Communicate effectively with parents and family members through a STEM newsletter

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It can be challenging to keep family members informed about what is happening at school. Yet, sharing what students are learning in class or during after-school clubs with those at home is critical to student success (Epstein 2001). Newsletters are an eye-catching way to keep family members updated on student activities, guest speakers, STEM content, career connections, vocabulary, related links, and upcoming club dates. We developed newsletters that aligned with each of our STEM Career Club meetings to keep parents informed; however, they can be modified and used to share information about any club or classroom. The newsletter can be printed out and sent home, or shared through email, school website, or social media.

Key parts of a STEM newsletter

1. **Program/school/teacher name**
   The name of your program, team, teacher, or club will promote your (and your colleagues’) positive work, as well as that of your school or club.

2. **Today’s date and upcoming meetings**
   The date lets families know what is happening right now, and can also advertise upcoming meetings, field trips, and volunteer days.

3. **Student-written or news articles**
   Students can take turns writing for the newsletters, and interesting and informative articles can extend the learning from a class or a club, or highlight professionals in relevant careers. Giving students a voice can get them excited to see the newsletters when they come out.

4. **Social media names, links, or hashtags**
   Include social media pages associated with your class, program, or club to help keep parents and students connected.

5. **Appealing graphics**
   Graphics from online sources, especially familiar cartoons, help attract students and their family members.

6. **References**
   Remember to cite information or graphics from other sources to credit the work, provide access to the sources, and provide a model for students on how to properly cite.

7. **STEM-ipedia**
   Reminds students and informs family members of relevant terminology.

8. **Content quiz**
   A short content quiz tests students’ knowledge and allows them to “stump” their family members. The answers to the quiz questions can be placed at the very bottom of page 1 in small font and upside down.

9. **STEM career descriptions**
   Providing information about related STEM careers can increase students’ knowledge about, awareness of, and interest in STEM careers and majors (Kier and Blanchard, 2016). Links to videos and additional information should also be included.

We recommend emphasi-
Chances are when you glanced at this article you probably recognized several of the cartoon characters such as Mike Wazowski from Monsters Inc., Woody from Toy Story, and perhaps even Fat Albert. Have you ever actually thought about the person responsible for the images you love to watch on the big screen? Meet Floyd Norman an animator or “cartoonist.”

Floyd Norman has been working on cartoons and storyboards as early as the 1950s and is credited with being the first African American animator at Disney studios. Floyd Norman also developed his own animation studio “AfroKids” that is best known for the show “Fat Albert” that aired in 1969.

More recently Norman has returned to working on motion picture films for Disney Animation and Pixar Studios as a story artist. Floyd Norman’s job requires many different skills. On some of his films Norman served as an animator. His job was to digitally create and edit images for films. You see some of this in the center picture. Norman has also been working on cartoons and storyboards as early as the 1950s and is credited with being the first African American animator at Disney studios. Floyd Norman also developed his own animation studio “AfroKids” that is best known for the show “Fat Albert” that aired in 1969.

Floyd Norman’s job requires a lot of creativity, as well as familiarity with computers and animation software.

If you would like to keep up with Floyd Norman, he’s social! You can follow him on Twitter at @floydnorman. To read more on Floyd Norman, please visit: http://disney.wikia.com/wiki/Floyd_Norman
FIGURE 1: STEM newsletter, back page

STEM Careers

3D Modeler — Create three dimensional computer models of objects such as video game characters, building designs, prosthetics, etc.

To find out more about 3D Modeling, check out:
https://www.chegg.com/career-center/explore/3d-modeler

Animator — Design animated movies, cartoons, or commercials using computer software.

To find out more about animating, check out:
http://www.animationcareerreview.com/articles/animator-career-profile

Check your electrical mastery!

1. Electricity can travel through:
   A) Insulators  
   B) Conductors  
   C) Semiconductors  
   D) Anything

2. What item below would be classified as an insulator?
   A) Aluminum foil  
   B) A rubber band  
   C) A paper clip  
   D) Copper wire

3. If you have just created a closed circuit, what does that mean?
   A) That electricity can travel all the way through  
   B) That electricity can travel almost all the way through  
   C) That electricity can’t travel at all  
   D) That electricity will bounce around the circuit

4. Why are humans conductors of electricity?
   A) We have blood pumping through us  
   B) We are capable of being anything  
   C) We are mostly made up of water  
   D) We are not cond

Welcome to SCRATCH!!

This week in STEM Career Club we explored Scratch. Scratch is a free online program that lets you create your own games, animations, videos, etc. and share them with others. You had time today to begin creating your own Scratch masterpiece, so let’s take a look at what other people have created!

3D Scratch Cat: This is a music game that allows you to create your own beats by tapping on the keyboard.

Pizza Chef: This is a video sensing game that uses your microphone and webcam to create pizzas without dropping them!

Pong Starter: This game allows you to use your mouse to move the paddle back and forth across the screen to gain points.

References:
ing diverse individuals in STEM careers. Contact Meg Blanchard (meg_blanchard@ncsu.edu) for information and links to videos about STEM careers.

10. Real-life extension
   Include short, real-life extensions to show students and parents how the things they are learning are useful and important in their lives.

Make your own!
To create newsletters, you can use tools such as Microsoft PowerPoint or free online resources offered through Canva or S’more (see Resources). These tools offer user-friendly, free templates for teachers and can be posted on social media platforms (e.g., Twitter, classroom website) without jeopardizing the newsletter format.

REFERENCES
April. Rural, high poverty middle school students’ STEM career explorations and identification.

RESOURCES
Canva—www.canva.com
Scratch. STEM Career Club 2 (1–2).
S’more—www.smore.com

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