CONNECTING
Library Collections to Science Standards

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http://bookconnectsolutions.com/
Aligning Library Collection to standards document

- Select Standard
- Identify key descriptors
- Create resource list
- Search
- Add & Tag
Select Standard

Massachusetts Department of Elementary and Secondary Education

2016 Massachusetts Science and Technology/Engineering Curriculum Framework

Grade 3

Human Interactions

In grade 3, students develop and sharpen their skills at obtaining, recording and charting, and analyzing data in order to study their environment. They use these practices to study the interactions between humans and earth systems, humans and the environment, and humans and the designed world. They learn that these entities not only interact but influence behaviors, reactions, and traits of organisms. Grade 3 students analyze weather patterns and consider humans' influence and opportunity to impact weather-related events. In life science they study the interactions between and influence of the environment and human traits and characteristics. They use the engineering design process to identify a problem and design solutions that enhance humans' interactions with their surroundings and to meet their needs. Students consider the interactions and consequently reactions between objects and forces, including forces that are balanced or not. Students reason and provide evidence to support arguments for the influence of humans on nature and nature on human experience.

Grade 3: Earth and Space Sciences

ESS2. Earth's Systems

3-ESS2-1. Use graphs and tables of local weather data to describe and predict typical weather during a particular season in an area.

Clarification Statement:
- Examples of weather data could include temperature, amount and type of precipitation (e.g., rain, snow), wind direction, and wind speed.
- Graphical displays should focus on pictographs and bar graphs.

3-ESS2-2. Obtain and summarize information about the climate of different regions of the world to illustrate that typical weather conditions over a year vary by region.

Clarification Statement:
- Examples of information can include climate data (average temperature, average precipitation, average wind speed) or comparative descriptions of seasonal weather for different regions.

State Assessment Boundary:
- An understanding of climate change is not expected in state assessment.

ESS3. Earth and Human Activity

3-ESS3-1. Evaluate the merit of a design solution that reduces the damage caused by weather.

Clarification Statement:
- Examples of design solutions to reduce weather-related damage could include a barrier to prevent flooding, a wind-resistant roof, and a lightning rod.
Identify key descriptors

- Weather
- Tornado
- Hurricane
- Lightning
- Storm (s)
- Flood (ing)

• Design
• Engineer
• Shelter
• Runoff
• Elements
• Survival
• Reinforce
• Damage
- Create resource list

[Not what you're looking for? Refine your search? Browse Subjects?]

Titles: 1 - 25 of 27

Sort By Title Go

The 2000s decade in photos: a new millennium
- Call #: 973.93 COR
- Corrigan, Jim.
- Series: Amazing decades in photos
- Published: 2010
- Reading Level: 8.0 Interest Level: 5-6

Beazy
- Call #: ER MCD
- McDonald, Megan.
- Location: Early Reader Section
- Published: 1997

Calvin can't fly: the story of a bookworm birdie
- Call #: EBER
- Berne, Jennifer.
- Published: 2010
- Reading Level: 3.6 Interest Level: K-3
Going through the collection gives you a chance to look everything over. Keep books with information like this.
Not this
Hurricanes: Earth's mightiest storms

by Patricia Lauber.

Call #: 363.3 LAU

Local copies available: 1 of 1.
Off-site copies available: 2 of 2.

Tells how hurricanes form, how scientists study them, and how they have affected the United St...
& Tag

Title: Hurricanes

Subjects:
- Local Heading: SCI 3-ESS3-1
- General
- General
- General

Check punctuation on Save

Save Title
Cancel
• Now you can find it through a search of the standard and the booklist you created. The tag will stay with the record.
Lessons
One exploration of this standard was concerned with shadows. In the library, fifth graders experimented with the ways shadows change with what appears to be the sun’s path throughout the day. This discussion was expanded upon as the students were then asked to teach the Kindergarteners about shadows. The older students made shadow puppets, and with their younger counterparts, put on shadow puppet plays which demonstrated an understanding of the ways an object’s silhouette might change as the light is brought closer to or farther away from the object itself.
Project Name: Shadow

Plans & Designs:

- Hippo
- Noon
- Rise
- Noon
- Set
We printed some animal models on our 3d printer and others using our vinyl cutter.

Kindergarten classes have STEaM infused lessons on their own. One series of classes involved looking at animal habitats. Kindergarteners discussed survival needs of hibernating animals like frogs as well as those of animals which stay active throughout the winter like birds and mammals (beavers and mice.) They then constructed habitats for these animals which would meet the needs identified (waterproof and warm for the beavers, undisturbed and wet for the frogs.)

Additionally, Kindergarteners paired with Fifth graders to discuss the effect of pushes and pulls on the motion of an object. Some groups programmed robots to launch balls at specific targets while other groups attached lego structures to their robots in order to scoop up the launched balls and return them to a central location.
STEaM carnival

This year, the Science Fair at Haynes changed focus. Rather than being an evening to showcase experiments conducted at home, this was a daytime event - a STEAM Carnival where all of Haynes students joined in Science, Technology, Engineering, Art, and Math focused exploration. We had virtual and augmented reality stations where students explored other times and places, obstacle courses to challenge the laws of physics, simple machines used to create Rube Goldberg devices, Stop action animation, Audio Engineering, Coding, Robotics, and more. A STEAM Carnival is a hands-on, immersive experience for students.
So... where do I start? Here are some links:

Lessons:
- **StemScopes**: Click “ Preview StemScopes, choose your state, then go to “StemScopes Massachusetts, and select “Preview Now” it’s all free!
- **CityX**: Problem solving scenarios for STEaM
- [http://showmelibrarian.blogspot.com/p/all-things-steam.html](http://showmelibrarian.blogspot.com/p/all-things-steam.html)

Grant sources:
- [http://www.ala.org/awardsgrants/awards/browse/grnt?showfilter=no](http://www.ala.org/awardsgrants/awards/browse/grnt?showfilter=no)
- [http://librarygrants.blogspot.com/](http://librarygrants.blogspot.com/)
- [http://libguides.memphis.edu/c.php?g=94249&p=611339](http://libguides.memphis.edu/c.php?g=94249&p=611339)
- [http://renovatedlearning.com/grant-resources/](http://renovatedlearning.com/grant-resources/)