WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

After School STEM Academy

Volunteer Facilitator Orientation

Spring 2022

To begin we acknowledge that we are on the homeland of the Coast Salish people, and it is with gratitude that we recognize the tribes of this area and that it is their land we are on.

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

THANK YOU for participating!

Our Mission

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

Washington Alliance for Better Schools is a collaborative of school districts and industry leaders that leverages resources, talent, and intellectual capital to help a quarter million students graduate career and college ready.

Edmonds School District
Everett Public Schools
Highline Public Schools
Kent School District — Commitment to Excellence
Lake Washington School District
Marysville School District
Mukilteo School District
Northshore School District
Renton School District — Service | Excellence | Equity
Seattle Public Schools
Shoreline Public Schools
Tacoma Public Schools — Every Student. Every Day.

Equity, Diversity & Inclusion - *Our lens*

WABS is committed to addressing the systemic racism that creates disparities in education. We are committed to equity, diversity and inclusion, which requires that we use our collective voice to identify and eliminate institutional barriers that deny equitable access and impact the success of Black, Indigenous, and people of color (BIPOC), and other underserved students.

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

What is ASSA?

A 4-week, hands-on program for elementary aged kids, designed to spark interest in STEM learning and careers.

Students

- Engage in real-world problem-solving using the Engineering Design Process
- Build 21st Century skills

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

ASSA Program Goals

- Provide high-quality, no-cost, career connected learning opportunities which prepare students to succeed in the global economy
- Build students' 21st Century skills (communication, collaboration, critical thinking, and creativity) by working directly with industry and community partnerships for all students, particularly those impacted by systemic racism and those furthest from educational justice

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

Roles

Industry Volunteers:
Primary Facilitators

- Facilitate the hands-on activity
- Share connection to personal job experience
- Support student learning

School Hosts:
Session Manager

- Arrange classroom
- Support volunteers with activities as needed
- Help address behavior or technical issues if they arise

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

Curriculum

Liftoff: Rockets & Rovers

In this unit, students will launch rockets to moons and planets, and create rovers to explore the destination. Students will use teamwork and cross team collaboration to redevelop new models using the engineering concepts of criteria and constraints.

Students will use a stomp launcher for testing. A large, open space, possibly outdoors, will be preferred.

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

Supply Kits

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

- **If plans are not made yet, coordinated kit pick up from the Shoreline Center is available. *Reach out to Grace ASAP***
- Please familiarize yourself with the supplies and the curriculum before your first session.
- Bring the kit to your 1st session. You will leave it in the classroom for the rest of the sessions.

Getting Started

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

Host Responsibilities

- Recruit students - *minimum 10*
- Connect with volunteers before the session
- Act as a class manager and support the volunteer facilitator during sessions

Guide volunteer through district's policies regarding volunteers, background checks, and COVID precautions.

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

Volunteer Responsibilities

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

- Attend 1 hour, online training
- Connect with school host
- ***Provide school with proof of full COVID vaccination*** & complete background check as instructed by the school
- Follow district policies regarding COVID precautions
- **Facilitate all sessions**
- Get to know the students, connect & *have fun*

Connect with School Host

- Confirm the schedule
- Determine if you need to meet ahead of the first session to prepare anything
- Ask about background check requirements, and covid precautions

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

Connect With Volunteer Partner

- Confirm Schedule
  - Discuss scheduling changes or conflicts
  - Do you already know that you will have a scheduling conflict for a specific week?
    - Arrange to have at least one volunteer at the session.
- Determine how you want to split tasks
  - Who will lead each session?

