

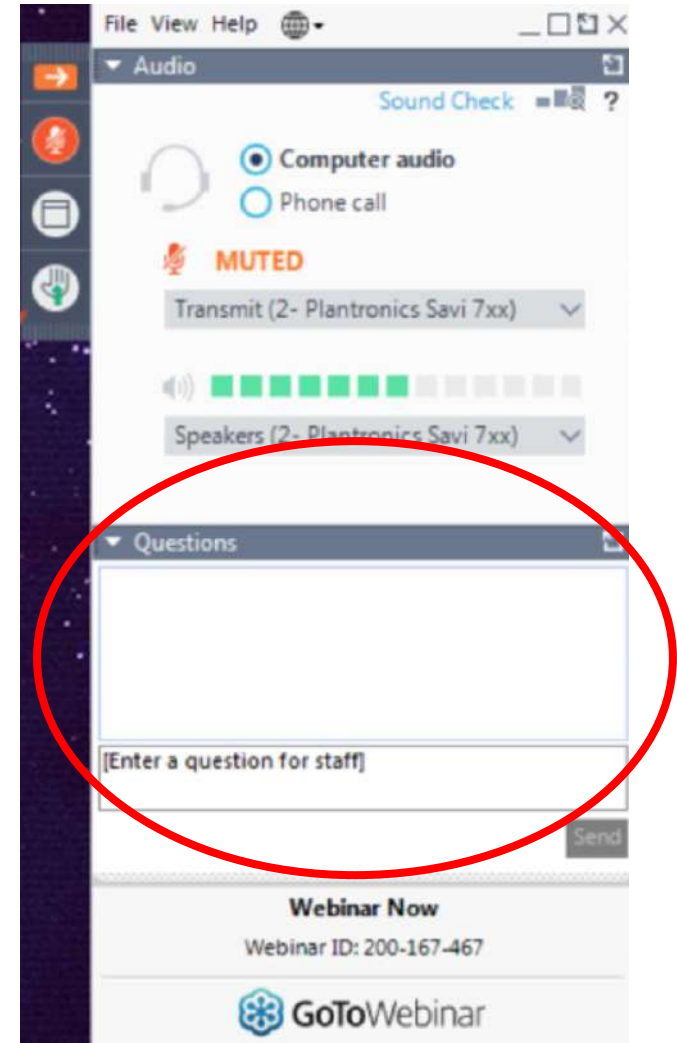


# **Discover Drones** as an **Instructional Platform**

STEM Connections for Career Pathways

## Quick Notes

- Everyone is in listen-only mode
- Use the questions toolbar at any time
- Questions for our panel will be asked during Q&A
- Today's webinar is being recorded and will be shared within 3 business days by email



