The Art of M.C. Escher

Cross-Curricular Focus: Mathematics/Art

Name: _____

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

Do you enjoy optical illusions? How about drawings of things that could never exist in real life? You may already be familiar with some of M.C. Escher's art. He is famous for his pictures of stairs that go around buildings both upside down and right side up at the same time. He used shading and angles to give us pictures that look realistic and accurate. Yet they also have a little fantasy.
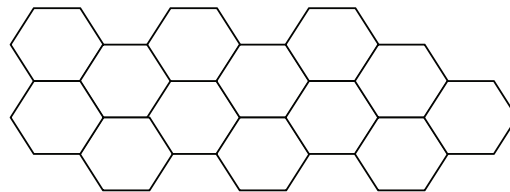
Maurits Cornelis Escher lived from 1898 to 1972. He went to a school for architects where he could learn to design buildings. His teachers there told him he should study graphic arts instead. Many of his sketches and paintings include an architectural flair. He used unique buildings, rooflines or other designs and wove them into the picture. He became a world famous artist whose unusual works are easy to recognize.

As an adult, Escher traveled all over Italy, Spain and Switzerland. He lived in Rome for 11 years with his wife. He took sketchbooks with him when he traveled. He used the sketchbooks to save ideas for his future work.

Escher was famous for his drawings of the **tessellation** of geometric shapes. He often used color or different shades grey to emphasize the alternating shapes and patterns.

Only some geometric shapes can tessellate. A shape tessellates if it can be drawn over and over on the page with no empty space between the shapes. Regular polygons, like squares, triangles and hexagons with sides that are the same length, tessellate easily. Other shapes may require **rotations** (turns) or **reflections** (flips) to tessellate. Some must be combined with at least one other shape before they will tessellate. Some shapes will not tessellate at all.

A regular hexagon tessellates because it can be drawn repeatedly with no white space showing between the hexagons.

1) What did Escher use to help him keep track of his ideas as he traveled?

_____

_____

2) Why did Escher leave architectural school?

_____

_____

3) What does tessellation mean?

_____

_____

4) What type of shapes are easy to tessellate?

_____

_____

5) Choose a geometric shape and show how it will tessellate here:

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Name: **Key**

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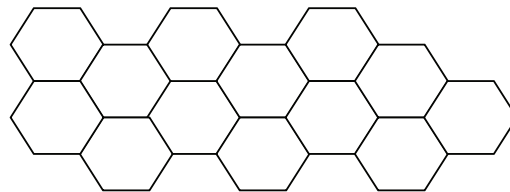
Actual wording of answers may vary.

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a sketchbook

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His teachers told him he should study graphic arts.

3) What does tessellation mean?

A shape can be drawn over and over with no empty space between the shapes.

4) What type of shapes are easy to tessellate?

polygons, such as squares, rectangles and hexagons with sides the same length

5) Choose a geometric shape and show how it will tessellate here:

student's choice