



# CENTERVILLE virtual STEM FEST



Facebook June-July 2020 Event:

<https://www.facebook.com/CentervilleCCSD/>

## June 15-19 — Earth & Space Science Week!

Day	Topic split K-2/3-5	Noon Video	Supplies for Each Day
<b>M</b>	<b>Stars</b>	<b>Dr. Deborah Kent: Solar Eclipses</b>	<b>PK-2:</b> 20 mini marshmallows, 20 pretzel sticks
<b>T</b>	<b>Rocks &amp; Minerals</b>	<b>NASA Ambassador Dan Hoy: Craters &amp; Meteors</b>	<b>K-5:</b> Rocks, paint, brushes
<b>W</b>	<b>Water Sources: Fresh and Salt</b>	<b>Cantera Aggregates</b>	<b>3-5:</b> Eggs, glasses, water, salt
<b>Th</b>	<b>Water Usage</b>		<b>P-2:</b> Paper plate, brad fastener, bowl, small mug/ cup, plastic wrap, rubber band, Ziploc bag, markers, food coloring, shaving cream, coffee filter, contact paper or waxed paper, blue tissue paper
<b>F</b>	<b>Water Pollution</b>		<b>K-2:</b> 2 clear jars or glasses, 1 plastic glass, bucket or bowl <b>3-5:</b> a large container of water mixed with enough dirt to make it brown but still water-like, empty bowl, clear plastic cups, material to filter the water (examples - paper towel, baby wipe, toilet paper, Kleenex, dryer sheet, coffee filter)

If you have questions or comments, please send us a note.

## Week 2: Earth & Space Science Monday

*Grades K-2*

Think About:

What is a constellation?

Read, sing, and dance along to this familiar song. Click on the link: [Twinkle Twinkle Little Star](#)

Watch:

How stars are connected to form patterns in the sky called constellations. Click on the link: [Ready Jet Go-Constellations](#)

Activity:

Connect the stars to form well known constellations. Click on the link: [Mindy's Constellations Explorations](#)

Activity:

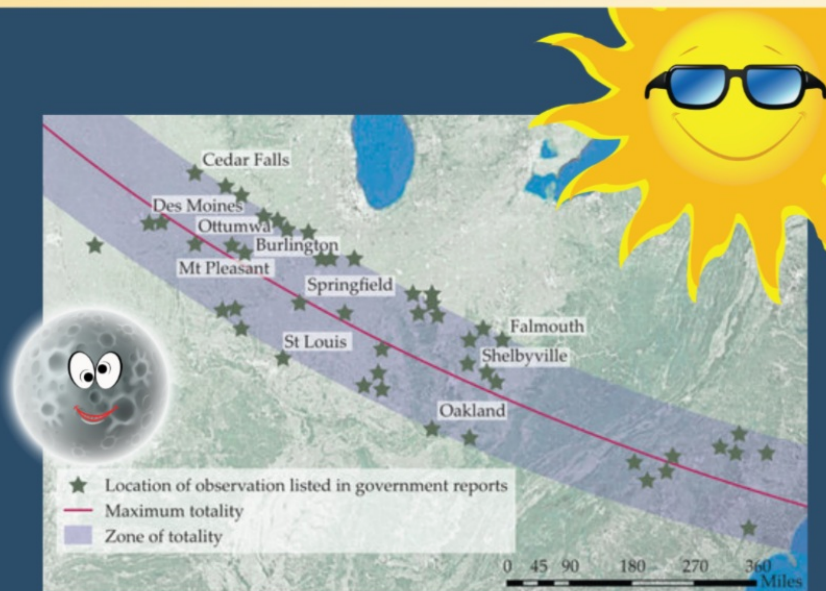
Click on the link: [Build marshmallow/pretzel constellations](#)

*Monday's Noon Video:*

*Dr. Deborah Kent, Drake University Math Professor*

Click **HERE** to watch at noon!

# CENTERVILLE Virtual STEM Video Drop



**June 15, Noon**

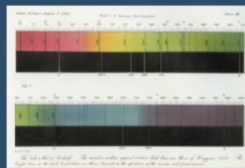
**Dr. Deborah Kent**

**Assoc. Prof. of Mathematics**

Deborah Kent is an associate professor of mathematics at Drake University in Des Moines, Iowa. Her research on the history of mathematics focuses on 19th-century mathematical sciences in the US.

She'll talk about the science of an eclipse provide a glimpse back at Iowa's most famous total eclipse in 1869. Those few moments of darkness changed how we observe them today.

Historic photos from Kent's article:  
<https://physicstoday.scitation.org/doi/10.1063/PT.3.4271>



## *Grades 3-5*

Think About:

How did ancient people use constellations?

