

1. Narrative

WKAR TV is requesting \$3,000 from the Shiawassee County Community Foundation Youth Advisory Council to help underwrite expenses producing a new television program entitled *Curious Crew*.

- **\$2,500 of the grant will be used to help underwrite expense of developing the curriculum and experiment demonstrations one episode of the show.**
- **\$500 will be used to prepare all eight episodes for use online.**

The goal of WKAR's new STEM based (Science Technology Engineering Math) television program, *Curious Crew*, is to make science fun, and encourage children to look for science applications using everyday objects in everyday places. A broader goal of *Curious Crew* is to encourage students to seek education in STEM fields.

No television programs in mid-Michigan showcase the investigation of science concepts in real world situations. There is general societal consensus that supplying a pipeline of STEM professionals is warranted to remain globally competitive and that there is currently a shortage of these people in these fields (Chang, 2009). Therefore, STEM education is critical to ensure that students have ample experiences, learn to problem-solve effectively, and develop an affinity for the STEM fields.

WKAR will create 8 half-hour episodes of *Curious Crew* during 2014. We plan to record all 8 episodes during five days of production this summer on location at Impression 5 Science Center in Lansing, Michigan. These programs will be broadcast throughout the year during children's programming on WKAR TV and online at video.wkar.org.

Many schools in mid-Michigan have seen a reduction in the amount of time allocated to K-4 science instruction, reverting to the least amount of learning time since 1988 (Blank 2012). In the most recently released MEAP scores, science is the only content area in which the scores declined, dropping 2.2 % statewide in fifth grade and .6% in the eighth grade score (Michigan Department of Education, 2013). *Curious Crew*, designed by 2009-10 Michigan Teacher of the Year Robert Stephenson, aims to increase student engagement with science. The experiments on screen and the hands-on curriculum available online for teachers, parents, and students are designed to improve MEAP scores throughout Shiawassee County, mid-Michigan and the entire state.

Each program will feature Mr. Stephenson and a "crew" of 6-8 third through eighth grade students as they demonstrate science, math and physics concepts that are fun and entertaining. *Curious Crew* is targeted to elementary and middle school students in Michigan. It will be constructed around STEM curriculum based on the Next Generation Science Standards soon to be adopted by the Michigan Department of Education.

Curious Crew activities encourage children to look for science applications with everyday objects in everyday places and to engage in engineering design practices. Additionally, archived segments will be available online for teachers to access and use in their own classrooms, or to emulate for their own professional development and improved science instruction.

Another project goal is to impact teaching (and learning) of STEM concepts in elementary and middle schools. We will conduct student surveys about *Curious Crew* content and hold professional development workshops for teachers. Survey data gathered and concepts presented at the workshops will assist teachers in evaluating and developing STEM lesson plans for their

classrooms. The ultimate result will be to engage more students in interactive STEM content and show them how they can use this content in problem solving.

2. Project Information

Curious Crew is intended for students in kindergarten through eighth grade and their teachers. The initial eight episodes will be shown on WKAR TV and available to over 250,000 households in the mid-Michigan area which includes over 12,500 students in Shiawassee County. Episodes will also be shared online for anyone across Michigan or around the world.

As noted previously, the target population is students age five through thirteen and their teachers. Initially, *Curious Crew* will be shown on WKAR TV starting in October of 2014. Once an episode has been on the air, it will be available to stream online. Curious Crew will also be made available to other PBS stations nationally through NETA (National Education Telecommunications Association).

Even though the targeted age range for the Curious Crew show is five to thirteen, any person watching will learn how to use science in everyday applications – including youth in Shiawassee County.

A major component of this television show are the Crew Members, the youth cast who will help demonstrate science concepts. Current plans include a large casting call for youth to audition to be Crew Members. Audition announcements will be made across mid-Michigan, including Shiawassee County. Six to eight young people will be featured in each episode of *Curious Crew*.

The project timetable is listed below:

May 2014:	Grant awarded; WKAR sends press release and promotion materials
June 2014:	Curriculum written and scripts are developed.
June/July 2014:	Auditions and selection of Crew Members.
July/August 2014:	8 episodes recorded at Impression 5 Science Center
September 2014:	Post production editing
October 2014-May 2015:	First season of <i>Curious Crew</i> airs on WKAR TV and online

Curious Crew will be promoted on WKAR TV and Radio. Over \$4,100 has been included in the project budget specifically for promotion. Some of those monies will be used to advertise auditions for Crew Members. WKAR will also utilize state and national PBS networks, science education and teacher training networks, and print media as appropriate.

Outcomes:

As a direct result of this project, we will have 8 television programs directly aligned to Michigan's curriculum and science standards. These programs will be broadcast on WKAR TV to over 250,000 households in Mid-Michigan and distributed online for teachers to use for supplemental science instruction in their classrooms. As a result, we expect children who are exposed to the program to more actively look for science applications in everyday places and experiment with everyday objects as demonstrated in the program.

We will also utilize TRAC Media (WKAR's audience research service) to monitor viewership. Quantitative data about the audience for Curious Crew will include demographics (age, gender) and

number of viewers. This data will be evaluated throughout the series. Comparing audience numbers from program to program and from the beginning of the season to the end will help us gauge the effectiveness of reaching our broadcast target audience.

To evaluate student retention of STEM content, WKAR staff members will visit three (third through eighth grade) classrooms (in three different school districts) in Ingham, Eaton and Clinton counties. We'll ask students to answer a few initial questions, show an episode of Curious Crew and have them answer questions after the program. Data obtained before and after the program will measure impact on student learning.

3. Organization Information

WKAR TV has been on the air since 1954; 2014 marks our 60th anniversary. We are the second oldest, continually operating public broadcasting television station in the United States. Since the beginning, WKAR has been committed to serving the educational needs of our community with local programming and engagement. Every week WKAR airs sixty-four hours of PBS educational shows for children. The Michigan Association of Broadcasters recently honored WKAR with seven awards, including the 2013 Michigan Public Television Station of the Year.

WKAR operates under a license held by Michigan State University. It is part of MSU Broadcasting Services, a unit of the College of Communication Arts and Sciences.

4. Project Budget (include specifically how grant funds will be spent if awarded)

See attachment A

A \$1,000 from the Russell and Annabelle Woodard Memorial Fund will cover almost all of the salary expenses for two Michigan State University students. These television broadcasting students will be assisting WKAR professional staff while gaining vital job training.

5. IRS determination letter or proof of the organizations

See attachment B

6. Current list of governing body and officers of the organization

See attachment C

7. Mission and goals of the organization

WKAR connects people to powerful ideas that inspire personal growth, exploration of our world and positive change.

8. Plans for evaluation, including how success will be defined and measures

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WKAR will distribute DVDs of the program to third through eighth grade teachers in Shiawassee, Ingham, Eaton and Clinton counties and ask for their feedback. This qualitative data about STEM content and applications of the experiments in and outside the classroom will assist in development of curriculum for future episodes.

9. Most recent financial statements or tax return of the organization

See attachment D