

## STEM Squires: Math

### Mathematicians

Mathematicians have an extensive knowledge of mathematics, and utilize this knowledge to solve mathematical problems. They may do research, or work in applied mathematics in fields such as science, engineering, business, and industry.

**\*The following are suggested activities for each grade level, however please feel free to explore other ideas that may be of interest to you.**

### Kindergarten

**Task:** Provide examples and non-examples of objects that are symmetrical.

Information on symmetry can be found at: <http://www.squidoo.com/teaching-symmetry-to-kindergarten-kids>

- Find at least three examples of symmetrical objects. Draw the line of symmetry.
- Find at least three objects that are **not** symmetrical.
- Draw objects, print or cut out photos/pictures.
- Group pictures by category (symmetrical/non symmetrical), mount on poster board or construction paper, and label.

### First Grade

**Task:** Conduct a survey by creating a specific question and a limited number of responses. Survey a sample of people gathering responses on a tally chart. Organize responses on a bar graph or pictograph. Draw conclusions and compare data.

Information on conducting a survey can be found at: [www.squidoo.com/chartsandgraphs](http://www.squidoo.com/chartsandgraphs) and [www.mathsisfun.com/data/survey-conducting.html](http://www.mathsisfun.com/data/survey-conducting.html)

- Create a survey question with three to four responses.
- Conduct the survey. Include at least 15 people in your survey.

- Organize the data into tally chart form.
- Transfer data to a bar or pictograph.
- Present the tally chart and graph on a poster or as a computer printout.
- Draw conclusions and make comparisons by writing four to six statements about the results.

## Second Grade

**Task:** Create a three dimensional “geometric-junk” piece using two and three dimensional geometric figures.

Information on geometry can be found at: [www.mathsisfun.com/geometry/index.html](http://www.mathsisfun.com/geometry/index.html)

- Use various three dimensional geometric solids, create a new object or figure (e.g. robot, animal, space ship).
- Add details using two dimensional shapes (e.g. circles, polygons)
- Provide a list of two and three dimensional figures and shapes used in your project.
- Project and list are to be included in your presentation.

## Third Grade

**Task:** Create an album which includes photos with captions or illustrations with captions that show the use of math in real world situations. Photos or pictures are to be presented in a photo album format or digitally. Provide at least one picture for each bolded category.

Ideas can be found at: <http://52brandnew.com/2012/10/23/teaching-math-through-real-life-experience/>

- **Money**-show and tell how you use money in your real world (spending, saving, making change)
- **Multiplication**-show and tell how you use multiplication in your real world (array, times-as-many, or equal groups)
- **Measurement**-show and tell how you measure in your real world (linear, capacity, weight)

- **Time**-show and tell how you spend time in your real world (seconds, minutes, hours)
- **Fractions**-show fractions in your real world (fractional part of a figure, fractions of a set)

### Fourth Grade

**Task:** What do you want to be when you grow up? Research a career you find interesting. Tell how math would help you do that job. Identify and describe 3-5 areas of math that you would use to do that job.

Information on math career paths can be found at: <http://www.maa.org/careers>

- Write a report that names and describes the job you might like to do.
- Name 3-5 areas of math that you would use to do your job.