Watch:

Click on the link to learn:  
[What About Stars?](#)

Activity:

A constellation is a pattern of stars. Interact with this presentation to learn about some common constellations. Click on the link: [Mindy's Constellations Explorations](#)

Watch and Read: the video and then read pages 25-43 to find out how people of different cultures interpreted the stars. Click on the link: [Constellations!](#) (Trouble connecting? Go to [Iowa AEA Online](#), scroll down to TrueFlix -> Outer Space -> Constellations)

Activity:

[Flashlight Constellations](#). Cut out the constellation cards. Using a sharp pencil, poke holes through the dots. In a darkened room, shine a flashlight behind the card and project the constellation on a wall. Read the accompanying myth to a parent or sibling.

Activity:

Use the star card included in your materials packet. (Or, use this [star card](#)) Study the stars. Connect the stars in a pattern to illustrate what you see when you look at the pattern. Write a story to match the picture you see. Share your story using this Flipgrid link. <https://flipgrid.com/warren7466> Show your constellation to your friends and family. Share the story you wrote about the con

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## Tuesday

*Grades K-2*

Think About:

How can collected rocks be sorted?

Watch:

Learn about rocks and minerals in this video: Click on the link: [Rocks and Minerals](#)

Read

*Rock Collecting* by Elaine Pasco

(Go to [Iowa AEA Online](#), scroll down to BookFlix and click. Once in BookFlix, type "Rock Collecting" in the search bar on the top right.)

Activity:

Go outside and start your own rock collection. Then sort the rocks based on different qualities like color, shape, size, etc. Click on the link: [Sorting Activity: My Rock Collection](#)

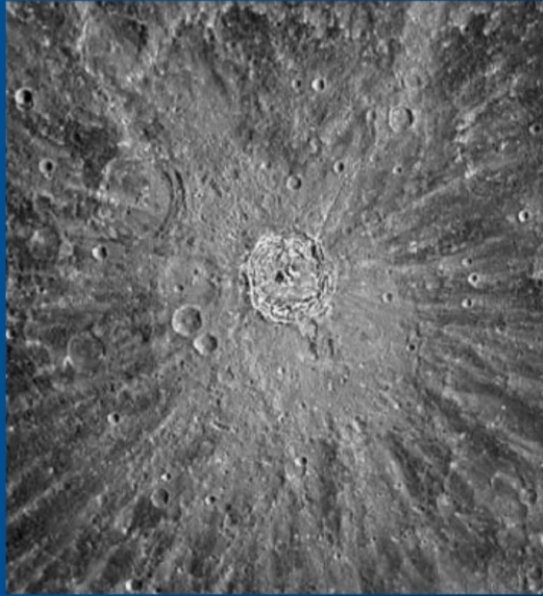
You could also paint rocks too! Click on the link: [20 Awesome Rock Painting Ideas for Kids to Try](#)

*Tuesday's Noon Video:  
Dan Hoy, NASA Ambassador*

**Click HERE to watch at noon!**



# CENTERVILLE <sup>Virtual</sup>STEM Video Drop



June 16, Noon

**Dan Hoy**

**NASA Ambassador**

Join NASA Solar System Ambassador Volunteer Dan Hoy and learn about the craters in our solar system—where to find them, what they look like, and how they are made. Dan will show you how you can make your own crater kit to learn more about the science of craters. For older students, there is a bonus section on the Asteroid Belt and the kinds of meteorites we find on Earth.

If you have a local event and need a NASA contact, you can email Dan at [jul201969@gmail.com](mailto:jul201969@gmail.com).

## Suggested Supplies: DIY Crater Kit

- \* 9" x 12" baking pan
- \* 4 cups of flour
- \* 3-4 TBS of cocoa
- \* Variety of pebbles and stones

### Optional

- \* 2 TBS colored sprinkles, not chocolate
- \* Strainer or sifter
- \* Ruler, notepaper, and pencil



## Grades 3-5

### Think About:

What are the three main types of rocks?

### Watch:

Click on the link to learn about three main rock types: [Be a Rock Detective!](#)

### Read:

Click on the link: [Types of Rock](#)

### Activity:

Cut and sort rocks into three groups using this paper activity. (There are also experiment ideas at the bottom of the packet.) Click on the link: [Three Main Types of Rocks](#) [Igneous Rocks](#) [Sedimentary Rocks](#) [Metamorphic Rocks](#)

### Activity:

You could also paint rocks too! Click on the link: [20 Awesome Rock Painting Ideas for Kids to Try](#)

## Wednesday

*Grades: K-2*

Think About:

Where do we get our water?

Watch:

Learn about where some of the earth's water is stored. Answer the quiz questions along the way to make sure you understand.

