**Strands of MPIs developed by ACS MVES 6th grade teachers
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**GRADE:6**

**ELD STANDARD:The Language of Mathematics EXAMPLE TOPIC: Polyhedrons and Nets**

 **CONNECTION: See Below
EXAMPLE CONTEXT FOR LANGUAGE USE:** Identify polyhedrons represented by nets and find surface area for prisms and pyramids.

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| **COGNITIVE FUNCTION:** Students at all levels of English language proficiency **APPLY** their knowledge of area to calculate surface area.  |
| **DOMAIN: Speaking/Writing** | **Level 1****Entering** | **Level 2****Emerging** | **Level 3****Developing** | **Level 4****Expanding** | **Level 5****Bridging** | **Level 6 - Reaching**  |
| After teacher modeling, partners cut out gridded nets, fold into polyhedrons, identify shapes, color-code congruent shapes, and determine needed area formulas. With teacher support and steps provided, students calculate areas for faces and find the total surface area for each polyhedron. Students label dimensions on nets and share results by repeating phrases provided by students or teachers. | After teacher modeling, partners cut out gridded nets, fold into polyhedrons, identify shapes, color-code congruent shapes, and determine needed area formulas. With teacher support and steps provided, students calculate areas for faces and find the total surface area for each polyhedron. Students label dimensions on nets and share results using phrases with teacher and student support if needed. | After teacher modeling, partners cut out gridded nets, fold into polyhedrons, identify shapes, color-code congruent shapes, and determine needed area formulas. With teacher support and steps provided, students calculate areas for faces and find the total surface area for each polyhedron. Students label dimensions on nets and describe results to peers using phrases. | After teacher modeling, partners cut out nets, fold into polyhedrons, identify shapes, color-code congruent shapes, and determine needed area formulas. With teacher support and steps provided, students calculate the areas for different faces and find the total surface area for each polyhedron. Students label dimensions on nets and explain their reasoning using simple sentences. | After oral and visual instructions, partners cut out nets, fold into polyhedrons, identify shapes, color-code congruent shapes, and determine needed area formulas. Students calculate the areas for different faces and find the total surface area for each polyhedron. Students label dimensions and areas on nets and explain their reasoning using complex sentences and technical vocabulary. |
| **TOPIC-RELATED LANGUAGE:** Students at all levels of English language proficiency interact with grade-level words and expressions, such as: **nets, polyhedrons, faces, edges, length, width, height, prism, pyramid, area, surface area, congruent, formula. Review vocabulary: rectangular, triangular** |

 **CONNECTION: CCSS.Math.Content.6.G.A.4** Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures.