

Video Transcript for “MWEE James Wood Middle School”  
Posted by: Chesapeake Bay Program

**Video images:** Interview with Ms. Byard, aerial video of school and town, students walking along stream.

**Narration:** I'm Dale Byard. I teach science at James Wood Middle School here in Frederick County, Virginia. We're at a unique location here at James Wood Middle School. Our school is part of the original settlement for the city of Winchester. Glen Burnie, next door to us, which is part of the Museum of the Shenandoah Valley, Glen Burnie means a land with many springs. It's why James Wood who was a surveyor in this area chose it. People settle where water is because water is everything and you can't live without it. [Ms. Byard interview]

**Video images:** Interview with Ms. Riley, Ms. Riley teaching students

**Narration:** We know water likes to travel as a group so if one starts carving a path, the rest of the water molecules behind it are gonna do the choo-choo train and pull each other down. Does anyone remember what that property of water was called where they like to stick together? [Ms. Riley to students]...My name is Megan Riley. I'm a sixth grade science teacher at James Wood Middle School. [Ms. Riley interview]...Say it louder, Makayla! Cohesion. [Ms. Riley and student]...We have a very diverse spectrum here at James Wood Middle School. It's just a big melting pot and yet somehow we kind of bring them in together and have just a lot of fun learning science. [Ms. Riley interview]...Evaporation. Condensation. Precipitation. [students]

**Video images:** Interview with Ms. Byard, Ms. Riley & Ms. Byard planning together and teaching students in their classrooms

**Narration:** Meghan Riley and I partnered this year and decided that we shouldn't do the MWEE project in isolation, that it really lent itself to many of the SOLs we had to cover this year. We taught about how the water molecule is unique and why it is essential for life and we could link that in with our MWEE project. Topography, erosion, and weathering...There were so many things that we teach in science this year that we could roll into our MWEE project and make it really rich and have the kids firsthand understand. [Ms. Byard interview]

**Video images:** Ms. Riley in class, Ms. Byard's class at the museum and outside testing water

**Narration:** Water is the only substance on Earth that does what? Oh! Solid, liquid, and gas. [Ms. Riley and students] Ever since I started working here at James Wood Middle School, I felt that the museum next door to us was a wonderful resource. They were so enthusiastic. We did a field trip where we went over the history of our town. We did water testing over at the museum to see how pure the water was that was coming out of the springs. [Ms. Byard interview]...It's the largest one and it's the beginning of the town run. [Museum educator to students]

**Video images:** Ms. Riley and Ms. Byard with class outside, Ms. Riley interview, images of pollution sources

**Narration:** We needed to come up with something the kids could own. We wanted something that was local and we needed something that was going to be a culminating project. [Ms. Riley interview]...When we get a lot of rain, where does all the runoff from...[Ms. Byard to students]...We surveyed the area and there was a drainage area to the side of the property of our school. There was farmland where we have cows grazing so we had phosphate and nitrate pollution coming from that area. We also had chemicals coming off the parking lot. We also knew that the museum was going to start a new entrance right next to the school and so we had the possibility of having sediment runoff. And I thought it was marvelous that we had all of the major pollution sources that are affecting the Chesapeake Bay right here in a little microcosm of our school watershed and that water, if untreated, was going to go down the sewer.

**Video images:** Ms. Byard outside with class, students testing water outside, students in class running the hydrogeology lab

**Narration:** Is the parking lot perfectly flat or does it go down towards our ditch? Oh, so the water collects there. [Ms. Byard to students]...The children did a hydrogeology lab where they tested how water reacts on different surfaces. They tested concrete, they tested bare soil, they tested grass, and they tested native Virginia plants to see which surface had the best recharge and not a lot of runoff which could cause flooding and make more pollutants go into our watershed. And they discovered that Virginia native plants did the best job at recharge and stopping runoff. [Ms. Byard interview]

**Video images:** Students outside working on a schoolyard garden, interview with Candace Lutzow-Felling (Director of Education Programs, Blandy Experimental Farm, University of Virginia)

**Narration:** We have sixth graders at James Wood middle school planting a wildlife erosion control garden. Right now, they're spreading the soil that was brought in by a company. We'll be planting some shrubs and wildflowers. They're all natives. Students selected the plants because they know that they will grow in this environment and there are also plants that are helpful for our native pollinators and will also provide food for birds. What's happening here at this school is exceeding my expectations. The teachers are thoroughly invested in this. They came up with a new partner, not just Blandy, but the Museum of the Shenandoah Valley; that's fabulous. Because they realized that the museum and the school share the same watershed. [Ms. Lutzow-Felling interview]...Team work is dream work guys! So let's break up the roots a little bit. Look at how much you guys accomplished right now! [students and teachers talking during planting]

**Video images:** Student award ceremony

**Narration:** These are the awards for best environmental impact study of the James Wood Middle School watershed. [Ms. Byard]...You had the artistic people who were able to show their artistic side in the drawing of their diagrams. You had the kids who are extremely well-written and well-spoken who were able to write their presentations and talk about what they learned effectively. And then you have the kids who just like to

get down and dirty and they wanted to help plant those plants or move the soil where it needed to be. Every kid wanted to jump on board with this project in some way or another. They took it very seriously because they realized it was a real-world problem that they had an opportunity to do something about and make a change to their environment for the better. [Ms. Riley interview]

**Video images:** Student in the garden they created

**Narration:** For making it a project that was happening right at their school that affected the water they drink every day. They came up with the idea for it. They were able to implement it and plant it, actually proving that as young as they are, they could have a really meaningful impact on their local watershed.

**Text:** Thank you to...Students and staff of James Wood Middle School Frederick County Public Schools Winchester, VA