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

Preparing For The Session

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

- **Review Facilitator Guide & *Adventure Slides (PowerPoint Presentations)***
  - Slideshows have: EDP visual, audio and video files/links, mission overview, words to know, and timers
- Pickup the supply kit
  - Look through the supply kit
- Connect with your host and volunteer partner

STEM Learning

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

Habits of Mind: SEL in STEM

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

Feel	
Collaborate effectively	See themselves as problem solvers
Persist and learn from failure	Weigh implications of solutions
Think	
Apply math knowledge to problem solving	Envision multiple solutions
Apply science knowledge to problem solving	Make evidence-based decisions
Consider problems in context	Use abstraction to create efficient solutions
Consider trade-offs between criteria & constraints	Use systems thinking
Do	
Communicate effectively	Innovate processes, methods, & designs
Construct models & simulations	Investigate features and uses of tools
Decompose problems	Investigate properties and uses of materials
Use computers to solve problems	

Source: *Using Habits of Mind in the Classroom*, blog.cie.org

Engaging Students in *Habits of Mind*

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

- **The Habits of Mind chart serves as a tool for discussion questions, encouragement, and extension activities.**
- *For example:*
  - *the Habit "Persist and learn from failure" might inspire:*
    - *the discussion question "What strategies did you use when your design wasn't working?"*
    - *the encouraging comment that "I admire how you all are learning from the results of your first design."*
    - *the exercise of listing ways in which designs failed and using that information to plan improvements.*

Source: *Using Habits of Mind in the Classroom*, *blog.eie.org*

SEL in STEM Impact

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

Academic	Workplace	Social
Learning to make reasoned judgement after analyzing information, data, facts Recognizing how critical thinking skills are useful	Using planning and organizational skills Practicing teamwork & collaborative problem-solving	Identifying one's emotions Examining prejudices and biases Taking others' perspectives

Health & Wellness	Civic
Resisting negative social pressure Anticipating & evaluating the consequences of one's actions	Understanding the influences of organizations/systems on behavior Identifying diverse social norms, including unjust ones

Source: *Engineering and SEL for Elementary Learners*. https://www.eie.org/

5 CASEL Competencies & 21st Century SKills

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

https://casel.org/casel-sel-framework-11-2020/

What Should You Share?

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

- Students are interested in learning your personal story and what you actually do everyday!
  - *What do you do?*
  - *How did you get there? What degree or certification do you have?*
  - *What did you like to learn about in school that led to your job?*
  - *What do you like about your job? Do you have time off?*
  - *What is the most innovative thing you have gotten to do in your career?*

Resources

- Curriculum
- Adventure Slides/PowerPoint Presentations
- Supply Kit

Files are located at www.wabsalliance.org

Engaged Students

↳ After School STEM Academy

↳ Volunteers

↳ Link under *Spring Curriculum Resources (password in email)*

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

After School STEM Academy

Volunteers

Teachers

Curriculum Review: Week 1

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

- ***Rocket Power! What is Engineering?***
- Activity Overview: Icebreaker/ Path & Career Sharing/Build a rocket to support a rover
- Prep time: 25 Min, Create mini-kits of cups, paper, and tape
- Slides: 1 video
- Reusables: None

Curriculum Review: Week 2

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

- ***Boost Your Knowledge Out of This World!***
- Activity Overview: Test variables of weight, angle, and material with stomp launchers
- Prep time: 20-40 Min, mostly arranging materials/ creating altitude trackers, *if using*
- Slides: 2 audio files
- Reusables: Altitude Trackers, Launchers, Dowels, Washers/ Keep the Results Chart

Curriculum Review: Week 3

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

- ***Boost Your Knowledge Out of This World!***
- Activity Overview: Creating rovers, working within criteria and constraints
- Prep time: 15-20 Min, create a rover model, prep motor wires
- Slides: 1 audio, 2 videos, rover graphics
- Reusables: none

Curriculum Review: Week 4

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

- ***Countdown to Blast Off!***
- Activity Overview: Work together to engineer a rocket that can get our rover and all of its tools to the location.
- Prep time: 10 Min, recreate the Results Chart from Activity 2
- Slides: 1 audio, 2 videos

STEM Learning Summary

- Adults guide, instead of giving answers
- Encourage learners to try their own ideas to questions. *(Even if you know it won't work!)*
- Remind everyone that STEM activities are more about the **process** than the results
- There is no right answer! Chances are, there are several ways to reach a solution
- Have fun!

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

Questions?

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS

Thank you!

If you need support, please contact us!

Grace Schouten: grace@wabsalliance.org

Van Onishi: van@wabsalliance.org

WABS
WASHINGTON ALLIANCE FOR BETTER SCHOOLS