

Outreach Report: Juliet Crowell, JOIDES Resolution Ambassador

Post-Cruise Outreach Program in Washington D.C. from April –June, 2015

Groups Reached: Schools, museum audiences, afterschool, and out of school programs

General Program Outline

- Broadcast live with JOIDES Resolution (JR), Expedition 355 (Arabian Sea) – 30 minutes
- Inquiry activities simulating science careers/jobs related to research on the JR – 45 minutes
- Tell the Story of time through Q&A wrap-up discussion to pull together science – 15 minutes
- *Variations of program adjusted to suite audience size, time limit, and educational needs*

Students work in teams of two with science partner. If adults (parents) interns are present they are assigned the tasks of leading and assisting with specific activities. When possible adults assist youngest learners.

JR Careers & Activities:

Core Describers (sedimentologists)

- Students are sedimentologists who use the core card to describe the K/T core, and 1 or 2 other cores where students use blank cards to describe arctic and/or coral cores. Students used pencils, crayons, magnifying glasses, and tape measure.

Micro-paleontologists:

Smear Slides

- Students produce permanent smear slides of diatomatius earth and view under microscopes using microfossils poster and IODP slides as reference.

Sieving for Microfossils

- Students sieve sand sample in search of colored beads that represent microfossils found at different depths in the ocean floor.
- Students use answer key reference card to produce their own answer key (tape/glue beads and write/document specific fossil name.



ACTIVITY STATIONS: SIEVING FOR MICROFOSSILS, CORE DESCRIPTION, AND SLIDE PREPARATION

Other Activities- as time permits or as groups rotate through activities

- Students assemble ship puzzles (1,2,3,and 4 options)
- Use laminated microfossil cards and answer key to tell geological period (time/date)

- Identifying and grouping types of fossils using laminated card and types of fossil key (plant or animal)

Wrap-up

Tell the Story of Time: Guide students in discussions around the science jobs (stations) and what we can learn from the cores, smear slides and identifying micro-fossils. Students get to keep the work they produce, and receive handouts (pencils, tattoos, books, posters, and more).

Teachers also receive handouts and are encouraged to visit the JR website to access lessons (educational resources). Those who choose to broadcast live with the JR and encourages connect with future expeditions.

Outreach Events

April 16, College Tribe

Group Type: College Tribe,
STEM program for boys grades 3-8

Group Size: 9

Ages/Grades: 3rd – 8th graders



Program Outline:

Live broadcast JR – 30 min

Science activities – 45 min

Wrap-up – 15 min



Students worked at stations sieving for fossils, making smear slide, describing cores, and identify fossils (type and geological time).

Event Photos: <https://mobile.twitter.com/collegetribe/status/588760593001291776>

Facebook posting on April 16: “Today at Spring Break minicamp. Juliet Crowell, Education Officer on the Joidas Resolution spent the day with the Nerd Night boys working a research ship drilling into the ocean floor. The boys were able to video chat with the ship, which is in the Arabian Sea.”

Partner & Contact

Patrick Wilborn

STEM Instructor/Tutor Instructor

3845 South Capitol Street SW

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Website: collegetribe.org

Facebook: facebook.com/collegetribe

Twitter: twitter.com/collegetribe

April 22, National Museum of Natural History (NMNH) – Earth Day

Time: 10am – 12 pm

Group type: museum visitors (families and school groups)

Group size: 40+ interactions

Hands on cart in the museum’s Ocean Hall exhibit

- 3 minute JR video expedition 354
- Sharing stories about deep ocean research
- Sharing stories about life at sea
- K/T core and laminated cards, talk about how cores tell time
- Microfossils (for viewing): talk about how these very small fossils tell time
- Handouts: encouraging kids, parents, and educators to use online resources

Time: 12:30 – 2:00

Docent Lunch at NMNH

Group Size & Age: 8 Adults

- Informal lunch training with ocean research docents
- Viewed 3 minute JR video
- Discussed research and life at sea
- Distributed IODP handouts

April 23, Logan Montessori Public School, Washington D.C.

Group Type: Logan Montessori School

Group Size: 21 students

Ages/Grades: ages 3-6

Program Outline:

2+ hours spend in the classroom with teacher.

2 students at a time to learn about JR & practice being scientists.

- viewed 3 minute intro to JR
- view the coral core using magnifying glasses
- draw interpretation of core using coloring pencils
- use sticker sheets to place JR and other items in the ocean and sky (life at sea)
- each student received a copy of newest edition of Uncovering Earth’s Secrets and other handouts



Partner & Contact

Christine Willis-Bennett, teacher

Capitol Hill Montessori

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May 6, National Museum of Natural History

Time: 10am – 2 pm

Group type: museum visitors (families and school groups)

Group size: 50+ interactions (families, adults, and school groups)

Hands on cart in the museum's Ocean Hall exhibit

- 3 minute JR video expedition 354
- Sharing stories about deep ocean research
- Sharing stories about life at sea
- K/T core and laminated cards, talk about how cores tell time
- Microfossils (for viewing): talk about how these very small fossils tell time
- Handouts: encouraging kids, parents, and educators to use online resources



Contact/Partner

Jennifer Collins - Ocean Education

National Museum of Natural History-Washington, DC

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May 7, Wilson Senior High School

Group Type: Marine Science Classes, *3th and 5th periods*

Group Size: 20 & 30

Ages/Grades: senior high school students (ages 16-18)

Program Outline:

Live broadcast JR – 30 min

Science activities – 45 min

Wrap-up – 15 min



Students worked at stations sieving for fossils, making smear slide, describing cores, and identify fossils (type and geological time). Teacher provided 8 digital microscopes (2 per station). Teacher graded students on work produced.



