It’s Elementary: Recruiting the Future Hydro Workforce via Early (and Constant) Interdisciplinary STEM Education
You can’t be what you can’t see.

- Marian Wright Edelman

• Visibility is **essential** for hydropower to thrive.
• Introduce → Inspire → Educate → Recruit

Accessible opportunity regardless of age, gender, origin, socio-economic-status, etc.
The Long Game

- Elementary & Middle/Junior High
  - Introduce concepts, set up for future STEM success
  - Field trips, hands-on & creative projects
- High School
  - Build on established concepts with engaging lessons across disciplines
  - Effectively communicate career opportunities & myriad hydro paths available
- Tech School, College/University & beyond
  - Co-op and apprentice programs
  - Apply ideas, knowledge, experience practically
  - Effectual change, sense of purpose and impact
Inspire, Rinse, Repeat

- The Foundation for Water and Energy Education (FWEE) & Chelan County PUD, Washington STEM
  - STEM Career Academy: “career opportunities and educational pathways”
  - Hands-on activities, classroom presentations, after school activities
  - Booth 11027
Inspire, Rinse, Repeat

• NEED Project (National Energy Education Development Project)
  • Educator and Student resources
  • Lesson plans, curriculum correlations, signature programs
  • Coloring pages, energy games, science fair projects, leadership opportunities and scholarship information
• www.need.org
ENERGY FROM MOVING WATER
Hydro comes from the Greek word meaning water.
Hydropower is the energy we make with moving water.
Moving water has a lot of energy. We use that energy to make electricity.

Gravity—the force of attraction between all objects—makes the water move.
Gravity pulls the water from high ground to low ground.
The rain that falls in the mountains flows down the valleys to the oceans.
HYDROPOWER

Fill in the spaces with the correct words for each clue.
If you enter an incorrect letter use the backspace key to delete the letter or word.

ACROSS
3 Force that moves water. (7)
5 Dams can ___ energy until it’s needed. (5)
8 Moving water spins the blades of this. (7)
9 Lake behind a dam. (9)
11 This energy powers the water cycle. (5)
13 Part of a dam for extra or overflow water. (8)
14 Prefix meaning water. (5)

DOWN
1 Rain, snow, sleet, or hail. (13)
2 Giant tube in a hydropower plant. (8)
4 Movement of water through the atmosphere and Earth. (10)
6 Replenished in a short time. (9)
7 Has magnets and coils of copper wire. (9)
10 Produced by a generator. (11)
12 Large structure across a river. (3)
HYDROPOWER

Fill in the blanks with the words in the word bank on the right. Use each word only once.

1. Hydro means ANSWER.

2. The movement of water between the Earth and the clouds is called the ANSWER.

3. When water turns into a gas it is called ANSWER.

4. The force that moves water from high ground to lower ground is ANSWER.

5. We can build a ANSWER across a river to control the flow of water and form a lake called a ANSWER.

6. In a hydropower plant, the water flows through a tube called a ANSWER and spins a ANSWER to make ANSWER.

7. The water cycle will keep water moving on the Earth; we call hydropower a ANSWER energy source.

WORD BANK

dam
electricity
gravity
penstock
renewable
reservoir
turbine
water
water cycle
water vapor