River of Power

Class code mvqj3du

Meet link [Generate Meet link](#)

Select theme  
Upload photo

## Upcoming

No work due soon

[View all](#)



Share something with your class...



Heather Stringer

May 11 (Edited May 13)



Hello Fourth Grade Teachers! Although I wish we were preparing to welcome you and your students to Rocky Reach Dam, I hope this virtual field trip is able to bring part of the experience to them. Your students will still learn about energy in the "Energy Transfer Station", the life cycle of a Sockeye Salmon in the "Salmon Art Station", and they'll even get to build their own dam in the "Build a Dam Station". There's also a section of additional videos and online games in the "Finished?" folder. There are enough activities for you to easily have a week's worth of science curriculum for your own Google classrooms, but feel free to pick and choose whatever you'd like to include if you don't have time for all of it. We suggest assigning the three videos from the "Welcome to River of Power" section to your students first. This will introduce them to ROP and give them a little background on hydropower on the Columbia River. The additional sections (Energy Transfer Station, Salmon Art Station, and Build a Dam Station) can be assigned in any order. The "Finished" section has fun games and videos and can be assigned at your discretion. Please follow the steps in the next post to upload the classroom for your students. I am also available to meet with your students over Zoom or Google Meet for a Q&A time! Please let me know if you'd like to set up a time. I hope you and your students enjoy your virtual ROP experience!



Add class comment...



Heather Stringer

May 12 (Edited May 13)



You have three options for sharing this information with your students.

1. You can copy this entire Google Classroom. This is the easiest option if you want to use this Google Classroom exactly as is. It involves making a copy of my classroom and then inviting your students to your copied class. As of right now, you a "student" in my class. In order to copy the class, you'll need to be added as a "teacher". Once you're added as a teacher, you'll be able to follow the simple steps from the attachment below to copy the class and add it to your own Google Classroom. Then you'll be able to edit or delete things from your copy, and finally invite your students. You won't need to worry about downloading videos or anything! Please let me know if you'd like to be added as a teacher!

2. If you don't want to copy my entire class, but just add bits and pieces of it to your own science section of your class, then you have two options:

Option #1: Right click on the video you want to add and choose "copy link address". Then paste it directly into your google classroom by choosing "add link".

Option #2: If that doesn't work, then use the following link to gain access to the Google Drive with everything (videos, documents, extension activities) in it.

<https://drive.google.com/drive/folders/0B5VRWI2GzhWffnNFV0pXcTB4NUZnVGh6T3BqT3dDcWRWWmhlNnF2T3FRrlqtYU9GdWttMVE?usp=sharing>

Then you can right click on any of the videos or documents and then either "make a copy" for yourself and drag that into your Google Drive, or you can just download it.

Please let me know if you'd like to be added as a "teacher" or if you have any questions or problems!

3 class comments



Tamara Lambert May 13

Thanks so much for doing this! Great stuff.

[+ Create](#)[Meet](#) [Google Calendar](#) [Class Drive folder](#)

All topics

Welcome to River of...

Energy Transfer Stat...

Build a Dam Station

Salmon Art Station

Finished? Here's wh...

## Welcome to River of Power!



- ROP Welcome Video Posted May 12
- Rivers to Power Video Edited May 8
- How Does Hydropower Work? Edited May 8

## Energy Transfer Station



- Intro to the Energy Transfer Station Edited Apr 22
- Energy Transfer Video Posted Apr 24
- Energy Transfer Quiz Edited Apr 24
- Want to try an energy experiment?! Posted Apr 28

## Build a Dam Station



- Build a Dam Challenge Posted May 11
- Build a Dam Video Posted Apr 27
- Build a Dam Reflection Posted May 11
- Ever seen a real fish ladder???
- Can you build a LEGO dam? Edited May 12

## Salmon Art Station



- Salmon Art Challenge Posted May 11
- Sockeye Salmon Stained Glass Posted May 11
- Sockeye Salmon Origami Edited May 11
- Sockeye Salmon Collagraph Edited May 11

## Finished? Here's what you can do next!



- Already finished with everything else? Here... Edited May 12

# Welcome to River of Power!



All topics

Welcome to River of...

Energy Transfer Stat...

Build a Dam Station

Salmon Art Station

Finished? Here's wh...



Heather Stringer posted a new material: ROP Welcome Video



Posted May 12

Are you ready for River of Power? Watch this video to see what you can look forward to during ROP!



ROP welcome video.mp4

Video



Add class comment...



Heather Stringer posted a new material: Rivers to Power Video



Posted Apr 22 (Edited May 8)

Watch this video about hydropower in the Northwest!



Rivers to Power.mp4

Video



Add class comment...



Heather Stringer posted a new material: How Does Hydropower Work?



Posted Apr 22 (Edited May 8)

Watch this short video to learn how hydropower is created at a hydroelectric plant.



How does hydropower w...

Video



Add class comment...



# Energy Transfer Station



All topics

Welcome to River of...

Energy Transfer Sta...

Build a Dam Station

Salmon Art Station

Finished? Here's wh...

