***Measure Figures*  Family Letter**

**Dear Family,**

In this module, ***Measure Figures***, students will build understanding of the parts of a circle and learn to measure circles. They will also build their understanding of volume and surface area and extend that knowledge to composite figures.

**What Did Students Learn Previously?**

In previous grades students learned about finding the area of two-dimensional figures and finding the area and surface area of three-dimensional figures.

**What Will Students Learn in This Module?**

**Circles**

* Students will develop an understanding of the **radius** and **diameter** of a **circle** and how they relate to the **circumference** of the **circle.**
* Students will draw on their knowledge of **circles** to build an understanding of the **area** of **circles**. Students will also develop an understanding of finding the **area** of a **circle** given the **circumference**.
* For example, in the figure shown the **circumference** would be
C = 2(π)(7.1 m) = 14.2π m ≈ 44.6 m. The **area** is
A = π (7.12) = 50.41π m2 ≈ 158.4 m2.

**Composite Figures**

* Students will draw on their knowledge of finding the **area** of triangles and quadrilaterals to gain fluency in finding the **area** of composite figures.
* For example, to find the area of the figure shown the student would need to find the area of the rectangle and the area of the **semicircle**.
A = (2.25)(1.5) + (π)(1.52) ≈ 3.375 + .884 ≈ 4.26 ft2

**Volume and Surface Area**

* Students will draw on their knowledge of finding **area** to gain fluency in finding the **volume** of rectangular **prisms**, triangular **prisms** and **pyramids**. They will use their knowledge to gain an understanding of using **volume** of a three-dimensional object to find a missing dimension.
* Students will draw on their knowledge of nets and their knowledge of finding the **area** of two-dimensional objects to gain fluency in finding the **surface area** of **prisms** and **pyramids**.

**What Vocabulary Terms Will Students Use?**

|  |  |
| --- | --- |
| **Term** | **Definition** |
| **area** | The measure of the interior surface of a two-dimensional figure. |
| **center** | The point from which all points on a circle are the same distance. |
| **circle** | The set of all points in a plane that are the same distance from a given point called the center. |
| **circumference** | The distance around a circle. |
| **composite figure** | A figure that is made up of two or more figures. |
| **diameter** | The distance across a circle through its center. |
| **face** | A flat surface of a polyhedron. |
| **lateral face** | In a polyhedron, a face that is not a base. |
| **pi** | The ratio of the circumference of a circle to its diameter. The Greek letter π represents this number. |
| **radius** | The distance from the center of a circle to any point on the circle. |
| **prism** | A polyhedron with two parallel congruent faces called bases. |
| **pyramid** | A polyhedron with one base that is a polygon and three or more triangular faces that meet at a common vertex. |
| **semicircle** | Half of a circle.  |
| **slant height** | The height of each lateral face. |
| **surface area** | The sum of the areas of all the surfaces (faces) of a three-dimensional figure. |
| **volume** | The number of cubic units needed to fill the space occupied by a solid. |

**How You Can Provide Support**

1. Support your child’s understanding of measuring figures by pointing out figures and terms that were studied in this section.
2. Encourage your child to have a positive, growth-oriented attitude towards mathematics and their learning.
	* Encourage them to ask questions – both at home and in class. Sometimes, an answer to a question will generate more questions. That’s how you know they are learning!
	* Encourage your child to embrace challenges and remind them that every challenge is an opportunity to learn something new.
	* Celebrate successes – both small and large.
3. Contact me to arrange a time to discuss the specifics of your child’s performance and how we can work together to help them succeed in this module.

Sincerely,

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(Teacher’s Name) (Email/Phone)