DATA PUZZLES

Analyzing authentic data with inquiry-based instructional practices

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WHAT IS A DATA PUZZLE?

- Free classroom resources that combine authentic and relevant scientific data datasets with research-backed instructional practices (see "Intellectual Engagement" figure below)
- Co-developed with CIRES scientists and education and outreach team members
- Tool to increase the reach, impact, and value of CIRES scientists' research

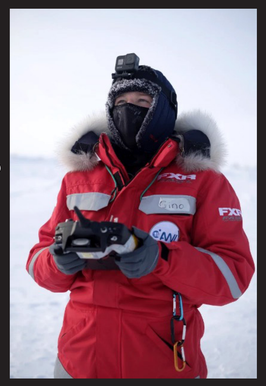
DATA PUZZLE EXAMPLE

Title: It's All Connected

Scientific Question: What effect, if any, do leads have on the transfer of moisture between the Arctic ocean and atmosphere?

Featured Scientist: CIRES scientist Gina Jozef participated in the 2019-2020 MOSAiC Arctic research expedition and used a drone called the DataHawk2 to study the lower atmosphere.

View the full Data Puzzle collection: https://datapuzzles.org



Gina Jozef flying the DataHawk.

BROADEN THE IMPACT OF YOUR SCIENCE!

Calling all CIRES scientists! Do you have an interesting dataset that could be turned into a Data Puzzle?

Contact **jonathan.griffith@colorado.edu** if you are interested in working with our team to translate your data into an educational resource!

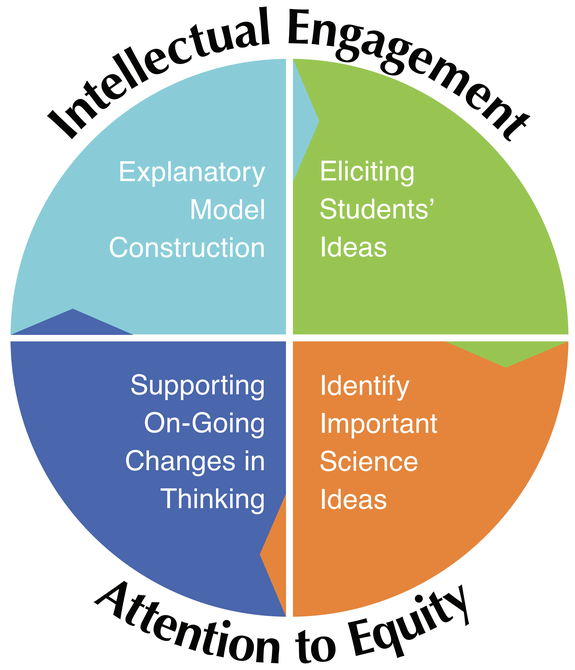
DATA PUZZLE TEAM MEMBERS

EXPLANATORY MODEL CONSTRUCTION

Students communicate new science ideas via the construction of a conceptual model to explain/answer the scientific question.

SUPPORTING ON-GOING CHANGES IN THINKING

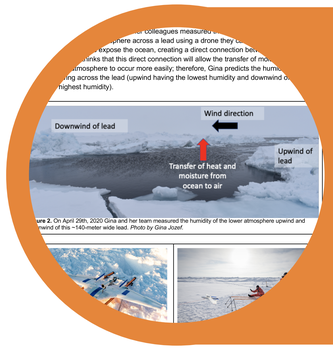
Students analyze and interpret authentic data to confirm or refute their predictions for the scientific question.



Research-backed instructional practices.
Figure modified from Ambitious Science Teaching.

ELICITING STUDENTS' IDEAS

Help students connect to the scientists' research by eliciting students' ideas about similar/related events or scenarios.



IDENTIFY IMPORTANT SCIENCE IDEAS

Connect students to the scientist and their work via an interactive reading complete with visuals, guided questions, and student predictions related to an established scientific question.

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https://datapuzzles.org

CIRES Education & Outreach

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