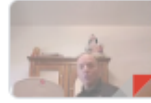


Heather Stringer posted a new material: Intro to the Energy Transfer Station



Posted Apr 22 (Edited Apr 22)

Bob Bauer, Education Specialist at Rocky Reach Dam, introduces the Energy Transfer Station.



Intro Video for Energy Tr...  
Video



Add class comment...



Heather Stringer posted a new material: Energy Transfer Video



Posted Apr 24

Watch this video about energy transfer.



Energy Transfer Video Fo...  
<https://www.generationgeniu...>



Add class comment...



Heather Stringer posted a new material: Energy Transfer Quiz



Posted Apr 22 (Edited Apr 24)

Take this quiz after watching the Energy Transfer Video.



Quizizz - Game Link  
<https://quizizz.com/join/quiz...>



Add class comment...



Heather Stringer posted a new material: Want to try an energy experiment?!



Posted Apr 28

Can you build a device that transfers light energy to heat energy to make your own s'mores? Give this experiment a try!



DIY smores maker.pdf  
PDF



Add class comment...



## Build a Dam Station



All topics

Welcome to River of...

Energy Transfer Stat...

**Build a Dam Station**

Salmon Art Station

Finished? Here's wh...



Heather Stringer posted a new assignment: Build a Dam Challenge



Posted May 11

1. Watch the "Build a Dam" video.
  2. Build your own dam and test it out.
  3. Complete the "Build a Dam Reflection" Google Document.
- Optional:
4. Watch the fish ladder video to see what a fish ladder looks like in real life.
  5. Watch the video about building a LEGO dam and then construct your own!

0

Turned in

18

Assigned



Add class comment...

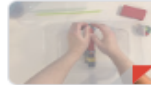


Heather Stringer posted a new material: Build a Dam Video



Posted Apr 27

Watch this video to learn how to build your own dam!

Build a Dam Video.mp4  
Video

Add class comment...



Heather Stringer posted a new assignment: Build a Dam Reflection



Posted May 11

After you build your dam, complete this document to describe your experience.

0

Turned in

18

Assigned

Build a Dam Reflection  
Google Docs

Add class comment...



Heather Stringer posted a new material: Ever seen a real fish ladder???



Posted Apr 28 (Edited May 12)

Watch this video to see how salmon safely migrate past a hydroelectric dam using a fish ladder.

Chinook Salmon Run.mp4  
Video

Add class comment...

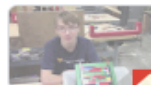


Heather Stringer posted a new material: Can you build a LEGO dam?



Posted Apr 28 (Edited May 12)

Do you like building with LEGO bricks? Can you build a dam that actually holds back water, using only LEGO pieces? Watch this video and then give it a try!

How to Build a LEGO Da...  
Video

# Salmon Art Station



All topics

Welcome to River of...

Energy Transfer Stat...

Build a Dam Station

Salmon Art Station

Finished? Here's wh...



Heather Stringer posted a new assignment: Salmon Art Challenge



Posted May 11

Choose one of the following options to create your own art project!

0

Turned in

18

Assigned



1. stained glass.jpg  
Image



2. origami.jpg  
Image



3. collagraph.jpg  
Image



Add class comment...



Heather Stringer posted a new material: Sockeye Salmon Stained Glass



Posted May 11

Create a stained glass design of a Sockeye Salmon with the following materials:

- washable markers
- paintbrush and water
- Sharpie
- white paper



1. stained glass.jpg  
Image



Stained Glass.mp4  
Video



Add class comment...







Heather Stringer posted a new material: Sockeye Salmon Origami



Posted May 11 (Edited May 11)

Learn about the life cycle of a Sockeye Salmon and create a 3-D Sockeye Salmon Origami with the following materials:

- aluminum foil
- glue
- scissors
- sponge and water
- Sharpie
- white paper



Origami.mp4  
Video



2. origami.jpg  
Image



Salmon in the Classroom....  
PDF



Add class comment...



Heather Stringer posted a new material: Sockeye Salmon Collagraph



Posted Apr 24 (Edited May 11)

Create a 3-dimensional collagraph of a Sockeye Salmon using the following materials:

- a cereal box
- glue
- scissors
- paintbrush
- washable markers
- a fruit or vegetable netted bag



Collagraph.mp4  
Video



3. collagraph.jpg  
Image



Add class comment...



# Finished? Here's what you can do next!



All topics

Welcome to River of...

Energy Transfer Stat...

Build a Dam Station

Salmon Art Station

Finished? Here's wh...



Heather Stringer posted a new material: Already finished with everything else? Here are so...



Posted Apr 22 (Edited May 12)



Energy | The Dr. Binocs S...  
YouTube video 4 minutes



Cartoon for Kids!! What i...  
YouTube video 4 minutes



Cyberchase . Games . Wa...  
<https://pbskids.org/cybercha...>



Play Power Up! | NASA Cli...  
<https://climatekids.nasa.gov/...>



Electrical safety in your h...  
<http://www.switchedonkids.o...>



Wonderville | Free Online...  
<https://wonderville.org/asset...>



Energy Conservation.pdf  
PDF



Virtual reality visit of a hy...  
YouTube video 3 minutes



A Virtual Tour of Snoqual...  
Video



Add class comment...