[https://edpuzzle.com/media/5eb6e750d649c33f0960e7e9\\_](https://edpuzzle.com/media/5eb6e750d649c33f0960e7e9_)

Activity:

Make a foldable to help you remember a fact about each body of water.

Watch:

Click on the link: [How deep is the ocean and just what is down there?](#)

Read:

Click on the link:

[The Ocean's Weirdest Creatures!](#) Read and then draw a picture of another creature you think may live way down deep.

*Wednesday's Noon Video:  
Cantera Aggregates*

Click **HERE** to watch at noon!

## CENTERVILLE <sup>virtual</sup> STEM Video Tour



Photos courtesy of Contera Aggregates website.

**CANTERA**  
**AGGREGATES L.L.C.**  
*We Rock So You Can Roll!*

**June 17, Noon**

Are you a rock collector? If so, you know that rocks tell stories. Layered under the ground we all walk on is a geologic history of Iowa, and often these layers can best be seen at your local quarry.

Cantera Aggregates mines rocks, but they also have a vast knowledge of the geology. Learn more about Iowa's past and what it's like to work in a quarry.

For more information or if you need rock work done, please visit:  
<https://cantera-aggregates-llc.business.site/?hl=en>

GREATNESS  
STEMS  
FROM IOWANS

Drake  
UNIVERSITY  
IOWA  
DRAKE UNIVERSITY'S IOWA AGENCY COURSE



CENTERVILLE COMMUNITY  
SCHOOL DISTRICT

*Grades: 3-5*

Think About:

What are sources of water on Earth?

Watch, Read, and Do:

Learn about a career as an extreme underwater explorer. Think about all the forms of and places we can find water. Click on the link:

[Watery Wonders of the World](#)

Read and Do:

Click on the link:

[The Ocean's Weirdest Creatures!](#) In this article. Draw a picture of another creature you think may live way down deep.

Activity:

Try to make an egg float. Answer this question, "Would it be easier to float in the ocean or a freshwater lake?" Click on the link:

<https://youtu.be/3nJ5R6baL90>

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## Thursday

*Grades: K-2*

Think About:

Where did Peep's water go?

Watch:

Click on the link to solve the mystery of "[The Disappearing Drink](#)".

Activity:

Dance to learn about the water cycle. Click on the link: [Water Cycle Gonoodle](#)

Activity:

Do the water cycle experiments in your materials packet. Or make a [Cloud in a Bag](#).

*Grades 3-5*

Think About:

How does water get to our homes?

Watch:

Learn about Nya and Salva who walked and walked and walked just to find clean drinking water. Click on the link: [A Long Walk to Water](#)

Read and Listen:

Click on the link: [Nya's Long Walk](#)

Activity:

Walk 4 miles (16 times around your local track) to understand Nya's walk for water.

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# Friday

## *Grades: K-2*

### Think About:

Why does Nya have to walk miles to get her water?

### Read:

Click on the link: [Nya's Long Walk](#)

### Watch:

What causes water pollution in our environment? What can we do to care for our water? Click on the link:

[What is Water Pollution?](#)

### Activity:

Learn how water can be filtered for drinking. Click on the link: [How to Do the Water Filtration Experiment](#)

## *Grades 3-5*

### Think About:

How can water be made safe for drinking?

### Activity:

Experiment to find the best material to use to make a water filtration device.

Click on the link: [Water Filter Experiment](#)

### Watch:

How Selva helped to improve Nya's water situation. Click on the link: [Just Add Water](#)

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## Earth & Space Science Book List

*[Click: Drake Public Library \(Centerville, Iowa\)](#)*

*[Click: Des Moines Public Library](#)*

*[Click: to find a public library near you.](#)*

Extend your learning  
with great books!

### **Picture Books**

- Water is Water
- Curiosity: The Story of the Mars Rover
- The Hike
- Hidden Figures
- The Water Princess

# CENTERVILLE Virtual STEM Festival



## Earth & Space Sci Books



- Earth: My First 5.4 Billion Years
- A Rock Can Be
- Ron's Big Mission

### Chapter Books & Middle Grade

- A Black Hole is Not a Hole
- My First Big Book of Space
- Space Case
- A Long Walk to Water
- Geology Rocks!
- Maps
- The Evolution of Calpurnia Tate
- Emery Jones: Bending Time
- Who is Rachel Carson
- A Line Tender
- Flush
- Weird Sea Creatures

If you'd like to share other great Earth and Space Science books, please email titles and authors to the [Hub](#).

Ask your librarian for more ideas!

**Click HERE to register for this event. (if you haven't already signed up)**

**GREATNESS  
STEMS  
FROM IOWANS**

**Drake  
UNIVERSITY**  
SOUTH CENTRAL IOWA REGION  
GOVERNOR'S STEM ADVISORY COUNCIL



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