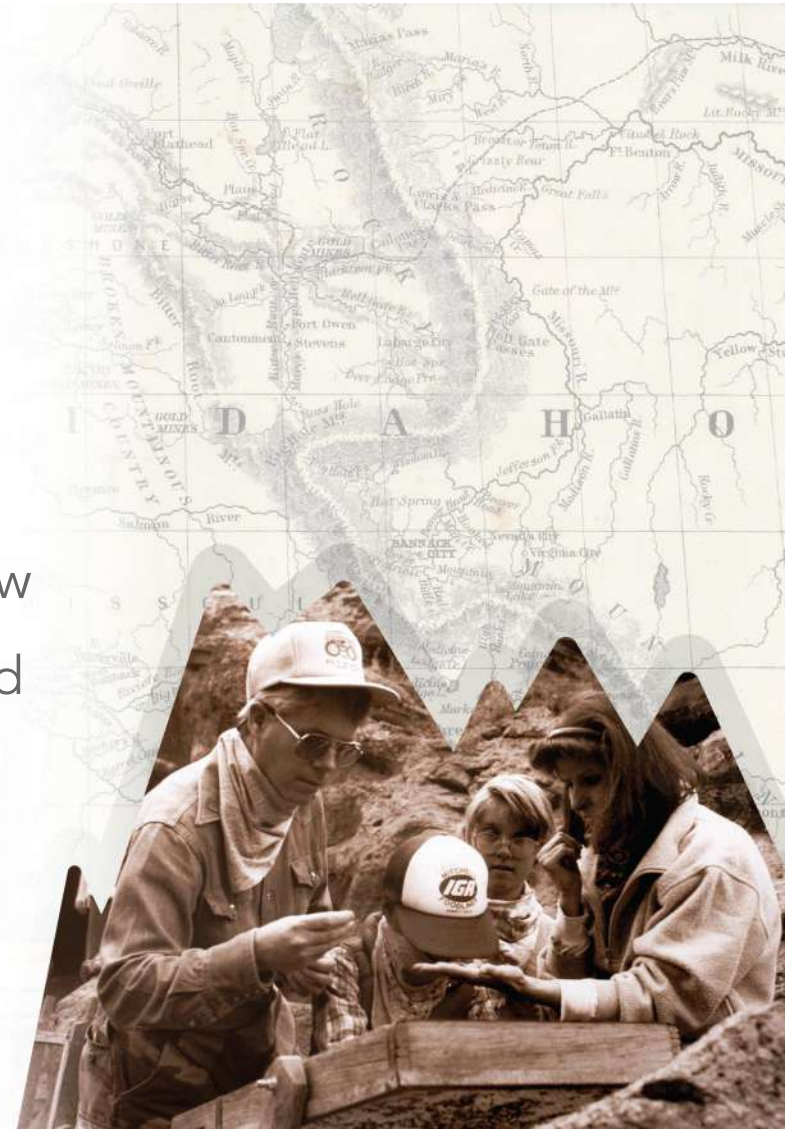


# **Discover Drones** as an **Instructional Platform**

STEM Connections for Career Pathways

## About PCS Edventures!

- Started as **P**at's **C**omputer **S**chool in 1988
- Grew to network of experiential learning centers in Idaho, Washington and California
- **PCS Edventures** learning solutions are now in more than 7000 sites in all 50 states and over 17 other countries
- Philosophy of hands-on projects that fuel a passion for learning and a lifelong love of STEM



## Our Products



- Turn-key solutions (everything included)
- Team programming for up to 30 students
- Student driven individual kits
- Curriculum sparks interest in STEAM
- Drone collection programming facilitates career exploration
- Training and support

## Our Customers



K-12 classrooms

Summer schools

After-school programs

Libraries and makerspaces



## Agenda

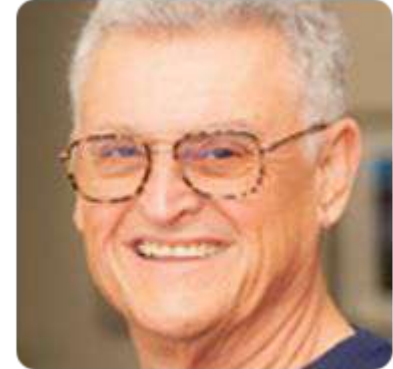
1. Panel Introduction
2. Drones as an Instructional Platform
3. The RubiQ Drone
4. Funding Drone Programs
5. How to Get Started
6. Q&A
7. Wrap-Up
8. Survey



## Today's Moderator

Jim Schmidt, Ed. D.

- Over 20 years experience in Public School Administration
- Key role in the creation of the Dehryl A. Dennis Professional Technical Center one of the top CTE high schools in the Pacific Northwest
- Strong background in industry partnerships and workforce development
- Managed numerous statewide STEM professional development training programs
- Joined PCS as a consultant in 2007



**Jim Schmidt**

Ed. D.

Dir. of Professional  
Development



## Panelists



**Kellie  
Dean**

Assistant Principal  
Gem Innovations  
Meridian, Idaho

30 Years in Education  
STEM Curr. Director and Trainer  
Instructional Coach  
Gifted and Talented Coordinator



**Justin  
Touchstone**

TSA State Advisor  
Idaho TSA  
Boise, Idaho

Engineering Technology Ed.  
Program Quality Manager  
Idaho Career & Technical  
Education



**Matt  
Koosmann**

CTE STEM Teacher  
North Tapps Middle School  
Bonney Lake, Washington

22 Years Middle-School  
Science Teacher  
8 Years CTE STEM Education  
2D/3D CAD, Robotics, Game Design, Drones

## Discover Drones

How do you use drones as an instructional platform?



## Kellie Dean



How do you use drones as an instructional platform?

- Implementation of drones
- Age
- Group size
- Exposure = opportunity

## Justin Touchstone



### How do you use drones as an instructional platform?

- Work with teachers for integrating drones into the classroom
- Project based learning environments
- Drones in both the classroom and student organizations
- TSA drone contest has a problem research component to connect drones to careers

## Matt Koosmann



### How do you use drones as an instructional platform?

- Used in multiple formats - club, stand-alone course, integrated into other courses
- Exploratory course to teach and build engineering mindset
- Provides students ownership over learning a skill and knowledge

## RubiQ

How does the RubiQ drone compare with other drone products?



## Kellie Dean



How does the RubiQ drone compare with other drone products?

- My experience is with the *Discover Drones* program and the RubiQ drone
- Feedback from trained teachers

## Justin Touchstone



How does the RubiQ drone compare with other drone products?

- The idea of an easy to build drone for learning makes it a great fit for the classroom
- The RubiQ meets the educational needs with a drone that is easy to build, without spending hours trying to figure out the right components
- It is not just a ready to fly drone either offering opportunities for students to learn
- Students learn the components and construction of drones



## Matt Koosmann



How does the RubiQ drone compare with other drone products?

- Modular kit with high quality components that can be swapped out easily when needed
- Open format of drone allows students to see the elements that make up the drone
- Easily approachable for the novice teacher and student

## Funding

What options have you discovered to fund drone programs?



## Kellie Dean



What options have you discovered to fund drone programs?