[Event Images](#) of students exploring JR science careers:

Partner

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May 13-14, Virginia Natural History Museum in Martinsville, VA

May 13, Henry County Home Educators

Time: 10:00 am – 11:30am

Group Type: Home school students & parents

Group Size: 15 kids plus parents

Ages/Grades: Ages 6- 11

Program Outline:

Live broadcast JR – 30 min

Science activities – 50 min

Wrap-up – 10 min

Students worked at stations sieving for fossils, making smear slide, describing cores, and identify fossils (type and geological time).

Other Activities- families also choose shorter self-guide activities such as:

- Students assemble ship puzzles (1,2,3,and 4 options)
- Use laminated microfossil cards and answer key to tell geological time/date
- Identifying and grouping types of fossils using laminated card and types of fossil key



Time: 4:00pm – 5pm

Martinsville Henry County (MHC) After School Program

- Group type: after school program
- Ages/Grades: 7-11 (grades 3-5)
- Group Size: 20

Program Outline:

- Live broadcast JR – 30 min (Q& A)
- Science activities – 30 min (5min wrap-up)

Students worked at stations sieving for fossils, making smear slide, viewing slides, describing cores, and identify fossils and geological time periods . All participants received handout materials and information on educational resources.



Time: 6pm – 7pm

- Group Type: Science Café, Adults
- Group Size: 8
- Ages/Grades: Adults

Program Outline:

- Live broadcast JR – 30 min
- Science activities – 30 min
- Adults mingle and chat, view cores, look at microfossils under microscopes and receive handouts

May 14, Martinsville Middle School

Group Type: Science class
Group Size: 35 (2 classes)
Ages/Grades: 13-14/ 7th

Program Outline:

- Live broadcast JR – 35 min (Q& A)
- Science Review – 25 min

After broadcast with JR students took turns visiting educational table where they:

- viewed cores
- looked at microfossil slides under the microscope
- received hand out materials
- teachers received all handouts and encourages to access online educational materials



Time limits: We could have used more time with the after school group of May 13th. School program of May 14 was added last minute and students have less time (1 hour max) that initially discussed/agreed.

Program Photos - <https://www.dropbox.com/l/swE2le7PXapLEi5JHQeot>

Partner & Contact

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May 18th, Smithsonian Anacostia Museum Community Outreach at Savoy Elementary

Group Type: after school program
Group Size: 20
Ages/Grades: 7 to 11 yr.

4:00 pm – 5:30pm

Program Outline:

Live broadcast JR – 30 min
Science activities – 45 min
Wrap-up – 15 min



Students worked at stations sieving for fossils, making smear slide, describing cores, and identify fossils (type and geological time).



Partner/ Contact

Linda A. Maxwell
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May 20, Logan Montessori Public School in Washington D.C.

Time: 1:30pm -3:00pm

- Group Type: elementary school
- Group Size: 20
- Ages/Grades: 1st grade

Program Outline:

- Introduction -15 min
- Hands On – 60 min
- Wrap-up and Q&A -15

Students worked at stations sieving for fossils, making smear slide, describing cores, and identify fossils (type and geological time). Students got to rotate to and try all 3 types of science activities.

Other Activities- students also choose shorter self-guide activities such as:

- Students assemble ship puzzles (1,2,3,and 4 options)
- Read the Uncovering Earth's Secrets book

Note: When planning this event teacher indicated that her students had already studied the K/T period and produced (geological) timelines. The teacher and I were so busy we forgot to take photos. The students had a great time.

May 21, Girls Inc. Washington DC & Howard University Middle School of Mathematics and Science

Time: 3:30 pm -4:30 pm

- Group Type: Middle School Girls
- Group Size: 30
- Ages/Grades: 6th grade

Program Outline

- JR introduction – 5 min (STEM careers onboard the JR)
- Introduction to career stations.- 5 min
- Hands on Stations – 35 min
- Wrap-up – 5 min



Students worked at stations describing cores, sieving for fossils, making smear slide, viewing smear slides and identify fossils.

Note: Could have used more time with group, but only give 45 min for programming. Three program staff/interns assisted the girls at the smear slide prep station, microscope stations, and core description station.

[Images from Girls Inc. Program](#)

Contact/Partner

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June 6-7, National Museum of Natural History World Ocean Day Events

Times:

June 6th, 1:30pm -4:30pm

June 7th, 1:00pm – 4:00pm

Program Outline

Group type: museum visitors (families and school groups)

Group size: 100+ interactions (families, adults, and school groups)

Hands on cart in the museum's Ocean Hall exhibit:

- 3 minute JR video expedition 354
- Sharing stories about deep ocean research
- Sharing stories about life at sea
- K/T core and laminated cards, talk about how cores tell time
- Microfossils (for viewing): talk about how these very small fossils tell time
- Handouts: encouraging kids, parents, and educators to use online resources

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