5-2019

Segregation and Inequality Within the Education System

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Abstract

This Capstone Paper will address segregation and inequality within the education system. The participants of the Capstone Project included 28 fourth-grade students in a public elementary school located on California's Central Coast. This Capstone Project introduced a project-based learning lesson into a low-income classroom. The students were asked to create a project to demonstrate their knowledge on the given topic in place of a traditional-classroom worksheet. Project-based learning has the ability to be integrated into any classroom regardless of the socioeconomic status of its students to insure a quality education. The students used a higher level of thinking when completing their projects. Project-based learning can be used not only in low-income classrooms, however, it is the key tool in bridging the gap of education inequality between social classes. This Capstone Project relates to the teachers future career path of being an elementary school teacher.

Keywords: inequality, project-based learning, teaching, low-income

Literature Review

When one thinks of segregation in the education system they tend to think back to the civil rights movement and times of the Little Rock Nine. There is, however, segregation of varying forms in the current education system. It can be seen between schools and within schools. Segregation between schools has been due to the redrawing of district lines and parents pulling their children out of certain schools. Segregation within, even diverse schools, is due to tracking students. Different levels of the same curriculum get broken down into advanced placement, mainstream, and vocational classrooms. The educational experience from these classroom are drastically different. Children of different socioeconomic statuses are also taught differently. Affluent students are taught important skills that allow them to succeed inside and outside of the classroom where their lower socioeconomic status counterparts are not.

Inequality

There are many different factors that attribute to inequality in the education system. Gerrymandering is a conscious manipulation that segregates students based on race and income. Parents remove their students from certain schools which creates segregation between students of different race and income. Tracking works within integrated schools by segregating low-income students from affluent students. These are three ways in which inequality is cultivated in the

education system. Leading to children of different socioeconomic statuses to be taught differently.

Students attend the schools they are assigned to based on their attendance zones. However, districts have been known to purposefully redraw district lines to exclude specific neighborhoods. This has caused neighborhoods that are not highly segregated to have schools that are (Avivi, 2014; Richards, 2014). “Groups with political clout — mainly wealthier, whiter communities — have pushed policies that help white families... attend heavily white schools” (Chang 2018 para. 4). Schools get funded based on the amount of students that attend and since affluent students are being removed those schools lose funding. Gerrymandering has caused schools that low-income students attend to be “desperately under-funded, and struggle to retain teachers and provide kids with the services they need” (Gunn, 2016, para. 1).

The issue of school segregation becomes more apparent when parents transfer their students out of schools to another. Sikkink and Emerson (2008) found that highly-educated white parents are more likely to pull their student out of a school and send them to a racially-homogeneous school if the surrounding area increases in the amount of non white families. When children transfer out of a school they decrease the current student population and enrollment of the school thus, influencing the funds the school receives. In effect, school programs are affected by having to cut back on programs such as art, music and social studies

which all enrich a students learning. In addition, students who attend low-income schools are not given the same quality education as their counterparts who are more privileged, further widening the gap of the inequality in our education system. Schools should naturally be mixed racially but, "it takes a conscious effort on the part of parents or school officials in there district to avoid the integration option that is often at their front doors" (Aviv, 2014, p. 2)

Another issue that further creates segregation in our education system is tracking. This is when students are placed in a specific class based on their performance and ability. This is a problem because having multiple levels of classes such as advanced placement, vocational, and mainstream creates an environment that is not equal for all students. The large amount of students placed in the lower-tacked classes are students of low-socioeconomic status. For instance, students who are places in advanced placement classes are "more likely to be surrounded by academically engaged peers," but these courses are "taking the more-advanced students out of the mainstream classes [at the expense of the less-advanced students]" (Godsey, 2015, para. 8). In effect, varying educational environments surround the students, influencing their performance, mindset and academic standard. Furthermore, parents have been told that is possible for students to move into a higher track after beginning in a lower track. However, evidence showed that " this upward movement was [not] in fact taking place. Instead, the opposite was happening—it was not uncommon for students to move from the middle track to

the lowest track" (Burris & Garrity, 2002, para. 18). Put together, socio-economic segregation and academic segregation further the issue of inequality in our education system. Giersch et. al. (2016) found that segregation in schools and among classes within schools is directly related to the compromise of college achievement.

Jean Anyon (1980) states that educators alter the way they teach according to their students' social class. Students of low-socioeconomic status are in classrooms that are teacher-centered and the focus is on following directions exactly. This type of classroom does not foster critical thinking skills which "help students take command of what they are learning, integrate and apply what they are learning, and appropriately question what they are learning" (Paul & Elder, 2008, p. 34). There is a name given to this type of teaching call the banking model of education. The banking model of education is seen as an oppressive form of teaching where students are taught to "receive, memorize, and repeat mechanically the narration content" (Freire, 2005, p.72). According to Freire (2005) low-income students are seen as buckets with a low threshold of capacity and capability. Teachers pour the material they will be testing on into their empty bucketed students. Students are filled to the brim with information only to be emptied after the assessment in order to make room for the next round of material. This causes students to to have an inauthentic education where critical thinking is not prioritized but rather following directions. Anyon (1980) states that "work is often evaluated...according to whether

the children followed the right steps" (p. 4) leaving the work to have little purpose. These students also do not have the financial backing to participate in extracurriculars or get additional educational support. Family income level is the biggest barrier to academic performance (Gallagher & Gallagher, 2015). Students of low socioeconomic status are not given the same education and opportunities as their affluent counterparts.

Teachers run their classrooms much differently when teaching affluent students. Those students are given purposeful work that cultivates critical thinking, creativity, and independence in the classroom. They are expected to "produce intellectual products that are both logically sound and of the top academic quality" (Anyon, 1980, p. 12). There is a higher expectation in affluent students classrooms where they are pushed by their teachers to succeed. Additionally, these students have parents who can afford to invest "time and money in extra programs to boost [their] child's success and achievement" (Godsey, 2015, para. 11). Affluent students have the opportunity to participate in extracurricular activities outside of school such as sports, college classes, or private academic tutoring. Participating in sports has been shown to "boost a student's chance at being admitted to college and securing a scholarship," while "SAT scores correlate with family income," and having private academic tutoring is a strong factor of achieving high scores (Godsey, 2015, para. 13). Affluent students have access to the opportunities to succeed that their low socioeconomic status counterparts do not.

How to Address Inequality in Elementary Classrooms

Students in low socioeconomic status are not given the same education or opportunities as their affluent, white, counterparts which causes future consequences. There is a link between the completion of high school and students of low-socioeconomic status and minorities. Low-income and minority students are are at a higher risk of dropping out of high school (*U. S. Department of Education*, 2013). High school dropouts are three times more likely than college graduates to be unemployed (*US Bureau of Labor Statistics*, 2014). The jobs that dropout students acquire are often of low academic skill sets or require manual labor. Students from low-income households are "estimated to have permanent incomes that are more than 30 percent lower" than students who are apart of an affluent households (Kearney & Levine 2016 p. 347).

Separate is not equal. Segregation has caused the education system to become unequal. School districts are segregated due to gerrymandering and parents pulling their students out of certain schools. Schools themselves are segregated due to tracking. Students of low-socioeconomic status tend to be in underfunded schools that have classrooms run in the banking model. Students of low-socioeconomic status who are in more affluent schools tend to be placed in lower tracks such as vocational. These classrooms are also run in the banking model.

There are some options that can be used to address this problem. The first option is to stop tracking students. This option remixes classrooms so that there are not different curriculum levels. The second option is to use controlled choice zones. This uses an algorithm to arrange students and eliminates traditional school district zones. The final option this paper presents is implementing project based learning into low-income classrooms. This model of teaching gives students skills that are critical to succeed.

Each of the three options have been evaluated by three forms of criteria; *time, strength of action, and reasonableness. Time* is measured by the duration of implementation. *Strength of action* is measured by the extent in which the option is successful. *Reasonableness* is measured by how realistic the option is at solving the issue. The criteria looks at how each option and how it will help solve the issue of inequality in the education system.

Table 1

[The Martix]

	Criteria 1 Strength of Action	Criteria 2 Time	Criteria Reasonableness
Option 1 Detracking	3	2	2
Option 2	3	2	2

Controlled Choice Zones			
Option 3	3	3	3
Project Based Learning			

Based on a scale of 1-3.

Detracking

Tracking students keeps integrated schools segregated from within. Each district conducts their tracking program independently. Districts can track their students based on parent preference, teacher recommendation, or student performance. If tracking was removed, students of all ability and socioeconomic level would be mixed into the same classrooms.

Because detracking has not been implemented in the same manner or degree by the schools who have done this, the timeline is unclear. Some believe, however, this option will work best if done where tracking begins (Burris & Garrity, 2008). Meaning, instead of beginning tracking with kindergarten students and placing them in tracks the following years, students would be in integrated classrooms. Starting at the beginning of a students educational career is the best way to insure they experience a totally integrated education. This also allows teachers in upper grades the time they need to create an integrated and cohesive curriculum. However, this would not help the students in upper grades who are being tracked currently. *Time* was given a 2

in the table above. It measured to a two because detracking can start at the beginning of the next academic year by not placing students in tracks but implementing it in upper grades would take more time.

Detracking has a strong *strength of action* and was given a 3 as shown in the table above. Detracking warrants a three because it forces classrooms to be inclusive of all students regardless of their socioeconomic status. The removal of teared classrooms means AP, mainstream, and vocational students will be mixed into the same classes. All students, no matter socioeconomic status or ethnic background, will receive the same curriculum.

Detracking is moderate in its measure of *reasonableness* which is why it received a 2 in the table above. The reason for this moderate measure is due to the potential backlash from high performing students parents. These parents "favor tracking because research shows that students assigned to high-ability groups make greater gains in achievement" (Hallinan, 2004, para. 4). However, this is the reason why detracking is necessary for all students to receive a higher educational experience. There is also a good amount of teachers who favor tracking out of convenience for their teaching methods.

Controlled Choice Zones

Controlled choice zones uses an algorithm that factors in family preference for a school as well as family income level. This option would eliminate traditional school districts.

Controlled choice zones "ensure that all schools within the zone have a mix of socioeconomic groups [because] research has shown that a balance of socioeconomic status produces the best educational outcomes, both overall and for students at each socioeconomic level" (Archer, 2014, para. 8). This option has been implemented by San Francisco which has resulted in one of the highest quality urban education systems due to educational diversity (Archer, 2014).

Controlled choice zones was given a 2 in the table above in the measure of *time* because it could take a long time to implement for some areas but not others. Some zones do not consist of enough diversity to make a difference in the schools demographic even with the use of the algorithm. For controlled choice zones to be effective in these areas more diversity would have to move into the areas of that zone which could take an unknown amount of time. However, in zones with high diversity, controlled choice zones would measure high in *time*.

Strength of Action for controlled choice zones measured a 3 in the table above. The algorithm used insures integration in schools because it does not place students based solely on where they live or their socioeconomic status. Instead, it uses those two factors to force diversity. In some zones, there is not enough diversity for the algorithm to integrate however as people move in the zones that will be fixed. This option does not specifically address the issue of tracking.

Controlled choice zones measured a 2 in *reasonableness.* Because the algorithm's purpose it to create diversity in all schools it sometimes places students in a school across town. This can make it difficult for some families to get their student to school.

Project Based Learning

Project-based learning is a form of problem-posing education, a pedagogy written by Paulo Freire (Behizadeh, 2014). Project based learning is a student-centered approach that forms critical thinking skills, problem-solving skills, planning skills, and self-regulation (Johnson & Cuevas, 2016). Students are given more freedom to problem solve and the focus is not on following directions correctly or getting the correct answer but rather the process in which the students used to get to their answer. When students are given freedom and autonomy in the classroom, students have "higher self-worth, cognitive competence, internal control and mastery motivation" (Lam, Cheng, & Ma, 2009, p.567). Project-based learning creates an authentic education experience where the learning environment positively affects the students academic achievement (Mahasneh & Alwan, 2018).

Project-based learning received a 3 in the measure of *time* because teachers could implement this form of curriculum tomorrow. This student-centered approach still uses the same standards as a traditional classroom but executes them in a much different manner. However, creating a project-based curriculum does take time and effort on the teachers part. They have to

prepare and plan how they will conduct the lesson by creating questions that cultivate critical thinking in their students. This measure, however, of *time* is only within the parameters of time to implement the curriculum which is why it received a three.

Strength of Action measured a 3 which is shown in the table above. Project-based learning addresses the issue of unequal education by creating a classroom that develops skills necessary to succeed inside and outside of the classroom. Students in classrooms where the teacher used the banking model would benefit the most from project-based learning. However, if project-based learning is not administered properly is can have little to no benefit above the traditional classroom (Johnson & Cuevas, 2016).

Project-based learning received a 3 in the measure of *reasonableness* in the table above. The reason for this measure is because each teacher can implement this approach without additional support from administration. Teachers are able to create fun and engaging lessons that get themselves and their students critically thinking. Project-based learning does take more preparation on the teachers end however it is not extraneous and many teachers find the more they teach these kinds of lessons the easier it gets (Gallagher & Gallagher, 2015).

Project

Based on the evaluation of all three options and the criteria used to measure them, the writer of this paper will be conducting a project using project-based learning. Though the first

two options are effective in solving the problem of inequality, they are go beyond the scope of this project seeing that they need to be done on the institutional level.

This project will be going into a traditionally taught, low-income, classroom and teaching a project-based lesson. The project lesson will be on geometry. The lesson will have the students identify geometric shapes in a creative and critical way while working in groups and individually. The students will be assessed based off of their projects using a rubric.

Project

Students from different socioeconomic statuses are taught differently from one another. Affluent students are taught in classrooms that cultivates critical thinking, creativity, independence, collaboration, and argumentative skills. These teachers have high expectations for their students. Whereas, students of low-socioeconomic status, are in classrooms that cultivates inauthentic learning. Their work has little purpose and following directions is prioritized over critical thinking. A way in which all teachers can combat this inequality in any classroom is through project based learning.

The teacher will teach a project-based lesson in mathematics. This lesson will be taught in a Title I, Program Improvement, school. This project is designed to teach and assess students through the creation of a project over the course of two class periods. The implementation of the

project will include students creating a hidden shapes project. The evaluation will explain the results of the project and assess if the students met the learning objective.

Design

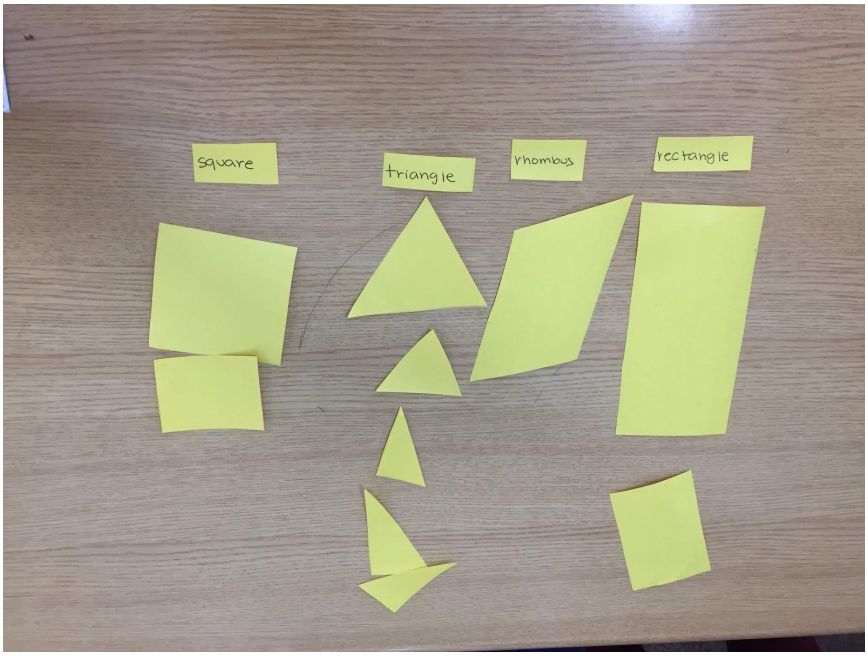
The school used to implement this project was chosen because it is in a low-income-suburban area and due to the students' state standard test scores being below average. This school was also selected for the capstone project because the students served are majority low-socioeconomic status, minorities, and are not meeting state standards. In 2017-2018 only 50% of students met or exceeded the ELA state standards and only 38% met or exceeded the math state standards (SARC, 2018, p. 5). This capstone project has focused on students of low-socioeconomic status and minority students because of the style in which they are often taught.

Teachers alter the way they run their classrooms and teach their students according to the student's social class (Anyon, 1980). In low-income schools, these classrooms are teacher-centered and do not foster critical thinking skills (Paul & Elder, 2008). Project-based learning, however, creates a contrasting learning environment. Project based learning is a student-centered approach that forms critical thinking skills, problem-solving skills, planning skills, and self-regulation (Johnson & Cuevas, 2016). Project-based learning creates an authentic education experience where the learning environment positively affects the students academic

achievement (Mahasneh & Alwan, 2018). This capstone project aims to assess how students achieve when taught a project-based lesson in a low-income school.

Implementation

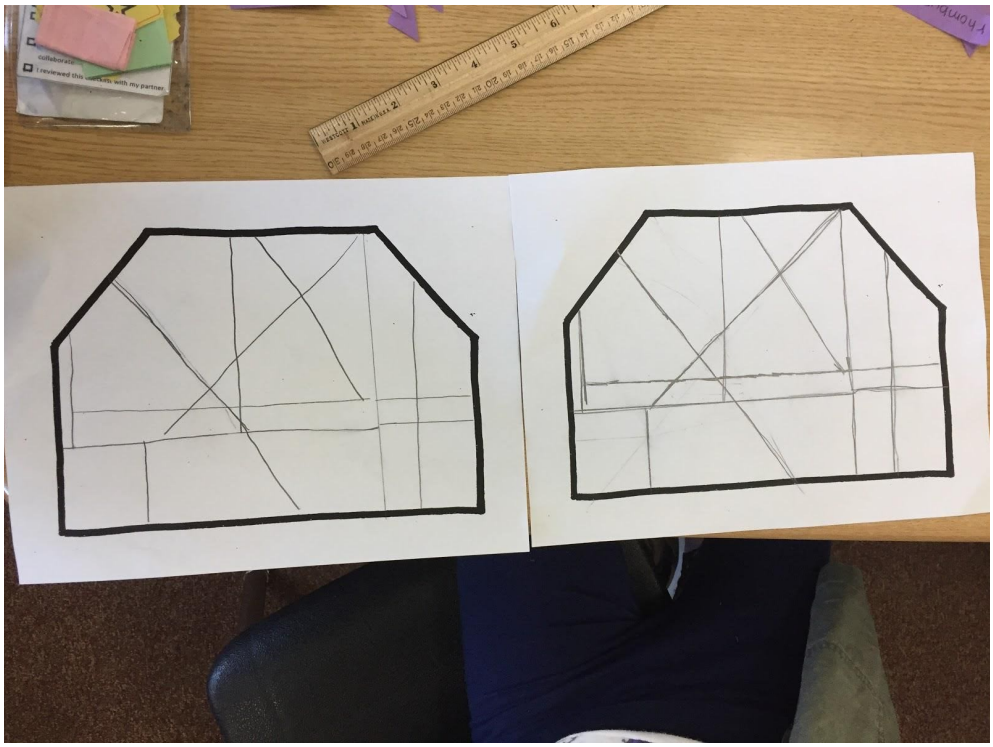
The teacher visited the fourth-grade class during their scheduled math block. Students were placed in small groups and given cut-out geometric shapes. They were asked to work together to group the shapes with their corresponding label.



Linss, J. (2019). *Cut-Out Shapes*

This image is an example of one student group's work of organizing geometric shapes with their corresponding labels. Before moving on, each group was asked what properties of each shape did they know that lead them to organize the shapes in that way.

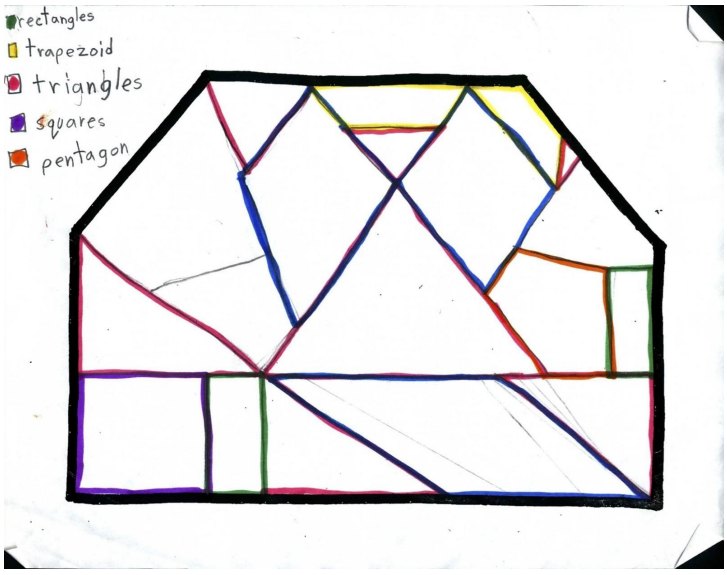
Students were then given two template papers of either the “barn” or “house.” See Appendix C for templates. They were then instructed to use a ruler and pencil to draw random lines inside the template. They could draw the lines diagonal, parallel, perpendicular, or any other direction using a ruler to keep the lines straight. After making their lines on one paper they were then instructed to duplicate the same lines onto their second paper. The picture below is an example of one student's work after completing this part of the project.



Linss, J. (2019). *Student Work 1*

On only one of the templates students were instructed to identify different geometric shapes and create a key. Each shape was assigned its own color and the key had to incorporate

the correct colors for each shape. Students were expected to be able to identify squares, rectangles, triangles, and rhombus'.



Linss, J. (2019). *Student Work 2*

There was a key projected at the front of the class with additional shapes the students could also identify other than the four that were expected.

After identifying as many shapes as each student could on their first template they were then instructed to decorate their second template. For this paper students were not to color inside the template line or identify any shapes.

Linss, J. (2019) *Student Work 3*

They were allowed to be as creative as they wished in decorating outside the second template. This paper would be given to a classmate to use.

After decorating the second template students traded with a classmate. If a student had a house template they traded with a classmate that had a barn template. On their classmates design students were to identify shapes again. They were still expected to identify the same four shapes but encouraged to use the additional shapes projected at the front of the room. As students worked, the teacher walked around to answer and ask questions.

The reader is able to access the full lesson plan in Appendix A and additional student work in Appendix E.

Evaluation

The project essentially went as planned. Students were able to complete all aspects of the lesson that was expected of them. Students worked at different speeds which is expected, however, some students finished drawing lines, identifying shapes, and decorating their project while others were still drawing lines on their first template. This caused some problems when it came time for students to trade papers. When it came to identifying four geometric shapes, the majority of the students were able to exceed this expectation. The only students who did not meet the learning objective were the same students who were not present on the first lesson day. They did not have enough time to complete their projects in one class period. The students enjoyed the lesson and stated it was a fun way to work with geometric shapes. Students who often do not participate in activities were engaged in this project.

Reflection

This portion of the paper will address successes, challenges, and limitations that came from completing the Capstone Project. Recommendations will be made to further improve upon the project and give future teachers ideas for better implementation. There will also be discussion for future plans on how this Capstone Project connects to an elementary schools teaching position.

Discussion

The literature review discussed how children are taught according to their assumes social classes. Students in low-socioeconomic classes are taught in classrooms hat do not foster critical thinking skills which are not only beneficial in the classroom but in the outside world as well. A way to combat any form of education inequality is through project-based learning. Project-based learning classrooms not only foster critical thinking but independence, autonomy, and problem-solving. Project-based lessons can be used in low-income schools as a way to bridge the education gap that is between social classes.

The project went well and all students were engaged in their activities. The students expressed that the project was fun and they enjoyed working with geometric shapes in this manner. Students were successful in achieving the learning objective. They were expected to be able to identify squares, rectangles, triangles, and rhombus'. Students had the freedom to be creative with their projects and each students individuality showed in their projects.

There were some challenges that arose during this project. One challenge was that each student worked at a different pace. Some students were still drawing their initial lines on their first template while others were decorating the outside of their second template. This was not a large challenge the first day of the lesson but become more of a challenge on the second day because students were completing their individual projects at different rates. This made trading with other classmates a problem. Some students had to wait to trade their projects which meant

that not all students were fully on task. Also, the students who completed their projects quickly needed something to do to keep them on task and working with geometric shapes.

Two limitations arose in the classroom during the project. One limitation was the students need for a visual of geometric shapes. A key was projected at the front of the class that had geometric shapes and their labels. Some students heavily relied on this key to complete their project and met the learning objective. Where other students used the key only for the geometric shapes that surpassed the learning objective. Another limitation that arose was needing to supply an additional lesson for the students who completed their project quickly. This lesson was used to reinforce what the original project covered as all as keep all students on tasks.

Recommendation

There are three recommendations that can be made to improve upon this Capstone Project. The first recommendation would be to provide a key for the students to refer to while completing their project. The classroom teacher made this recommendation to the research teacher. The key was projected at the front of the classroom and displayed various shapes with their corresponding labels.

Another recommendation that can be made would be to provide various time checks for the students throughout the project. This would insure that the majority of the students would be completing their projects around the same time. This recommendation is being made because

student collaboration is a part of completing the projects and having students working at dramatically different speeds showed to be problematic.

The third recommendation would be to implement project-based learning across the curriculum. The classroom would be student-centered where they would be given the freedom to problem solve and be independent. When students are given freedom and autonomy in the classroom, students have "higher self-worth, cognitive competence, internal control and mastery motivation" (Lam, Cheng, & Ma, 2009, p. 567). This project focused only on one subject area, however, project-based learning is most effective and beneficial when used across the whole curriculum.

Future Plans to Build on Capstone

This Capstone Project will be built upon in the teacher's future career as an elementary school teacher. She plans to use the knowledge gained from the Capstone to better her teaching abilities. The teacher plans to do this by having a project-based classroom that incorporates the full curriculum. Based off of evidence from the Literature Review, students are taught according to their socioeconomic class, which creates an unequal education system. Having a project-based classroom is the best way to bridge the inequality gap and allow for all students to have a quality education.

A second way in which this Capstone will be built upon in the teachers future career is by educating fellow teachers on project-based learning. She plans to help other educators incorporate project-based learning into their curriculum. The teacher wants to educate fellow educators on the benefits this form of teach brings to all students of every background. By bringing awareness to the problem of inequality and offering a solution, the teacher plans to help all teachers create a learning environment that helps all students achieve success.

Conclusion

This Capstone Paper has addressed the issue of inequality in the education system. Students are taught differently according to their socioeconomic status'. Affluent students are taught skills that gear them for future success where low-income students are not. The evidence backing this claim is what led the teacher in finding a solution. Project-based learning was most efficient solution the teacher found that all fellow educators can use to create equality.

Project-based learning is a student-centered approach to teaching where the focus is the student not the teacher. The project completed by the teacher was a project-based lesson that assessed the students ability to met a mathematics learning objective. The students worked collaboratively and individually to create two projects which is a key element to project-based learning. This solution was chosen because project-based learning can be implemented into any classroom by any teacher willing to put in the work. Project-based learning is the most accessible

way to bridge the learning gap between socioeconomic classes. It gives every student the same opportunities to succeed and prepares them with skills vital for success.

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APPENDICES

APPENDIX A: LESSON PLAN

APPENDIX B: CUT-OUT SHAPES

APPENDIX C: TEMPLATE

APPENDIX D: STUDENT WORK 1

APPENDIX E: STUDENT WORK 2

APPENDIX F: STUDENT WORK 3

APPENDIX G: ADDITIONAL STUDENT WORK

APPENDIX A: LESSON PLAN

Find the Hidden Shapes

Lesson Overview

1.Subject Area: Mathematics

2.Topic: Geometric shape identification

3. Grade: Fourth-grade

4. Measurable Learning Objective: Students will identify the properties of four geometric shapes.

5. Summary of Lesson: Students will create a "hidden shapes" project. They will first be asked to work in groups to identify and label shapes. Students will then create two hidden shapes papers; one to become their key and the second to be given to another student. On a classmate's projects, students will have to find hidden shapes and label them. Students will be asked to work in groups collaboratively as well as individually. Each student will be exposed to identifying geometric shapes multiple times.

Implementation

Students at the fourth-grade level are learning geometry. They are being asked to draw and identify lines and angles as well as classify shapes based on their line and angle properties. This lesson challenges students to complete part of these state standards. They will be asked to identify shapes based on their properties. This lesson utilizes the think-pair-share strategy by having students think about shapes on their own then work in groups to match shapes to their

names. A second teaching strategy used in this lesson is modeling. The teacher will explain and model in front of the whole class what is expected of each student. This lesson will take two class periods of 30-45 minutes each.

Procedure

This lesson will be introduced by getting students to think about geometric shapes. Students will be given various cut-out shapes and cut-out labels with shape names on them. In their table groups they will work together to match the correct labels with the shapes. They will also be asked to work in a group to find different components that make up each shape ie parallel lines, right, acute, and obtuse angles, line segments etc. The teacher will verbally explain what each step is as the students move through the lesson as well as provide examples. Each student will receive two handout papers. They will either get a barn outline or house outline. The teacher will give manageable amounts of direction for each step instead of explaining the whole lesson at once. First, the students will be asked to use a ruler and pencil to trace random line within the barn or house outline. Once they complete that they are to trace the same lines onto their second paper. As students complete different aspects of their lesson the teacher give direction to the whole class. After each step is explained the students will work independently to identify different geometric shapes on only one paper. Each shape should be outlined with a different color and a key be made. The teacher will be walking around making sure students are correctly

identifying shapes. On the second paper, students will decorate outside the barn or house outline. This should take an hour class session. For the second session. Students with the barn papers will trade with students who have the house paper. They will be trading the second peer they created that does not have shaped identified yet. Students will then identify geometric shapes on their classmates second paper. Use different colors to identify each different shapes. To wrap-up the lesson, have a discussion on the different properties that make each shape. A follow-up to this lesson will be looking at geometric shapes as well. Students will be given various colorful shapes and asked to create a picture using the various shapes. The picture should be of other geometric shapes.

Materials and Resources

This lesson will require two handouts per students. The handouts can be viewed in Appendix A. Various cut-out shapes per table group will be needed along with the shapes labels. Students will also need a ruler, pencil, and color markers or colored pencils.

Standards & Assessment

Draw and identify lines and angles, and classify shapes by properties of their lines and angles. CCSS.Math.Content.4.G.A.1

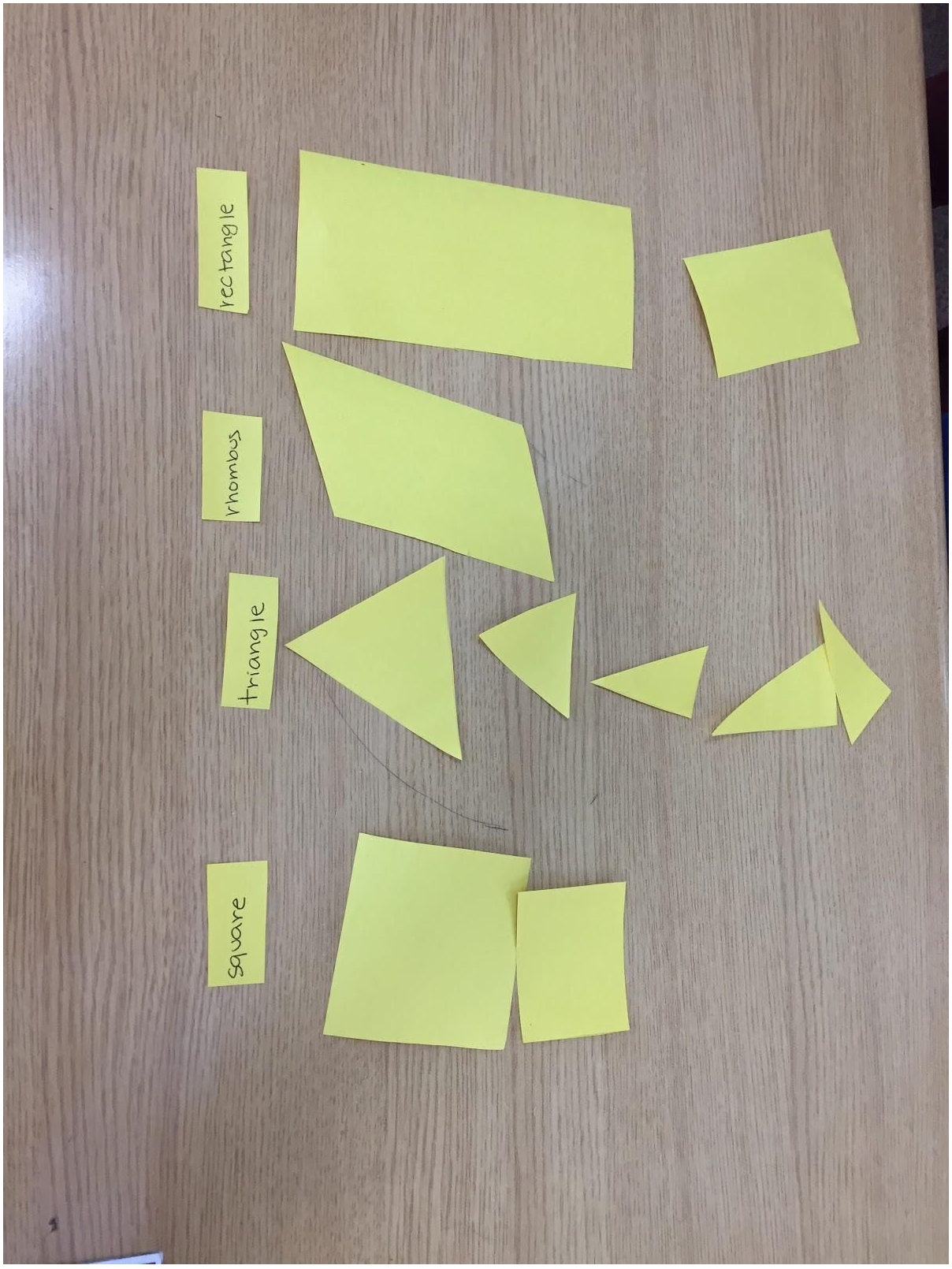
Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

Students will be assessed based on a grading rubric. The rubric will assess accuracy, creativity and depth of thought, and presentation.

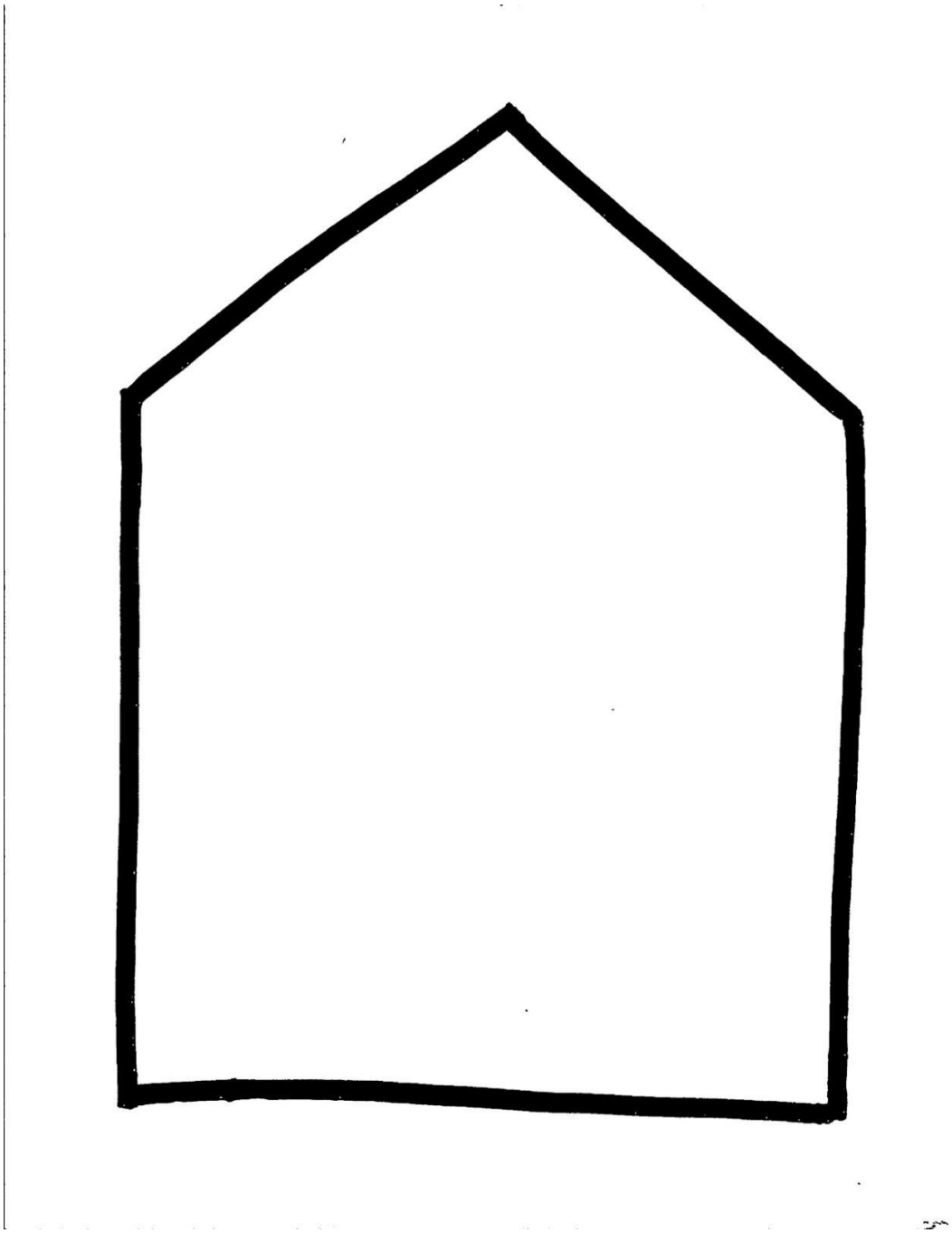
Criteria	5 Above Standard	3 Meets Expectation	1 Needs Improvement
Accuracy	Identified additional geometric shapes accurately. The answer key was correctly color coded.	Each geometric shape is identified accurately. The answer key is neat and clearly labeled.	Did not identify shapes accurately. Answer key is lacking or incorrect.
Creativity & Depth of Thought	Geometric shapes are incorporated in creative ways that make them challenging to find.	Geometric shapes are incorporated in creative ways	Shapes are not incorporated into the design of the house

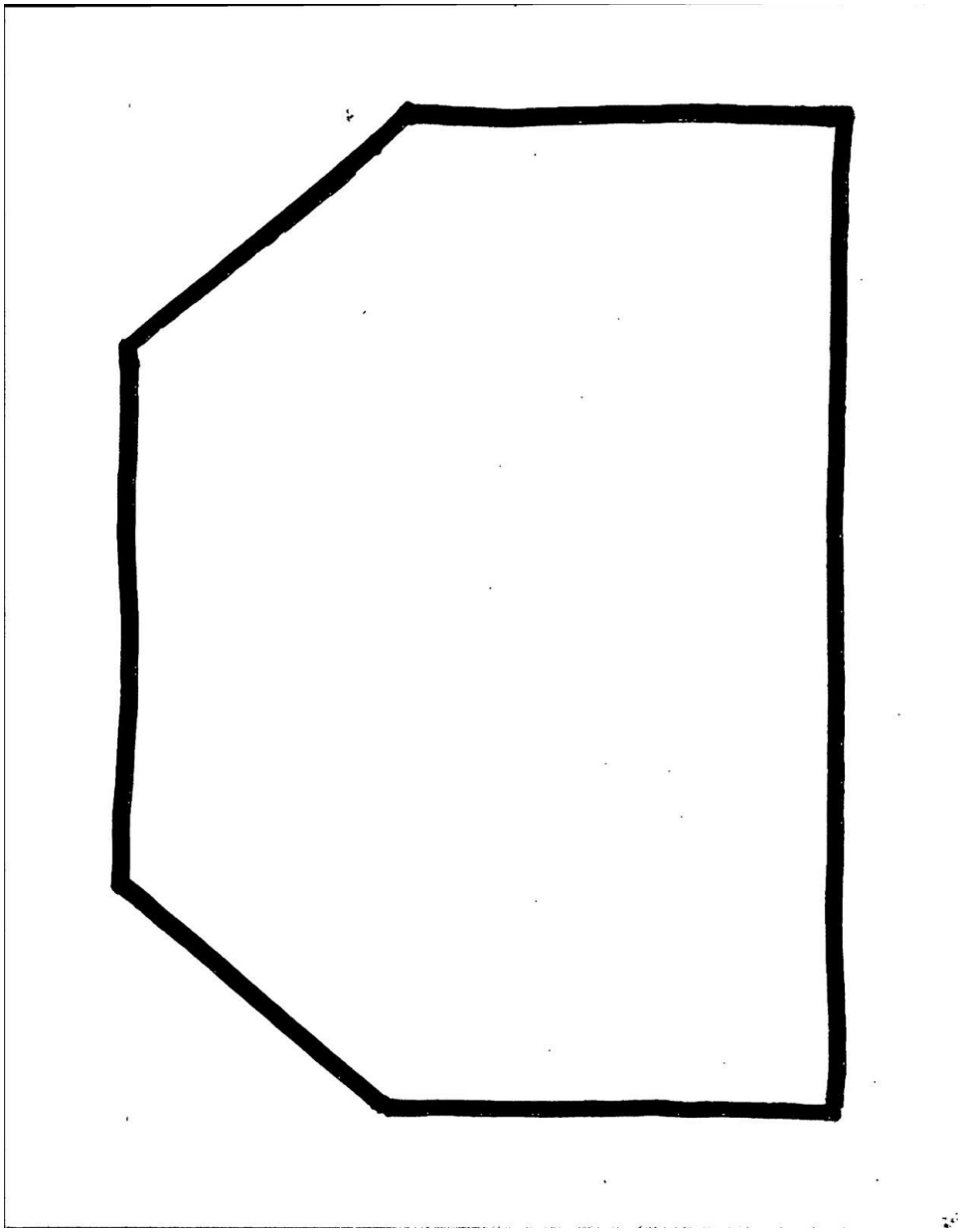
Presentation	Relevant and interesting details are added to elaborate in the content and project.	Work is visually appealing and easy to follow/understand	Work is messy and/ or difficult to follow.

APPENDIX B: CUT-OUT SHAPES

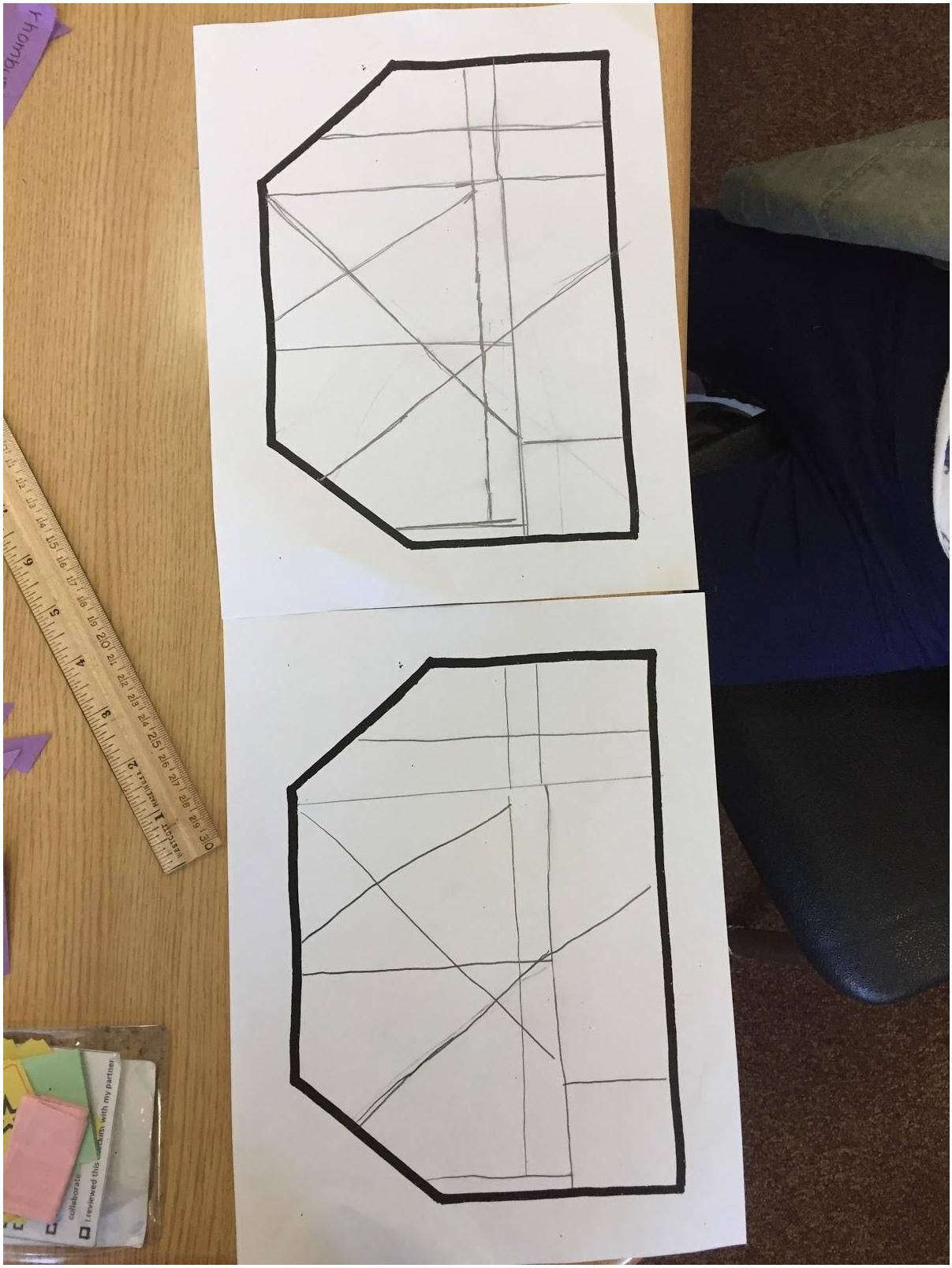

rectangle
rhombus
triangle
square

APPENDIX C: TEMPLATES

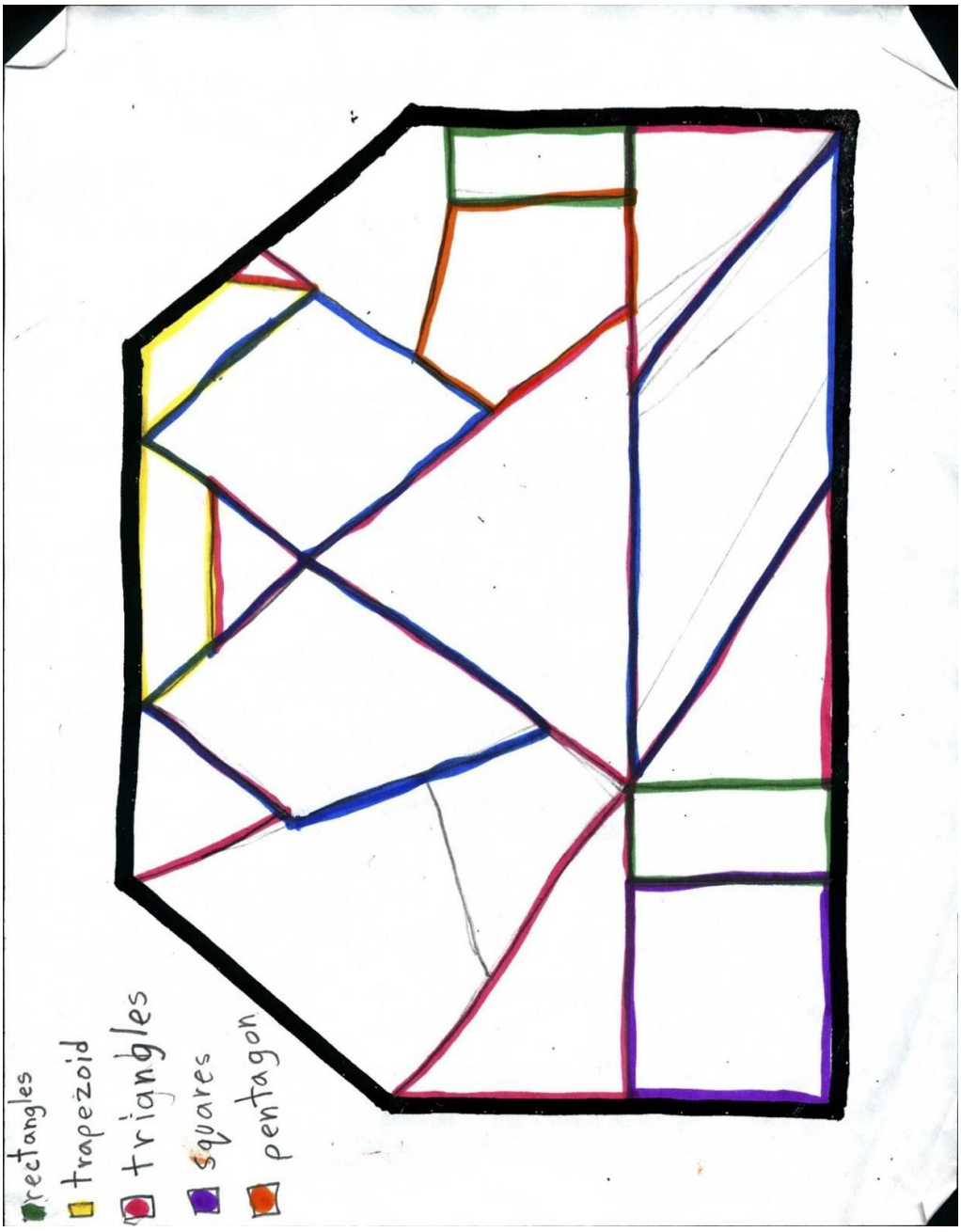




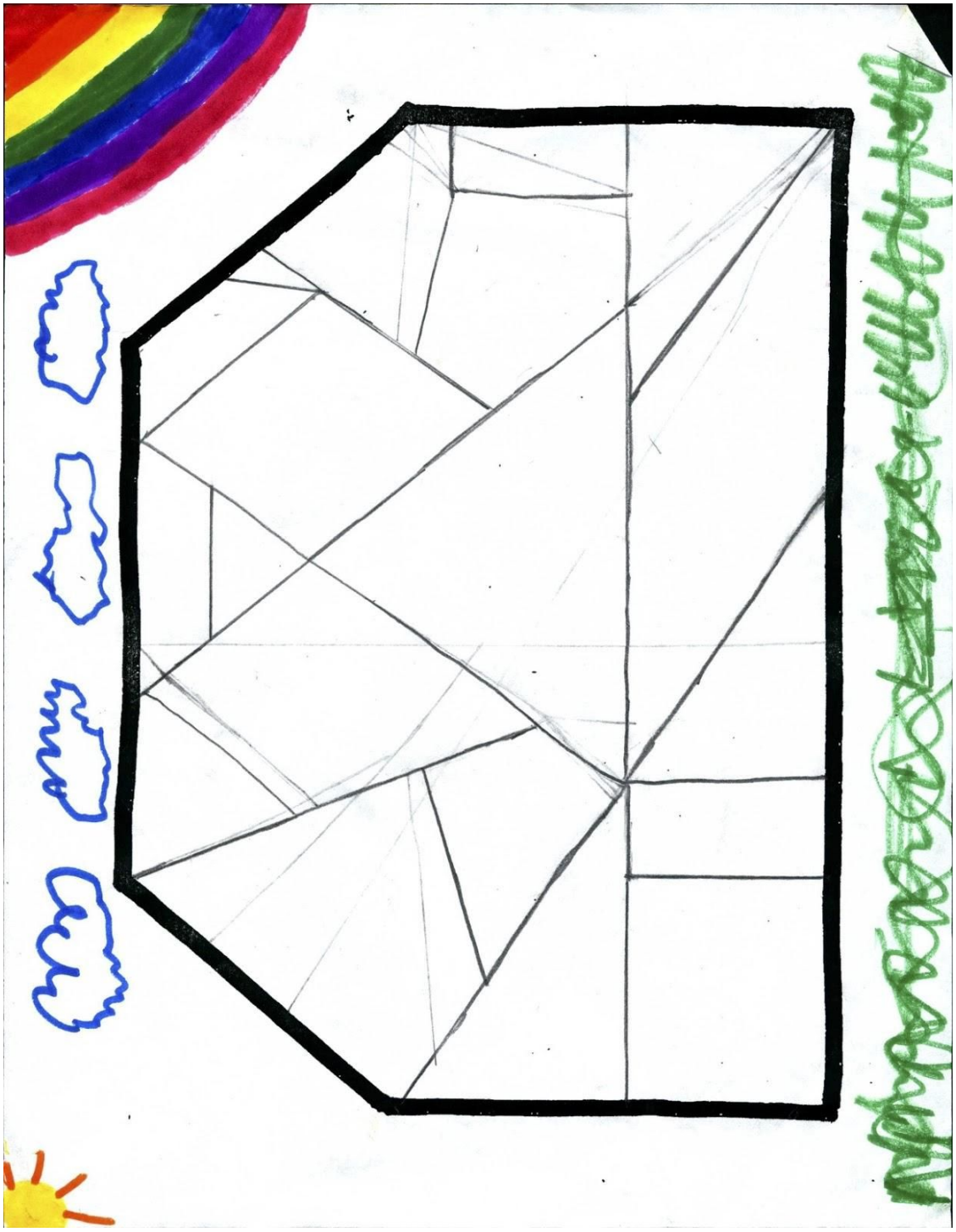
APPENDIX D: STUDENT WORK 1


I reviewed this
with my partner.

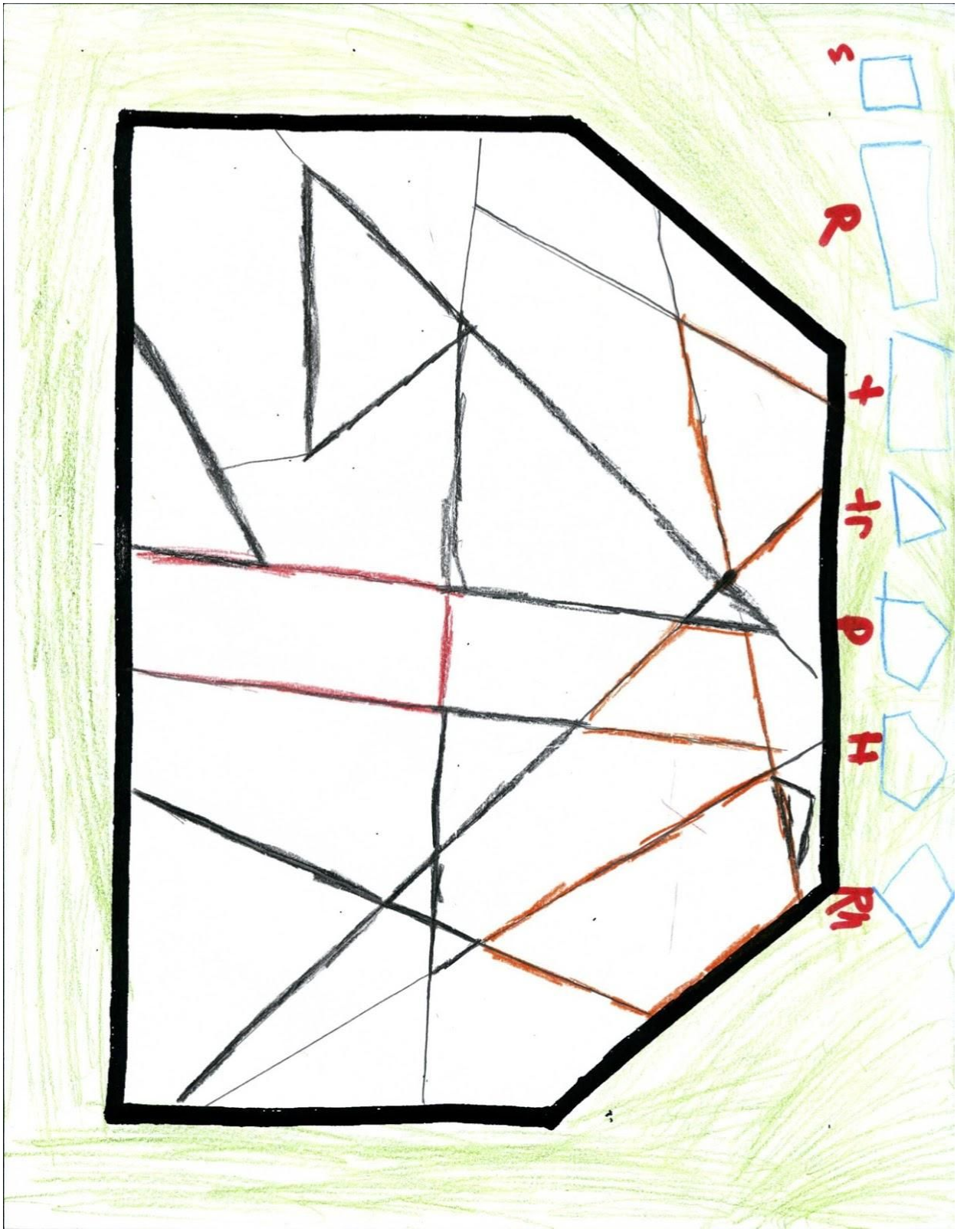
APPENDIX E: STUDENT WORK 2

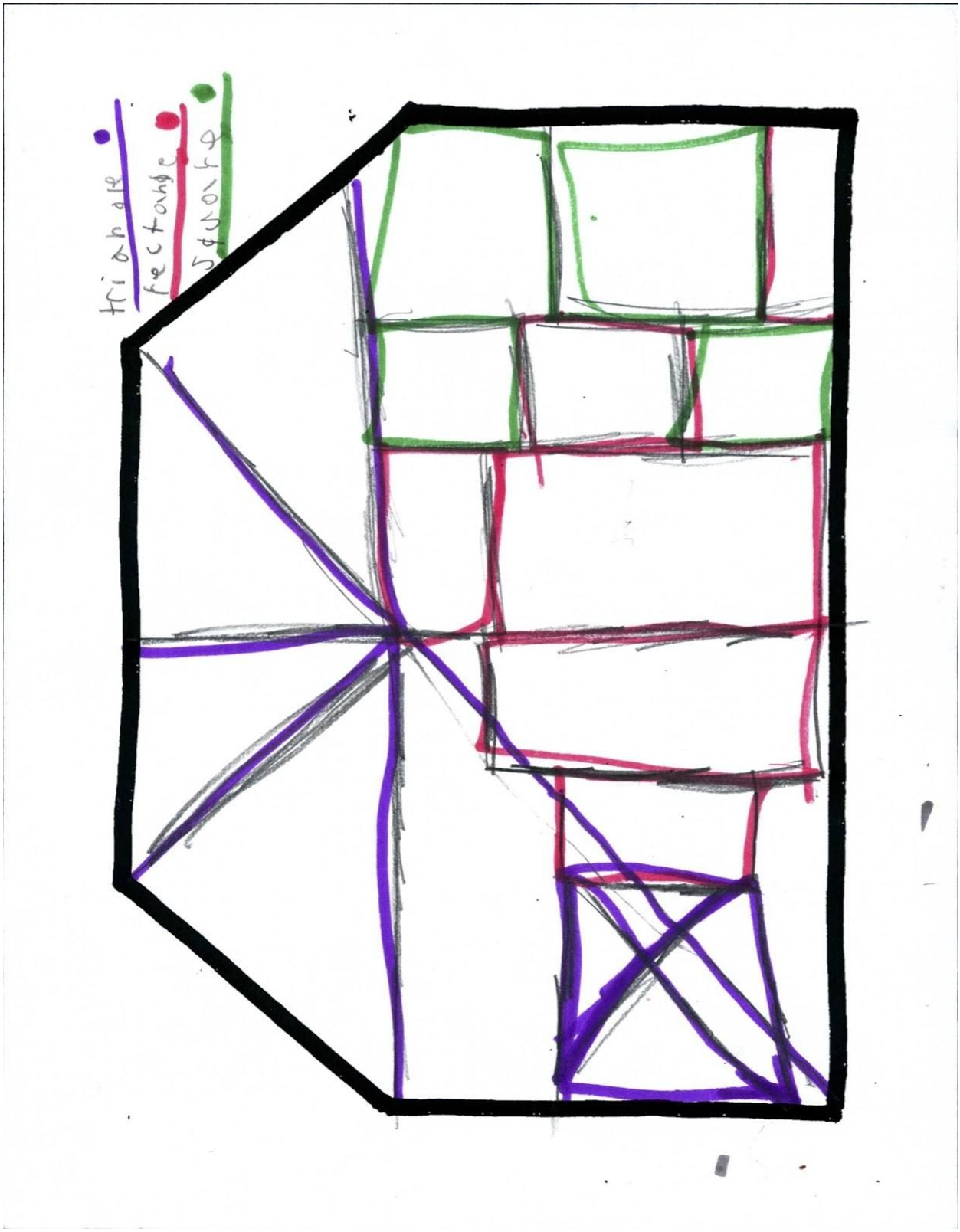

rectangles
trapezoid
triangles
squares
pentagon

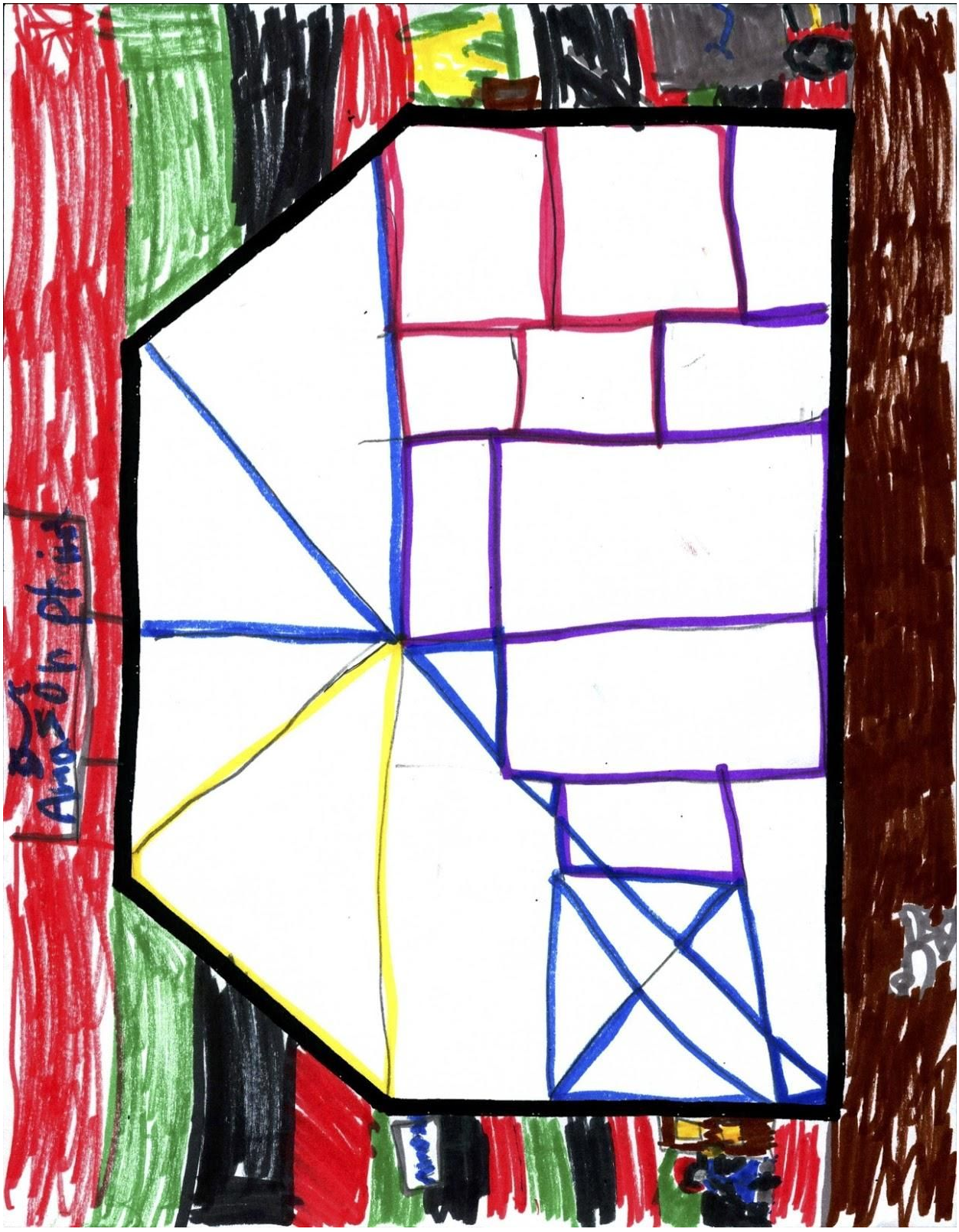
APPENDIX F: STUDENT WORK 3

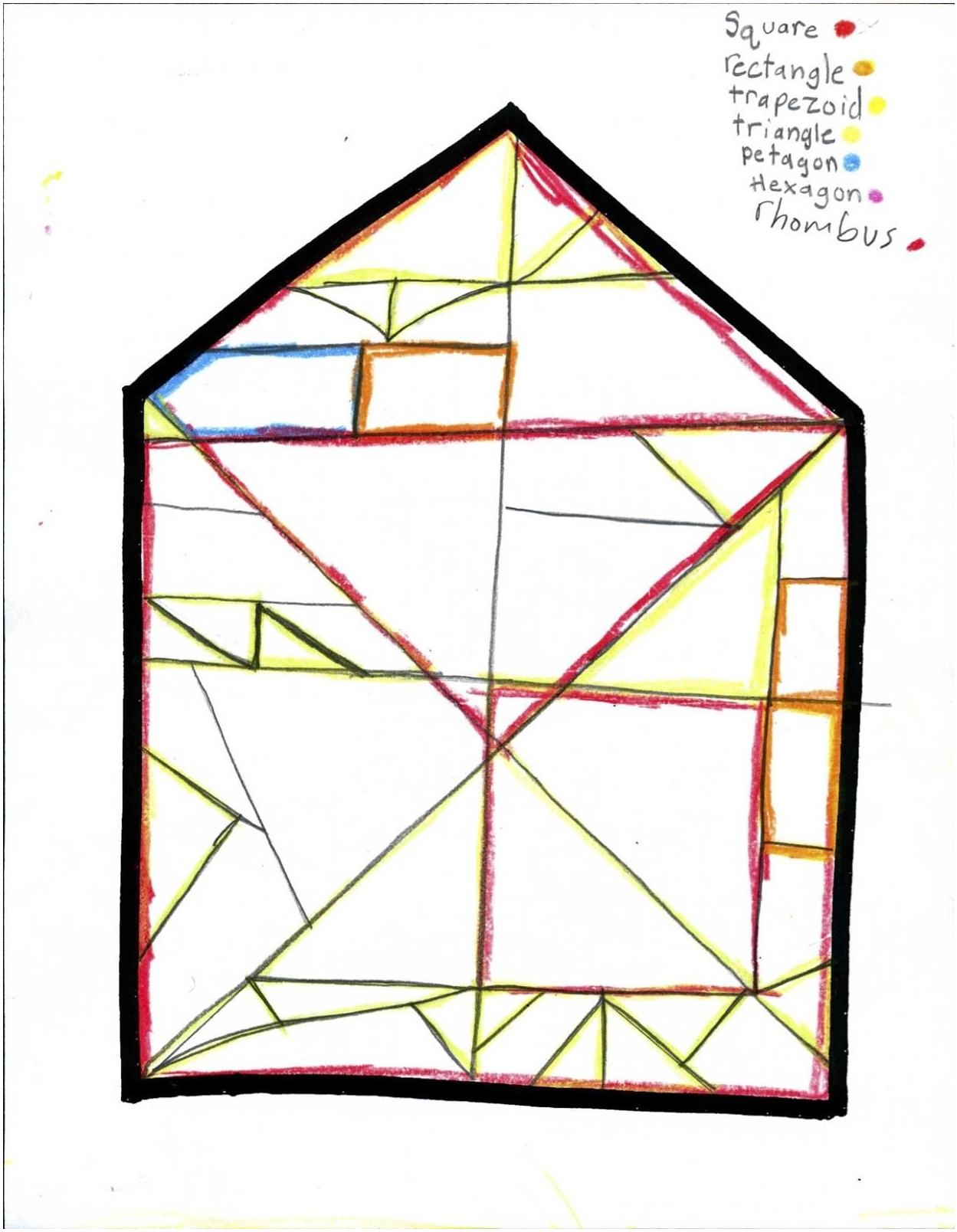


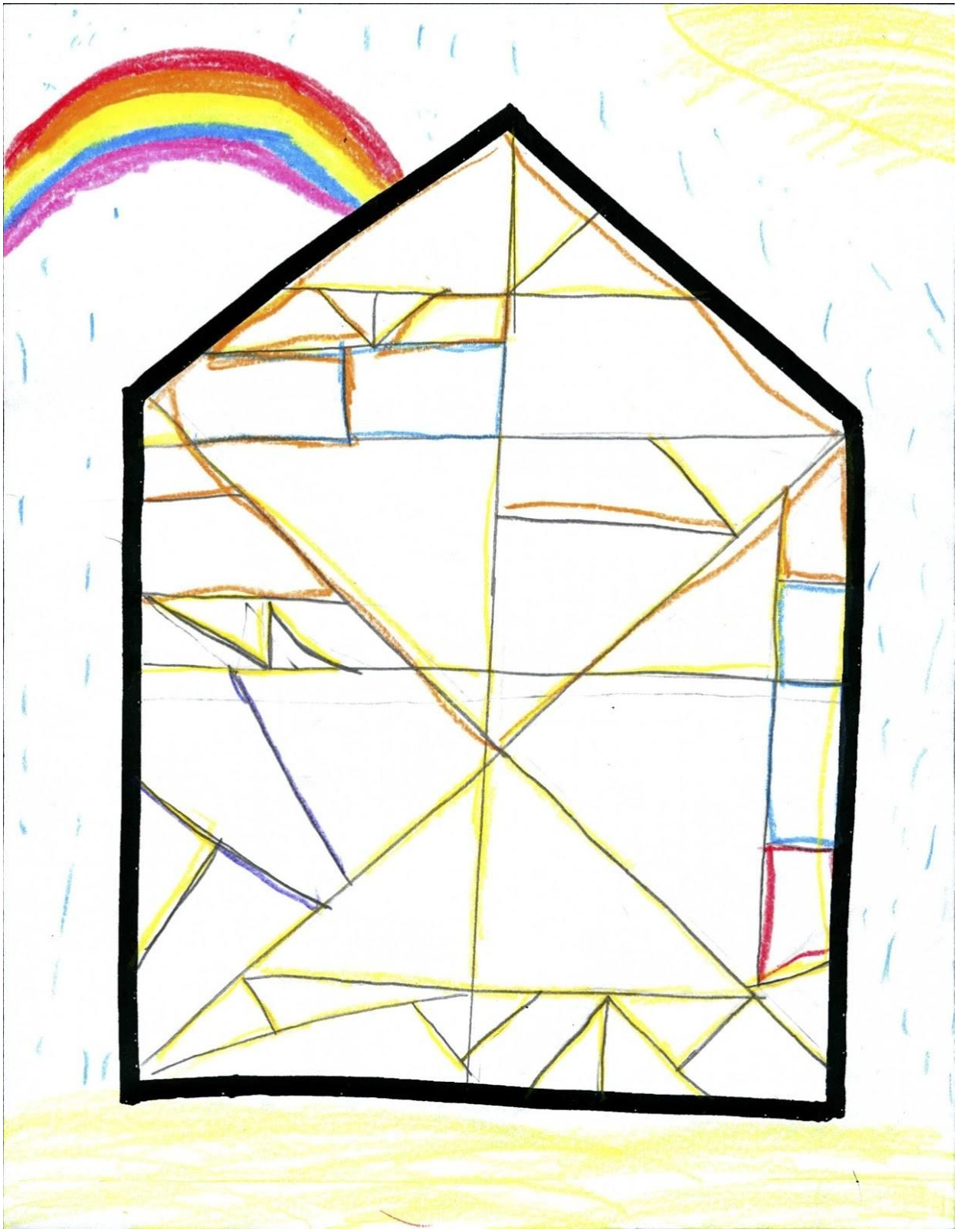
APPENDIX G: ADDITIONAL STUDENT WORK

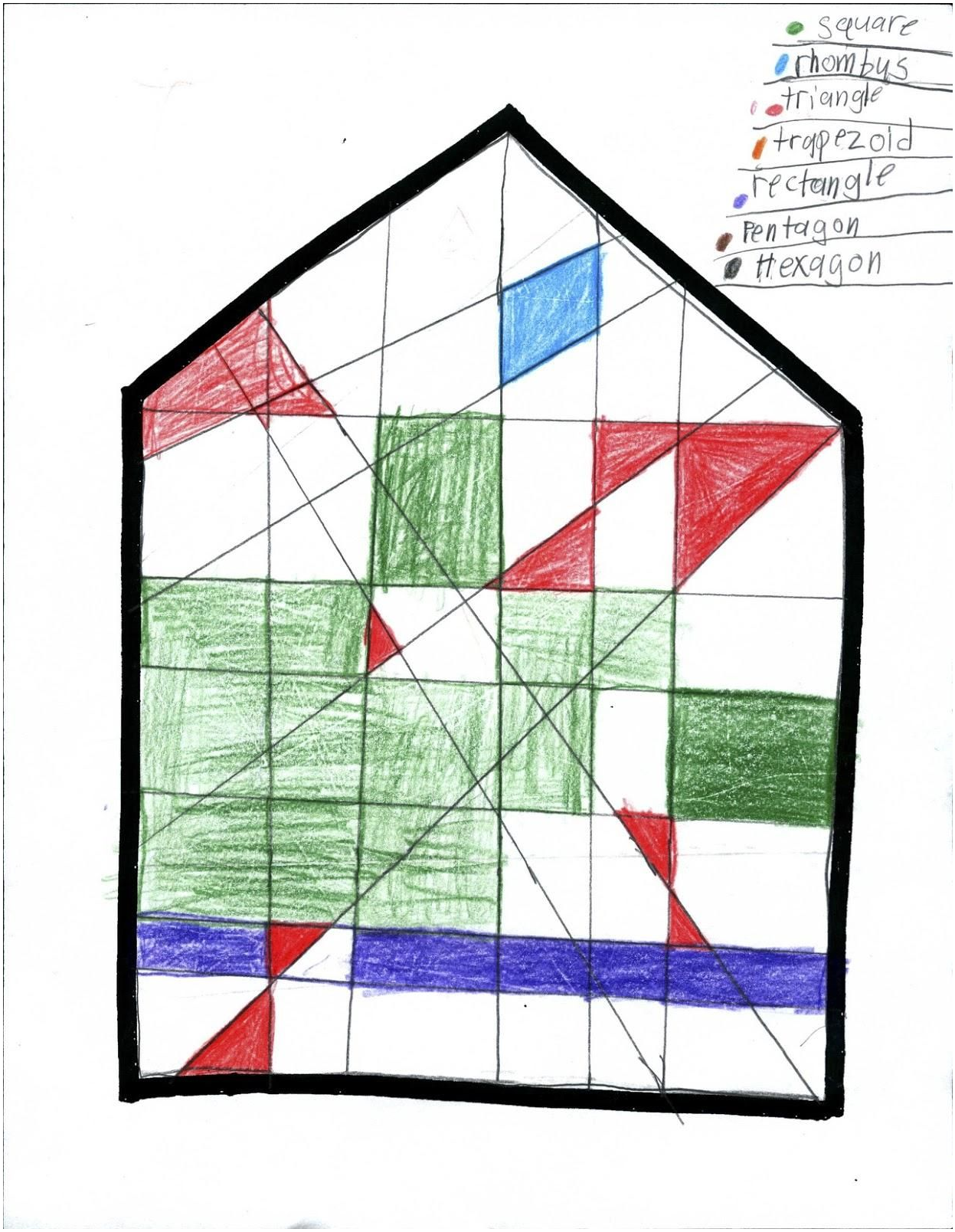

S
R
T
TP
P
H
RH

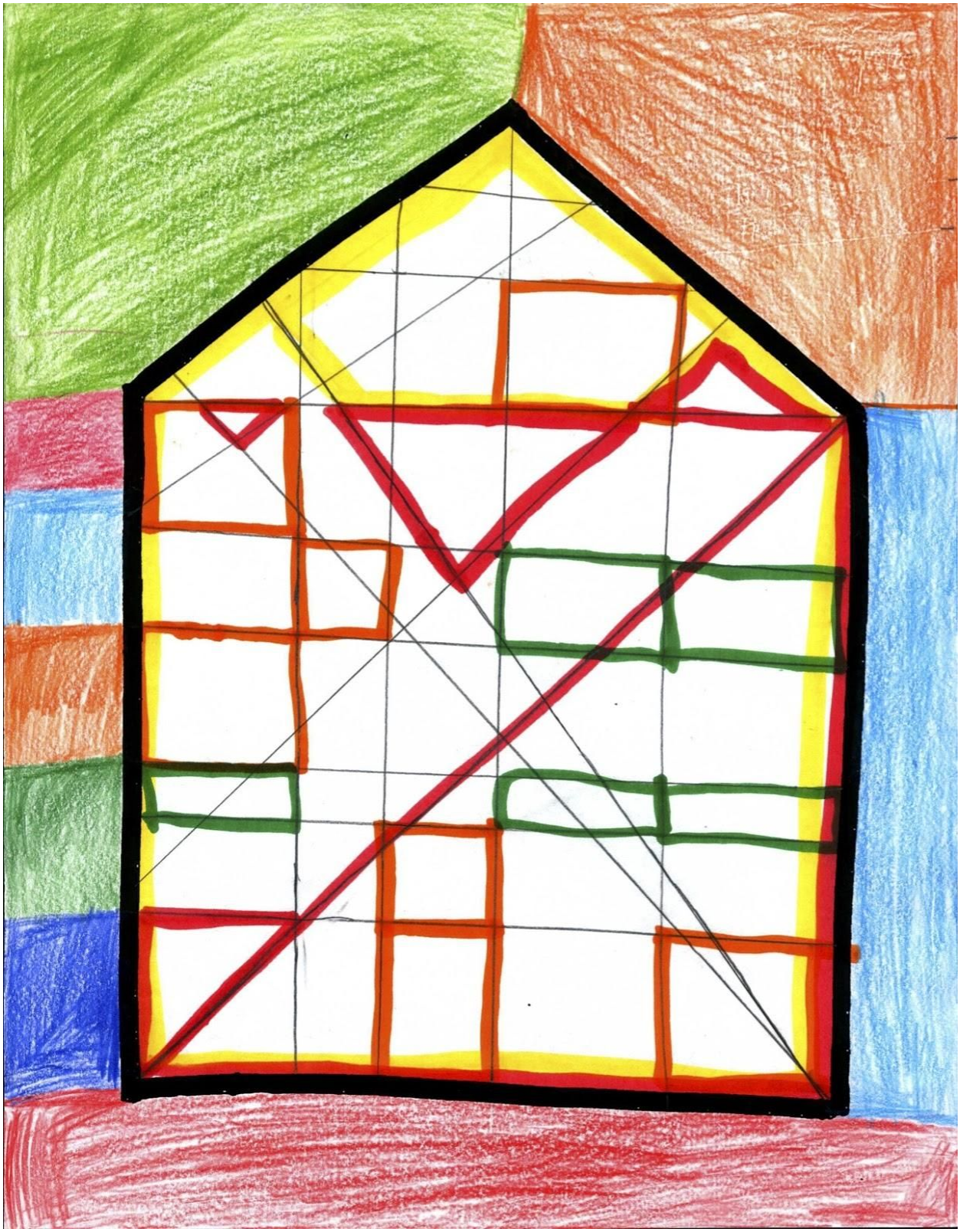

triangle
rectangle
square