- Corporate and family foundations
- K-12 STEM Grant - [stemgrant.com](http://stemgrant.com)
- HSU Foundation - <https://hsu-foundation.org/>
- AFA Educator Grants
- IGEM grant - <http://commerce.idaho.gov/idaho-business/idaho-global-entrepreneurial-mission-igem/>
- Idaho STEM Action Center

## Justin Touchstone



What options have you discovered to fund drone programs?

- With Career and Technical Education we have access to dollars that others do not. State added cost, and Federal Perkins funding
- There are also grant opportunities for purchasing drones for the classroom

## Matt Koosmann

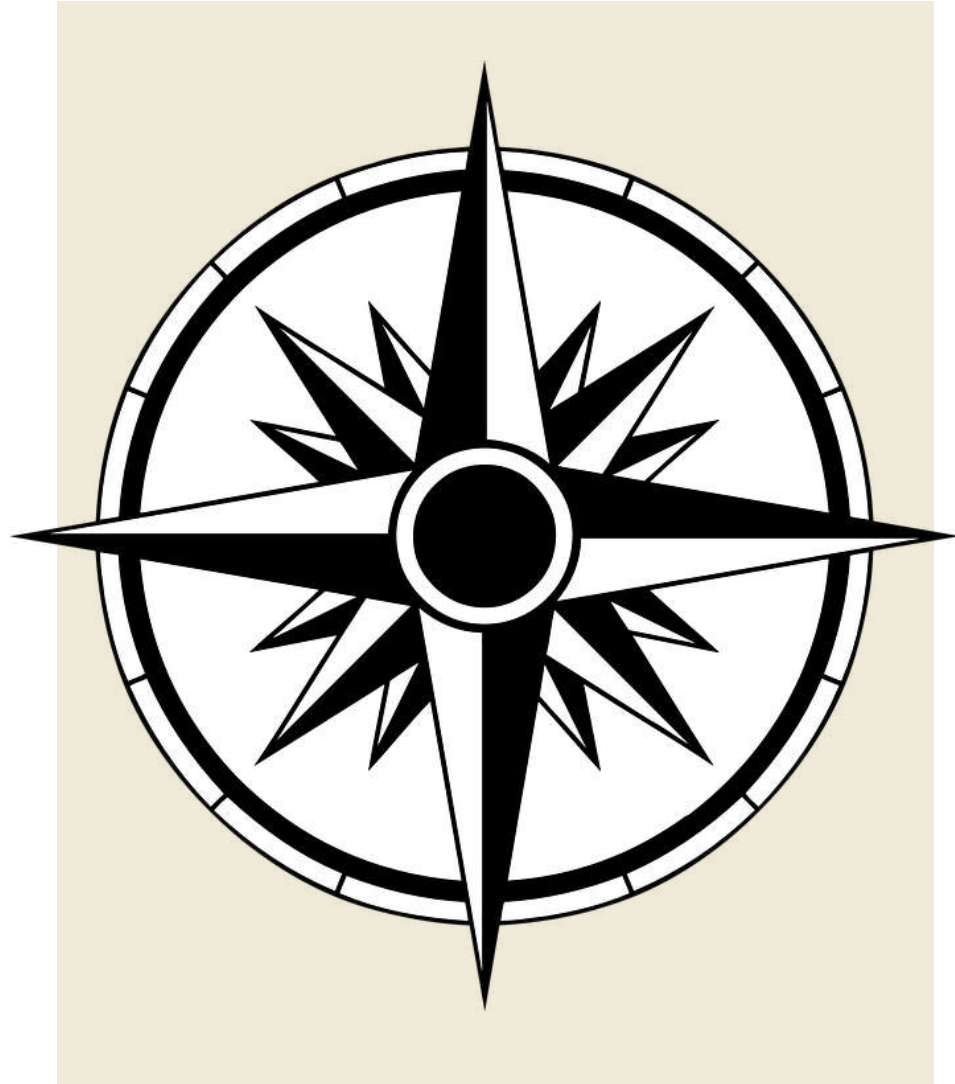


What options have you discovered to fund drone programs?

- CTE Advisory members contributed to building our program through donations
- PTSA is a great resource!

## Getting Started

What advice would you give educators to start a drone program?



## Kellie Dean



What advice would you give educators to start a drone program?

- Training - Program facilitator
- Program goals
- District/school approval
- Funding
- Marketing
- Recruiting
- Launch - Program participants

## Justin Touchstone



What advice would you give educators to start a drone program?

- Teachers should attend training and professional development (obtain a part 107)
- Teachers need to be comfortable with drones before they will fully embrace the technology
- PCS has been a fantastic partner with Idaho TSA in development, training and ongoing technical support for our drone contest



## Matt Koosmann



What advice would you give educators to start a drone program?

- Build and fly well before the students
- Call and talk to other teachers and PCS Edventures!
- Practice, practice, practice
- Fly indoors
- Create safety protocols - battery, check in and out, checklists, travel to and from classroom, etc
- Communicate with building staff
  - Master Schedule - Year and time of day
  - Colleagues - PE for indoor and outdoor space



Type your question in questions panel and indicate who the question is for.

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Contact a

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