

nPower Girls
Year 2 Teacher Professional Development Learning
Progression

Session 1
(Oct 11):

Sub – DQ:
How can we use our community resources to support girls in STEM learning?

Science Content:
SEP #5 – deep dive
ETS – Gliders, balloon cars
PS2 – Gravitational force; spinners; flight simulators

Math Content
4.OA.A.3 whole numbers to solve problems
4.MD.B.4 Represent and interpret Data
5.OA.B.3 Analyze patterns and relationships
7.EE.B Solve real-life and mathematical problems
SMP 1 and 2

Career Related Learning:
Pearson Field Education Center – [Garrett Schmidt](#)

Session 2
(Dec 6):

Sub – DQ:
How do engineers use computer-based models to prepare for or prevent natural disasters?

Science Content:
SEP #2 & #5 – CAD modeling; vector data models; GIS
ETS – fish passage; flood risk management; programmable logic controllers
ESS3 – computational fluid dynamics

Math Content:
5.OA.B.3 Analyze patterns and relationships
5.G.A solve real-world and mathematical problems
6.SP statistical variability
7.EE.B Solve real-life and mathematical problems
7.SP.A, B statistical variability
8.SP.A statistical variability
SMP 3 & 4

Career Related Learning:
US Army Corps of Engineers – [Tom Conning](#)

Session 3
(Feb 21):

Sub – DQ:
How are computer models and data used to predict natural disasters?

Science Content:
SEP #2 & #5; CCC #2 & 6
3-5 and MS ETS1-3
4-ESS3-2; MS-ESS2-2

Math Content:
5.OA.B.3 Analyze patterns and relationships
5.G.A solve real-world and mathematical problems
6.SP statistical variability
7.EE.B Solve real-life and mathematical problems
7.SP.A, B statistical variability
8.SP.A statistical variability
SMP 3 & 4

Career Related Learning:
Cascades Volcano Observatory – [Carolyn Driedger](#)

Session 4
(Mar 14):

Sub – DQ:
Can STEM professional use data modeling to indicate changes in fish populations?

Science Content: LS2.A; ESS2.A; ESS3.C; SEP #2 and #5; CCC #2 and #6; Influence of S, E, T on Society and Nat world
Math Content:
5.OA.B.3 Analyze patterns and relationships
5.G.A solve real-world and mathematical problems
6.SP statistical variability
7.SP.A Random Sampling to draw inferences
7.SP.A, B statistical variability
8.SP.A statistical variability
SMP 1 - 6

Career Related Learning:
Abernathy Fish Tech Center – [Patty Crandall](#)

Session 5
(Apr 25):

Sub – DQ:
How do STEM professionals use GIS and spatial models to plan for community growth?

Science Content: LS2.A; ESS2.A; ESS3.C; SEP #2 and #5; CCC #2 and #6; Influence of S, E, T on Society and Nat world
Math Content: 5.OA.B.3 Analyze patterns and relationships
5.G.A solve real-world and mathematical problems
6.SP statistical variability

Career Related Learning:
Mackay Sposito – [Carla Merritt](#)

Session 6
(May 16)

Sub – DQ:
Science Content: LS2.A; ESS2.A; ESS3.C; SEP #2 and #5; CCC #2 and #6;
Math Content: 5.OA.B.3 Analyze patterns and relationships
5.G.A solve real-world and mathematical problems
6.SP statistical variability
7.SP.A Random Sampling to draw inferences
7.SP.A, B statistical variability
8.SP.A statistical variability

Career Related Learning:
Federal Highway Department - Blaine Kunihasa

How can we use Computer Science to understand earth system interactions?

Culminating Products:
Individual – Write a response to the DQ, supporting your claim with evidence, and prepare to argue your position publicly.
Team – Prepare a state of the situation report for your city council that uses data to answer the Red Circle question.