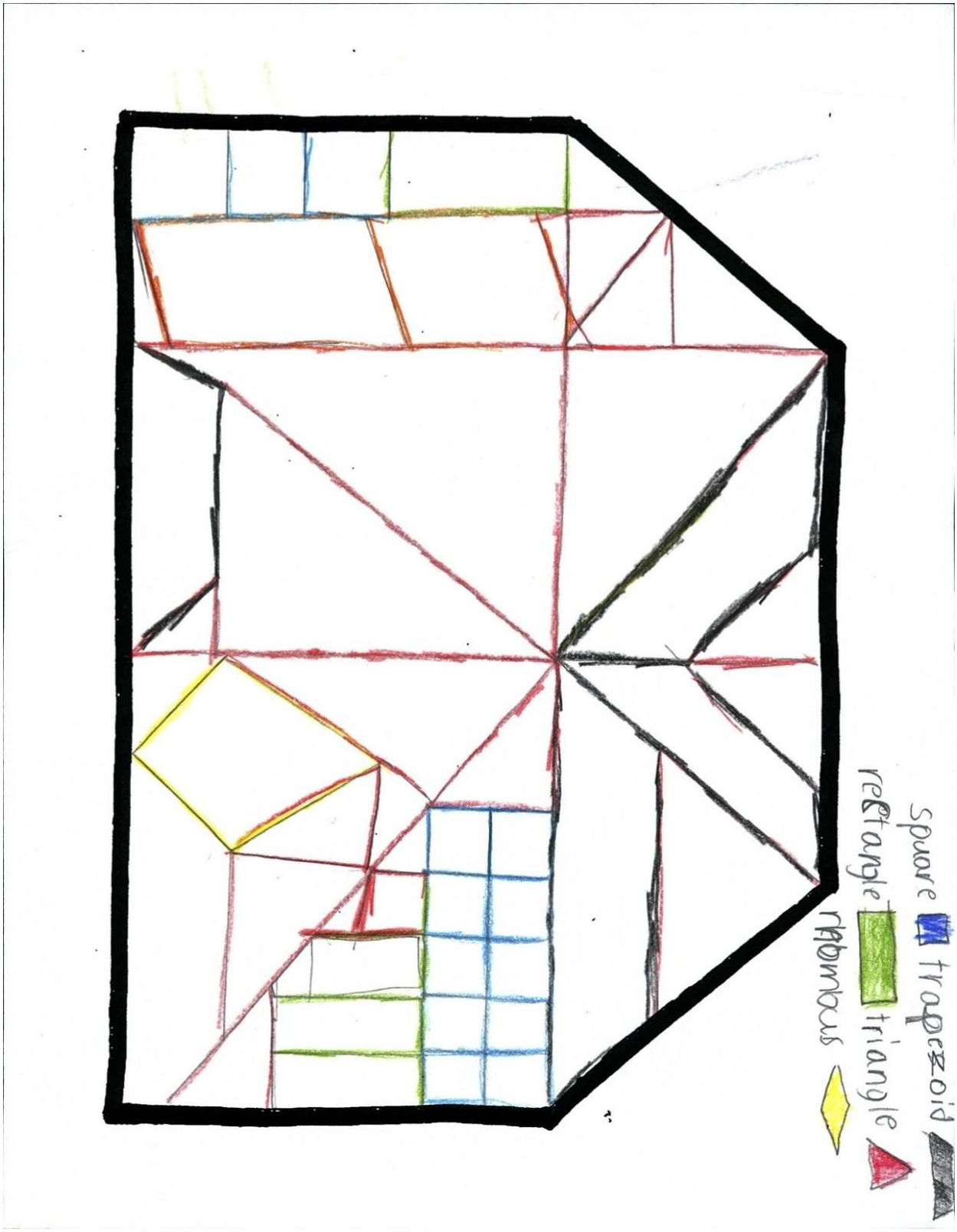

Amazon Rainforest


Square
rectangle
trapezoid
triangle
petagon
Hexagon
rhombus




square
rhombus
triangle
trapezoid
rectangle
Pentagon
Hexagon




Square
trapezoid
rectangle
triangle
rhombus